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# **python-cybox Documentation**

*Release 2.1.0.12.dev0*

**The MITRE Corporation**

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The python-cybox library provides an API for developing and consuming Cyber Observable eXpression (CybOX) content. Developers can leverage the API to create applications that create, consume, translate, or otherwise work with CybOX content.



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**Versions**

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Each version of python-cybox is designed to work with a single version of the CybOX Language. The table below shows the latest version the library for each version of CybOX.

CybOX Version	python-cybox Version
2.1	2.1.0.11 ( <a href="#">PyPI</a> ) ( <a href="#">GitHub</a> )
2.0.1	2.0.1.4 ( <a href="#">PyPI</a> ) ( <a href="#">GitHub</a> )
2.0	2.0.0.1 ( <a href="#">PyPI</a> ) ( <a href="#">GitHub</a> )
1.0	1.0.0b3 ( <a href="#">PyPI</a> ) ( <a href="#">GitHub</a> )



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## 2.1 Getting Started with python-cybox

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**Note:** The python-cybox library is intended for developers who want to add CybOX support to existing programs or create new programs that handle CybOX content. Experience with Python development is assumed.

Other users should look at existing [tools](#) that support CybOX.

Understanding XML, XML Schema, and the CybOX language is also incredibly helpful when using python-cybox in an application.

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First, you should follow the [Installation](#) procedures.

### 2.1.1 Example Scripts

The python-cybox repository contains several [example scripts](#) that help illustrate the capabilities of the APIs. These scripts are simple command line utilities that can be executed by passing the name of the script to a Python interpreter.

```
$ python simple_email_instance.py
```

### 2.1.2 Writing Your Own Application

See the [Examples](#) page for more examples of using python-cybox in your own application.

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## 2.2 Installation

### 2.2.1 Recommended Installation

Use pip:

```
$ pip install cybox
```

You might also want to consider using a [virtualenv](#).

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## 2.2.2 Dependencies

The python-cybox library is developed on Python 2.7 and tested against both Python 2.6 and 2.7. Besides the Python Standard Library, python-cybox relies on the following Python libraries:

- `lxml` - A Pythonic binding for the C libraries `libxml2` and `libxslt`.
- `python-dateutil` - A library for parsing datetime information.
- `importlib` (Python 2.6) - Convenience wrappers for `__import__()`.

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**Note:** `importlib` is [built into](#) Python 2.7, and is available on PyPI for Python 2.6.

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Each of these can be installed with `pip` or by manually downloading packages from PyPI. On Windows, you will probably have the most luck using [pre-compiled binaries](#) for `lxml`. On Ubuntu (12.04 or 14.04), you should make sure the following packages are installed before attempting to compile `lxml` from source:

- `libxml2-dev`
- `libxslt1-dev`
- `zlib1g-dev`

## 2.2.3 Manual Installation

If you are unable to use `pip`, you can also install python-cybox with `setuptools`. If you don't already have `setuptools` installed, please install it before continuing.

1. Download and install the [dependencies](#) above. Although `setuptools` will generally install dependencies automatically, installing the dependencies manually beforehand helps distinguish errors in dependency installation from errors in python-cybox installation. Make sure you check to ensure the versions you install are compatible with the version of python-cybox you plan to install.
2. Download the desired version of python-cybox from [PyPI](#) or the [GitHub releases](#) page. The steps below assume you are using the 2.1.0.12.dev0 release.
3. Extract the downloaded file. This will leave you with a directory named `cybox-2.1.0.12.dev0`.

```
$ tar -zxf cybox-2.1.0.12.dev0.tar.gz
$ ls
cybox-2.1.0.12.dev0  cybox-2.1.0.12.dev0.tar.gz
```

OR

```
$ unzip cybox-2.1.0.12.dev0.zip
$ ls
cybox-2.1.0.12.dev0  cybox-2.1.0.12.dev0.zip
```

4. Run the installation script.

```
$ cd cybox-2.1.0.12.dev0
$ python setup.py install
```

5. Test the installation.

```
$ python
Python 2.7.6 (default, Mar 22 2014, 22:59:56)
[GCC 4.8.2] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>> import cybox
>>>
```

If you don't see an `ImportError`, the installation was successful.

## 2.2.4 Further Information

If you're new to installing Python packages, you can learn more at the [Python Packaging User Guide](#), specifically the [Installing Python Packages](#) section.

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## 2.3 Overview

This page provides a quick overview needed to understand the inner workings of the python-cybox library. If you prefer a more hands-on approach, browse the [Examples](#).

### 2.3.1 CybOX Entities

Each type within CybOX is represented by a class which derives from `cybox.Entity`. In general, there is one Python class per CybOX type, though in some cases classes which would have identical functionality have been reused rather than writing duplicating classes. One example of this is that many enumerated values are implemented using the `cybox.common.properties.String`, since values aren't checked to make sure they are valid enumeration values.

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**Note:** Not all CybOX types have yet been implemented.

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### 2.3.2 Controlled Vocabulary Strings

Controlled Vocabulary strings are a concept originally designed for STIX and adapted for use in CybOX as well. For background, see the [STIX documentation](#). Controlled Vocabulary strings are implemented in the `cybox` Python package very similarly to how they are implemented in the `stix` package, so viewing the [python-stix documentation](#) should help explain how to work with CybOX Controlled Vocabulary strings as well. CybOX vocabularies are defined in the `cybox.common.vocabs` module.

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## 2.4 Examples

This page includes some basic examples of creating and parsing CybOX content.

There are a couple things we do in these examples for purposes of demonstration that shouldn't be done in production code:

- When calling `to_xml()`, we use `include_namespaces=False`. This is to make the example output easier to read, but means the resulting output cannot be successfully parsed. The XML parser doesn't know what namespaces to use if they aren't included. In production code, you should explicitly set `include_namespaces` to `True` or omit it entirely (`True` is the default).
- We use `set_id_method(IDGenerator.METHOD_INT)` to make IDs for Objects and Observables easier to read and cross-reference within the XML document. In production code, you should omit this statement, which causes random UUIDs to be created instead, or create explicit IDs yourself for objects and observables.

## 2.4.1 Creating Objects

The easiest way to create an object is to construct one and then set various properties on it.

```
from cybox.objects.file_object import File
f = File()
f.file_name = "malware.exe"
f.file_path = "C:\Windows\Temp\malware.exe"
print(f.to_xml(include_namespaces=False, encoding=None))
```

Which outputs:

```
<FileObj:FileObjectType xsi:type="FileObj:FileObjectType">
  <FileObj:File_Name>malware.exe</FileObj:File_Name>
  <FileObj:File_Path>C:\Windows\Temp\malware.exe</FileObj:File_Path>
</FileObj:FileObjectType>
```

For some objects, such as the AddressObject, you can pass parameters directly into the constructor.

```
from cybox.objects.address_object import Address
a = Address("1.2.3.4", Address.CAT_IPV4)
print(a.to_xml(include_namespaces=False, encoding=None))
```

```
<AddressObj:AddressObjectType xsi:type="AddressObj:AddressObjectType" category="ipv4-addr">
  <AddressObj:Address_Value>1.2.3.4</AddressObj:Address_Value>
</AddressObj:AddressObjectType>
```

## 2.4.2 Creating Observables

Full CyBOX documents are expected to have Observables as the root element. You can pass any object to the Observables constructor to generate the proper XML.

```
from cybox.core import Observables
from cybox.objects.file_object import File
from cybox.utils import IDGenerator, set_id_method
set_id_method(IDGenerator.METHOD_INT)
f = File()
f.file_name = "malware.exe"
f.file_path = "C:\Windows\Temp\malware.exe"
print(Observables(f).to_xml(include_namespaces=False, encoding=None))
```

```
<cybox:Observables cybox_major_version="2" cybox_minor_version="1" cybox_update_version="0">
  <cybox:Observable id="example:Observable-1">
    <cybox:Object id="example:File-2">
      <cybox:Properties xsi:type="FileObj:FileObjectType">
        <FileObj:File_Name>malware.exe</FileObj:File_Name>
        <FileObj:File_Path>C:\Windows\Temp\malware.exe</FileObj:File_Path>
      </cybox:Properties>
    </cybox:Object>
  </cybox:Observable>
</cybox:Observables>
```

To include multiple objects as individual Observables within one document, you can pass them as a list to the Observables constructor.

```
from cybox.core import Observables
from cybox.objects.address_object import Address
from cybox.objects.uri_object import URI
```

```

from cybox.utils import IDGenerator, set_id_method
set_id_method(IDGenerator.METHOD_INT)
a = Address("1.2.3.4", Address.CAT_IPV4)
u = URI("http://cybox.mitre.org/")
print(Observables([a, u]).to_xml(include_namespaces=False, encoding=None))

```

```

<cybox:Observables cybox_major_version="2" cybox_minor_version="1" cybox_update_version="0">
  <cybox:Observable id="example:Observable-1">
    <cybox:Object id="example:Address-2">
      <cybox:Properties xsi:type="AddressObj:AddressObjectType" category="ipv4-addr">
        <AddressObj:Address_Value>1.2.3.4</AddressObj:Address_Value>
      </cybox:Properties>
    </cybox:Object>
  </cybox:Observable>
  <cybox:Observable id="example:Observable-3">
    <cybox:Object id="example:URI-4">
      <cybox:Properties xsi:type="URIObj:URIObjectType">
        <URIObj:Value>http://cybox.mitre.org/</URIObj:Value>
      </cybox:Properties>
    </cybox:Object>
  </cybox:Observable>
</cybox:Observables>

```

### 2.4.3 HTTP Message Body

When outputting XML, by default, reserved XML characters such as < and > are escaped by default.

```

from cybox.objects.http_session_object import HTTPMessage
m = HTTPMessage()
m.message_body = "<html><title>An HTML page</title><body><p>Body text</p></body></html>"
m.length = len(m.message_body.value)
print(m.to_xml(include_namespaces=False, encoding=None))

```

```

<HTTPSessionObj:HTTPMessageType>
  <HTTPSessionObj:Length>69</HTTPSessionObj:Length>
  <HTTPSessionObj:Message_Body>&lt;html&gt;&lt;title&gt;An HTML page&lt;/title&gt;&lt;body&gt;&lt;p&gt;Body text&lt;/p&gt;&lt;/body&gt;&lt;/html&gt;
</HTTPSessionObj:HTTPMessageType>

```

When you parse this content, these characters are converted back.

```

from cybox.bindings.http_session_object import parseString
m2 = HTTPMessage.from_obj(parseString(m.to_xml(encoding=None)))
print(m2.message_body)

```

```

<html><title>An HTML page</title><body><p>Body text</p></body></html>

```

### 2.4.4 HTTP User Agent

```

from cybox.objects.http_session_object import *
fields = HTTPRequestHeaderFields()
fields.user_agent = 'Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:25.0) Gecko/20100101 Firefox/25.0'

header = HTTPRequestHeader()
header.parsed_header = fields

```

```
request = HTTPClientRequest()
request.http_request_header = header

req_res = HTTPRequestResponse()
req_res.http_client_request = request

session = HTTPSession()
session.http_request_response = [req_res]

print(session.to_xml(include_namespaces=False, encoding=None))
```

```
<HTTPSessionObj:HTTPSessionObjectType xsi:type="HTTPSessionObj:HTTPSessionObjectType">
  <HTTPSessionObj:HTTP_Request_Response>
    <HTTPSessionObj:HTTP_Client_Request>
      <HTTPSessionObj:HTTP_Request_Header>
        <HTTPSessionObj:Parsed_Header>
          <HTTPSessionObj:User_Agent>Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:25.0) Gecko/20100101 Firefox/25.0
        </HTTPSessionObj:Parsed_Header>
      </HTTPSessionObj:HTTP_Request_Header>
    </HTTPSessionObj:HTTP_Client_Request>
  </HTTPSessionObj:HTTP_Request_Response>
</HTTPSessionObj:HTTPSessionObjectType>
```

## 2.4.5 Objects with DateTime properties

When setting DateTime properties on objects, you can either use a native Python `datetime.datetime` or a string. The `python-dateutil` library is used to parse strings into dates, so a wide variety of formats is supported.

```
import datetime
from cybox.objects.email_message_object import EmailMessage
e = EmailMessage()
e.from_ = "spammer@spam.com"
e.subject = "This is not spam"
e.date = datetime.datetime(2012, 1, 17, 8, 35, 6)
print(e.to_xml(include_namespaces=False, encoding=None))
```

```
<EmailMessageObj:EmailMessageObjectType xsi:type="EmailMessageObj:EmailMessageObjectType">
  <EmailMessageObj:Header>
    <EmailMessageObj:From xsi:type="AddressObj:AddressObjectType" category="e-mail">
      <AddressObj:Address_Value>spammer@spam.com</AddressObj:Address_Value>
    </EmailMessageObj:From>
    <EmailMessageObj:Subject>This is not spam</EmailMessageObj:Subject>
    <EmailMessageObj:Date>2012-01-17T08:35:06</EmailMessageObj:Date>
  </EmailMessageObj:Header>
</EmailMessageObj:EmailMessageObjectType>
```

```
from cybox.objects.email_message_object import EmailMessage
e = EmailMessage()
e.date = "Mon, 14 Oct, 2013 12:32:03 -0500"
print(e.to_xml(include_namespaces=False, encoding=None))
```

```
<EmailMessageObj:EmailMessageObjectType xsi:type="EmailMessageObj:EmailMessageObjectType">
  <EmailMessageObj:Header>
    <EmailMessageObj:Date>2013-10-14T12:32:03-05:00</EmailMessageObj:Date>
  </EmailMessageObj:Header>
</EmailMessageObj:EmailMessageObjectType>
```

## 2.4.6 Hashes

In many cases you can pass a dictionary or a list to create an instance of a CybOX type.

```
from cybox.common import HashList
h = HashList.from_list([{'type': 'MD5', 'simple_hash_value': 'FFFFFF'},
                       {'type': 'SHA1', 'simple_hash_value': 'FFFFFF'}])
print(h.to_xml(include_namespaces=False, encoding=None))
```

```
<cyboxCommon:HashListType>
  <cyboxCommon:Hash>
    <cyboxCommon:Type>MD5</cyboxCommon:Type>
    <cyboxCommon:Simple_Hash_Value>FFFFFF</cyboxCommon:Simple_Hash_Value>
  </cyboxCommon:Hash>
  <cyboxCommon:Hash>
    <cyboxCommon:Type>SHA1</cyboxCommon:Type>
    <cyboxCommon:Simple_Hash_Value>FFFFFF</cyboxCommon:Simple_Hash_Value>
  </cyboxCommon:Hash>
</cyboxCommon:HashListType>
```

This can easily be incorporated into constructing objects as well.

```
from cybox.objects.win_file_object import WinFile
f = WinFile()
f.file_name = "foo.exe"
f.drive = "C:\\\\"
f.hashes = h
print(f.to_xml(include_namespaces=False, encoding=None))
```

```
<WinFileObj:WindowsFileType xsi:type="WinFileObj:WindowsFileType">
  <FileObj:File_Name>foo.exe</FileObj:File_Name>
  <FileObj:Hashes>
    <cyboxCommon:Hash>
      <cyboxCommon:Type>MD5</cyboxCommon:Type>
      <cyboxCommon:Simple_Hash_Value>FFFFFF</cyboxCommon:Simple_Hash_Value>
    </cyboxCommon:Hash>
    <cyboxCommon:Hash>
      <cyboxCommon:Type>SHA1</cyboxCommon:Type>
      <cyboxCommon:Simple_Hash_Value>FFFFFF</cyboxCommon:Simple_Hash_Value>
    </cyboxCommon:Hash>
  </FileObj:Hashes>
  <WinFileObj:Drive>C:\\</WinFileObj:Drive>
</WinFileObj:WindowsFileType>
```

## 2.4.7 Object Subclasses

The WindowsFile object is a subclass of the File object. As you can see, the correct namespaces for the various properties are set.

```
from cybox.objects.win_file_object import WinFile
f = WinFile()
f.file_name = "blah.exe"
f.drive = "C:\\\\"
print(f.to_xml(include_namespaces=False, encoding=None))
```

```
<WinFileObj:WindowsFileType xsi:type="WinFileObj:WindowsFileType">
  <FileObj:File_Name>blah.exe</FileObj:File_Name>
```

```
<WinFileObj:Drive>C:\</WinFileObj:Drive>
</WinFileObj:WindowsFileObjectType>
```

As another example, the WinUser object is a refinement of the UserAccount object, which itself is a refinement of the Account object. As with Hashes, these can be constructed from a dictionary representation.

```
from cybox.objects.win_user_object import WinUser
winuser_dict = {
    # Account-specific fields
    'disabled': False,
    'domain': 'ADMIN',
    # UserAccount-specific fields
    'password_required': True,
    'full_name': "Steve Ballmer",
    'home_directory': "C:\\Users\\ballmer\\",
    'last_login': "2011-05-12T07:14:01+07:00",
    'username': "ballmer",
    'user_password_age': "P180D",
    # WinUser-specific fields
    'security_id': "S-1-5-21-3623811015-3361044348-30300820-1013",
    'security_type': "SidTypeUser",
    'xsi:type': 'WindowsUserAccountObjectType',
}
print(WinUser.from_dict(winuser_dict).to_xml(include_namespaces=False, encoding=None))
```

```
<WinUserAccountObj:WindowsUserAccountObjectType xsi:type="WinUserAccountObj:WindowsUserAccountObjectType"
  disabled="false" password_required="true">
  <AccountObj:Domain>ADMIN</AccountObj:Domain>
  <UserAccountObj:Full_Name>Steve Ballmer</UserAccountObj:Full_Name>
  <UserAccountObj:Home_Directory>C:\Users\ballmer\<</UserAccountObj:Home_Directory>
  <UserAccountObj:Last_Login>2011-05-12T07:14:01+07:00</UserAccountObj:Last_Login>
  <UserAccountObj:Username>ballmer</UserAccountObj:Username>
  <UserAccountObj:User_Password_Age>P180D</UserAccountObj:User_Password_Age>
  <WinUserAccountObj:Security_ID>S-1-5-21-3623811015-3361044348-30300820-1013</WinUserAccountObj:Security_ID>
  <WinUserAccountObj:Security_Type>SidTypeUser</WinUserAccountObj:Security_Type>
</WinUserAccountObj:WindowsUserAccountObjectType>
```

## 2.4.8 ObservableCompositions

```
from cybox.core import Observable, Observables, ObservableComposition
from cybox.objects.file_object import File
from cybox.objects.process_object import Process
from cybox.utils import IDGenerator, set_id_method
set_id_method(IDGenerator.METHOD_INT)

observables = Observables()

proc = Process.from_dict(
    {"name": "cmd.exe",
     "image_info": {"command_line": "cmd.exe /c blah.bat"}})
proc.name.condition = "Equals"
proc.image_info.command_line.condition = "Contains"
oproc = Observable(proc)
observables.add(oproc)

f = File.from_dict({"file_name": "blah", "file_extension": "bat"})
f.file_name.condition = "Contains"
```

```
f.file_extension.condition = "Equals"
ofile = Observable(f)
observables.add(ofile)

oproc_ref = Observable()
oproc_ref.id_ = None
oproc_ref.idref = oproc.id_

ofile_ref = Observable()
ofile_ref.id_ = None
ofile_ref.idref = ofile.id_

o_comp = ObservableComposition(operator="OR")
o_comp.add(oproc_ref)
o_comp.add(ofile_ref)
observables.add(Observable(o_comp))

print(observables.to_xml(include_namespaces=False, encoding=None))
```

```
<cybox:Observables cybox_major_version="2" cybox_minor_version="1" cybox_update_version="0">
  <cybox:Observable id="example:Observable-1">
    <cybox:Object id="example:Process-2">
      <cybox:Properties xsi:type="ProcessObj:ProcessObjectType">
        <ProcessObj:Name condition="Equals">cmd.exe</ProcessObj:Name>
        <ProcessObj:Image_Info>
          <ProcessObj:Command_Line condition="Contains">cmd.exe /c blah.bat</ProcessObj:Command_Line>
        </ProcessObj:Image_Info>
      </cybox:Properties>
    </cybox:Object>
  </cybox:Observable>
  <cybox:Observable id="example:Observable-3">
    <cybox:Object id="example:File-4">
      <cybox:Properties xsi:type="FileObj:FileObjectType">
        <FileObj:File_Name condition="Contains">blah</FileObj:File_Name>
        <FileObj:File_Extension condition="Equals">bat</FileObj:File_Extension>
      </cybox:Properties>
    </cybox:Object>
  </cybox:Observable>
  <cybox:Observable id="example:Observable-7">
    <cybox:Observable_Composition operator="OR">
      <cybox:Observable idref="example:Observable-1">
      </cybox:Observable>
      <cybox:Observable idref="example:Observable-3">
      </cybox:Observable>
    </cybox:Observable_Composition>
  </cybox:Observable>
</cybox:Observables>
```

## 2.4.9 Parsing example

Just as you can call `to_xml()` to generate XML, you can call `parseString` to parse an XML string.

```
>>> import cybox.bindings.file_object as file_binding
>>> from cybox.objects.file_object import File
>>> a = ""
... <FileObj:FileObjectType
...     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

```

...     xmlns:FileObj="http://cybox.mitre.org/objects#FileObject-2"
...     xsi:type="FileObj:FileObjectType">
...     <FileObj:File_Name condition="Contains">bad.exe</FileObj:File_Name>
... </FileObj:FileObjectType>
... """
>>> file_obj = file_binding.parseString(a)
>>> type(file_obj)
<class 'cybox.bindings.file_object.FileObjectType'>
>>> f = File.from_obj(file_obj)
>>> f.file_name.value
'bad.exe'
>>> str(f.file_name)
'bad.exe'
>>> f.file_name.condition
'Contains'

```

## 2.4.10 Comparisons

CyBOX objects can be compared for equality using the standard Python equality operator. By default, every field must be equal between the two objects. However, you can explicitly say that some fields should not be considered.

```

>>> from cybox.objects.file_object import File

>>> file_1 = File.from_dict({'file_name': 'abcd.dll', 'size_in_bytes': '25556'})
>>> file_2 = File.from_dict({'file_name': 'abcd.dll', 'size_in_bytes': '25556'})
>>> file_3 = File.from_dict({'file_name': 'abcd.dll', 'size_in_bytes': '1337'})

# First, disable the use of ``size_in_bytes`` comparisons.
>>> File.size_in_bytes.comparable = False

>>> file_1 == file_2
True
>>> file_1 == file_3
True

# Now, set it back to True (the default).
>>> File.size_in_bytes.comparable = True

>>> file_1 == file_2
True
>>> file_1 == file_3
False

```

## 2.4.11 Custom Objects

The CyBOX Custom Object is used to specify objects which do not have their own object type in CyBOX. These objects should be used with care, as they can make interoperability more challenging if both producer and consumer do not agree on the fields used in the Custom object.

```

from cybox.common.object_properties import CustomProperties, Property
from cybox.objects.custom_object import Custom

c = Custom()

# This should be a QName with a prefix specific to the application

```

```
# (i.e. not "example"). The prefix should be included in the output
# namespaces.
c.custom_name = "example:OfficePassword"
c.description = "This is a string used as a password to protect an Microsoft Office document."
c.custom_properties = CustomProperties()

p1 = Property()
p1.name = "password"
p1.description = "MS Office encryption password"
p1.value = "SuP3rS3cr3T!"
c.custom_properties.append(p1)

print(c.to_xml(include_namespaces=False, encoding=None))
```

```
<CustomObj:CustomObjectType xsi:type="CustomObj:CustomObjectType" custom_name="example:OfficePassword"
  <cyboxCommon:Custom_Properties>
    <cyboxCommon:Property name="password" description="MS Office encryption password">SuP3rS3cr3T!</cyboxCommon:Property>
  </cyboxCommon:Custom_Properties>
  <CustomObj:Description>This is a string used as a password to protect an Microsoft Office document.</CustomObj:Description>
</CustomObj:CustomObjectType>
```

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## 2.5 Contributing

If you notice a bug, have a suggestion for a new feature, or find that something just isn't behaving the way you'd expect it to, please submit an issue to our [issue tracker](#).

If you'd like to contribute code to our repository, you can do so by issuing a pull request and we will work with you to try and integrate that code into our repository. Users who want to contribute code to the python-cybox repository should be familiar with [git](#) and the [GitHub pull request process](#).



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## API Reference

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**Version:** 2.1.0.12.dev0

### 3.1 API Reference

#### 3.1.1 CybOX Common

Modules located in the base `cybox.common` package

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**Note:** Most objects from the CybOX Common schema can be implemented directly from the `cybox.common` package, rather than needing to remember which submodule they are defined in.

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**Version:** 2.1.0.12.dev0

##### `cybox.common` package

The `cybox.common` module contains classes needed to implement the types found in the CybOX Common schema (`cybox_common.xsd`). Although the implementation is spread between different modules within the `cybox.common` package, types should be imported directly from this module in case the implementations are reorganized in the future.

In other words, do this:

```
from cybox.common import String
```

rather than:

```
from cybox.common.properties import String
```

##### Submodules

**Version:** 2.1.0.12.dev0

`cybox.common.attribute_groups` module **Version:** 2.1.0.12.dev0

**cybox.common.byterun module**

**class** cybox.common.byterun.**ByteRun**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_common.ByteRunType

**byte\_order**

Type: *cybox.common.properties.String*

XML Binding class name: Byte\_Order

Dictionary key name: byte\_order

**byte\_run\_data**

XML Binding class name: Byte\_Run\_Data

Dictionary key name: byte\_run\_data

**file\_system\_offset**

Type: *cybox.common.properties.Integer*

XML Binding class name: File\_System\_Offset

Dictionary key name: file\_system\_offset

**hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

**image\_offset**

Type: *cybox.common.properties.Integer*

XML Binding class name: Image\_Offset

Dictionary key name: image\_offset

**length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

**offset**

Type: *cybox.common.properties.Integer*

XML Binding class name: Offset

Dictionary key name: offset

**class** cybox.common.byterun.**ByteRuns** (\*args)

Bases: cybox.EntityList

XML binding class: `cybox.bindings.cybox_common.ByteRunsType`

Version: 2.1.0.12.dev0

#### **cybox.common.contributor module**

**class** `cybox.common.contributor.Contributor`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ContributorType`

#### **contribution\_location**

XML Binding class name: `Contribution_Location`

Dictionary key name: `contribution_location`

#### **date**

Type: `cybox.common.daterange.DateRange`

XML Binding class name: `Date`

Dictionary key name: `date`

#### **email**

XML Binding class name: `Email`

Dictionary key name: `email`

#### **name**

XML Binding class name: `Name`

Dictionary key name: `name`

#### **organization**

XML Binding class name: `Organization`

Dictionary key name: `organization`

#### **phone**

XML Binding class name: `Phone`

Dictionary key name: `phone`

#### **role**

XML Binding class name: `Role`

Dictionary key name: `role`

**class** `cybox.common.contributor.Personnel` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.PersonnelType`

Version: 2.1.0.12.dev0

#### **cybox.common.data\_segment module**

**class** `cybox.common.data_segment.DataSegment`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DataSegmentType`

#### **byte\_order**

Type: `cybox.common.properties.String`

XML Binding class name: `Byte_Order`

Dictionary key name: `byte_order`

#### **data\_format**

XML Binding class name: `Data_Format`

Dictionary key name: `data_format`

#### **data\_segment**

Type: `cybox.common.properties.String`

XML Binding class name: `Data_Segment`

Dictionary key name: `data_segment`

#### **data\_size**

Type: `cybox.common.data_segment.DataSize`

XML Binding class name: `Data_Size`

Dictionary key name: `data_size`

#### **id\_**

XML Binding class name: `id`

Dictionary key name: `id`

#### **offset**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Offset`

Dictionary key name: `offset`

#### **search\_distance**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Search_Distance`

Dictionary key name: search\_distance

#### **search\_within**

Type: *cybox.common.properties.Integer*

XML Binding class name: Search\_Within

Dictionary key name: search\_within

**class** *cybox.common.data\_segment.DataSize* (\*args, \*\*kwargs)

Bases: *cybox.common.properties.String*

XML binding class: *cybox.bindings.cybox\_common.DataSizeType*

**static from\_dict** (*datasize\_dict*)

**static from\_obj** (*datasize\_obj*)

**is\_plain** ()

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

Version: 2.1.0.12.dev0

#### **cybox.common.daterange module**

**class** *cybox.common.daterange.DateRange*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.cybox\_common.DateRangeType*

#### **end\_date**

Type: *cybox.common.datetimewithprecision.DateWithPrecision*

XML Binding class name: End\_Date

Dictionary key name: end\_date

#### **start\_date**

Type: *cybox.common.datetimewithprecision.DateWithPrecision*

XML Binding class name: Start\_Date

Dictionary key name: start\_date

Version: 2.1.0.12.dev0

#### **cybox.common.datetimewithprecision module**

**class** *cybox.common.datetimewithprecision.DateTimeWithPrecision* (*value=None, precision='second'*)

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.cybox\_common.DateTimeWithPrecisionType*

**classmethod** `from_dict` (*dict\_*)

**classmethod** `from_obj` (*obj*)

`to_dict` ()

`to_obj` (*return\_obj=None, ns\_info=None*)

**class** `cybox.common.datetimewithprecision.DateWithPrecision` (*value=None, precision='day'*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DateWithPrecisionType`

**classmethod** `from_dict` (*dict\_*)

**classmethod** `from_obj` (*obj*)

`to_dict` ()

`to_obj` (*return\_obj=None, ns\_info=None*)

`cybox.common.datetimewithprecision.parse_value` (*value*)

`cybox.common.datetimewithprecision.serialize_value` (*value*)

**Version:** 2.1.0.12.dev0

#### **cybox.common.digitalsignature module**

**class** `cybox.common.digitalsignature.DigitalSignature`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DigitalSignatureInfoType`

#### **certificate\_issuer**

Type: `cybox.common.properties.String`  
XML Binding class name: `Certificate_Issuer`  
Dictionary key name: `certificate_issuer`

#### **certificate\_subject**

Type: `cybox.common.properties.String`  
XML Binding class name: `Certificate_Subject`  
Dictionary key name: `certificate_subject`

#### **signature\_description**

Type: `cybox.common.properties.String`  
XML Binding class name: `Signature_Description`  
Dictionary key name: `signature_description`

#### **signature\_exists**

XML Binding class name: signature\_exists

Dictionary key name: signature\_exists

#### **signature\_verified**

XML Binding class name: signature\_verified

Dictionary key name: signature\_verified

**class** cybox.common.digitalsignature.**DigitalSignatureList** (\*args)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_common.DigitalSignaturesType

**Version:** 2.1.0.12.dev0

#### **cybox.common.environment\_variable module**

**class** cybox.common.environment\_variable.**EnvironmentVariable**

Bases: cybox.Entity

XML binding class: <undefined>

**static from\_dict** (*environment\_variable\_dict*)

**static from\_obj** (*environment\_variable\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** cybox.common.environment\_variable.**EnvironmentVariableList** (\*args)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_common.EnvironmentVariableListType

**Version:** 2.1.0.12.dev0

#### **cybox.common.extracted\_features module**

**class** cybox.common.extracted\_features.**CodeSnippets** (\*args)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_common.CodeSnippetsType

**class** cybox.common.extracted\_features.**ExtractedFeatures**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_common.ExtractedFeaturesType

### **code\_snippets**

Type: *cybox.common.extracted\_features.CodeSnippets*

XML Binding class name: Code\_Snippets

Dictionary key name: code\_snippets

### **functions**

Type: *cybox.common.extracted\_features.Functions*

XML Binding class name: Functions

Dictionary key name: functions

### **imports**

Type: *cybox.common.extracted\_features.Imports*

XML Binding class name: Imports

Dictionary key name: imports

### **strings**

Type: *cybox.common.extracted\_string.ExtractedStrings*

XML Binding class name: Strings

Dictionary key name: strings

**class** `cybox.common.extracted_features.Functions` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.FunctionsType`

**class** `cybox.common.extracted_features.Imports` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.ImportsType`

**Version:** 2.1.0.12.dev0

### **cybox.common.extracted\_string module**

**class** `cybox.common.extracted_string.ExtractedString` (*string\_value=None*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ExtractedStringType`

### **address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Address

Dictionary key name: address

### **byte\_string\_value**

Type: *cybox.common.properties.String*

XML Binding class name: Byte\_String\_Value

Dictionary key name: byte\_string\_value

### **encoding**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Encoding

Dictionary key name: encoding

### **english\_translation**

Type: *cybox.common.properties.String*

XML Binding class name: English\_Translation

Dictionary key name: english\_translation

### **hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

### **language**

Type: *cybox.common.properties.String*

XML Binding class name: Language

Dictionary key name: language

### **length**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Length

Dictionary key name: length

### **string\_value**

Type: *cybox.common.properties.String*

XML Binding class name: String\_Value

Dictionary key name: string\_value

**class** `cybox.common.extracted_string.ExtractedStrings` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.ExtractedStringsType`

Version: 2.1.0.12.dev0

#### **cybox.common.hashes module**

**class** cybox.common.hashes.**Hash** (*hash\_value=None, type\_=None, exact=False*)  
Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_common.HashType

#### **fuzzy\_hash\_value**

Type: *cybox.common.properties.String*

XML Binding class name: Fuzzy\_Hash\_Value

Dictionary key name: fuzzy\_hash\_value

#### **simple\_hash\_value**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Simple\_Hash\_Value

Dictionary key name: simple\_hash\_value

#### **type\_**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Type

Dictionary key name: type

**class** cybox.common.hashes.**HashList** (*\*args*)  
Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_common.HashListType

Version: 2.1.0.12.dev0

#### **cybox.common.measuresource module**

**class** cybox.common.measuresource.**MeasureSource**  
Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_common.MeasureSourceType

#### **class\_**

XML Binding class name: classxx

Dictionary key name: class

**contributors**

Type: *cybox.common.contributor.Personnel*

XML Binding class name: Contributors

Dictionary key name: contributors

**description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

**information\_source\_type**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Information\_Source\_Type

Dictionary key name: information\_source\_type

**instance**

Type: *cybox.common.object\_properties.ObjectProperties*

XML Binding class name: Instance

Dictionary key name: instance

**name**

XML Binding class name: name

Dictionary key name: name

**platform**

Type: *cybox.common.platform\_specification.PlatformSpecification*

XML Binding class name: Platform

Dictionary key name: platform

**sighting\_count**

XML Binding class name: sighting\_count

Dictionary key name: sighting\_count

**source\_type**

XML Binding class name: source\_type

Dictionary key name: source\_type

**system**

Type: *cybox.common.object\_properties.ObjectProperties*

XML Binding class name: System

Dictionary key name: system

#### **time**

Type: *cybox.common.time.Time*

XML Binding class name: Time

Dictionary key name: time

#### **tool\_type**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Tool\_Type

Dictionary key name: tool\_type

#### **tools**

Type: *cybox.common.tools.ToolInformationList*

XML Binding class name: Tools

Dictionary key name: tools

Version: 2.1.0.12.dev0

### **cybox.common.object\_properties module**

**class** `cybox.common.object_properties.CustomProperties` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.CustomPropertiesType`

**class** `cybox.common.object_properties.ObjectProperties`

Bases: `cybox.Entity`

The Cybox ObjectProperties base class.

XML binding class: <undefined>

**add\_related** (*related, relationship, inline=True*)

#### **custom\_properties**

Type: *cybox.common.object\_properties.CustomProperties*

XML Binding class name: Custom\_Properties

Dictionary key name: custom\_properties

**classmethod from\_dict** (*defobj\_dict, defobj=None*)

**classmethod from\_obj** (*defobj\_obj, defobj=None*)

**object\_reference**

XML Binding class name: `object_reference`

Dictionary key name: `object_reference`

**to\_dict** (*partial\_dict=None*)

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.common.object_properties.Property`

Bases: `cybox.common.properties.String`

XML binding class: `cybox.bindings.cybox_common.PropertyType`

**static from\_dict** (*property\_dict*)

**static from\_obj** (*property\_obj*)

**is\_plain** ()

Whether the Property can be represented as a single value.

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

Version: 2.1.0.12.dev0

**cybox.common.platform\_specification module**

**class** `cybox.common.platform_specification.PlatformIdentifier`

Bases: `cybox.common.properties.String`

XML binding class: `cybox.bindings.cybox_common.PlatformIdentifierType`

**static from\_dict** (*platform\_identifier\_dict*)

**static from\_obj** (*platform\_identifier\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.common.platform_specification.PlatformSpecification`

Bases: `cybox.Entity`

Cybox Common PlatformSpecification object representation

XML binding class: <undefined>

**static from\_dict** (*platform\_specification\_dict*)

**static from\_obj** (*platform\_specification\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

Version: 2.1.0.12.dev0

### cybox.common.properties module

**class** cybox.common.properties.**BaseProperty** (*value=None*)

XML binding class: <undefined>

**is\_plain** ()

Whether the Property can be represented as a single value.

The *datatype* can be inferred by the particular BaseProperty subclass, so if *datatype* and *value* are the only non-None properties, the BaseProperty can be represented by a single value rather than a dictionary. This makes the JSON representation simpler without losing any data fidelity.

**class** cybox.common.properties.**AnyURI** (*value=None*)

XML binding class: cybox.bindings.cybox\_common.AnyURIObjectPropertyType

**class** cybox.common.properties.**Base64Binary** (*value=None*)

XML binding class: cybox.bindings.cybox\_common.Base64BinaryObjectPropertyType

**class** cybox.common.properties.**Date** (*value=None, precision='day'*)

XML binding class: cybox.bindings.cybox\_common.DateObjectPropertyType

**class** cybox.common.properties.**DateTime** (*value=None, precision='second'*)

XML binding class: cybox.bindings.cybox\_common.DateTimeObjectPropertyType

**class** cybox.common.properties.**Double** (*value=None*)

XML binding class: cybox.bindings.cybox\_common.DoubleObjectPropertyType

**class** cybox.common.properties.**Duration** (*value=None*)

XML binding class: cybox.bindings.cybox\_common.DurationObjectPropertyType

**class** cybox.common.properties.**Float** (*value=None*)

XML binding class: cybox.bindings.cybox\_common.FloatObjectPropertyType

**class** cybox.common.properties.**HexBinary** (*value=None*)

XML binding class: cybox.bindings.cybox\_common.HexBinaryObjectPropertyType

**class** cybox.common.properties.**Integer** (*value=None*)

XML binding class: cybox.bindings.cybox\_common.IntegerObjectPropertyType

**class** cybox.common.properties.**Long** (*value=None*)

XML binding class: cybox.bindings.cybox\_common.LongObjectPropertyType

**class** `cybox.common.properties.Name` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.NameObjectPropertyType`

**class** `cybox.common.properties.NonNegativeInteger` (*value=None*)

XML binding class:

`cybox.bindings.cybox_common.NonNegativeIntegerObjectPropertyType`

**class** `cybox.common.properties.PositiveInteger` (*value=None*)

XML binding class:

`cybox.bindings.cybox_common.PositiveIntegerObjectPropertyType`

**class** `cybox.common.properties.String` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.StringObjectPropertyType`

**class** `cybox.common.properties.Time` (*value=None, precision='second'*)

XML binding class: `cybox.bindings.cybox_common.TimeObjectPropertyType`

**class** `cybox.common.properties.UnsignedInteger` (*value=None*)

XML binding class:

`cybox.bindings.cybox_common.UnsignedIntegerObjectPropertyType`

**class** `cybox.common.properties.UnsignedLong` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.UnsignedLongObjectPropertyType`

**Version:** 2.1.0.12.dev0

#### **cybox.common.structured\_text** module

**class** `cybox.common.structured_text.StructuredText` (*value=None*)

Bases: `cybox.Entity`

XML binding class: <undefined>

**classmethod** `from_dict` (*text\_dict, text=None*)

**classmethod** `from_obj` (*text\_obj, text=None*)

**is\_plain** ()

Whether this can be represented as a string rather than a dictionary

Subclasses can override this to include their custom fields in this check:

return `(super(..., self).is_plain() and self.other_field is None)`

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**Version:** 2.1.0.12.dev0

**cybox.common.time module**

**class** cybox.common.time.**Time** (*start\_time=None, end\_time=None, produced\_time=None, received\_time=None*)

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_common.TimeType

**end\_time**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*

XML Binding class name: End\_Time

Dictionary key name: end\_time

**produced\_time**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*

XML Binding class name: Produced\_Time

Dictionary key name: produced\_time

**received\_time**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*

XML Binding class name: Received\_Time

Dictionary key name: received\_time

**start\_time**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*

XML Binding class name: Start\_Time

Dictionary key name: start\_time

Version: 2.1.0.12.dev0

**cybox.common.tools module**

**class** cybox.common.tools.**ToolInformation** (*tool\_name=None, tool\_vendor=None*)

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_common.ToolInformationType

**static from\_dict** (*toolinfo\_dict, toolinfo=None*)

**static from\_obj** (*toolinfo\_obj, toolinfo=None*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** cybox.common.tools.**ToolInformationList** (*\*args*)

Bases: cybox.EntityList

XML binding class: `cybox.bindings.cybox_common.ToolsInformationType`

Version: 2.1.0.12.dev0

#### **cybox.common.vocabs module**

**class** `cybox.common.vocabs.ActionArgumentName` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ActionName` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ActionObjectAssociationType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ActionRelationshipType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ActionType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.CharacterEncoding` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.EventType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.HashName` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.InformationSourceType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ObjectRelationship` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ObjectState` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ToolType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.VocabString` (*value=None*)  
Bases: `cybox.common.attribute_groups.PatternFieldGroup`, `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**classmethod** `from_dict` (*vocab\_dict*, *return\_obj=None*)

**classmethod** `from_obj` (*vocab\_obj*, *return\_obj=None*)

**is\_plain** ()

Whether the VocabString can be represented as a single value.

**static lookup\_class** (*xsi\_type*)

**to\_dict** ()

**to\_obj** (*return\_obj=None*, *ns\_info=None*)

`cybox.common.vocabs.register_vocab` (*cls*)

Register a VocabString subclass.

Also, calculate all the permitted values for class being decorated by adding an `_ALLOWED_VALUES` tuple of all the values of class members beginning with `TERM_`.

**Version:** 2.1.0.12.dev0

### `cybox.common.attribute_groups` module

**Version:** 2.1.0.12.dev0

### `cybox.common.byterun` module

**class** `cybox.common.byterun.ByteRun`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ByteRunType`

#### **byte\_order**

Type: `cybox.common.properties.String`

XML Binding class name: `Byte_Order`

Dictionary key name: `byte_order`

#### **byte\_run\_data**

XML Binding class name: `Byte_Run_Data`

Dictionary key name: `byte_run_data`

#### **file\_system\_offset**

Type: `cybox.common.properties.Integer`

XML Binding class name: `File_System_Offset`

Dictionary key name: `file_system_offset`

#### **hashes**

Type: `cybox.common.hashes.HashList`

XML Binding class name: `Hashes`

Dictionary key name: `hashes`

#### **image\_offset**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Image_Offset`

Dictionary key name: `image_offset`

#### **length**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Length  
Dictionary key name: length

**offset**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Offset  
Dictionary key name: offset

**class** `cybox.common.byterun.ByteRuns` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.ByteRunsType`

**Version:** 2.1.0.12.dev0

**cybox.common.contributor module**

**class** `cybox.common.contributor.Contributor`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ContributorType`

**contribution\_location**

XML Binding class name: Contribution\_Location  
Dictionary key name: contribution\_location

**date**

Type: *cybox.common.daterange.DateRange*  
XML Binding class name: Date  
Dictionary key name: date

**email**

XML Binding class name: Email  
Dictionary key name: email

**name**

XML Binding class name: Name  
Dictionary key name: name

**organization**

XML Binding class name: Organization

Dictionary key name: organization

#### **phone**

XML Binding class name: Phone

Dictionary key name: phone

#### **role**

XML Binding class name: Role

Dictionary key name: role

**class** cybox.common.contributor.**Personnel** (\*args)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_common.PersonnelType

**Version:** 2.1.0.12.dev0

### **cybox.common.data\_segment module**

**class** cybox.common.data\_segment.**DataSegment**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_common.DataSegmentType

#### **byte\_order**

Type: *cybox.common.properties.String*

XML Binding class name: Byte\_Order

Dictionary key name: byte\_order

#### **data\_format**

XML Binding class name: Data\_Format

Dictionary key name: data\_format

#### **data\_segment**

Type: *cybox.common.properties.String*

XML Binding class name: Data\_Segment

Dictionary key name: data\_segment

#### **data\_size**

Type: *cybox.common.data\_segment.DataSize*

XML Binding class name: Data\_Size

Dictionary key name: data\_size

**id\_**

XML Binding class name: id

Dictionary key name: id

**offset**

Type: *cybox.common.properties.Integer*

XML Binding class name: Offset

Dictionary key name: offset

**search\_distance**

Type: *cybox.common.properties.Integer*

XML Binding class name: Search\_Distance

Dictionary key name: search\_distance

**search\_within**

Type: *cybox.common.properties.Integer*

XML Binding class name: Search\_Within

Dictionary key name: search\_within

**class** *cybox.common.data\_segment.DataSize*(\*args, \*\*kwargs)  
Bases: *cybox.common.properties.String*

XML binding class: *cybox.bindings.cybox\_common.DataSizeType*

**static from\_dict** (*datasize\_dict*)

**static from\_obj** (*datasize\_obj*)

**is\_plain** ()

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**Version:** 2.1.0.12.dev0

**cybox.common.daterange module**

**class** *cybox.common.daterange.DateRange*  
Bases: *cybox.Entity*

XML binding class: *cybox.bindings.cybox\_common.DateRangeType*

**end\_date**

Type: *cybox.common.datetimewithprecision.DateWithPrecision*

XML Binding class name: End\_Date

Dictionary key name: end\_date

**start\_date**

Type: *cybox.common.datetimewithprecision.DateWithPrecision*

XML Binding class name: Start\_Date

Dictionary key name: start\_date

**Version:** 2.1.0.12.dev0

### **cybox.common.datetimewithprecision module**

**class** `cybox.common.datetimewithprecision.DateTimeWithPrecision` (*value=None, precision='second'*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DateTimeWithPrecisionType`

**classmethod** `from_dict` (*dict\_*)

**classmethod** `from_obj` (*obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.common.datetimewithprecision.DateWithPrecision` (*value=None, precision='day'*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DateWithPrecisionType`

**classmethod** `from_dict` (*dict\_*)

**classmethod** `from_obj` (*obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

`cybox.common.datetimewithprecision.parse_value` (*value*)

`cybox.common.datetimewithprecision.serialize_value` (*value*)

**Version:** 2.1.0.12.dev0

### **cybox.common.digitalsignature module**

**class** `cybox.common.digitalsignature.DigitalSignature`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DigitalSignatureInfoType`

**certificate\_issuer**

Type: *cybox.common.properties.String*  
XML Binding class name: Certificate\_Issuer  
Dictionary key name: certificate\_issuer

**certificate\_subject**

Type: *cybox.common.properties.String*  
XML Binding class name: Certificate\_Subject  
Dictionary key name: certificate\_subject

**signature\_description**

Type: *cybox.common.properties.String*  
XML Binding class name: Signature\_Description  
Dictionary key name: signature\_description

**signature\_exists**

XML Binding class name: signature\_exists  
Dictionary key name: signature\_exists

**signature\_verified**

XML Binding class name: signature\_verified  
Dictionary key name: signature\_verified

**class** cybox.common.digitalsignature.**DigitalSignatureList** (\*args)  
Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_common.DigitalSignaturesType

**Version:** 2.1.0.12.dev0

**cybox.common.environment\_variable module**

**class** cybox.common.environment\_variable.**EnvironmentVariable**  
Bases: cybox.Entity

XML binding class: <undefined>

**static from\_dict** (*environment\_variable\_dict*)

**static from\_obj** (*environment\_variable\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.common.environment_variable.EnvironmentVariableList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.EnvironmentVariableListType`

**Version:** 2.1.0.12.dev0

### **cybox.common.extracted\_features module**

**class** `cybox.common.extracted_features.CodeSnippets` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.CodeSnippetsType`

**class** `cybox.common.extracted_features.ExtractedFeatures`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ExtractedFeaturesType`

#### **code\_snippets**

Type: `cybox.common.extracted_features.CodeSnippets`

XML Binding class name: `Code_Snippets`

Dictionary key name: `code_snippets`

#### **functions**

Type: `cybox.common.extracted_features.Functions`

XML Binding class name: `Functions`

Dictionary key name: `functions`

#### **imports**

Type: `cybox.common.extracted_features.Imports`

XML Binding class name: `Imports`

Dictionary key name: `imports`

#### **strings**

Type: `cybox.common.extracted_string.ExtractedStrings`

XML Binding class name: `Strings`

Dictionary key name: `strings`

**class** `cybox.common.extracted_features.Functions` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.FunctionsType`

**class** `cybox.common.extracted_features.Imports` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.ImportsType`

**Version:** 2.1.0.12.dev0

### **cybox.common.extracted\_string module**

**class** `cybox.common.extracted_string.ExtractedString` (*string\_value=None*)  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ExtractedStringType`

#### **address**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: Address  
Dictionary key name: address

#### **byte\_string\_value**

Type: `cybox.common.properties.String`  
XML Binding class name: Byte\_String\_Value  
Dictionary key name: byte\_string\_value

#### **encoding**

TypedField subclass for VocabString fields.

Type: `cybox.common.vocabs.VocabString`  
XML Binding class name: Encoding  
Dictionary key name: encoding

#### **english\_translation**

Type: `cybox.common.properties.String`  
XML Binding class name: English\_Translation  
Dictionary key name: english\_translation

#### **hashes**

Type: `cybox.common.hashes.HashList`

XML Binding class name: Hashes

Dictionary key name: hashes

#### **language**

Type: *cybox.common.properties.String*

XML Binding class name: Language

Dictionary key name: language

#### **length**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Length

Dictionary key name: length

#### **string\_value**

Type: *cybox.common.properties.String*

XML Binding class name: String\_Value

Dictionary key name: string\_value

**class** `cybox.common.extracted_string.ExtractedStrings` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.ExtractedStringsType`

**Version:** 2.1.0.12.dev0

### **cybox.common.hashes module**

**class** `cybox.common.hashes.Hash` (*hash\_value=None, type\_=None, exact=False*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.HashType`

#### **fuzzy\_hash\_value**

Type: *cybox.common.properties.String*

XML Binding class name: Fuzzy\_Hash\_Value

Dictionary key name: fuzzy\_hash\_value

#### **simple\_hash\_value**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Simple\_Hash\_Value

Dictionary key name: simple\_hash\_value

**type\_**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Type

Dictionary key name: type

**class** `cybox.common.hashes.HashList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.HashListType`

Version: 2.1.0.12.dev0

**cybox.common.measuresource module**

**class** `cybox.common.measuresource.MeasureSource`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.MeasureSourceType`

**class\_**

XML Binding class name: classxx

Dictionary key name: class

**contributors**

Type: *cybox.common.contributor.Personnel*

XML Binding class name: Contributors

Dictionary key name: contributors

**description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

**information\_source\_type**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Information\_Source\_Type

Dictionary key name: information\_source\_type

**instance**

Type: *cybox.common.object\_properties.ObjectProperties*

XML Binding class name: Instance

Dictionary key name: instance

**name**

XML Binding class name: name

Dictionary key name: name

**platform**

Type: *cybox.common.platform\_specification.PlatformSpecification*

XML Binding class name: Platform

Dictionary key name: platform

**sighting\_count**

XML Binding class name: sighting\_count

Dictionary key name: sighting\_count

**source\_type**

XML Binding class name: source\_type

Dictionary key name: source\_type

**system**

Type: *cybox.common.object\_properties.ObjectProperties*

XML Binding class name: System

Dictionary key name: system

**time**

Type: *cybox.common.time.Time*

XML Binding class name: Time

Dictionary key name: time

**tool\_type**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Tool\_Type

Dictionary key name: tool\_type

**tools**

Type: *cybox.common.tools.ToolInformationList*

XML Binding class name: Tools

Dictionary key name: tools

Version: 2.1.0.12.dev0

### **cybox.common.object\_properties module**

**class** `cybox.common.object_properties.CustomProperties` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.CustomPropertiesType`

**class** `cybox.common.object_properties.ObjectProperties`

Bases: `cybox.Entity`

The Cybox ObjectProperties base class.

XML binding class: <undefined>

**add\_related** (*related, relationship, inline=True*)

**custom\_properties**

Type: `cybox.common.object_properties.CustomProperties`

XML Binding class name: `Custom_Properties`

Dictionary key name: `custom_properties`

**classmethod from\_dict** (*defobj\_dict, defobj=None*)

**classmethod from\_obj** (*defobj\_obj, defobj=None*)

**object\_reference**

XML Binding class name: `object_reference`

Dictionary key name: `object_reference`

**to\_dict** (*partial\_dict=None*)

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.common.object_properties.Property`

Bases: `cybox.common.properties.String`

XML binding class: `cybox.bindings.cybox_common.PropertyType`

**static from\_dict** (*property\_dict*)

**static from\_obj** (*property\_obj*)

**is\_plain** ()

Whether the Property can be represented as a single value.

`to_dict ()`

`to_obj (return_obj=None, ns_info=None)`

Version: 2.1.0.12.dev0

### cybox.common.platform\_specification module

**class** `cybox.common.platform_specification.PlatformIdentifier`

Bases: `cybox.common.properties.String`

XML binding class: `cybox.bindings.cybox_common.PlatformIdentifierType`

**static** `from_dict (platform_identifier_dict)`

**static** `from_obj (platform_identifier_obj)`

`to_dict ()`

`to_obj (return_obj=None, ns_info=None)`

**class** `cybox.common.platform_specification.PlatformSpecification`

Bases: `cybox.Entity`

CyBOX Common PlatformSpecification object representation

XML binding class: <undefined>

**static** `from_dict (platform_specification_dict)`

**static** `from_obj (platform_specification_obj)`

`to_dict ()`

`to_obj (return_obj=None, ns_info=None)`

Version: 2.1.0.12.dev0

### cybox.common.properties module

**class** `cybox.common.properties.BaseProperty (value=None)`

XML binding class: <undefined>

**is\_plain ()**

Whether the Property can be represented as a single value.

The *datatype* can be inferred by the particular BaseProperty subclass, so if *datatype* and *value* are the only non-None properties, the BaseProperty can be represented by a single value rather than a dictionary. This makes the JSON representation simpler without losing any data fidelity.

**class** `cybox.common.properties.AnyURI (value=None)`

XML binding class: `cybox.bindings.cybox_common.AnyURIObjectPropertyType`

**class** `cybox.common.properties.Base64Binary` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.Base64BinaryObjectPropertyType`

**class** `cybox.common.properties.Date` (*value=None, precision='day'*)

XML binding class: `cybox.bindings.cybox_common.DateObjectPropertyType`

**class** `cybox.common.properties.DateTime` (*value=None, precision='second'*)

XML binding class: `cybox.bindings.cybox_common.DateTimeObjectPropertyType`

**class** `cybox.common.properties.Double` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.DoubleObjectPropertyType`

**class** `cybox.common.properties.Duration` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.DurationObjectPropertyType`

**class** `cybox.common.properties.Float` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.FloatObjectPropertyType`

**class** `cybox.common.properties.HexBinary` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.HexBinaryObjectPropertyType`

**class** `cybox.common.properties.Integer` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.IntegerObjectPropertyType`

**class** `cybox.common.properties.Long` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.LongObjectPropertyType`

**class** `cybox.common.properties.Name` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.NameObjectPropertyType`

**class** `cybox.common.properties.NonNegativeInteger` (*value=None*)

XML binding class:

`cybox.bindings.cybox_common.NonNegativeIntegerObjectPropertyType`

**class** `cybox.common.properties.PositiveInteger` (*value=None*)

XML binding class:

`cybox.bindings.cybox_common.PositiveIntegerObjectPropertyType`

**class** `cybox.common.properties.String` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.StringObjectPropertyType`

**class** `cybox.common.properties.Time` (*value=None, precision='second'*)

XML binding class: `cybox.bindings.cybox_common.TimeObjectPropertyType`

**class** `cybox.common.properties.UnsignedInteger` (*value=None*)

XML binding class:

`cybox.bindings.cybox_common.UnsignedIntegerObjectPropertyType`

**class** `cybox.common.properties.UnsignedLong` (*value=None*)

XML binding class: `cybox.bindings.cybox_common.UnsignedLongObjectPropertyType`

**Version:** 2.1.0.12.dev0

### **cybox.common.structured\_text module**

**class** `cybox.common.structured_text.StructuredText` (*value=None*)

Bases: `cybox.Entity`

XML binding class: <undefined>

**classmethod** `from_dict` (*text\_dict, text=None*)

**classmethod** `from_obj` (*text\_obj, text=None*)

**is\_plain** ()

Whether this can be represented as a string rather than a dictionary

Subclasses can override this to include their custom fields in this check:

return `(super(..., self).is_plain() and self.other_field is None)`

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**Version:** 2.1.0.12.dev0

### **cybox.common.time module**

**class** `cybox.common.time.Time` (*start\_time=None, end\_time=None, produced\_time=None, received\_time=None*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.TimeType`

**end\_time**

Type: `cybox.common.datetimewithprecision.DateTimeWithPrecision`

XML Binding class name: `End_Time`

Dictionary key name: end\_time

#### **produced\_time**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*

XML Binding class name: Produced\_Time

Dictionary key name: produced\_time

#### **received\_time**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*

XML Binding class name: Received\_Time

Dictionary key name: received\_time

#### **start\_time**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*

XML Binding class name: Start\_Time

Dictionary key name: start\_time

Version: 2.1.0.12.dev0

### **cybox.common.tools module**

**class** `cybox.common.tools.ToolInformation` (*tool\_name=None, tool\_vendor=None*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ToolInformationType`

**static from\_dict** (*toolinfo\_dict, toolinfo=None*)

**static from\_obj** (*toolinfo\_obj, toolinfo=None*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.common.tools.ToolInformationList` (*\*args*)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.ToolsInformationType`

Version: 2.1.0.12.dev0

### **cybox.common.vocabs module**

**class** `cybox.common.vocabs.ActionArgumentName` (*value=None*)

Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ActionName` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ActionObjectAssociationType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ActionRelationshipType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ActionType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.CharacterEncoding` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.EventType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.HashName` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.InformationSourceType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ObjectRelationship` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ObjectState` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.ToolType` (*value=None*)  
Bases: `cybox.common.vocabs.VocabString`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**class** `cybox.common.vocabs.VocabString` (*value=None*)  
Bases: `cybox.common.attribute_groups.PatternFieldGroup`, `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**classmethod** `from_dict` (*vocab\_dict*, *return\_obj=None*)

**classmethod** `from_obj` (*vocab\_obj*, *return\_obj=None*)

**is\_plain** ()

Whether the VocabString can be represented as a single value.

**static lookup\_class** (*xsi\_type*)

**to\_dict** ()

**to\_obj** (*return\_obj=None*, *ns\_info=None*)

`cybox.common.vocabs.register_vocab` (*cls*)  
Register a VocabString subclass.

Also, calculate all the permitted values for class being decorated by adding an `_ALLOWED_VALUES` tuple of all the values of class members beginning with `TERM_`.

### 3.1.2 CybOX Core

Modules located in the base `cybox.core` package

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**Note:** Most objects from the CybOX Core schema can be implemented directly from the `cybox.core` package, rather than needing to remember which submodule they are defined in.

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Version: 2.1.0.12.dev0

## cybox.core package

### Submodules

Version: 2.1.0.12.dev0

#### cybox.core.action module

class cybox.core.action.Action

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_core.ActionType

#### action\_aliases

Type: *cybox.core.action.ActionAliases*

XML Binding class name: ActionAliases

Dictionary key name: action\_aliases

#### action\_arguments

Type: *cybox.core.action.ActionArguments*

XML Binding class name: ActionArguments

Dictionary key name: action\_arguments

#### action\_status

XML Binding class name: action\_status

Dictionary key name: action\_status

#### associated\_objects

Type: *cybox.core.action.AssociatedObjects*

XML Binding class name: AssociatedObjects

Dictionary key name: associated\_objects

#### context

XML Binding class name: context

Dictionary key name: context

#### description

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

### **discovery\_method**

Type: *cybox.common.measuresource.MeasureSource*

XML Binding class name: Discovery\_Method

Dictionary key name: discovery\_method

### **frequency**

Type: *cybox.core.frequency.Frequency*

XML Binding class name: Frequency

Dictionary key name: frequency

### **id\_**

XML Binding class name: id

Dictionary key name: id

### **idref**

XML Binding class name: idref

Dictionary key name: idref

### **name**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Name

Dictionary key name: name

### **ordinal\_position**

XML Binding class name: ordinal\_position

Dictionary key name: ordinal\_position

### **relationships**

Type: *cybox.core.action.ActionRelationships*

XML Binding class name: Relationships

Dictionary key name: relationships

### **timestamp**

XML Binding class name: timestamp

Dictionary key name: timestamp

### **type\_**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Type

Dictionary key name: type

**class** cybox.core.action.**ActionAliases** (\*args)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_core.ActionAliasesType

**class** cybox.core.action.**ActionArgument**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_core.ActionArgumentType

**argument\_name**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Argument\_Name

Dictionary key name: argument\_name

**argument\_value**

XML Binding class name: Argument\_Value

Dictionary key name: argument\_value

**class** cybox.core.action.**ActionArguments** (\*args)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_core.ActionArgumentsType

**class** cybox.core.action.**ActionRelationship**

Bases: cybox.Entity

XML binding class: <undefined>

**static from\_dict** (*action\_relationship\_dict*)

**static from\_obj** (*action\_relationship\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** cybox.core.action.**ActionRelationships** (\*args)

Bases: cybox.EntityList

XML binding class: `cybox.bindings.cybox_core.ActionRelationshipsType`

```
class cybox.core.action.Actions(*args)
    Bases: cybox.EntityList
```

XML binding class: `cybox.bindings.cybox_core.ActionsType`

```
class cybox.core.action.AssociatedObjects(*args)
    Bases: cybox.EntityList
```

XML binding class: `cybox.bindings.cybox_core.AssociatedObjectsType`

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**cybox.core.action\_reference module** CyBOX Action Reference Class

```
class cybox.core.action_reference.ActionReference(action_id=None)
    Bases: cybox.Entity
```

XML binding class: `cybox.bindings.cybox_core.ActionReferenceType`

**action\_id**

XML Binding class name: `action_id`  
Dictionary key name: `action_id`

Version: 2.1.0.12.dev0

**cybox.core.associated\_object module**

```
class cybox.core.associated_object.AssociatedObject(defined_object=None, type_=None,
    association_type=None)
```

Bases: `cybox.core.object.Object`

The CyBOX Associated Object element.

Currently only supports the `id`, `association_type` and `ObjectProperties` properties

XML binding class: <undefined>

**static from\_dict** (*object\_dict*)

**static from\_obj** (*object\_obj*)

**superclass**

alias of `Object` | XML binding class: <undefined>

**to\_dict** ()

`to_obj` (*return\_obj=None, ns\_info=None*)

Version: 2.1.0.12.dev0

### **cybox.core.event module**

**class** `cybox.core.event.Event`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_core.EventType`

#### **actions**

Type: `cybox.core.action.Actions`

XML Binding class name: `Actions`

Dictionary key name: `actions`

#### **description**

Type: `cybox.common.structured_text.StructuredText`

XML Binding class name: `Description`

Dictionary key name: `description`

#### **event**

(List of values permitted)

Type: `cybox.core.event.Event`

XML Binding class name: `Event`

Dictionary key name: `event`

#### **frequency**

Type: `cybox.core.frequency.Frequency`

XML Binding class name: `Frequency`

Dictionary key name: `frequency`

#### **id\_**

XML Binding class name: `id`

Dictionary key name: `id`

#### **idref**

XML Binding class name: `idref`

Dictionary key name: `idref`

#### **observation\_method**

Type: `cybox.common.measuresource.MeasureSource`

XML Binding class name: `Observation_Method`

Dictionary key name: `observation_method`

**type\_**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Type

Dictionary key name: type

Version: 2.1.0.12.dev0

**cybox.core.frequency module**

**class** `cybox.core.frequency.Frequency`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_core.FrequencyType`

**rate**

XML Binding class name: rate

Dictionary key name: rate

**scale**

XML Binding class name: scale

Dictionary key name: scale

**trend**

XML Binding class name: trend

Dictionary key name: trend

**units**

XML Binding class name: units

Dictionary key name: units

Version: 2.1.0.12.dev0

**cybox.core.object module**

**class** `cybox.core.object.DomainSpecificObjectProperties`

Bases: `cybox.Entity`

The Cybox DomainSpecificObjectProperties base class.

XML binding class: <undefined>

**static from\_dict** (*domain\_specific\_properties\_dict*)

**static from\_obj** (*domain\_specific\_properties\_obj*)

**to\_dict** (*partial\_dict=None*)

Populate an existing dictionary.

Note that this is different than `to_dict()` on most other CybOX types.

**to\_obj** (*return\_obj=None, ns\_info=None*)

Populate an existing bindings object.

Note that this is different than `to_obj()` on most other CybOX types.

**class** `cybox.core.object.Object` (*properties=None, type\_=None*)

Bases: `cybox.Entity`

The CybOX Object element.

Currently only supports the following data members: - `id_` - `idref` - `properties` - `related_objects`

XML binding class: <undefined>

**add\_related** (*related, relationship, inline=True*)

**static from\_dict** (*object\_dict, obj=None*)

**static from\_obj** (*object\_obj, obj=None*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.core.object.RelatedObject` (*\*args, \*\*kwargs*)

Bases: `cybox.core.object.Object`

XML binding class: <undefined>

**static from\_dict** (*relobj\_dict*)

**static from\_obj** (*relobj\_obj*)

**get\_properties** ()

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

`cybox.core.object.add_external_class` (*klass, name=None*)

Adds a class implementation to this binding's `globals()` dict.

These classes can be used to implement `Properties`, `Domain_Specific_Object_Properties`, or `Defined_Effect` fields on an `Object`.

#### Parameters

- **klass** (*class*) – Python class that implements the new type
- **name** (*str*) – The name of the class, as it will appear in XML documents to be parsed. Defaults to `klass.__name__`.

Version: 2.1.0.12.dev0

**cybox.core.observable module**

**class** cybox.core.observable.**Keywords** (\*args)  
Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox\_core.KeywordsType

**class** cybox.core.observable.**Observable** (item=None, id=None, idref=None, title=None, description=None)  
Bases: cybox.Entity

Bases: cybox.Entity

A single Observable.

XML binding class: <undefined>

**add\_keyword** (value)

**static from\_dict** (observable\_dict)

**static from\_obj** (observable\_obj)

**to\_dict** ()

**to\_obj** (return\_obj=None, ns\_info=None)

**class** cybox.core.observable.**ObservableComposition** (operator='AND', observables=None)  
Bases: cybox.Entity

The ObservableCompositionType entity defines a logical compositions of CybOX Observables. The combinatorial behavior is derived from the operator property.

XML binding class: <undefined>

**add** (observable)

**static from\_dict** (observable\_comp\_dict)

**static from\_obj** (observable\_comp\_obj)

**to\_dict** ()

**to\_obj** (return\_obj=None, ns\_info=None)

**class** cybox.core.observable.**Observables** (observables=None)  
Bases: cybox.EntityList

The root CybOX Observables object.

Pools are not currently supported.

XML binding class: <undefined>

**add** (observable)

**static from\_dict** (observables\_dict)

```
static from_obj (observables_obj)
to_dict ()
to_obj (return_obj=None, ns_info=None)
```

Version: 2.1.0.12.dev0

### cybox.core.action module

class cybox.core.action.Action  
Bases: cybox.Entity

XML binding class: cybox.bindings.cybox\_core.ActionType

#### action\_aliases

Type: *cybox.core.action.ActionAliases*  
XML Binding class name: ActionAliases  
Dictionary key name: action\_aliases

#### action\_arguments

Type: *cybox.core.action.ActionArguments*  
XML Binding class name: ActionArguments  
Dictionary key name: action\_arguments

#### action\_status

XML Binding class name: action\_status  
Dictionary key name: action\_status

#### associated\_objects

Type: *cybox.core.action.AssociatedObjects*  
XML Binding class name: AssociatedObjects  
Dictionary key name: associated\_objects

#### context

XML Binding class name: context  
Dictionary key name: context

#### description

Type: *cybox.common.structured\_text.StructuredText*  
XML Binding class name: Description  
Dictionary key name: description

#### discovery\_method

Type: *cybox.common.measuresource.MeasureSource*  
XML Binding class name: Discovery\_Method  
Dictionary key name: discovery\_method

#### **frequency**

Type: *cybox.core.frequency.Frequency*  
XML Binding class name: Frequency  
Dictionary key name: frequency

#### **id\_**

XML Binding class name: id  
Dictionary key name: id

#### **idref**

XML Binding class name: idref  
Dictionary key name: idref

#### **name**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*  
XML Binding class name: Name  
Dictionary key name: name

#### **ordinal\_position**

XML Binding class name: ordinal\_position  
Dictionary key name: ordinal\_position

#### **relationships**

Type: *cybox.core.action.ActionRelationships*  
XML Binding class name: Relationships  
Dictionary key name: relationships

#### **timestamp**

XML Binding class name: timestamp  
Dictionary key name: timestamp

#### **type\_**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*  
XML Binding class name: Type  
Dictionary key name: type

**class** `cybox.core.action.ActionAliases` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_core.ActionAliasesType`

**class** `cybox.core.action.ActionArgument`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_core.ActionArgumentType`

**argument\_name**  
TypedField subclass for VocabString fields.

Type: `cybox.common.vocabs.VocabString`  
XML Binding class name: `Argument_Name`  
Dictionary key name: `argument_name`

**argument\_value**

XML Binding class name: `Argument_Value`  
Dictionary key name: `argument_value`

**class** `cybox.core.action.ActionArguments` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_core.ActionArgumentsType`

**class** `cybox.core.action.ActionRelationship`  
Bases: `cybox.Entity`

XML binding class: <undefined>

**static from\_dict** (*action\_relationship\_dict*)

**static from\_obj** (*action\_relationship\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.core.action.ActionRelationships` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_core.ActionRelationshipsType`

**class** `cybox.core.action.Actions` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_core.ActionsType`

**class** `cybox.core.action.AssociatedObjects` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_core.AssociatedObjectsType`

**Version:** 2.1.0.12.dev0

### **cybox.core.action\_reference module**

CyBOX Action Reference Class

**class** `cybox.core.action_reference.ActionReference` (*action\_id=None*)  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_core.ActionReferenceType`

**action\_id**

XML Binding class name: `action_id`

Dictionary key name: `action_id`

**Version:** 2.1.0.12.dev0

### **cybox.core.associated\_object module**

**class** `cybox.core.associated_object.AssociatedObject` (*defined\_object=None, type\_=None, association\_type=None*)

Bases: `cybox.core.object.Object`

The CyBOX Associated Object element.

Currently only supports the `id`, `association_type` and `ObjectProperties` properties

XML binding class: <undefined>

**static from\_dict** (*object\_dict*)

**static from\_obj** (*object\_obj*)

**superclass**

alias of `Object` | XML binding class: <undefined>

**to\_dict** ()

`to_obj` (*return\_obj=None, ns\_info=None*)

Version: 2.1.0.12.dev0

### **cybox.core.event module**

**class** `cybox.core.event.Event`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_core.EventType`

#### **actions**

Type: `cybox.core.action.Actions`

XML Binding class name: `Actions`

Dictionary key name: `actions`

#### **description**

Type: `cybox.common.structured_text.StructuredText`

XML Binding class name: `Description`

Dictionary key name: `description`

#### **event**

(List of values permitted)

Type: `cybox.core.event.Event`

XML Binding class name: `Event`

Dictionary key name: `event`

#### **frequency**

Type: `cybox.core.frequency.Frequency`

XML Binding class name: `Frequency`

Dictionary key name: `frequency`

#### **id\_**

XML Binding class name: `id`

Dictionary key name: `id`

#### **idref**

XML Binding class name: `idref`

Dictionary key name: `idref`

#### **observation\_method**

Type: `cybox.common.measuresource.MeasureSource`

XML Binding class name: `Observation_Method`

Dictionary key name: `observation_method`

#### **type\_**

TypedField subclass for VocabString fields.

Type: `cybox.common.vocabs.VocabString`

XML Binding class name: `Type`

Dictionary key name: `type`

**Version:** 2.1.0.12.dev0

### **cybox.core.frequency module**

**class** `cybox.core.frequency.Frequency`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_core.FrequencyType`

#### **rate**

XML Binding class name: `rate`

Dictionary key name: `rate`

#### **scale**

XML Binding class name: `scale`

Dictionary key name: `scale`

#### **trend**

XML Binding class name: `trend`

Dictionary key name: `trend`

#### **units**

XML Binding class name: `units`

Dictionary key name: `units`

**Version:** 2.1.0.12.dev0

### **cybox.core.object module**

**class** `cybox.core.object.DomainSpecificObjectProperties`

Bases: `cybox.Entity`

The Cybox DomainSpecificObjectProperties base class.

XML binding class: <undefined>

**static from\_dict** (*domain\_specific\_properties\_dict*)

**static from\_obj** (*domain\_specific\_properties\_obj*)

**to\_dict** (*partial\_dict=None*)

Populate an existing dictionary.

Note that this is different than to\_dict() on most other CybOX types.

**to\_obj** (*return\_obj=None, ns\_info=None*)

Populate an existing bindings object.

Note that this is different than to\_obj() on most other CybOX types.

**class** cybox.core.object.**Object** (*properties=None, type\_=None*)

Bases: cybox.Entity

The CybOX Object element.

Currently only supports the following data members: - id\_ - idref - properties - related\_objects

XML binding class: <undefined>

**add\_related** (*related, relationship, inline=True*)

**static from\_dict** (*object\_dict, obj=None*)

**static from\_obj** (*object\_obj, obj=None*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** cybox.core.object.**RelatedObject** (*\*args, \*\*kwargs*)

Bases: *cybox.core.object.Object*

XML binding class: <undefined>

**static from\_dict** (*relobj\_dict*)

**static from\_obj** (*relobj\_obj*)

**get\_properties** ()

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

cybox.core.object.**add\_external\_class** (*klass, name=None*)

Adds a class implementation to this binding's globals() dict.

These classes can be used to implement Properties, Domain\_Specific\_Object\_Properties, or Defined\_Effect fields on an Object.

#### Parameters

- **klass** (*class*) – Python class that implements the new type

- **name** (*str*) – The name of the class, as it will appear in XML documents to be parsed. Defaults to `klass.__name__`.

**Version:** 2.1.0.12.dev0

### **cybox.core.observable** module

**class** `cybox.core.observable.Keywords` (*\*args*)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_core.KeywordsType`

**class** `cybox.core.observable.Observable` (*item=None, id=None, idref=None, title=None, description=None*)

Bases: `cybox.Entity`

A single Observable.

XML binding class: <undefined>

**add\_keyword** (*value*)

**static from\_dict** (*observable\_dict*)

**static from\_obj** (*observable\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.core.observable.ObservableComposition` (*operator='AND', observables=None*)  
Bases: `cybox.Entity`

The `ObservableCompositionType` entity defines a logical compositions of CybOX Observables. The combinatorial behavior is derived from the operator property.

XML binding class: <undefined>

**add** (*observable*)

**static from\_dict** (*observable\_comp\_dict*)

**static from\_obj** (*observable\_comp\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.core.observable.Observables` (*observables=None*)  
Bases: `cybox.EntityList`

The root CybOX Observables object.

Pools are not currently supported.

XML binding class: <undefined>

```
add (observable)  
static from_dict (observables_dict)  
static from_obj (observables_obj)  
to_dict ()  
to_obj (return_obj=None, ns_info=None)
```

### 3.1.3 CybOX Objects

Modules located in the base `cybox.objects` package

**Version:** 2.1.0.12.dev0

#### `cybox.objects` package

##### Submodules

**Version:** 2.1.0.12.dev0

#### `cybox.objects.account_object` module

**class** `cybox.objects.account_object.Account`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.account_object.AccountObjectType`

#### **authentication**

(List of values permitted)

Type: `cybox.objects.account_object.Authentication`

XML Binding class name: Authentication

Dictionary key name: authentication

#### **creation\_date**

Type: `cybox.common.properties.DateTime`

XML Binding class name: Creation\_Date

Dictionary key name: creation\_date

#### **description**

Type: `cybox.common.properties.String`

XML Binding class name: Description

Dictionary key name: description

#### **disabled**

XML Binding class name: disabled

Dictionary key name: disabled

#### **domain**

Type: *cybox.common.properties.String*

XML Binding class name: Domain

Dictionary key name: domain

#### **last\_accessed\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Last\_Accessed\_Time

Dictionary key name: last\_accessed\_time

#### **locked\_out**

XML Binding class name: locked\_out

Dictionary key name: locked\_out

#### **modified\_date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Modified\_Date

Dictionary key name: modified\_date

**class** `cybox.objects.account_object.Authentication`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.account_object.AuthenticationType`

#### **authentication\_data**

Type: *cybox.common.properties.String*

XML Binding class name: Authentication\_Data

Dictionary key name: authentication\_data

#### **authentication\_token\_protection\_mechanism**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Authentication-Token-Protection-Mechanism

Dictionary key name: authentication\_token\_protection\_mechanism

#### **authentication\_type**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*  
XML Binding class name: Authentication\_Type  
Dictionary key name: authentication\_type

#### **structured\_authentication\_mechanism**

Type: *cybox.objects.account\_object.StructuredAuthenticationMechanism*  
XML Binding class name: Structured\_Authentication\_Mechanism  
Dictionary key name: structured\_authentication\_mechanism

**class** `cybox.objects.account_object.StructuredAuthenticationMechanism`  
Bases: `cybox.Entity`

XML binding class:  
`cybox.bindings.account_object.StructuredAuthenticationMechanismType`

#### **description**

Type: *cybox.common.properties.String*  
XML Binding class name: Description  
Dictionary key name: description

**Version:** 2.1.0.12.dev0

#### **cybox.objects.address\_object module**

**class** `cybox.objects.address_object.Address` (*address\_value=None, category=None*)  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.address_object.AddressObjectType`

#### **address\_value**

Type: *cybox.common.properties.String*  
XML Binding class name: Address\_Value  
Dictionary key name: address\_value

#### **category**

XML Binding class name: category  
Dictionary key name: category

#### **is\_destination**

XML Binding class name: is\_destination  
Dictionary key name: is\_destination

#### **is\_source**

XML Binding class name: `is_source`

Dictionary key name: `is_source`

#### **is\_spoofed**

XML Binding class name: `is_spoofed`

Dictionary key name: `is_spoofed`

#### **vlan\_name**

Type: `cybox.common.properties.String`

XML Binding class name: `VLAN_Name`

Dictionary key name: `vlan_name`

#### **vlan\_num**

Type: `cybox.common.properties.Integer`

XML Binding class name: `VLAN_Num`

Dictionary key name: `vlan_num`

**class** `cybox.objects.address_object.EmailAddress` (*addr\_string=None*)

Bases: `cybox.objects.address_object.Address`

Convenience class for creating email addresses.

Note that this is not an actual CybOX type.

XML binding class: `cybox.bindings.address_object.AddressObjectType`

#### **classmethod `istypeof`** (*obj*)

Version: 2.1.0.12.dev0

#### **cybox.objects.api\_object module**

**class** `cybox.objects.api_object.API`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.api_object.APIObjectType`

#### **address**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Address`

Dictionary key name: `address`

#### **description**

Type: `cybox.common.structured_text.StructuredText`

XML Binding class name: Description

Dictionary key name: description

**function\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Function\_Name

Dictionary key name: function\_name

**normalized\_function\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Normalized\_Function\_Name

Dictionary key name: normalized\_function\_name

**platform**

Type: *cybox.common.platform\_specification.PlatformSpecification*

XML Binding class name: Platform

Dictionary key name: platform

Version: 2.1.0.12.dev0

**cybox.objects.archive\_file\_object module**

**class** `cybox.objects.archive_file_object.ArchiveFile`

Bases: *cybox.objects.file\_object.File*

XML binding class: `cybox.bindings.file_object.FileObjectType`

**archive\_format**

Type: *cybox.common.properties.String*

XML Binding class name: Archive\_Format

Dictionary key name: archive\_format

**archived\_file**

(List of values permitted)

Type: *cybox.objects.file\_object.File*

XML Binding class name: Archived\_File

Dictionary key name: archived\_file

**comment**

Type: *cybox.common.properties.String*

XML Binding class name: Comment

Dictionary key name: comment

**decryption\_key**

Type: *cybox.common.properties.String*  
XML Binding class name: `Decryption_Key`  
Dictionary key name: `decryption_key`

#### **encryption\_algorithm**

Type: *cybox.common.properties.String*  
XML Binding class name: `Encryption_Algorithm`  
Dictionary key name: `encryption_algorithm`

#### **file\_count**

Type: *cybox.common.properties.Integer*  
XML Binding class name: `File_Count`  
Dictionary key name: `file_count`

#### **version**

Type: *cybox.common.properties.String*  
XML Binding class name: `Version`  
Dictionary key name: `version`

Version: 2.1.0.12.dev0

### **cybox.objects.artifact\_object module**

**class** `cybox.objects.artifact_object.Artifact` (*data=None, type\_=None*)  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: <undefined>

**static from\_dict** (*artifact\_dict*)

**static from\_obj** (*artifact\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.objects.artifact_object.Base64Encoding`  
Bases: *cybox.objects.artifact\_object.Encoding*

XML binding class: <undefined>

**pack** (*data*)

**unpack** (*packed\_data*)

**class** `cybox.objects.artifact_object.Bz2Compression`  
Bases: *cybox.objects.artifact\_object.Compression*

XML binding class: <undefined>

**pack** (*data*)

**unpack** (*packed\_data*)

**class** `cybox.objects.artifact_object.Compression` (*compression\_mechanism=None*)

Bases: `cybox.objects.artifact_object.Packaging`

A Compression packaging layer

Currently only zlib and bz2 are supported. Also, `compression_mechanism_ref` is not currently supported.

XML binding class: <undefined>

**static from\_dict** (*compression\_dict*)

**static from\_obj** (*compression\_obj*)

**static get\_object** (*mechanism*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.objects.artifact_object.Encoding`

Bases: `cybox.objects.artifact_object.Packaging`

An encoding packaging layer.

Currently only base64 with a standard alphabet is supported.

XML binding class: <undefined>

**static from\_dict** (*encoding\_dict*)

**static from\_obj** (*encoding\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.objects.artifact_object.Encryption` (*encryption\_mechanism=None, encryption\_key=None*)

Bases: `cybox.objects.artifact_object.Packaging`

An encryption packaging layer.

XML binding class: <undefined>

**static from\_dict** (*encryption\_dict*)

**static from\_obj** (*encryption\_obj*)

**static get\_object** (*mechanism, key*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.objects.artifact_object.Packaging`

Bases: `cybox.Entity`

An individual packaging layer.

XML binding class: <undefined>

**pack** (*data*)

This should accept byte data and return byte data

**unpack** (*packed\_data*)

This should accept byte data and return byte data

**class** `cybox.objects.artifact_object.PasswordProtectedZipEncryption` (*key*)

Bases: `cybox.objects.artifact_object.Encryption`

XML binding class: <undefined>

**unpack** (*packed\_data*)

**class** `cybox.objects.artifact_object.RawArtifact` (*value=None*)

Bases: `cybox.common.properties.String`

XML binding class: `cybox.bindings.artifact_object.RawArtifactType`

**byte\_order**

XML Binding class name: `byte_order`

Dictionary key name: `byte_order`

**class** `cybox.objects.artifact_object.XOREncryption` (*key*)

Bases: `cybox.objects.artifact_object.Encryption`

XML binding class: <undefined>

**pack** (*data*)

**unpack** (*packed\_data*)

**class** `cybox.objects.artifact_object.ZlibCompression`

Bases: `cybox.objects.artifact_object.Compression`

XML binding class: <undefined>

**pack** (*data*)

**unpack** (*packed\_data*)

Version: 2.1.0.12.dev0

### **cybox.objects.as\_object module**

**cybox.objects.as\_object.AS**

alias of *AutonomousSystem* | XML binding class: `cybox.bindings.as_object.ASObjectType`

**class cybox.objects.as\_object.AutonomousSystem**

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.as_object.ASObjectType`

#### **handle**

Type: `cybox.common.properties.String`

XML Binding class name: Handle

Dictionary key name: handle

#### **name**

Type: `cybox.common.properties.String`

XML Binding class name: Name

Dictionary key name: name

#### **number**

Type: `cybox.common.properties.NonNegativeInteger`

XML Binding class name: Number

Dictionary key name: number

#### **regional\_internet\_registry**

Type: `cybox.common.properties.String`

XML Binding class name: Regional\_Internet\_Registry

Dictionary key name: regional\_internet\_registry

Version: 2.1.0.12.dev0

### **cybox.objects.arp\_cache\_object module**

**class cybox.objects.arp\_cache\_object.ARPCache**

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.arp_cache_object.ARPCacheObjectType`

#### **arp\_cache\_entry**

(List of values permitted)

Type: `cybox.objects.arp_cache_object.ARPCacheEntry`

XML Binding class name: ARP\_Cache\_Entry

Dictionary key name: arp\_cache\_entry  
**class** cybox.objects.arp\_cache\_object.ARPCacheEntry  
Bases: cybox.Entity

XML binding class: cybox.bindings.arp\_cache\_object.ARPCacheEntryType

#### **ip\_address**

Type: *cybox.objects.address\_object.Address*  
XML Binding class name: IP\_Address  
Dictionary key name: ip\_address

#### **network\_interface**

Type: *cybox.objects.system\_object.NetworkInterface*  
XML Binding class name: Network\_Interface  
Dictionary key name: network\_interface

#### **physical\_address**

Type: *cybox.common.properties.String*  
XML Binding class name: Physical\_Address  
Dictionary key name: physical\_address

#### **type\_**

Type: *cybox.common.properties.String*  
XML Binding class name: Type  
Dictionary key name: type

Version: 2.1.0.12.dev0

#### **cybox.objects.code\_object module**

**class** cybox.objects.code\_object.Code  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: cybox.bindings.code\_object.CodeObjectType

#### **code\_language**

Type: *cybox.common.properties.String*  
XML Binding class name: Code\_Language  
Dictionary key name: code\_language

#### **code\_segment**

Type: *cybox.common.properties.String*

XML Binding class name: Code\_Segment

Dictionary key name: code\_segment

#### **code\_segment\_xor**

Type: *cybox.objects.code\_object.CodeSegmentXOR*

XML Binding class name: Code\_Segment\_XOR

Dictionary key name: code\_segment\_xor

#### **description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

#### **digital\_signatures**

Type: *cybox.common.digitalsignature.DigitalSignatureList*

XML Binding class name: Digital\_Signatures

Dictionary key name: digital\_signatures

#### **discovery\_method**

Type: *cybox.common.measuresource.MeasureSource*

XML Binding class name: Discovery\_Method

Dictionary key name: discovery\_method

#### **extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*

XML Binding class name: Extracted\_Features

Dictionary key name: extracted\_features

#### **processor\_family**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Processor\_Family

Dictionary key name: processor\_family

#### **purpose**

Type: *cybox.common.properties.String*

XML Binding class name: Purpose

Dictionary key name: purpose

#### **start\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Start\_Address

Dictionary key name: start\_address

### targeted\_platforms

Type: *cybox.objects.code\_object.TargetedPlatforms*

XML Binding class name: Targeted\_Platforms

Dictionary key name: targeted\_platforms

### type\_

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**class** *cybox.objects.code\_object.CodeSegmentXOR* (*value=None*)

Bases: *cybox.common.properties.String*

XML binding class: *cybox.bindings.code\_object.CodeSegmentXORType*

### xor\_pattern

XML Binding class name: xor\_pattern

Dictionary key name: xor\_pattern

**class** *cybox.objects.code\_object.TargetedPlatforms* (*\*args*)

Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.code\_object.TargetedPlatformsType*

**Version:** 2.1.0.12.dev0

### **cybox.objects.device\_object** module

**class** *cybox.objects.device\_object.Device*

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: *cybox.bindings.device\_object.DeviceObjectType*

### description

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

### device\_type

Type: *cybox.common.properties.String*

XML Binding class name: Device\_Type

Dictionary key name: device\_type

**firmware\_version**

Type: *cybox.common.properties.String*

XML Binding class name: Firmware\_Version

Dictionary key name: firmware\_version

**manufacturer**

Type: *cybox.common.properties.String*

XML Binding class name: Manufacturer

Dictionary key name: manufacturer

**model**

Type: *cybox.common.properties.String*

XML Binding class name: Model

Dictionary key name: model

**serial\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Serial\_Number

Dictionary key name: serial\_number

Version: 2.1.0.12.dev0

**cybox.objects.disk\_object module**

class `cybox.objects.disk_object.Disk`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.disk_object.DiskObjectType`

**disk\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Disk\_Name

Dictionary key name: disk\_name

**disk\_size**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Disk\_Size

Dictionary key name: disk\_size

**free\_space**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Free\_Space

Dictionary key name: free\_space

#### **partition\_list**

Type: *cybox.objects.disk\_object.PartitionList*

XML Binding class name: Partition\_List

Dictionary key name: partition\_list

#### **type**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**class** `cybox.objects.disk_object.PartitionList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.disk_object.PartitionListType`

**Version:** 2.1.0.12.dev0

#### **cybox.objects.disk\_partition\_object module**

**class** `cybox.objects.disk_partition_object.DiskPartition`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.disk_partition_object.DiskPartitionObjectType`

#### **created**

Type: *cybox.common.properties.String*

XML Binding class name: Created

Dictionary key name: created

#### **device\_name**

Type: *cybox.common.properties.Name*

XML Binding class name: Device\_Name

Dictionary key name: device\_name

#### **mount\_point**

Type: *cybox.common.properties.String*

XML Binding class name: Mount\_Point

Dictionary key name: mount\_point

#### **partition\_id**

Type: *cybox.common.properties.Integer*

XML Binding class name: Partition\_ID

Dictionary key name: `partition_id`

#### **partition\_length**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Partition_Length`

Dictionary key name: `partition_length`

#### **partition\_offset**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Partition_Offset`

Dictionary key name: `partition_offset`

#### **space\_left**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Space_Left`

Dictionary key name: `space_left`

#### **space\_used**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Space_Used`

Dictionary key name: `space_used`

#### **total\_space**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Total_Space`

Dictionary key name: `total_space`

#### **type**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Type`

Dictionary key name: `type`

Version: 2.1.0.12.dev0

### **cybox.objects.dns\_cache\_object module**

**class** `cybox.objects.dns_cache_object.DNSCache`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.dns_cache_object.DNSCacheObjectType`

#### **dns\_cache\_entry**

(List of values permitted)

Type: `cybox.objects.dns_cache_object.DNSCacheEntry`

XML Binding class name: `DNS_Cache_Entry`  
Dictionary key name: `dns_cache_entry`  
**class** `cybox.objects.dns_cache_object.DNSCacheEntry`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.dns_cache_object.DNSCacheEntryType`

#### **dns\_entry**

Type: `cybox.objects.dns_record_object.DNSRecord`  
XML Binding class name: `DNS_Entry`  
Dictionary key name: `dns_entry`

#### **ttl**

Type: `cybox.common.properties.PositiveInteger`  
XML Binding class name: `TTL`  
Dictionary key name: `ttl`

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#### **cybox.objects.dns\_query\_object module**

**class** `cybox.objects.dns_query_object.DNSQuery`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.dns_query_object.DNSQueryObjectType`

#### **additional\_records**

Type: `cybox.objects.dns_query_object.DNSResourceRecords`  
XML Binding class name: `Additional_Records`  
Dictionary key name: `additional_records`

#### **answer\_resource\_records**

Type: `cybox.objects.dns_query_object.DNSResourceRecords`  
XML Binding class name: `Answer_Resource_Records`  
Dictionary key name: `answer_resource_records`

#### **authority\_resource\_records**

Type: `cybox.objects.dns_query_object.DNSResourceRecords`  
XML Binding class name: `Authority_Resource_Records`  
Dictionary key name: `authority_resource_records`

#### **date\_ran**

Type: *cybox.common.properties.DateTime*  
 XML Binding class name: Date\_Ran  
 Dictionary key name: date\_ran

**question**

Type: *cybox.objects.dns\_query\_object.DNSQuestion*  
 XML Binding class name: Question  
 Dictionary key name: question

**service\_used**

Type: *cybox.common.properties.String*  
 XML Binding class name: Service\_Used  
 Dictionary key name: service\_used

**successful**

XML Binding class name: successful  
 Dictionary key name: successful

**transaction\_id**

Type: *cybox.common.properties.HexBinary*  
 XML Binding class name: Transaction\_ID  
 Dictionary key name: transaction\_id

**class** *cybox.objects.dns\_query\_object.DNSQuestion*  
 Bases: *cybox.Entity*

XML binding class: *cybox.bindings.dns\_query\_object.DNSQuestionType*

**qclass**

Type: *cybox.common.properties.String*  
 XML Binding class name: QClass  
 Dictionary key name: qclass

**qname**

Type: *cybox.objects.uri\_object.URI*  
 XML Binding class name: QName  
 Dictionary key name: qname

**qtype**

Type: *cybox.common.properties.String*  
 XML Binding class name: QType  
 Dictionary key name: qtype

**class** `cybox.objects.dns_query_object.DNSResourceRecords` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.dns_query_object.DNSResourceRecordsType`

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#### **cybox.objects.dns\_record\_object module**

**class** `cybox.objects.dns_record_object.DNSRecord`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.dns_record_object.DNSRecordObjectType`

#### **address\_class**

Type: `cybox.common.properties.String`  
XML Binding class name: `Address_Class`  
Dictionary key name: `address_class`

#### **data\_length**

Type: `cybox.common.properties.Integer`  
XML Binding class name: `Data_Length`  
Dictionary key name: `data_length`

#### **description**

Type: `cybox.common.structured_text.StructuredText`  
XML Binding class name: `Description`  
Dictionary key name: `description`

#### **domain\_name**

Type: `cybox.objects.uri_object.URI`  
XML Binding class name: `Domain_Name`  
Dictionary key name: `domain_name`

#### **entry\_type**

Type: `cybox.common.properties.String`  
XML Binding class name: `Entry_Type`  
Dictionary key name: `entry_type`

#### **flags**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `Flags`

Dictionary key name: flags

#### **ip\_address**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IP\_Address

Dictionary key name: ip\_address

#### **queried\_date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Queried\_Date

Dictionary key name: queried\_date

#### **record\_data**

XML Binding class name: Record\_Data

Dictionary key name: record\_data

#### **record\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Record\_Name

Dictionary key name: record\_name

#### **record\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Record\_Type

Dictionary key name: record\_type

#### **ttl**

Type: *cybox.common.properties.Integer*

XML Binding class name: TTL

Dictionary key name: ttl

**Version:** 2.1.0.12.dev0

### **cybox.objects.domain\_name\_object module**

**class** `cybox.objects.domain_name_object.DomainName`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.domain_name_object.DomainNameObjectType`

#### **type\_**

XML Binding class name: type\_

Dictionary key name: type

## value

Type: *cybox.common.properties.String*

XML Binding class name: Value

Dictionary key name: value

Version: 2.1.0.12.dev0

## cybox.objects.email\_message\_object module

**class** `cybox.objects.email_message_object.AttachmentReference` (*object\_reference=None*)

Bases: `cybox.ObjectReference`

XML binding class: `cybox.bindings.email_message_object.AttachmentReferenceType`

**class** `cybox.objects.email_message_object.Attachments` (*\*args*)

Bases: `cybox.ReferenceList`

XML binding class: `cybox.bindings.email_message_object.AttachmentsType`

**class** `cybox.objects.email_message_object.EmailHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.email_message_object.EmailHeaderType`

## bcc

Type: *cybox.objects.email\_message\_object.EmailRecipients*

XML Binding class name: BCC

Dictionary key name: bcc

## boundary

Type: *cybox.common.properties.String*

XML Binding class name: Boundary

Dictionary key name: boundary

## cc

Type: *cybox.objects.email\_message\_object.EmailRecipients*

XML Binding class name: CC

Dictionary key name: cc

## content\_type

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Type

Dictionary key name: content\_type

**date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Date

Dictionary key name: date

**errors\_to**

Type: *cybox.common.properties.String*

XML Binding class name: Errors\_To

Dictionary key name: errors\_to

**from\_**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: From

Dictionary key name: from

**in\_reply\_to**

Type: *cybox.common.properties.String*

XML Binding class name: In\_Reply\_To

Dictionary key name: in\_reply\_to

**message\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Message\_ID

Dictionary key name: message\_id

**mime\_version**

Type: *cybox.common.properties.String*

XML Binding class name: MIME\_Version

Dictionary key name: mime\_version

**precedence**

Type: *cybox.common.properties.String*

XML Binding class name: Precedence

Dictionary key name: precedence

**received\_lines**

Type: *cybox.objects.email\_message\_object.ReceivedLineList*

XML Binding class name: Received\_Lines

Dictionary key name: received\_lines

**reply\_to**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: Reply\_To

Dictionary key name: reply\_to

**sender**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: Sender

Dictionary key name: sender

**subject**

Type: *cybox.common.properties.String*

XML Binding class name: Subject

Dictionary key name: subject

**to**

Type: *cybox.objects.email\_message\_object.EmailRecipients*

XML Binding class name: To

Dictionary key name: to

**user\_agent**

Type: *cybox.common.properties.String*

XML Binding class name: User\_Agent

Dictionary key name: user\_agent

**x\_mailer**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Mailer

Dictionary key name: x\_mailer

**x\_originating\_ip**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: X\_Originating\_IP

Dictionary key name: x\_originating\_ip

**x\_priority**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: X\_Priority

Dictionary key name: x\_priority

**class** *cybox.objects.email\_message\_object.EmailMessage*

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: *cybox.bindings.email\_message\_object.EmailMessageObjectType*

**attachments**

Type: `cybox.objects.email_message_object.Attachments`

XML Binding class name: Attachments

Dictionary key name: attachments

**email\_server**

Type: `cybox.common.properties.String`

XML Binding class name: Email\_Server

Dictionary key name: email\_server

**header**

Type: `cybox.objects.email_message_object.EmailHeader`

XML Binding class name: Header

Dictionary key name: header

**links**

Type: `cybox.objects.email_message_object.Links`

XML Binding class name: Links

Dictionary key name: links

**raw\_body**

Type: `cybox.common.properties.String`

XML Binding class name: Raw\_Body

Dictionary key name: raw\_body

**raw\_header**

Type: `cybox.common.properties.String`

XML Binding class name: Raw\_Header

Dictionary key name: raw\_header

**class** `cybox.objects.email_message_object.EmailRecipients` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.email_message_object.EmailRecipientsType`

**class** `cybox.objects.email_message_object.LinkReference` (*object\_reference=None*)

Bases: `cybox.ObjectReference`

XML binding class: `cybox.bindings.email_message_object.LinkReferenceType`

**class** `cybox.objects.email_message_object.Links` (\*args)

Bases: `cybox.ReferenceList`

XML binding class: `cybox.bindings.email_message_object.LinksType`

**class** `cybox.objects.email_message_object.ReceivedLine`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.email_message_object.EmailReceivedLineType`

**by**

Type: `cybox.common.properties.String`

XML Binding class name: `By`

Dictionary key name: `by`

**for\_**

Type: `cybox.common.properties.String`

XML Binding class name: `For`

Dictionary key name: `for`

**from\_**

Type: `cybox.common.properties.String`

XML Binding class name: `From`

Dictionary key name: `from`

**id\_**

Type: `cybox.common.properties.String`

XML Binding class name: `ID`

Dictionary key name: `id`

**timestamp**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Timestamp`

Dictionary key name: `timestamp`

**via**

Type: `cybox.common.properties.String`

XML Binding class name: `Via`

Dictionary key name: `via`

**with\_**

Type: `cybox.common.properties.String`

XML Binding class name: `With`

Dictionary key name: `with`

**class** `cybox.objects.email_message_object.ReceivedLineList` (\*args)  
Bases: `cybox.EntityList`

XML binding class:  
`cybox.bindings.email_message_object.EmailReceivedLineListType`

Version: 2.1.0.12.dev0

#### **cybox.objects.file\_object module**

**class** `cybox.objects.file_object.EPJumpCode`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.file_object.EPJumpCodeType`

#### **depth**

Type: `cybox.common.properties.Integer`  
XML Binding class name: Depth  
Dictionary key name: depth

#### **opcodes**

Type: `cybox.common.properties.String`  
XML Binding class name: Opcodes  
Dictionary key name: opcodes

**class** `cybox.objects.file_object.EntryPointSignature`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.file_object.EntryPointSignatureType`

#### **name**

Type: `cybox.common.properties.String`  
XML Binding class name: Name  
Dictionary key name: name

#### **type\_**

Type: `cybox.common.properties.String`  
XML Binding class name: Type  
Dictionary key name: type

**class** `cybox.objects.file_object.EntryPointSignatureList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.file_object.EntryPointSignatureListType`

**class** `cybox.objects.file_object.File`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.file_object.FileObjectType`

#### **accessed\_time**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Accessed_Time`

Dictionary key name: `accessed_time`

**add\_hash** (*hash\_*)

#### **byte\_runs**

Type: `cybox.common.byterun.ByteRuns`

XML Binding class name: `Byte_Runs`

Dictionary key name: `byte_runs`

#### **compression\_comment**

Type: `cybox.common.properties.String`

XML Binding class name: `Compression_Comment`

Dictionary key name: `compression_comment`

#### **compression\_method**

Type: `cybox.common.properties.String`

XML Binding class name: `Compression_Method`

Dictionary key name: `compression_method`

#### **compression\_version**

Type: `cybox.common.properties.String`

XML Binding class name: `Compression_Version`

Dictionary key name: `compression_version`

#### **created\_time**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Created_Time`

Dictionary key name: `created_time`

#### **decryption\_key**

Type: `cybox.common.properties.String`

XML Binding class name: `Decryption_Key`

Dictionary key name: decryption\_key

#### **device\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Device\_Path

Dictionary key name: device\_path

#### **digital\_signatures**

Type: *cybox.common.digitalsignature.DigitalSignatureList*

XML Binding class name: Digital\_Signatures

Dictionary key name: digital\_signatures

#### **encryption\_algorithm**

Type: *cybox.common.properties.String*

XML Binding class name: Encryption\_Algorithm

Dictionary key name: encryption\_algorithm

#### **extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*

XML Binding class name: Extracted\_Features

Dictionary key name: extracted\_features

#### **file\_attributes\_list**

Type: *cybox.objects.file\_object.FileAttribute*

XML Binding class name: File\_Attributes\_List

Dictionary key name: file\_attributes\_list

#### **file\_extension**

Type: *cybox.common.properties.String*

XML Binding class name: File\_Extension

Dictionary key name: file\_extension

#### **file\_format**

Type: *cybox.common.properties.String*

XML Binding class name: File\_Format

Dictionary key name: file\_format

#### **file\_name**

Type: *cybox.common.properties.String*

XML Binding class name: File\_Name

Dictionary key name: file\_name

#### **file\_path**

Type: *cybox.objects.file\_object.FilePath*  
XML Binding class name: File\_Path  
Dictionary key name: file\_path

#### **full\_path**

Type: *cybox.common.properties.String*  
XML Binding class name: Full\_Path  
Dictionary key name: full\_path

#### **hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Hashes  
Dictionary key name: hashes

#### **is\_masqueraded**

XML Binding class name: is\_masqueraded  
Dictionary key name: is\_masqueraded

#### **is\_packed**

XML Binding class name: is\_packed  
Dictionary key name: is\_packed

#### **magic\_number**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Magic\_Number  
Dictionary key name: magic\_number

#### **modified\_time**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Modified\_Time  
Dictionary key name: modified\_time

#### **packer\_list**

Type: *cybox.objects.file\_object.PackerList*  
XML Binding class name: Packer\_List  
Dictionary key name: packer\_list

#### **peak\_entropy**

Type: *cybox.common.properties.Double*  
XML Binding class name: Peak\_Entropy  
Dictionary key name: peak\_entropy

#### **permissions**

Type: *cybox.objects.file\_object.FilePermissions*

XML Binding class name: Permissions

Dictionary key name: permissions

#### **size\_in\_bytes**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Size\_In\_Bytes

Dictionary key name: size\_in\_bytes

#### **sym\_links**

Type: *cybox.objects.file\_object.SymLinksList*

XML Binding class name: Sym\_Links

Dictionary key name: sym\_links

#### **user\_owner**

Type: *cybox.common.properties.String*

XML Binding class name: User\_Owner

Dictionary key name: user\_owner

**class** *cybox.objects.file\_object.FileAttribute*

Bases: *cybox.Entity*

An abstract class for file attributes.

XML binding class: <undefined>

**class** *cybox.objects.file\_object.FilePath* (\*args, \*\*kwargs)

Bases: *cybox.common.properties.String*

XML binding class: *cybox.bindings.file\_object.FilePathType*

**static from\_dict** (*filepath\_dict*)

**static from\_obj** (*filepath\_obj*)

**is\_plain** ()

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** *cybox.objects.file\_object.FilePermissions*

Bases: *cybox.Entity*

An abstract class for file permissions.

XML binding class: <undefined>

**class** `cybox.objects.file_object.Packer`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.file_object.PackerType`

#### **detected\_entrypoint\_signatures**

Type: `cybox.objects.file_object.EntryPointSignatureList`  
XML Binding class name: `Detected_Entrypoint_Signatures`  
Dictionary key name: `detected_entrypoint_signatures`

#### **entry\_point**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `Entry_Point`  
Dictionary key name: `entry_point`

#### **ep\_jump\_codes**

Type: `cybox.objects.file_object.EPJumpCode`  
XML Binding class name: `EP_Jump_Codes`  
Dictionary key name: `ep_jump_codes`

#### **name**

Type: `cybox.common.properties.String`  
XML Binding class name: `Name`  
Dictionary key name: `name`

#### **signature**

Type: `cybox.common.properties.String`  
XML Binding class name: `Signature`  
Dictionary key name: `signature`

#### **type\_**

Type: `cybox.common.properties.String`  
XML Binding class name: `Type`  
Dictionary key name: `type`

#### **version**

Type: `cybox.common.properties.String`  
XML Binding class name: `Version`  
Dictionary key name: `version`

**class** `cybox.objects.file_object.PackerList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.file_object.PackerListType`

**class** `cybox.objects.file_object.SymLinksList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.file_object.SymLinksListType`

**Version:** 2.1.0.12.dev0

**cybox.objects.gui\_dialogbox\_object module**

**class** `cybox.objects.gui_dialogbox_object.GUIDialogbox`  
Bases: `cybox.objects.gui_object.GUI`

XML binding class: `cybox.bindings.gui_dialogbox_object.GUIDialogboxObjectType`

**box\_caption**

Type: `cybox.common.properties.String`  
XML Binding class name: `Box_Caption`  
Dictionary key name: `box_caption`

**box\_text**

Type: `cybox.common.properties.String`  
XML Binding class name: `Box_Text`  
Dictionary key name: `box_text`

**Version:** 2.1.0.12.dev0

**cybox.objects.gui\_object module**

**class** `cybox.objects.gui_object.GUI`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.gui_object.GUIObjectType`

**height**

Type: `cybox.common.properties.Integer`  
XML Binding class name: `Height`  
Dictionary key name: `height`

**width**

Type: `cybox.common.properties.Integer`  
XML Binding class name: `Width`

Dictionary key name: width

Version: 2.1.0.12.dev0

#### **cybox.objects.gui\_window\_object module**

**class** cybox.objects.gui\_window\_object.**GUIWindow**

Bases: *cybox.objects.gui\_object.GUI*

XML binding class: cybox.bindings.gui\_window\_object.GUIWindowObjectType

#### **owner\_window**

Type: *cybox.common.properties.String*

XML Binding class name: Owner\_Window

Dictionary key name: owner\_window

#### **parent\_window**

Type: *cybox.common.properties.String*

XML Binding class name: Parent\_Window

Dictionary key name: parent\_window

#### **window\_display\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Window\_Display\_Name

Dictionary key name: window\_display\_name

Version: 2.1.0.12.dev0

#### **cybox.objects.hostname\_object module**

**class** cybox.objects.hostname\_object.**Hostname**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: cybox.bindings.hostname\_object.HostnameObjectType

#### **hostname\_value**

Type: *cybox.common.properties.String*

XML Binding class name: Hostname\_Value

Dictionary key name: hostname\_value

#### **is\_domain\_name**

XML Binding class name: is\_domain\_name

Dictionary key name: is\_domain\_name

#### **naming\_system**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Naming\_System

Dictionary key name: naming\_system

Version: 2.1.0.12.dev0

### **cybox.objects.http\_session\_object module**

**class** `cybox.objects.http_session_object.HTTPClientRequest`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPClientRequestType`

#### **http\_message\_body**

Type: *cybox.objects.http\_session\_object.HTTPMessage*

XML Binding class name: HTTP\_Message\_Body

Dictionary key name: http\_message\_body

#### **http\_request\_header**

Type: *cybox.objects.http\_session\_object.HTTPRequestHeader*

XML Binding class name: HTTP\_Request\_Header

Dictionary key name: http\_request\_header

#### **http\_request\_line**

Type: *cybox.objects.http\_session\_object.HTTPRequestLine*

XML Binding class name: HTTP\_Request\_Line

Dictionary key name: http\_request\_line

**class** `cybox.objects.http_session_object.HTTPMessage`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPMessageType`

#### **length**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Length

Dictionary key name: length

#### **message\_body**

Type: *cybox.common.properties.String*

XML Binding class name: Message\_Body

Dictionary key name: message\_body

**class** `cybox.objects.http_session_object.HTTPRequestHeader`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPRequestHeaderType`

#### **parsed\_header**

Type: `cybox.objects.http_session_object.HTTPRequestHeaderFields`  
XML Binding class name: `Parsed_Header`  
Dictionary key name: `parsed_header`

#### **raw\_header**

Type: `cybox.common.properties.String`  
XML Binding class name: `Raw_Header`  
Dictionary key name: `raw_header`

**class** `cybox.objects.http_session_object.HTTPRequestHeaderFields`  
Bases: `cybox.Entity`

XML binding class:  
`cybox.bindings.http_session_object.HTTPRequestHeaderFieldsType`

#### **accept**

Type: `cybox.common.properties.String`  
XML Binding class name: `Accept`  
Dictionary key name: `accept`

#### **accept\_charset**

Type: `cybox.common.properties.String`  
XML Binding class name: `Accept_Charset`  
Dictionary key name: `accept_charset`

#### **accept\_datetime**

Type: `cybox.common.properties.String`  
XML Binding class name: `Accept_Datetime`  
Dictionary key name: `accept_datetime`

#### **accept\_encoding**

Type: `cybox.common.properties.String`  
XML Binding class name: `Accept_Encoding`  
Dictionary key name: `accept_encoding`

**accept\_language**

Type: *cybox.common.properties.String*

XML Binding class name: Accept\_Language

Dictionary key name: accept\_language

**authorization**

Type: *cybox.common.properties.String*

XML Binding class name: Authorization

Dictionary key name: authorization

**cache\_control**

Type: *cybox.common.properties.String*

XML Binding class name: Cache\_Control

Dictionary key name: cache\_control

**connection**

Type: *cybox.common.properties.String*

XML Binding class name: Connection

Dictionary key name: connection

**content\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Content\_Length

Dictionary key name: content\_length

**content\_md5**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_MD5

Dictionary key name: content\_md5

**content\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Type

Dictionary key name: content\_type

**cookie**

Type: *cybox.common.properties.String*

XML Binding class name: Cookie

Dictionary key name: cookie

**date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Date

Dictionary key name: date

#### **dnt**

Type: *cybox.common.properties.String*

XML Binding class name: DNT

Dictionary key name: dnt

#### **expect**

Type: *cybox.common.properties.String*

XML Binding class name: Expect

Dictionary key name: expect

#### **from\_**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: From

Dictionary key name: from

#### **host**

Type: *cybox.objects.http\_session\_object.HostField*

XML Binding class name: Host

Dictionary key name: host

#### **if\_match**

Type: *cybox.common.properties.String*

XML Binding class name: If\_Match

Dictionary key name: if\_match

#### **if\_modified\_since**

Type: *cybox.common.properties.DateTime*

XML Binding class name: If\_Modified\_Since

Dictionary key name: if\_modified\_since

#### **if\_none\_match**

Type: *cybox.common.properties.String*

XML Binding class name: If\_None\_Match

Dictionary key name: if\_none\_match

#### **if\_range**

Type: *cybox.common.properties.String*

XML Binding class name: If\_Range

Dictionary key name: if\_range

**if\_unmodified\_since**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: If\_Unmodified\_Since  
Dictionary key name: if\_unmodified\_since

**max\_forwards**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Max\_Forwards  
Dictionary key name: max\_forwards

**pragma**

Type: *cybox.common.properties.String*  
XML Binding class name: Pragma  
Dictionary key name: pragma

**proxy\_authorization**

Type: *cybox.common.properties.String*  
XML Binding class name: Proxy\_Authorization  
Dictionary key name: proxy\_authorization

**range\_**

Type: *cybox.common.properties.String*  
XML Binding class name: Range  
Dictionary key name: range

**referer**

Type: *cybox.objects.uri\_object.URI*  
XML Binding class name: Referer  
Dictionary key name: referer

**te**

Type: *cybox.common.properties.String*  
XML Binding class name: TE  
Dictionary key name: te

**user\_agent**

Type: *cybox.common.properties.String*  
XML Binding class name: User\_Agent  
Dictionary key name: user\_agent

**via**

Type: *cybox.common.properties.String*

XML Binding class name: Via

Dictionary key name: via

#### **warning**

Type: *cybox.common.properties.String*

XML Binding class name: Warning

Dictionary key name: warning

#### **x\_att\_deviceid**

Type: *cybox.common.properties.String*

XML Binding class name: X\_ATT\_DeviceId

Dictionary key name: x\_att\_deviceid

#### **x\_forwarded\_for**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Forwarded\_For

Dictionary key name: x\_forwarded\_for

#### **x\_forwarded\_proto**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Forwarded\_Proto

Dictionary key name: x\_forwarded\_proto

#### **x\_requested\_with**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Requested\_With

Dictionary key name: x\_requested\_with

#### **x\_wap\_profile**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: X\_Wap\_Profile

Dictionary key name: x\_wap\_profile

**class** `cybox.objects.http_session_object.HTTPRequestLine`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPRequestLineType`

#### **http\_method**

Type: *cybox.common.properties.String*

XML Binding class name: HTTP\_Method

Dictionary key name: http\_method

**value**

Type: *cybox.common.properties.String*

XML Binding class name: Value

Dictionary key name: value

**version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.http_session_object.HTTPRequestResponse`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPRequestResponseType`

**http\_client\_request**

Type: *cybox.objects.http\_session\_object.HTTPClientRequest*

XML Binding class name: HTTP\_Client\_Request

Dictionary key name: http\_client\_request

**http\_provisional\_server\_response**

Type: *cybox.objects.http\_session\_object.HTTPServerResponse*

XML Binding class name: HTTP\_Provisional\_Server\_Response

Dictionary key name: http\_provisional\_server\_response

**http\_server\_response**

Type: *cybox.objects.http\_session\_object.HTTPServerResponse*

XML Binding class name: HTTP\_Server\_Response

Dictionary key name: http\_server\_response

**ordinal\_position**

XML Binding class name: ordinal\_position

Dictionary key name: ordinal\_position

**class** `cybox.objects.http_session_object.HTTPResponseHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPResponseHeaderType`

**parsed\_header**

Type: *cybox.objects.http\_session\_object.HTTPResponseHeaderFields*

XML Binding class name: Parsed\_Header

Dictionary key name: parsed\_header

#### **raw\_header**

Type: *cybox.common.properties.String*

XML Binding class name: Raw\_Header

Dictionary key name: raw\_header

**class** cybox.objects.http\_session\_object.HTTPResponseHeaderFields

Bases: cybox.Entity

XML binding class:

cybox.bindings.http\_session\_object.HTTPResponseHeaderFieldsType

#### **accept\_ranges**

Type: *cybox.common.properties.String*

XML Binding class name: Accept\_Ranges

Dictionary key name: accept\_ranges

#### **access\_control\_allow\_origin**

Type: *cybox.common.properties.String*

XML Binding class name: Access\_Control-Allow-Origin

Dictionary key name: access\_control\_allow\_origin

#### **age**

Type: *cybox.common.properties.Integer*

XML Binding class name: Age

Dictionary key name: age

#### **cache\_control**

Type: *cybox.common.properties.String*

XML Binding class name: Cache\_Control

Dictionary key name: cache\_control

#### **connection**

Type: *cybox.common.properties.String*

XML Binding class name: Connection

Dictionary key name: connection

#### **content\_disposition**

Type: *cybox.common.properties.String*

XML Binding class name: Content-Disposition

Dictionary key name: content\_disposition

**content\_encoding**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Encoding

Dictionary key name: content\_encoding

**content\_language**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Language

Dictionary key name: content\_language

**content\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Content\_Length

Dictionary key name: content\_length

**content\_location**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Location

Dictionary key name: content\_location

**content\_md5**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_MD5

Dictionary key name: content\_md5

**content\_range**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Range

Dictionary key name: content\_range

**content\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Type

Dictionary key name: content\_type

**date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Date

Dictionary key name: date

**etag**

Type: *cybox.common.properties.String*

XML Binding class name: ETag

Dictionary key name: etag

#### **expires**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Expires

Dictionary key name: expires

#### **last\_modified**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Last\_Modified

Dictionary key name: last\_modified

#### **link**

Type: *cybox.common.properties.String*

XML Binding class name: Link

Dictionary key name: link

#### **location**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: Location

Dictionary key name: location

#### **p3p**

Type: *cybox.common.properties.String*

XML Binding class name: P3P

Dictionary key name: p3p

#### **pragma**

Type: *cybox.common.properties.String*

XML Binding class name: Pragma

Dictionary key name: pragma

#### **proxy\_authenticate**

Type: *cybox.common.properties.String*

XML Binding class name: Proxy\_Authenticate

Dictionary key name: proxy\_authenticate

#### **refresh**

Type: *cybox.common.properties.String*

XML Binding class name: Refresh

Dictionary key name: refresh

**retry\_after**

Type: *cybox.common.properties.Integer*

XML Binding class name: `Retry_After`

Dictionary key name: `retry_after`

**server**

Type: *cybox.common.properties.String*

XML Binding class name: `Server`

Dictionary key name: `server`

**set\_cookie**

Type: *cybox.common.properties.String*

XML Binding class name: `Set_Cookie`

Dictionary key name: `set_cookie`

**strict\_transport\_security**

Type: *cybox.common.properties.String*

XML Binding class name: `Strict_Transport_Security`

Dictionary key name: `strict_transport_security`

**trailer**

Type: *cybox.common.properties.String*

XML Binding class name: `Trailer`

Dictionary key name: `trailer`

**transfer\_encoding**

Type: *cybox.common.properties.String*

XML Binding class name: `Transfer_Encoding`

Dictionary key name: `transfer_encoding`

**vary**

Type: *cybox.common.properties.String*

XML Binding class name: `Vary`

Dictionary key name: `vary`

**via**

Type: *cybox.common.properties.String*

XML Binding class name: `Via`

Dictionary key name: `via`

**warning**

Type: *cybox.common.properties.String*

XML Binding class name: Warning

Dictionary key name: warning

#### **www\_authenticate**

Type: *cybox.common.properties.String*

XML Binding class name: WWW\_Authenticate

Dictionary key name: www\_authenticate

#### **x\_content\_type\_options**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Content\_Type\_Options

Dictionary key name: x\_content\_type\_options

#### **x\_frame\_options**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Frame\_Options

Dictionary key name: x\_frame\_options

#### **x\_powered\_by**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Powered\_By

Dictionary key name: x\_powered\_by

#### **x\_ua\_compatible**

Type: *cybox.common.properties.String*

XML Binding class name: X\_UA-Compatible

Dictionary key name: x\_ua\_compatible

#### **x\_xss\_protection**

Type: *cybox.common.properties.String*

XML Binding class name: X\_XSS\_Protection

Dictionary key name: x\_xss\_protection

**class** `cybox.objects.http_session_object.HTTPServerResponse`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPServerResponseType`

#### **http\_message\_body**

Type: *cybox.objects.http\_session\_object.HTTPMessage*

XML Binding class name: HTTP\_Message\_Body

Dictionary key name: http\_message\_body

**http\_response\_header**

Type: *cybox.objects.http\_session\_object.HTTPResponseHeader*

XML Binding class name: HTTP\_Response\_Header

Dictionary key name: http\_response\_header

**http\_status\_line**

Type: *cybox.objects.http\_session\_object.HTTPStatusLine*

XML Binding class name: HTTP\_Status\_Line

Dictionary key name: http\_status\_line

**class** *cybox.objects.http\_session\_object.HTTPSession*

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: *cybox.bindings.http\_session\_object.HTTPSessionObjectType*

**http\_request\_response**

(List of values permitted)

Type: *cybox.objects.http\_session\_object.HTTPRequestResponse*

XML Binding class name: HTTP\_Request\_Response

Dictionary key name: http\_request\_response

**class** *cybox.objects.http\_session\_object.HTTPStatusLine*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.http\_session\_object.HTTPStatusLineType*

**reason\_phrase**

Type: *cybox.common.properties.String*

XML Binding class name: Reason\_Phrase

Dictionary key name: reason\_phrase

**status\_code**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Status\_Code

Dictionary key name: status\_code

**version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.http_session_object.HostField`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HostFieldType`

**domain\_name**

Type: `cybox.objects.uri_object.URI`  
XML Binding class name: `Domain_Name`  
Dictionary key name: `domain_name`

**port**

Type: `cybox.objects.port_object.Port`  
XML Binding class name: `Port`  
Dictionary key name: `port`

**Version:** 2.1.0.12.dev0

**cybox.objects.image\_file\_object module**

**class** `cybox.objects.image_file_object.ImageFile`  
Bases: `cybox.objects.file_object.File`

XML binding class: `cybox.bindings.file_object.FileObjectType`

**bits\_per\_pixel**

Type: `cybox.common.properties.PositiveInteger`  
XML Binding class name: `Bits_Per_Pixel`  
Dictionary key name: `bits_per_pixel`

**compression\_algorithm**

Type: `cybox.common.properties.String`  
XML Binding class name: `Compression_Algorithm`  
Dictionary key name: `compression_algorithm`

**image\_file\_format**

Type: `cybox.common.properties.String`  
XML Binding class name: `Image_File_Format`  
Dictionary key name: `image_file_format`

**image\_height**

Type: `cybox.common.properties.Integer`  
XML Binding class name: `Image_Height`

Dictionary key name: image\_height

#### **image\_is\_compressed**

XML Binding class name: image\_is\_compressed

Dictionary key name: image\_is\_compressed

#### **image\_width**

Type: *cybox.common.properties.Integer*

XML Binding class name: Image\_Width

Dictionary key name: image\_width

Version: 2.1.0.12.dev0

### **cybox.objects.library\_object module**

class `cybox.objects.library_object.Library`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.library_object.LibraryObjectType`

#### **base\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Base\_Address

Dictionary key name: base\_address

#### **extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*

XML Binding class name: Extracted\_Features

Dictionary key name: extracted\_features

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **path**

Type: *cybox.common.properties.String*

XML Binding class name: Path

Dictionary key name: path

#### **size**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Size

Dictionary key name: size

#### **type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

#### **version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

Version: 2.1.0.12.dev0

#### **cybox.objects.link\_object module**

**class** `cybox.objects.link_object.Link` (*value=None, type\_=None*)

Bases: *cybox.objects.uri\_object.URI*

XML binding class: `cybox.bindings.link_object.LinkObjectType`

#### **url\_label**

Type: *cybox.common.properties.String*

XML Binding class name: URL\_Label

Dictionary key name: url\_label

Version: 2.1.0.12.dev0

#### **cybox.objects.linux\_package\_object module**

**class** `cybox.objects.linux_package_object.LinuxPackage`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.linux_package_object.LinuxPackageObjectType`

#### **architecture**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Architecture

Dictionary key name: architecture

#### **category**

Type: *cybox.common.properties.String*

XML Binding class name: Category

Dictionary key name: category

**description**

Type: *cybox.common.properties.String*

XML Binding class name: Description

Dictionary key name: description

**epoch**

Type: *cybox.common.properties.String*

XML Binding class name: Epoch

Dictionary key name: epoch

**evr**

Type: *cybox.common.properties.String*

XML Binding class name: EVR

Dictionary key name: evr

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**release**

Type: *cybox.common.properties.String*

XML Binding class name: Release

Dictionary key name: release

**vendor**

Type: *cybox.common.properties.String*

XML Binding class name: Vendor

Dictionary key name: vendor

**version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.linux_package_object.LinuxPackageArchitecture` (*value=None*)

Bases: *cybox.common.vocabs.VocabString*

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**Version:** 2.1.0.12.dev0

**cybox.objects.memory\_object module**

**class** cybox.objects.memory\_object.**Memory**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: cybox.bindings.memory\_object.MemoryObjectType

**block\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Block\_Type

Dictionary key name: block\_type

**extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*

XML Binding class name: Extracted\_Features

Dictionary key name: extracted\_features

**hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

**is\_injected**

XML Binding class name: is\_injected

Dictionary key name: is\_injected

**is\_mapped**

XML Binding class name: is\_mapped

Dictionary key name: is\_mapped

**is\_protected**

XML Binding class name: is\_protected

Dictionary key name: is\_protected

**is\_volatile**

XML Binding class name: is\_volatile

Dictionary key name: is\_volatile

**memory\_source**

Type: *cybox.common.properties.String*

XML Binding class name: Memory\_Source

Dictionary key name: memory\_source

**name**Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**region\_end\_address**Type: *cybox.common.properties.HexBinary*

XML Binding class name: Region\_End\_Address

Dictionary key name: region\_end\_address

**region\_size**Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Region\_Size

Dictionary key name: region\_size

**region\_start\_address**Type: *cybox.common.properties.HexBinary*

XML Binding class name: Region\_Start\_Address

Dictionary key name: region\_start\_address

**Version:** 2.1.0.12.dev0**cybox.objects.mutex\_object module****class** `cybox.objects.mutex_object.Mutex`Bases: *cybox.common.object\_properties.ObjectProperties*XML binding class: `cybox.bindings.mutex_object.MutexObjectType`**name**Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**named**

XML Binding class name: named

Dictionary key name: named

**Version:** 2.1.0.12.dev0**cybox.objects.network\_connection\_object module****class** `cybox.objects.network_connection_object.Layer7Connections`Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_connection_object.Layer7ConnectionsType`

#### **dns\_query**

(List of values permitted)

Type: `cybox.objects.dns_query_object.DNSQuery`

XML Binding class name: `DNS_Query`

Dictionary key name: `dns_query`

#### **http\_session**

Type: `cybox.objects.http_session_object.HTTPSession`

XML Binding class name: `HTTP_Session`

Dictionary key name: `http_session`

**class** `cybox.objects.network_connection_object.NetworkConnection`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class:

`cybox.bindings.network_connection_object.NetworkConnectionObjectType`

#### **creation\_time**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Creation_Time`

Dictionary key name: `creation_time`

#### **destination\_socket\_address**

Type: `cybox.objects.socket_address_object.SocketAddress`

XML Binding class name: `Destination_Socket_Address`

Dictionary key name: `destination_socket_address`

#### **destination\_tcp\_state**

XML Binding class name: `Destination_TCP_State`

Dictionary key name: `destination_tcp_state`

#### **layer3\_protocol**

Type: `cybox.common.properties.String`

XML Binding class name: `Layer3_Protocol`

Dictionary key name: `layer3_protocol`

#### **layer4\_protocol**

Type: `cybox.common.properties.String`

XML Binding class name: `Layer4_Protocol`

Dictionary key name: layer4\_protocol

#### **layer7\_connections**

Type: *cybox.objects.network\_connection\_object.Layer7Connections*

XML Binding class name: Layer7\_Connections

Dictionary key name: layer7\_connections

#### **layer7\_protocol**

Type: *cybox.common.properties.String*

XML Binding class name: Layer7\_Protocol

Dictionary key name: layer7\_protocol

#### **source\_socket\_address**

Type: *cybox.objects.socket\_address\_object.SocketAddress*

XML Binding class name: Source\_Socket\_Address

Dictionary key name: source\_socket\_address

#### **source\_tcp\_state**

XML Binding class name: Source\_TCP\_State

Dictionary key name: source\_tcp\_state

#### **tls\_used**

XML Binding class name: tls\_used

Dictionary key name: tls\_used

Version: 2.1.0.12.dev0

### **cybox.objects.network\_packet\_object module**

**class** cybox.objects.network\_packet\_object.ARP

Bases: cybox.Entity

XML binding class: cybox.bindings.network\_packet\_object.ARPTyp

#### **hardware\_addr\_size**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Hardware\_Addr\_Size

Dictionary key name: hardware\_addr\_size

#### **hardware\_addr\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Hardware\_Addr\_Type

Dictionary key name: hardware\_addr\_type

#### **op\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Op\_Type

Dictionary key name: op\_type

#### **proto\_addr\_size**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Proto\_Addr\_Size

Dictionary key name: proto\_addr\_size

#### **proto\_addr\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Proto\_Addr\_Type

Dictionary key name: proto\_addr\_type

#### **recip\_hardware\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Recip\_Hardware\_Addr

Dictionary key name: recip\_hardware\_addr

#### **recip\_protocol\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Recip\_Protocol\_Addr

Dictionary key name: recip\_protocol\_addr

#### **sender\_hardware\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Sender\_Hardware\_Addr

Dictionary key name: sender\_hardware\_addr

#### **sender\_protocol\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Sender\_Protocol\_Addr

Dictionary key name: sender\_protocol\_addr

**class** *cybox.objects.network\_packet\_object.AuthenticationHeader*

Bases: *cybox.Entity*

XML binding class:

*cybox.bindings.network\_packet\_object.AuthenticationHeaderType*

#### **Authentication\_Data**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Authentication\_Data  
Dictionary key name: authentication\_data

**header\_ext\_len**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Header\_Ext\_Len  
Dictionary key name: header\_ext\_len

**next\_header**

Type: *cybox.common.properties.String*  
XML Binding class name: Next\_Header  
Dictionary key name: next\_header

**security\_parameters\_index**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Security\_Parameters\_Index  
Dictionary key name: security\_parameters\_index

**sequence\_number**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Sequence\_Number  
Dictionary key name: sequence\_number

**class** `cybox.objects.network_packet_object.DestinationOptions`  
Bases: `cybox.objects.network_packet_object._IPv6ExtHeader`

XML binding class: `cybox.bindings.network_packet_object.DestinationOptionsType`

**class** `cybox.objects.network_packet_object.EncapsulatingSecurityPayload`  
Bases: `cybox.Entity`

XML binding class:  
`cybox.bindings.network_packet_object.EncapsulatingSecurityPayloadType`

**authentication\_data**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Authentication\_Data  
Dictionary key name: authentication\_data

**next\_header**

Type: *cybox.common.properties.String*

XML Binding class name: Next\_Header

Dictionary key name: next\_header

#### **padding**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Padding

Dictionary key name: padding

#### **padding\_len**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Padding\_Len

Dictionary key name: padding\_len

#### **payload\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Payload\_Data

Dictionary key name: payload\_data

#### **security\_parameters\_index**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Security\_Parameters\_Index

Dictionary key name: security\_parameters\_index

#### **sequence\_number**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Sequence\_Number

Dictionary key name: sequence\_number

**class** `cybox.objects.network_packet_object.EthernetHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.EthernetHeaderType`

#### **checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

#### **destination\_mac\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Destination\_MAC\_Addr

Dictionary key name: destination\_mac\_addr

**source\_mac\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Source\_MAC\_Addr

Dictionary key name: source\_mac\_addr

**type\_or\_length**

Type: *cybox.objects.network\_packet\_object.TypeLength*

XML Binding class name: Type\_Or\_Length

Dictionary key name: type\_or\_length

**class** *cybox.objects.network\_packet\_object.EthernetInterface*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.EthernetInterfaceType*

**ethernet\_header**

Type: *cybox.objects.network\_packet\_object.EthernetHeader*

XML Binding class name: Ethernet\_Header

Dictionary key name: ethernet\_header

**class** *cybox.objects.network\_packet\_object.Fragment*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.FragmentType*

**fragment**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Fragment

Dictionary key name: fragment

**fragment\_header**

Type: *cybox.objects.network\_packet\_object.FragmentHeader*

XML Binding class name: Fragment\_Header

Dictionary key name: fragment\_header

**class** *cybox.objects.network\_packet\_object.FragmentHeader*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.FragmentHeaderType*

#### **fragment\_offset**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Fragment\_Offset

Dictionary key name: fragment\_offset

#### **identification**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Identification

Dictionary key name: identification

#### **m\_flag**

Type: *cybox.common.properties.String*

XML Binding class name: M\_Flag

Dictionary key name: m\_flag

#### **next\_header**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Next\_Header

Dictionary key name: next\_header

**class** `cybox.objects.network_packet_object.FragmentationRequired`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.FragmentationRequiredType`

#### **fragmentation\_required**

XML Binding class name: Fragmentation\_Required

Dictionary key name: fragmentation\_required

#### **next\_hop\_mtu**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Next\_Hop\_MTU

Dictionary key name: next\_hop\_mtu

**class** `cybox.objects.network_packet_object.HopByHopOptions`

Bases: `cybox.objects.network_packet_object._IPv6ExtHeader`

XML binding class: `cybox.bindings.network_packet_object.HopByHopOptionsType`

**class** `cybox.objects.network_packet_object.ICMPv4AddressMaskReply`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4AddressMaskReplyType`

#### **address\_mask**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Address_Mask`

Dictionary key name: `address_mask`

#### **address\_mask\_reply**

XML Binding class name: `Address_Mask_Reply`

Dictionary key name: `address_mask_reply`

**class** `cybox.objects.network_packet_object.ICMPv4AddressMaskRequest`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4AddressMaskRequestType`

#### **address\_mask**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Address_Mask`

Dictionary key name: `address_mask`

#### **address\_mask\_request**

XML Binding class name: `Address_Mask_Request`

Dictionary key name: `address_mask_request`

**class** `cybox.objects.network_packet_object.ICMPv4DestinationUnreachable`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4DestinationUnreachableType`

#### **communication\_administratively\_prohibited**

XML Binding class name: `Communication_Administratively_Prohibited`

Dictionary key name: `communication_administratively_prohibited`

#### **destination\_host\_unknown**

XML Binding class name: `Destination_Host_Unknown`

Dictionary key name: `destination_host_unknown`

**destination\_host\_unreachable**

XML Binding class name: Destination\_Host\_Unreachable

Dictionary key name: destination\_host\_unreachable

**destination\_network\_unknown**

XML Binding class name: Destination\_Network\_Unknown

Dictionary key name: destination\_network\_unknown

**destination\_network\_unreachable**

XML Binding class name: Destination\_Network\_Unreachable

Dictionary key name: destination\_network\_unreachable

**destination\_port\_unreachable**

XML Binding class name: Destination\_Port\_Unreachable

Dictionary key name: destination\_port\_unreachable

**destination\_protocol\_unreachable**

XML Binding class name: Destination\_Protocol\_Unreachable

Dictionary key name: destination\_protocol\_unreachable

**fragmentation\_required**

Type: *cybox.objects.network\_packet\_object.FragmentationRequired*

XML Binding class name: Fragmentation\_Required

Dictionary key name: fragmentation\_required

**host\_administratively\_prohibited**

XML Binding class name: Host\_Administratively\_Prohibited

Dictionary key name: host\_administratively\_prohibited

**host\_precedence\_violation**

XML Binding class name: Host\_Precedence\_Violation

Dictionary key name: host\_precedence\_violation

**host\_unreachable\_for\_tos**

XML Binding class name: Host\_Unreachable\_For\_TOS

Dictionary key name: host\_unreachable\_for\_tos

**network\_administratively\_prohibited**

XML Binding class name: Network\_Administratively\_Prohibited

Dictionary key name: network\_administratively\_prohibited

**network\_unreachable\_for\_tos**

XML Binding class name: Network\_Unreachable\_For\_TOS

Dictionary key name: network\_unreachable\_for\_tos

**precedence\_cutoff\_in\_effect**

XML Binding class name: Precedence\_Cutoff\_In\_Effect

Dictionary key name: precedence\_cutoff\_in\_effect

**source\_host\_isolated**

XML Binding class name: Source\_Host\_Isolated

Dictionary key name: source\_host\_isolated

**source\_route\_failed**

XML Binding class name: Source\_Route\_Failed

Dictionary key name: source\_route\_failed

**class** `cybox.objects.network_packet_object.ICMPv4EchoReply`  
Bases: `cybox.objects.network_packet_object._ICMPEchoReply`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4EchoReplyType`

**class** `cybox.objects.network_packet_object.ICMPv4EchoRequest`  
Bases: `cybox.objects.network_packet_object._ICMPEchoRequest`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4EchoRequestType`

**class** `cybox.objects.network_packet_object.ICMPv4ErrorMessage`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4ErrorMessageType`

**destination\_unreachable**

Type: `cybox.objects.network_packet_object.ICMPv4DestinationUnreachable`

XML Binding class name: Destination\_Unreachable

Dictionary key name: destination\_unreachable

**error\_msg\_content**

Type: `cybox.objects.network_packet_object.ICMPv4ErrorMessageContent`

XML Binding class name: Error\_Msg\_Content

Dictionary key name: error\_msg\_content

#### **redirect\_message**

Type: *cybox.objects.network\_packet\_object.ICMPv4RedirectMessage*

XML Binding class name: Redirect\_Message

Dictionary key name: redirect\_message

#### **source\_quench**

Type: *cybox.objects.network\_packet\_object.ICMPv4SourceQuench*

XML Binding class name: Source\_Quench

Dictionary key name: source\_quench

#### **time\_exceeded**

Type: *cybox.objects.network\_packet\_object.ICMPv4TimeExceeded*

XML Binding class name: Time\_Exceeded

Dictionary key name: time\_exceeded

**class** `cybox.objects.network_packet_object.ICMPv4ErrorMessageContent`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4ErrorMessageContentType`

#### **first\_eight\_bytes**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: First\_Eight\_Bytes

Dictionary key name: first\_eight\_bytes

#### **ip\_header**

Type: *cybox.objects.network\_packet\_object.IPv4Header*

XML Binding class name: IP\_Header

Dictionary key name: ip\_header

**class** `cybox.objects.network_packet_object.ICMPv4Header`

Bases: `cybox.objects.network_packet_object._ICMPHeader`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4HeaderType`

**class** `cybox.objects.network_packet_object.ICMPv4InfoMessage`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4InfoMessageType`

**address\_mask\_reply**

Type: *cybox.objects.network\_packet\_object.ICMPv4AddressMaskReply*

XML Binding class name: Address\_Mask\_Reply

Dictionary key name: address\_mask\_reply

**address\_mask\_request**

Type: *cybox.objects.network\_packet\_object.ICMPv4AddressMaskRequest*

XML Binding class name: Address\_Mask\_Request

Dictionary key name: address\_mask\_request

**echo\_reply**

Type: *cybox.objects.network\_packet\_object.ICMPv4EchoReply*

XML Binding class name: Echo\_Reply

Dictionary key name: echo\_reply

**echo\_request**

Type: *cybox.objects.network\_packet\_object.ICMPv4EchoRequest*

XML Binding class name: Echo\_Request

Dictionary key name: echo\_request

**info\_msg\_content**

Type: *cybox.objects.network\_packet\_object.ICMPv4InfoMessageContent*

XML Binding class name: Info\_Msg\_Content

Dictionary key name: info\_msg\_content

**timestamp\_reply**

Type: *cybox.objects.network\_packet\_object.ICMPv4TimestampReply*

XML Binding class name: Timestamp\_Reply

Dictionary key name: timestamp\_reply

**timestamp\_request**

Type: *cybox.objects.network\_packet\_object.ICMPv4TimestampRequest*

XML Binding class name: Timestamp\_Request

Dictionary key name: timestamp\_request

**class** `cybox.objects.network_packet_object.ICMPv4InfoMessageContent`

Bases: `cybox.objects.network_packet_object._ICMPInfoMessageContent`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4InfoMessageContentType`

**class** `cybox.objects.network_packet_object.ICMPv4Packet`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4PacketType`

#### **error\_msg**

Type: `cybox.objects.network_packet_object.ICMPv4ErrorMessage`

XML Binding class name: `Error_Msg`

Dictionary key name: `error_msg`

#### **icmpv4\_header**

Type: `cybox.objects.network_packet_object.ICMPv4Header`

XML Binding class name: `ICMPv4_Header`

Dictionary key name: `icmpv4_header`

#### **info\_msg**

Type: `cybox.objects.network_packet_object.ICMPv4InfoMessage`

XML Binding class name: `Info_Msg`

Dictionary key name: `info_msg`

#### **traceroute**

Type: `cybox.objects.network_packet_object.ICMPv4Traceroute`

XML Binding class name: `Traceroute`

Dictionary key name: `traceroute`

**class** `cybox.objects.network_packet_object.ICMPv4RedirectMessage`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4RedirectMessageType`

#### **host\_redirect**

XML Binding class name: `Host_Redirect`

Dictionary key name: `host_redirect`

#### **ip\_address**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `IP_Address`

Dictionary key name: `ip_address`

#### **network\_redirect**

XML Binding class name: `Network_Redirect`

Dictionary key name: `network_redirect`

**tos\_host\_redirect**

XML Binding class name: ToS\_Host\_Redirect

Dictionary key name: tos\_host\_redirect

**tos\_network\_redirect**

XML Binding class name: ToS\_Network\_Redirect

Dictionary key name: tos\_network\_redirect

**class** cybox.objects.network\_packet\_object.ICMPv4SourceQuench

Bases: cybox.Entity

XML binding class: cybox.bindings.network\_packet\_object.ICMPv4SourceQuenchType

**source\_quench**

XML Binding class name: Source\_Quench

Dictionary key name: source\_quench

**class** cybox.objects.network\_packet\_object.ICMPv4TimeExceeded

Bases: cybox.Entity

XML binding class: cybox.bindings.network\_packet\_object.ICMPv4TimeExceededType

**frag\_reassembly\_time\_exceeded**

XML Binding class name: Frag\_Reassembly\_Time\_Exceeded

Dictionary key name: frag\_reassembly\_time\_exceeded

**ttl\_exceeded\_in\_transit**

XML Binding class name: TTL\_Exceeded\_In\_Transit

Dictionary key name: ttl\_exceeded\_in\_transit

**class** cybox.objects.network\_packet\_object.ICMPv4TimestampReply

Bases: cybox.Entity

XML binding class:

cybox.bindings.network\_packet\_object.ICMPv4TimestampReplyType

**originate\_timestamp**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Originate\_Timestamp

Dictionary key name: originate\_timestamp

#### **receive\_timestamp**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Receive\_Timestamp

Dictionary key name: receive\_timestamp

#### **timestamp\_reply**

XML Binding class name: Timestamp\_Reply

Dictionary key name: timestamp\_reply

#### **transmit\_timestamp**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Transmit\_Timestamp

Dictionary key name: transmit\_timestamp

**class** `cybox.objects.network_packet_object.ICMPv4TimestampRequest`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4TimestampRequestType`

#### **originate\_timestamp**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Originate\_Timestamp

Dictionary key name: originate\_timestamp

#### **timestamp**

XML Binding class name: Timestamp

Dictionary key name: timestamp

**class** `cybox.objects.network_packet_object.ICMPv4Traceroute`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4TracerouteType`

#### **identifier**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Identifier

Dictionary key name: identifier

#### **outbound\_hop\_count**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Outbound\_Hop\_Count

Dictionary key name: outbound\_hop\_count

#### **outbound\_packet\_forward\_success**

XML Binding class name: Outbound\_Packet\_Forward\_Success

Dictionary key name: outbound\_packet\_forward\_success

#### **outbound\_packet\_no\_route**

XML Binding class name: Outbound\_Packet\_no\_Route

Dictionary key name: outbound\_packet\_no\_route

#### **output\_link\_mtu**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Output\_Link\_MTU

Dictionary key name: output\_link\_mtu

#### **output\_link\_speed**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Output\_Link\_Speed

Dictionary key name: output\_link\_speed

#### **return\_hop\_count**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Return\_Hop\_Count

Dictionary key name: return\_hop\_count

**class** `cybox.objects.network_packet_object.ICMPv6DestinationUnreachable`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv6DestinationUnreachableType`

#### **address\_unreachable**

XML Binding class name: Address\_Unreachable

Dictionary key name: address\_unreachable

#### **beyond\_scope**

XML Binding class name: Beyond\_Scope

Dictionary key name: beyond\_scope

#### **comm\_prohibited**

XML Binding class name: Comm\_Prohibited

Dictionary key name: comm\_prohibited

#### **no\_route**

XML Binding class name: No\_Route

Dictionary key name: no\_route

#### **port\_unreachable**

XML Binding class name: Port\_Unreachable

Dictionary key name: port\_unreachable

#### **reject\_route**

XML Binding class name: Reject\_Route

Dictionary key name: reject\_route

#### **src\_addr\_failed\_policy**

XML Binding class name: Src\_Addr\_Failed\_Policy

Dictionary key name: src\_addr\_failed\_policy

**class** cybox.objects.network\_packet\_object.**ICMPv6EchoReply**  
Bases: cybox.objects.network\_packet\_object.\_ICMPEchoReply

XML binding class: cybox.bindings.network\_packet\_object.ICMPv6EchoReplyType

**class** cybox.objects.network\_packet\_object.**ICMPv6EchoRequest**  
Bases: cybox.objects.network\_packet\_object.\_ICMPEchoRequest

XML binding class: cybox.bindings.network\_packet\_object.ICMPv6EchoRequestType

**class** cybox.objects.network\_packet\_object.**ICMPv6ErrorMessage**  
Bases: cybox.Entity

XML binding class: cybox.bindings.network\_packet\_object.ICMPv6ErrorMessageType

#### **destination\_unreachable**

Type: *cybox.objects.network\_packet\_object.ICMPv6DestinationUnreachable*

XML Binding class name: Destination\_Unreachable

Dictionary key name: destination\_unreachable

#### **invoking\_packet**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Invoking\_Packet

Dictionary key name: `invoking_packet`

#### **packet\_too\_big**

Type: `cybox.objects.network_packet_object.ICMPv6PacketTooBig`

XML Binding class name: `Packet_Too_Big`

Dictionary key name: `packet_too_big`

#### **parameter\_problem**

Type: `cybox.objects.network_packet_object.ICMPv6ParameterProblem`

XML Binding class name: `Parameter_Problem`

Dictionary key name: `parameter_problem`

#### **time\_exceeded**

Type: `cybox.objects.network_packet_object.ICMPv6TimeExceeded`

XML Binding class name: `Time_Exceeded`

Dictionary key name: `time_exceeded`

**class** `cybox.objects.network_packet_object.ICMPv6Header`

Bases: `cybox.objects.network_packet_object._ICMPHeader`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6HeaderType`

**class** `cybox.objects.network_packet_object.ICMPv6InfoMessage`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6InfoMessageType`

#### **echo\_reply**

Type: `cybox.objects.network_packet_object.ICMPv6EchoReply`

XML Binding class name: `Echo_Reply`

Dictionary key name: `echo_reply`

#### **echo\_request**

Type: `cybox.objects.network_packet_object.ICMPv6EchoRequest`

XML Binding class name: `Echo_Request`

Dictionary key name: `echo_request`

#### **info\_msg\_content**

Type: `cybox.objects.network_packet_object.ICMPv6InfoMessageContent`

XML Binding class name: `Info_Msg_Content`

Dictionary key name: `info_msg_content`

**class** `cybox.objects.network_packet_object.ICMPv6InfoMessageContent`  
Bases: `cybox.objects.network_packet_object._ICMPInfoMessageContent`

XML binding class:  
`cybox.bindings.network_packet_object.ICMPv6InfoMessageContentType`

**class** `cybox.objects.network_packet_object.ICMPv6Packet`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6PacketType`

#### **error\_msg**

Type: `cybox.objects.network_packet_object.ICMPv6ErrorMessage`  
XML Binding class name: `Error_Msg`  
Dictionary key name: `error_msg`

#### **icmpv6\_header**

Type: `cybox.objects.network_packet_object.ICMPv6Header`  
XML Binding class name: `ICMPv6_Header`  
Dictionary key name: `icmpv6_header`

#### **info\_msg**

Type: `cybox.objects.network_packet_object.ICMPv6InfoMessage`  
XML Binding class name: `Info_Msg`  
Dictionary key name: `info_msg`

**class** `cybox.objects.network_packet_object.ICMPv6PacketTooBig`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6PacketTooBigType`

#### **mtu**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `MTU`  
Dictionary key name: `mtu`

#### **packet\_too\_big**

XML Binding class name: `Packet_Too_Big`  
Dictionary key name: `packet_too_big`

**class** `cybox.objects.network_packet_object.ICMPv6ParameterProblem`  
Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv6ParameterProblemType`

#### **erroneous\_header\_field**

XML Binding class name: `Erroneous_Header_Field`

Dictionary key name: `erroneous_header_field`

#### **pointer**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Pointer`

Dictionary key name: `pointer`

#### **unrecognized\_ipv6\_option**

XML Binding class name: `Unrecognized_IPv6_Option`

Dictionary key name: `unrecognized_ipv6_option`

#### **unrecognized\_next\_header\_type**

XML Binding class name: `Unrecognized_Next_Header_Type`

Dictionary key name: `unrecognized_next_header_type`

**class** `cybox.objects.network_packet_object.ICMPv6TimeExceeded`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6TimeExceededType`

#### **fragment\_reassem\_time\_exceeded**

XML Binding class name: `Fragment_Reassem_Time_Exceeded`

Dictionary key name: `fragment_reassem_time_exceeded`

#### **hop\_limit\_exceeded**

XML Binding class name: `Hop_Limit_Exceeded`

Dictionary key name: `hop_limit_exceeded`

**class** `cybox.objects.network_packet_object.IPv4Flags`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv4FlagsType`

#### **do\_not\_fragment**

Type: `cybox.common.properties.String`

XML Binding class name: Do\_Not\_Fragment

Dictionary key name: do\_not\_fragment

#### **more\_fragments**

Type: *cybox.common.properties.String*

XML Binding class name: More\_Fragments

Dictionary key name: more\_fragments

#### **reserved**

Type: *cybox.common.properties.Integer*

XML Binding class name: Reserved

Dictionary key name: reserved

**class** `cybox.objects.network_packet_object.IPv4Header`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv4HeaderType`

#### **checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

#### **dest\_ipv4\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Dest\_IPv4\_Addr

Dictionary key name: dest\_ipv4\_addr

#### **dscp**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: DSCP

Dictionary key name: dscp

#### **ecn**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: ECN

Dictionary key name: ecn

#### **flags**

Type: *cybox.objects.network\_packet\_object.IPv4Flags*

XML Binding class name: Flags

Dictionary key name: flags

**fragment\_offset**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Fragment\_Offset

Dictionary key name: fragment\_offset

**header\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Header\_Length

Dictionary key name: header\_length

**identification**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Identification

Dictionary key name: identification

**ip\_version**

Type: *cybox.common.properties.String*

XML Binding class name: IP\_Version

Dictionary key name: ip\_version

**option**

(List of values permitted)

Type: *cybox.objects.network\_packet\_object.IPv4Option*

XML Binding class name: Option

Dictionary key name: option

**protocol**

Type: *cybox.common.properties.String*

XML Binding class name: Protocol

Dictionary key name: protocol

**src\_ipv4\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Src\_IPv4\_Addr

Dictionary key name: src\_ipv4\_addr

**total\_length**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Total\_Length

Dictionary key name: total\_length

**ttl**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: TTL

Dictionary key name: ttl

**class** `cybox.objects.network_packet_object.IPv4Option`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv4OptionType`

#### **class\_**

Type: *cybox.common.properties.String*

XML Binding class name: Class

Dictionary key name: class

#### **copy\_flag**

Type: *cybox.common.properties.String*

XML Binding class name: Copy\_Flag

Dictionary key name: copy\_flag

#### **option**

Type: *cybox.common.properties.String*

XML Binding class name: Option

Dictionary key name: option

**class** `cybox.objects.network_packet_object.IPv4Packet`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv4PacketType`

#### **data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Data

Dictionary key name: data

#### **ipv4\_header**

Type: *cybox.objects.network\_packet\_object.IPv4Header*

XML Binding class name: IPv4\_Header

Dictionary key name: ipv4\_header

**class** `cybox.objects.network_packet_object.IPv6ExtHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv6ExtHeaderType`

**authentication\_header**

Type: *cybox.objects.network\_packet\_object.AuthenticationHeader*

XML Binding class name: Authentication\_Header

Dictionary key name: authentication\_header

**destination\_options**

(List of values permitted)

Type: *cybox.objects.network\_packet\_object.DestinationOptions*

XML Binding class name: Destination\_Options

Dictionary key name: destination\_options

**encapsulating\_security\_payload**

Type: *cybox.objects.network\_packet\_object.EncapsulatingSecurityPayload*

XML Binding class name: Encapsulating\_Security\_Payload

Dictionary key name: encapsulating\_security\_payload

**fragment**

Type: *cybox.objects.network\_packet\_object.Fragment*

XML Binding class name: Fragment

Dictionary key name: fragment

**hop\_by\_hop\_options**

Type: *cybox.objects.network\_packet\_object.HopByHopOptions*

XML Binding class name: Hop\_by\_Hop\_Options

Dictionary key name: hop\_by\_hop\_options

**routing**

Type: *cybox.objects.network\_packet\_object.Routing*

XML Binding class name: Routing

Dictionary key name: routing

**class** `cybox.objects.network_packet_object.IPv6Header`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv6HeaderType`

**dest\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Dest\_IPv6\_Addr

Dictionary key name: dest\_ipv6\_addr

**flow\_label**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Flow\_Label  
Dictionary key name: flow\_label

**ip\_version**

Type: *cybox.common.properties.String*  
XML Binding class name: IP\_Version  
Dictionary key name: ip\_version

**next\_header**

Type: *cybox.common.properties.String*  
XML Binding class name: Next\_Header  
Dictionary key name: next\_header

**payload\_length**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Payload\_Length  
Dictionary key name: payload\_length

**src\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*  
XML Binding class name: Src\_IPv6\_Addr  
Dictionary key name: src\_ipv6\_addr

**traffic\_class**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Traffic\_Class  
Dictionary key name: traffic\_class

**ttl**

Type: *cybox.common.properties.PositiveInteger*  
XML Binding class name: TTL  
Dictionary key name: ttl

**class** `cybox.objects.network_packet_object.IPv6Option`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv6OptionType`

**do\_not\_recogn\_action**

Type: *cybox.common.properties.String*  
XML Binding class name: Do\_Not\_Recogn\_Action

Dictionary key name: do\_not\_recogn\_action

#### **option\_byte**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Option\_Byte

Dictionary key name: option\_byte

#### **packet\_change**

Type: *cybox.common.properties.String*

XML Binding class name: Packet\_Change

Dictionary key name: packet\_change

**class** `cybox.objects.network_packet_object.IPv6Packet`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv6PacketType`

#### **data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Data

Dictionary key name: data

#### **ext\_headers**

(List of values permitted)

Type: *cybox.objects.network\_packet\_object.IPv6ExtHeader*

XML Binding class name: Ext\_Headers

Dictionary key name: ext\_headers

#### **ipv6\_header**

Type: *cybox.objects.network\_packet\_object.IPv6Header*

XML Binding class name: IPv6\_Header

Dictionary key name: ipv6\_header

**class** `cybox.objects.network_packet_object.InternetLayer`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.InternetLayerType`

#### **icmpv4**

Type: *cybox.objects.network\_packet\_object.ICMPv4Packet*

XML Binding class name: ICMPv4

Dictionary key name: icmpv4

#### **icmpv6**

Type: *cybox.objects.network\_packet\_object.ICMPv6Packet*

XML Binding class name: ICMPv6

Dictionary key name: icmpv6

#### **ipv4**

Type: *cybox.objects.network\_packet\_object.IPv4Packet*

XML Binding class name: IPv4

Dictionary key name: ipv4

#### **ipv6**

Type: *cybox.objects.network\_packet\_object.IPv6Packet*

XML Binding class name: IPv6

Dictionary key name: ipv6

**class** *cybox.objects.network\_packet\_object.LinkLayer*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.LinkLayerType*

#### **logical\_protocols**

Type: *cybox.objects.network\_packet\_object.LogicalProtocol*

XML Binding class name: Logical\_Protocols

Dictionary key name: logical\_protocols

#### **physical\_interface**

Type: *cybox.objects.network\_packet\_object.PhysicalInterface*

XML Binding class name: Physical\_Interface

Dictionary key name: physical\_interface

**class** *cybox.objects.network\_packet\_object.LogicalProtocol*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.LogicalProtocolType*

#### **arp\_rarp**

Type: *cybox.objects.network\_packet\_object.ARP*

XML Binding class name: ARP\_RARP

Dictionary key name: arp\_rarp

#### **ndp**

Type: *cybox.objects.network\_packet\_object.NDP*

XML Binding class name: NDP

Dictionary key name: ndp

**class** `cybox.objects.network_packet_object.NDP`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NDPType`

#### **icmpv6\_header**

Type: *cybox.objects.network\_packet\_object.ICMPv6Header*

XML Binding class name: ICMPv6\_Header

Dictionary key name: icmpv6\_header

#### **neighbor\_advertisement**

Type: *cybox.objects.network\_packet\_object.NeighborAdvertisement*

XML Binding class name: Neighbor\_Advertisement

Dictionary key name: neighbor\_advertisement

#### **neighbor\_solicitation**

Type: *cybox.objects.network\_packet\_object.NeighborSolicitation*

XML Binding class name: Neighbor\_Solicitation

Dictionary key name: neighbor\_solicitation

#### **redirect**

Type: *cybox.objects.network\_packet\_object.Redirect*

XML Binding class name: Redirect

Dictionary key name: redirect

#### **router\_advertisement**

Type: *cybox.objects.network\_packet\_object.RouterAdvertisement*

XML Binding class name: Router\_Advertisement

Dictionary key name: router\_advertisement

#### **router\_solicitation**

Type: *cybox.objects.network\_packet\_object.RouterSolicitation*

XML Binding class name: Router\_Solicitation

Dictionary key name: router\_solicitation

**class** `cybox.objects.network_packet_object.NDPLinkAddr`

Bases: `cybox.Entity`

Abstract Type

XML binding class: `cybox.bindings.network_packet_object.NDPLinkAddrType`

**length**

Type: `cybox.common.properties.Integer`

XML Binding class name: Length

Dictionary key name: length

**link\_layer\_mac\_addr**

Type: `cybox.objects.address_object.Address`

XML Binding class name: Link\_Layer\_MAC\_Addr

Dictionary key name: link\_layer\_mac\_addr

**class** `cybox.objects.network_packet_object.NDPMTU`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NDPMTUType`

**length**

Type: `cybox.common.properties.Integer`

XML Binding class name: Length

Dictionary key name: length

**mtu**

Type: `cybox.common.properties.Integer`

XML Binding class name: MTU

Dictionary key name: mtu

**class** `cybox.objects.network_packet_object.NDPPrefixInfo`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NDPPrefixInfoType`

**addr\_config\_flag**

XML Binding class name: addr\_config\_flag

Dictionary key name: addr\_config\_flag

**length**

Type: `cybox.common.properties.Integer`

XML Binding class name: Length

Dictionary key name: length

**link\_flag**

XML Binding class name: link\_flag

Dictionary key name: link\_flag

**preferred\_lifetime**

Type: *cybox.common.properties.Integer*

XML Binding class name: Preferred\_Lifetime

Dictionary key name: preferred\_lifetime

**prefix**

Type: *cybox.objects.network\_packet\_object.Prefix*

XML Binding class name: Prefix

Dictionary key name: prefix

**prefix\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Prefix\_Length

Dictionary key name: prefix\_length

**valid\_lifetime**

Type: *cybox.common.properties.Integer*

XML Binding class name: Valid\_Lifetime

Dictionary key name: valid\_lifetime

**class** cybox.objects.network\_packet\_object.NDPRedirectedHeader

Bases: cybox.Entity

XML binding class: cybox.bindings.network\_packet\_object.NDPRedirectedHeaderType

**ipheader\_and\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: IPHeader\_And\_Data

Dictionary key name: ipheader\_and\_data

**length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

**class** cybox.objects.network\_packet\_object.NeighborAdvertisement

Bases: cybox.Entity

XML binding class:  
cybox.bindings.network\_packet\_object.NeighborAdvertisementType

#### **options**

Type: *cybox.objects.network\_packet\_object.NeighborOptions*  
XML Binding class name: Options  
Dictionary key name: options

#### **override\_flag**

XML Binding class name: override\_flag  
Dictionary key name: override\_flag

#### **router\_flag**

XML Binding class name: router\_flag  
Dictionary key name: router\_flag

#### **solicited\_flag**

XML Binding class name: solicited\_flag  
Dictionary key name: solicited\_flag

#### **target\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*  
XML Binding class name: Target\_IPv6\_Addr  
Dictionary key name: target\_ipv6\_addr

**class** cybox.objects.network\_packet\_object.**NeighborOptions**  
Bases: cybox.Entity

XML binding class: cybox.bindings.network\_packet\_object.NeighborOptionsType

#### **target\_link\_addr**

Type: *cybox.objects.network\_packet\_object.NDPLinkAddr*  
XML Binding class name: Target\_Link\_Addr  
Dictionary key name: target\_link\_addr

**class** cybox.objects.network\_packet\_object.**NeighborSolicitation**  
Bases: cybox.Entity

XML binding class:  
cybox.bindings.network\_packet\_object.NeighborSolicitationType

**options**

Type: *cybox.objects.network\_packet\_object.NeighborSolicitationOptions*

XML Binding class name: Options

Dictionary key name: options

**target\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Target\_IPv6\_Addr

Dictionary key name: target\_ipv6\_addr

**class** `cybox.objects.network_packet_object.NeighborSolicitationOptions`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.NeighborSolicitationOptionsType`

**src\_link\_addr**

Type: *cybox.objects.network\_packet\_object.NDPLinkAddr*

XML Binding class name: Src\_Link\_Addr

Dictionary key name: src\_link\_addr

**class** `cybox.objects.network_packet_object.NetworkPacket`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.network_packet_object.NetworkPacketObjectType`

**internet\_layer**

Type: *cybox.objects.network\_packet\_object.InternetLayer*

XML Binding class name: Internet\_Layer

Dictionary key name: internet\_layer

**link\_layer**

Type: *cybox.objects.network\_packet\_object.LinkLayer*

XML Binding class name: Link\_Layer

Dictionary key name: link\_layer

**transport\_layer**

Type: *cybox.objects.network\_packet\_object.TransportLayer*

XML Binding class name: Transport\_Layer

Dictionary key name: transport\_layer

**class** `cybox.objects.network_packet_object.OptionData`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.OptionDataType`

#### **option\_data\_len**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Option_Data_Len`

Dictionary key name: `option_data_len`

#### **option\_type**

Type: `cybox.objects.network_packet_object.IPv6Option`

XML Binding class name: `Option_Type`

Dictionary key name: `option_type`

#### **pad1**

Type: `cybox.objects.network_packet_object.Pad1`

XML Binding class name: `Pad1`

Dictionary key name: `pad1`

#### **padn**

Type: `cybox.objects.network_packet_object.PadN`

XML Binding class name: `PadN`

Dictionary key name: `padn`

**class** `cybox.objects.network_packet_object.Pad1`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.Pad1Type`

#### **octet**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Octet`

Dictionary key name: `octet`

**class** `cybox.objects.network_packet_object.PadN`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.PadNType`

**octet**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Octet

Dictionary key name: octet

**option\_data**

Type: *cybox.common.properties.Integer*

XML Binding class name: Option\_Data

Dictionary key name: option\_data

**option\_data\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Option\_Data\_Length

Dictionary key name: option\_data\_length

**class** `cybox.objects.network_packet_object.PhysicalInterface`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.PhysicalInterfaceType`

**ethernet**

Type: *cybox.objects.network\_packet\_object.EthernetInterface*

XML Binding class name: Ethernet

Dictionary key name: ethernet

**class** `cybox.objects.network_packet_object.Prefix`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.PrefixType`

**ip\_addr\_prefix**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IP\_Addr\_Prefix

Dictionary key name: ip\_addr\_prefix

**ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IPv6\_Addr

Dictionary key name: ipv6\_addr

**class** `cybox.objects.network_packet_object.Redirect`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.RedirectType`

#### **dest\_ipv6\_addr**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Dest_IPv6_Addr`

Dictionary key name: `dest_ipv6_addr`

#### **options**

Type: `cybox.objects.network_packet_object.RedirectOptions`

XML Binding class name: `Options`

Dictionary key name: `options`

#### **target\_ipv6\_addr**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Target_IPv6_Addr`

Dictionary key name: `target_ipv6_addr`

**class** `cybox.objects.network_packet_object.RedirectOptions`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NeighborOptionsType`

#### **redirected\_header**

Type: `cybox.objects.network_packet_object.NDPRedirectedHeader`

XML Binding class name: `Redirected_Header`

Dictionary key name: `redirected_header`

#### **target\_link\_addr**

Type: `cybox.objects.network_packet_object.NDPLinkAddr`

XML Binding class name: `Target_Link_Addr`

Dictionary key name: `target_link_addr`

**class** `cybox.objects.network_packet_object.RouterAdvertisement`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.RouterAdvertisementType`

#### **cur\_hop\_limit**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Cur_Hop_Limit`

Dictionary key name: `cur_hop_limit`

**managed\_address\_config\_flag**

XML Binding class name: managed\_address\_config\_flag

Dictionary key name: managed\_address\_config\_flag

**options**

Type: *cybox.objects.network\_packet\_object.RouterAdvertisementOptions*

XML Binding class name: Options

Dictionary key name: options

**other\_config\_flag**

XML Binding class name: other\_config\_flag

Dictionary key name: other\_config\_flag

**reachable\_time**

Type: *cybox.common.properties.Integer*

XML Binding class name: Reachable\_Time

Dictionary key name: reachable\_time

**retrans\_timer**

Type: *cybox.common.properties.Integer*

XML Binding class name: Retrans\_Timer

Dictionary key name: retrans\_timer

**router\_lifetime**

Type: *cybox.common.properties.Integer*

XML Binding class name: Router\_Lifetime

Dictionary key name: router\_lifetime

**class** `cybox.objects.network_packet_object.RouterAdvertisementOptions`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.RouterAdvertisementOptionsType`

**mtu**

Type: *cybox.objects.network\_packet\_object.NDPMTU*

XML Binding class name: MTU

Dictionary key name: mtu

**prefix\_info**

Type: *cybox.objects.network\_packet\_object.NDPPrefixInfo*

XML Binding class name: Prefix\_Info

Dictionary key name: prefix\_info

#### **src\_link\_addr**

Type: *cybox.objects.network\_packet\_object.NDPLinkAddr*

XML Binding class name: Src\_Link\_Addr

Dictionary key name: src\_link\_addr

**class** `cybox.objects.network_packet_object.RouterSolicitation`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.RouterSolicitationType`

#### **options**

(List of values permitted)

Type: *cybox.objects.network\_packet\_object.RouterSolicitationOptions*

XML Binding class name: Options

Dictionary key name: options

**class** `cybox.objects.network_packet_object.RouterSolicitationOptions`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.RouterSolicitationOptionsType`

#### **src\_link\_addr**

Type: *cybox.objects.network\_packet\_object.NDPLinkAddr*

XML Binding class name: Src\_Link\_Addr

Dictionary key name: src\_link\_addr

**class** `cybox.objects.network_packet_object.Routing`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.RoutingType`

#### **header\_ext\_len**

Type: *cybox.common.properties.Integer*

XML Binding class name: Header\_Ext\_Len

Dictionary key name: header\_ext\_len

#### **next\_header**

Type: *cybox.common.properties.String*  
XML Binding class name: Next\_Header  
Dictionary key name: next\_header

**routing\_type**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Routing\_Type  
Dictionary key name: routing\_type

**segments\_left**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Segments\_Left  
Dictionary key name: segments\_left

**type\_specific\_data**

Type: *cybox.common.properties.String*  
XML Binding class name: Type\_Specific\_Data  
Dictionary key name: type\_specific\_data

**class** `cybox.objects.network_packet_object.TCP`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TCPType`

**data**

Type: *cybox.common.data\_segment.DataSegment*  
XML Binding class name: Data  
Dictionary key name: data

**options**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Options  
Dictionary key name: options

**tcp\_header**

Type: *cybox.objects.network\_packet\_object.TCPHeader*  
XML Binding class name: TCP\_Header  
Dictionary key name: tcp\_header

**class** `cybox.objects.network_packet_object.TCPFlags`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TCPFlagsType`

**ack**

XML Binding class name: ack

Dictionary key name: ack

**cwr**

XML Binding class name: cwr

Dictionary key name: cwr

**ece**

XML Binding class name: ece

Dictionary key name: ece

**fin**

XML Binding class name: fin

Dictionary key name: fin

**ns**

XML Binding class name: ns

Dictionary key name: ns

**psh**

XML Binding class name: psh

Dictionary key name: psh

**rst**

XML Binding class name: rst

Dictionary key name: rst

**syn**

XML Binding class name: syn

Dictionary key name: syn

**urg**

XML Binding class name: urg

Dictionary key name: urg

**class** cybox.objects.network\_packet\_object.**TCPHeader**

Bases: cybox.Entity

XML binding class: cybox.bindings.network\_packet\_object.TCPHeaderType

**ack\_num**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: ACK\_Num

Dictionary key name: ack\_num

**checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

**data\_offset**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Data\_Offset

Dictionary key name: data\_offset

**dest\_port**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: Dest\_Port

Dictionary key name: dest\_port

**reserved**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Reserved

Dictionary key name: reserved

**seq\_num**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Seq\_Num

Dictionary key name: seq\_num

**src\_port**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: Src\_Port

Dictionary key name: src\_port

**tcp\_flags**

Type: *cybox.objects.network\_packet\_object.TCPFlags*

XML Binding class name: TCP\_Flags

Dictionary key name: tcp\_flags

**urg\_ptr**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Urg\_Ptr

Dictionary key name: urg\_ptr

#### **window**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Window

Dictionary key name: window

**class** `cybox.objects.network_packet_object.TransportLayer`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TransportLayerType`

#### **tcp**

Type: *cybox.objects.network\_packet\_object.TCP*

XML Binding class name: TCP

Dictionary key name: tcp

#### **udp**

Type: *cybox.objects.network\_packet\_object.UDP*

XML Binding class name: UDP

Dictionary key name: udp

**class** `cybox.objects.network_packet_object.TypeLength`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TypeLengthType`

#### **internet\_layer\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Internet\_Layer\_Type

Dictionary key name: internet\_layer\_type

#### **length**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Length

Dictionary key name: length

**class** `cybox.objects.network_packet_object.UDP`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.UDPType`

**data**

Type: *cybox.common.data\_segment.DataSegment*

XML Binding class name: Data

Dictionary key name: data

**udp\_header**

Type: *cybox.objects.network\_packet\_object.UDPHeader*

XML Binding class name: UDP\_Header

Dictionary key name: udp\_header

**class** `cybox.objects.network_packet_object.UDPHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.UDPHeaderType`

**checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

**destport**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: DestPort

Dictionary key name: destport

**length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

**srcport**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: SrcPort

Dictionary key name: srcport

**Version:** 2.1.0.12.dev0

**cybox.objects.network\_route\_entry\_object module**

**class** `cybox.objects.network_route_entry_object.NetworkRouteEntry`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.network_route_entry_object.NetworkRouteEntryObjectType`

#### **destination\_address**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Destination_Address`

Dictionary key name: `destination_address`

#### **gateway\_address**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Gateway_Address`

Dictionary key name: `gateway_address`

#### **interface**

Type: `cybox.common.properties.String`

XML Binding class name: `Interface`

Dictionary key name: `interface`

#### **is\_autoconfigure\_address**

XML Binding class name: `is_autoconfigure_address`

Dictionary key name: `is_autoconfigure_address`

#### **is\_immortal**

XML Binding class name: `is_immortal`

Dictionary key name: `is_immortal`

#### **is\_ipv6**

XML Binding class name: `is_ipv6`

Dictionary key name: `is_ipv6`

#### **is\_loopback**

XML Binding class name: `is_loopback`

Dictionary key name: `is_loopback`

#### **is\_publish**

XML Binding class name: `is_publish`

Dictionary key name: `is_publish`

#### **metric**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Metric`

Dictionary key name: `metric`

#### **netmask**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Netmask`

Dictionary key name: `netmask`

#### **origin**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Origin`

Dictionary key name: `origin`

#### **preferred\_lifetime**

Type: `cybox.common.properties.Duration`

XML Binding class name: `Preferred_Lifetime`

Dictionary key name: `preferred_lifetime`

#### **protocol**

Type: `cybox.common.properties.String`

XML Binding class name: `Protocol`

Dictionary key name: `protocol`

#### **route\_age**

Type: `cybox.common.properties.Duration`

XML Binding class name: `Route_Age`

Dictionary key name: `route_age`

#### **type\_**

Type: `cybox.common.properties.String`

XML Binding class name: `Type`

Dictionary key name: `type`

#### **valid\_lifetime**

Type: `cybox.common.properties.Duration`

XML Binding class name: `Valid_Lifetime`

Dictionary key name: `valid_lifetime`

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### **cybox.objects.network\_route\_object module**

**class** `cybox.objects.network_route_object.NetRoute`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.network_route_object.NetRouteObjectType`

### **description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

### **is\_autoconfigure\_address**

XML Binding class name: is\_autoconfigure\_address

Dictionary key name: is\_autoconfigure\_address

### **is\_immortal**

XML Binding class name: is\_immortal

Dictionary key name: is\_immortal

### **is\_ipv6**

XML Binding class name: is\_ipv6

Dictionary key name: is\_ipv6

### **is\_loopback**

XML Binding class name: is\_loopback

Dictionary key name: is\_loopback

### **is\_publish**

XML Binding class name: is\_publish

Dictionary key name: is\_publish

### **network\_route\_entries**

Type: *cybox.objects.network\_route\_object.NetworkRouteEntries*

XML Binding class name: Network\_Route\_Entries

Dictionary key name: network\_route\_entries

### **preferred\_lifetime**

Type: *cybox.common.properties.Duration*

XML Binding class name: Preferred\_Lifetime

Dictionary key name: preferred\_lifetime

### **route\_age**

Type: *cybox.common.properties.Duration*

XML Binding class name: Route\_Age

Dictionary key name: route\_age

### **valid\_lifetime**

Type: *cybox.common.properties.Duration*

XML Binding class name: Valid\_Lifetime

Dictionary key name: valid\_lifetime

**class** `cybox.objects.network_route_object.NetworkRouteEntries` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.network_route_object.NetworkRouteEntriesType`

**Version:** 2.1.0.12.dev0

#### **cybox.objects.network\_socket\_object module**

**class** `cybox.objects.network_socket_object.NetworkSocket`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.network_socket_object.NetworkSocketObjectType`

#### **address\_family**

Type: *cybox.common.properties.String*

XML Binding class name: Address\_Family

Dictionary key name: address\_family

#### **domain**

Type: *cybox.common.properties.String*

XML Binding class name: Domain

Dictionary key name: domain

#### **is\_blocking**

XML Binding class name: is\_blocking

Dictionary key name: is\_blocking

#### **is\_listening**

XML Binding class name: is\_listening

Dictionary key name: is\_listening

#### **local\_address**

Type: *cybox.objects.socket\_address\_object.SocketAddress*

XML Binding class name: Local\_Address

Dictionary key name: local\_address

#### **options**

Type: *cybox.objects.network\_socket\_object.SocketOptions*

XML Binding class name: Options

Dictionary key name: options

#### **protocol**

Type: *cybox.common.properties.String*

XML Binding class name: Protocol

Dictionary key name: protocol

#### **remote\_address**

Type: *cybox.objects.socket\_address\_object.SocketAddress*

XML Binding class name: Remote\_Address

Dictionary key name: remote\_address

#### **socket\_descriptor**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Socket\_Descriptor

Dictionary key name: socket\_descriptor

#### **type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**class** `cybox.objects.network_socket_object.SocketOptions`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_socket_object.SocketOptionsType`

#### **ip\_multicast\_if**

Type: *cybox.common.properties.String*

XML Binding class name: IP\_MULTICAST\_IF

Dictionary key name: ip\_multicast\_if

#### **ip\_multicast\_if2**

Type: *cybox.common.properties.String*

XML Binding class name: IP\_MULTICAST\_IF2

Dictionary key name: ip\_multicast\_if2

#### **ip\_multicast\_loop**

XML Binding class name: IP\_MULTICAST\_LOOP

Dictionary key name: ip\_multicast\_loop

#### **ip\_tos**

Type: *cybox.common.properties.String*  
XML Binding class name: IP\_TOS  
Dictionary key name: ip\_tos

**so\_broadcast**

XML Binding class name: SO\_BROADCAST  
Dictionary key name: so\_broadcast

**so\_conditional\_accept**

XML Binding class name: SO\_CONDITIONAL\_ACCEPT  
Dictionary key name: so\_conditional\_accept

**so\_debug**

XML Binding class name: SO\_DEBUG  
Dictionary key name: so\_debug

**so\_dontlinger**

XML Binding class name: SO\_DONTLINGER  
Dictionary key name: so\_dontlinger

**so\_dontroute**

XML Binding class name: SO\_DONTRROUTE  
Dictionary key name: so\_dontroute

**so\_group\_priority**

Type: *cybox.common.properties.UnsignedInteger*  
XML Binding class name: SO\_GROUP\_PRIORITY  
Dictionary key name: so\_group\_priority

**so\_keepalive**

XML Binding class name: SO\_KEEPALIVE  
Dictionary key name: so\_keepalive

**so\_linger**

Type: *cybox.common.properties.UnsignedInteger*  
XML Binding class name: SO\_LINGER  
Dictionary key name: so\_linger

**so\_oobinline**

XML Binding class name: SO\_OOBINLINE  
Dictionary key name: so\_oobinline

**so\_rcvbuf**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_RCVBUF

Dictionary key name: so\_rcvbuf

**so\_rcvtimeo**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_RCVTIMEO

Dictionary key name: so\_rcvtimeo

**so\_reuseaddr**

XML Binding class name: SO\_REUSEADDR

Dictionary key name: so\_reuseaddr

**so\_sndbuf**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_SNDBUF

Dictionary key name: so\_sndbuf

**so\_sndtimeo**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_SNDTIMEO

Dictionary key name: so\_sndtimeo

**so\_timeout**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_TIMEOUT

Dictionary key name: so\_timeout

**so\_update\_accept\_context**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_UPDATE\_ACCEPT\_CONTEXT

Dictionary key name: so\_update\_accept\_context

**tcp\_nodelay**

XML Binding class name: TCP\_NODELAY

Dictionary key name: tcp\_nodelay

Version: 2.1.0.12.dev0

**cybox.objects.network\_subnet\_object module**

**class** cybox.objects.network\_subnet\_object.**NetworkSubnet**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.network_subnet_object.NetworkSubnetObjectType`

#### description

Type: `cybox.common.structured_text.StructuredText`

XML Binding class name: Description

Dictionary key name: description

#### name

Type: `cybox.common.properties.String`

XML Binding class name: Name

Dictionary key name: name

#### number\_of\_ip\_addresses

Type: `cybox.common.properties.Integer`

XML Binding class name: Number\_Of\_IP\_Addresses

Dictionary key name: number\_of\_ip\_addresses

#### routes

Type: `cybox.objects.network_subnet_object.Routes`

XML Binding class name: Routes

Dictionary key name: routes

**class** `cybox.objects.network_subnet_object.Routes` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.network_subnet_object.RoutesType`

Version: 2.1.0.12.dev0

#### cybox.objects.pdf\_file\_object module

**class** `cybox.objects.pdf_file_object.PDFDocumentInformationDictionary`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.pdf_file_object.PDFDocumentInformationDictionaryType`

#### author

Type: `cybox.common.properties.String`

XML Binding class name: Author

Dictionary key name: author

**creationdate**

Type: *cybox.common.properties.DateTime*

XML Binding class name: `CreationDate`

Dictionary key name: `creationdate`

**creator**

Type: *cybox.common.properties.String*

XML Binding class name: `Creator`

Dictionary key name: `creator`

**keywords**

Type: *cybox.common.properties.String*

XML Binding class name: `Keywords`

Dictionary key name: `keywords`

**moddate**

Type: *cybox.common.properties.DateTime*

XML Binding class name: `ModDate`

Dictionary key name: `moddate`

**producer**

Type: *cybox.common.properties.String*

XML Binding class name: `Producer`

Dictionary key name: `producer`

**subject**

Type: *cybox.common.properties.String*

XML Binding class name: `Subject`

Dictionary key name: `subject`

**title**

Type: *cybox.common.properties.String*

XML Binding class name: `Title`

Dictionary key name: `title`

**trapped**

Type: *cybox.common.properties.String*

XML Binding class name: `Trapped`

Dictionary key name: `trapped`

**class** `cybox.objects.pdf_file_object.PDFFile`

Bases: *cybox.objects.file\_object.File*

XML binding class: `cybox.bindings.pdf_file_object.PDFFileObjectType`

#### **metadata**

Type: `cybox.objects.pdf_file_object.PDFFileMetadata`

XML Binding class name: Metadata

Dictionary key name: metadata

#### **version**

Type: `cybox.common.properties.Double`

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.pdf_file_object.PDFFileMetadata`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.pdf_file_object.PDFFileMetadataType`

#### **document\_information\_dictionary**

Type: `cybox.objects.pdf_file_object.PDFDocumentInformationDictionary`

XML Binding class name: Document\_Information\_Dictionary

Dictionary key name: document\_information\_dictionary

#### **encrypted**

XML Binding class name: encrypted

Dictionary key name: encrypted

#### **keyword\_counts**

Type: `cybox.objects.pdf_file_object.PDFKeywordCounts`

XML Binding class name: Keyword\_Counts

Dictionary key name: keyword\_counts

#### **number\_of\_cross\_reference\_tables**

Type: `cybox.common.properties.PositiveInteger`

XML Binding class name: Number\_Of\_Cross\_Reference\_Tables

Dictionary key name: number\_of\_cross\_reference\_tables

#### **number\_of\_indirect\_objects**

Type: `cybox.common.properties.PositiveInteger`

XML Binding class name: Number\_Of\_Indirect\_Objects

Dictionary key name: number\_of\_indirect\_objects

#### **number\_of\_trailers**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Number\_Of\_Trailers

Dictionary key name: number\_of\_trailers

#### **optimized**

XML Binding class name: optimized

Dictionary key name: optimized

**class** `cybox.objects.pdf_file_object.PDFKeywordCount`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.pdf_file_object.PDFKeywordCountType`

#### **non\_obfuscated\_count**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Non\_Obfuscated\_Count

Dictionary key name: non\_obfuscated\_count

#### **obfuscated\_count**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Obfuscated\_Count

Dictionary key name: obfuscated\_count

**class** `cybox.objects.pdf_file_object.PDFKeywordCounts`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.pdf_file_object.PDFKeywordCountsType`

#### **aa\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: AA\_Count

Dictionary key name: aa\_count

#### **ascii85decode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: ASCII85Decode\_Count

Dictionary key name: ascii85decode\_count

#### **asciihexdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: ASCIIHexDecode\_Count

Dictionary key name: asciihexdecode\_count

#### **ccittfaxdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: CCITTFaxDecode\_Count

Dictionary key name: ccittfaxdecode\_count

#### **dctdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: DCTDecode\_Count

Dictionary key name: dctdecode\_count

#### **encrypt\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: Encrypt\_Count

Dictionary key name: encrypt\_count

#### **flatedecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: FlateDecode\_Count

Dictionary key name: flatedecode\_count

#### **javascript\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: JavaScript\_Count

Dictionary key name: javascript\_count

#### **jbig2decode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: JBIG2Decode\_Count

Dictionary key name: jbig2decode\_count

#### **js\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: JS\_Count

Dictionary key name: js\_count

#### **launch\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: Launch\_Count

Dictionary key name: launch\_count

#### **lzwdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: LZWDecode\_Count

Dictionary key name: lzwdecode\_count

#### **objstm\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: ObjStm\_Count

Dictionary key name: objstm\_count

#### **openaction\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: OpenAction\_Count

Dictionary key name: openaction\_count

#### **page\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: Page\_Count

Dictionary key name: page\_count

#### **richmedia\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: RichMedia\_Count

Dictionary key name: richmedia\_count

#### **runlengthdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: RunLengthDecode\_Count

Dictionary key name: runlengthdecode\_count

#### **xfa\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: XFA\_Count

Dictionary key name: xfa\_count

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#### **cybox.objects.pipe\_object module**

**class** *cybox.objects.pipe\_object.Pipe*

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: *cybox.bindings.pipe\_object.PipeObjectType*

**name**Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**named**

XML Binding class name: named

Dictionary key name: named

**Version:** 2.1.0.12.dev0**cybox.objects.port\_object module****class** `cybox.objects.port_object.Port`Bases: *cybox.common.object\_properties.ObjectProperties*XML binding class: `cybox.bindings.port_object.PortObjectType`**layer4\_protocol**Type: *cybox.common.properties.String*

XML Binding class name: Layer4\_Protocol

Dictionary key name: layer4\_protocol

**port\_value**Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Port\_Value

Dictionary key name: port\_value

**Version:** 2.1.0.12.dev0**cybox.objects.process\_object module****class** `cybox.objects.process_object.ArgumentList` (\*args)Bases: `cybox.EntityList`XML binding class: `cybox.bindings.process_object.ArgumentListType`**class** `cybox.objects.process_object.ChildPIDList` (\*args)Bases: `cybox.EntityList`XML binding class: `cybox.bindings.process_object.ChildPIDListType`**class** `cybox.objects.process_object.ImageInfo`Bases: `cybox.Entity`

XML binding class: `cybox.bindings.process_object.ImageInfoType`

#### **command\_line**

Type: `cybox.common.properties.String`

XML Binding class name: `Command_Line`

Dictionary key name: `command_line`

#### **current\_directory**

Type: `cybox.common.properties.String`

XML Binding class name: `Current_Directory`

Dictionary key name: `current_directory`

#### **file\_name**

Type: `cybox.common.properties.String`

XML Binding class name: `File_Name`

Dictionary key name: `file_name`

#### **path**

Type: `cybox.common.properties.String`

XML Binding class name: `Path`

Dictionary key name: `path`

**class** `cybox.objects.process_object.NetworkConnectionList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.process_object.NetworkConnectionListType`

**class** `cybox.objects.process_object.PortList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.process_object.PortListType`

**class** `cybox.objects.process_object.Process`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.process_object.ProcessObjectType`

#### **argument\_list**

Type: `cybox.objects.process_object.ArgumentList`

XML Binding class name: `Argument_List`

Dictionary key name: `argument_list`

#### **child\_pid\_list**

Type: `cybox.objects.process_object.ChildPIDList`

XML Binding class name: `Child_PID_List`

Dictionary key name: `child_pid_list`

#### **creation\_time**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Creation_Time`

Dictionary key name: `creation_time`

#### **environment\_variable\_list**

Type: `cybox.common.environment_variable.EnvironmentVariableList`

XML Binding class name: `Environment_Variable_List`

Dictionary key name: `environment_variable_list`

#### **extracted\_features**

Type: `cybox.common.extracted_features.ExtractedFeatures`

XML Binding class name: `Extracted_Features`

Dictionary key name: `extracted_features`

#### **image\_info**

Type: `cybox.objects.process_object.ImageInfo`

XML Binding class name: `Image_Info`

Dictionary key name: `image_info`

#### **is\_hidden**

XML Binding class name: `is_hidden`

Dictionary key name: `is_hidden`

#### **kernel\_time**

Type: `cybox.common.properties.Duration`

XML Binding class name: `Kernel_Time`

Dictionary key name: `kernel_time`

#### **name**

Type: `cybox.common.properties.String`

XML Binding class name: `Name`

Dictionary key name: `name`

#### **network\_connection\_list**

Type: `cybox.objects.process_object.NetworkConnectionList`

XML Binding class name: Network\_Connection\_List

Dictionary key name: network\_connection\_list

#### **parent\_pid**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Parent\_PID

Dictionary key name: parent\_pid

#### **pid**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: PID

Dictionary key name: pid

#### **port\_list**

Type: *cybox.objects.process\_object.PortList*

XML Binding class name: Port\_List

Dictionary key name: port\_list

#### **start\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Start\_Time

Dictionary key name: start\_time

#### **user\_time**

Type: *cybox.common.properties.Duration*

XML Binding class name: User\_Time

Dictionary key name: user\_time

#### **username**

Type: *cybox.common.properties.String*

XML Binding class name: Username

Dictionary key name: username

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#### **cybox.objects.product\_object module**

**class** `cybox.objects.product_object.Product`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.product_object.ProductObjectType`

#### **edition**

Type: *cybox.common.properties.String*  
XML Binding class name: Edition  
Dictionary key name: edition

#### **language**

Type: *cybox.common.properties.String*  
XML Binding class name: Language  
Dictionary key name: language

#### **product**

Type: *cybox.common.properties.String*  
XML Binding class name: Product  
Dictionary key name: product

#### **update**

Type: *cybox.common.properties.String*  
XML Binding class name: Update  
Dictionary key name: update

#### **vendor**

Type: *cybox.common.properties.String*  
XML Binding class name: Vendor  
Dictionary key name: vendor

#### **version**

Type: *cybox.common.properties.String*  
XML Binding class name: Version  
Dictionary key name: version

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### **cybox.objects.semaphore\_object module**

**class** `cybox.objects.semaphore_object.Semaphore`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.semaphore_object.SemaphoreObjectType`

#### **current\_count**

Type: *cybox.common.properties.UnsignedInteger*  
XML Binding class name: Current\_Count  
Dictionary key name: current\_count

#### **maximum\_count**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Maximum\_Count

Dictionary key name: maximum\_count

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **named**

XML Binding class name: named

Dictionary key name: named

Version: 2.1.0.12.dev0

### **cybox.objects.socket\_address\_object module**

**class** `cybox.objects.socket_address_object.SocketAddress`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.socket_address_object.SocketAddressObjectType`

#### **hostname**

Type: *cybox.objects.hostname\_object.Hostname*

XML Binding class name: Hostname

Dictionary key name: hostname

#### **ip\_address**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IP\_Address

Dictionary key name: ip\_address

#### **port**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: Port

Dictionary key name: port

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### **cybox.objects.sms\_message\_object module**

**class** `cybox.objects.sms_message_object.SMSMessage`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.sms_message_object.SMSMessageObjectType`

**bits\_per\_character**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Bits\_Per\_Character

Dictionary key name: bits\_per\_character

**body**

Type: *cybox.common.properties.String*

XML Binding class name: Body

Dictionary key name: body

**encoding**

Type: *cybox.common.properties.String*

XML Binding class name: Encoding

Dictionary key name: encoding

**is\_premium**

XML Binding class name: is\_premium

Dictionary key name: is\_premium

**length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

**recipient\_phone\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Recipient\_Phone\_Number

Dictionary key name: recipient\_phone\_number

**sender\_phone\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Sender\_Phone\_Number

Dictionary key name: sender\_phone\_number

**sent\_datetime**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Sent\_DateTime

Dictionary key name: sent\_datetime

**size**

Type: *cybox.common.properties.Integer*

XML Binding class name: Size

Dictionary key name: size

**user\_data\_header**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: User\_Data\_Header

Dictionary key name: user\_data\_header

Version: 2.1.0.12.dev0

**cybox.objects.system\_object module**

**class** cybox.objects.system\_object.**BIOSInfo**

Bases: cybox.Entity

XML binding class: cybox.bindings.system\_object.BIOSInfoType

**bios\_date**

Type: *cybox.common.properties.Date*

XML Binding class name: BIOS\_Date

Dictionary key name: bios\_date

**bios\_manufacturer**

Type: *cybox.common.properties.String*

XML Binding class name: BIOS\_Manufacturer

Dictionary key name: bios\_manufacturer

**bios\_release\_date**

Type: *cybox.common.properties.Date*

XML Binding class name: BIOS\_Release\_Date

Dictionary key name: bios\_release\_date

**bios\_serial\_number**

Type: *cybox.common.properties.String*

XML Binding class name: BIOS\_Serial\_Number

Dictionary key name: bios\_serial\_number

**bios\_version**

Type: *cybox.common.properties.String*

XML Binding class name: BIOS\_Version

Dictionary key name: bios\_version

**class** cybox.objects.system\_object.**DHCPServerList** (\*args)

Bases: cybox.EntityList

XML binding class: cybox.bindings.system\_object.DHCPServerListType

**class** `cybox.objects.system_object.IPGatewayList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.system_object.IPGatewayListType`

**class** `cybox.objects.system_object.IPInfo`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.system_object.IPInfoType`

#### **ip\_address**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `IP_Address`

Dictionary key name: `ip_address`

#### **subnet\_mask**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Subnet_Mask`

Dictionary key name: `subnet_mask`

**class** `cybox.objects.system_object.IPInfoList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.system_object.IPInfoListType`

**class** `cybox.objects.system_object.NetworkInterface`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.system_object.NetworkInterfaceType`

#### **adapter**

Type: `cybox.common.properties.String`

XML Binding class name: `Adapter`

Dictionary key name: `adapter`

#### **description**

Type: `cybox.common.properties.String`

XML Binding class name: `Description`

Dictionary key name: `description`

#### **dhcp\_lease\_expires**

Type: *cybox.common.properties.DateTime*

XML Binding class name: DHCP\_Lease\_Expires

Dictionary key name: dhcp\_lease\_expires

#### **dhcp\_lease\_obtained**

Type: *cybox.common.properties.DateTime*

XML Binding class name: DHCP\_Lease\_Obtained

Dictionary key name: dhcp\_lease\_obtained

#### **dhcp\_server\_list**

Type: *cybox.objects.system\_object.DHCPServerList*

XML Binding class name: DHCP\_Server\_List

Dictionary key name: dhcp\_server\_list

#### **ip\_gateway\_list**

Type: *cybox.objects.system\_object.IPGatewayList*

XML Binding class name: IP\_Gateway\_List

Dictionary key name: ip\_gateway\_list

#### **ip\_list**

Type: *cybox.objects.system\_object.IPInfoList*

XML Binding class name: IP\_List

Dictionary key name: ip\_list

#### **mac**

Type: *cybox.common.properties.String*

XML Binding class name: MAC

Dictionary key name: mac

**class** *cybox.objects.system\_object.NetworkInterfaceList* (\*args)

Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.system\_object.NetworkInterfaceListType*

**class** *cybox.objects.system\_object.OS*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.system\_object.OSType*

#### **bitness**

Type: *cybox.common.properties.String*  
XML Binding class name: Bitness  
Dictionary key name: bitness

**build\_number**

Type: *cybox.common.properties.String*  
XML Binding class name: Build\_Number  
Dictionary key name: build\_number

**environment\_variable\_list**

Type: *cybox.common.environment\_variable.EnvironmentVariableList*  
XML Binding class name: Environment\_Variable\_List  
Dictionary key name: environment\_variable\_list

**install\_date**

Type: *cybox.common.properties.Date*  
XML Binding class name: Install\_Date  
Dictionary key name: install\_date

**patch\_level**

Type: *cybox.common.properties.String*  
XML Binding class name: Patch\_Level  
Dictionary key name: patch\_level

**platform**

Type: *cybox.common.platform\_specification.PlatformSpecification*  
XML Binding class name: Platform  
Dictionary key name: platform

**class** `cybox.objects.system_object.System`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.system_object.SystemObjectType`

**available\_physical\_memory**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: Available\_Physical\_Memory  
Dictionary key name: available\_physical\_memory

**bios\_info**

Type: *cybox.objects.system\_object.BIOSInfo*  
XML Binding class name: BIOS\_Info

Dictionary key name: bios\_info

#### **date**

Type: *cybox.common.properties.Date*

XML Binding class name: Date

Dictionary key name: date

#### **hostname**

Type: *cybox.common.properties.String*

XML Binding class name: Hostname

Dictionary key name: hostname

#### **local\_time**

Type: *cybox.common.properties.Time*

XML Binding class name: Local\_Time

Dictionary key name: local\_time

#### **network\_interface\_list**

Type: *cybox.objects.system\_object.NetworkInterfaceList*

XML Binding class name: Network\_Interface\_List

Dictionary key name: network\_interface\_list

#### **os**

Type: *cybox.objects.system\_object.OS*

XML Binding class name: OS

Dictionary key name: os

#### **processor**

Type: *cybox.common.properties.String*

XML Binding class name: Processor

Dictionary key name: processor

#### **system\_time**

Type: *cybox.common.properties.Time*

XML Binding class name: System\_Time

Dictionary key name: system\_time

#### **timezone\_dst**

Type: *cybox.common.properties.String*

XML Binding class name: Timezone\_DST

Dictionary key name: timezone\_dst

#### **timezone\_standard**

Type: *cybox.common.properties.String*  
XML Binding class name: `Timezone_Standard`  
Dictionary key name: `timezone_standard`

**total\_physical\_memory**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: `Total_Physical_Memory`  
Dictionary key name: `total_physical_memory`

**uptime**

Type: *cybox.common.properties.Duration*  
XML Binding class name: `Uptime`  
Dictionary key name: `uptime`

**username**

Type: *cybox.common.properties.String*  
XML Binding class name: `Username`  
Dictionary key name: `username`

**Version:** 2.1.0.12.dev0

**cybox.objects.uri\_object module**

**class** `cybox.objects.uri_object.URI` (*value=None, type\_=None*)  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.uri_object.URIOBJECTType`

**type\_**

XML Binding class name: `type_`  
Dictionary key name: `type`

**value**

Type: *cybox.common.properties.AnyURI*  
XML Binding class name: `Value`  
Dictionary key name: `value`

**Version:** 2.1.0.12.dev0

**cybox.objects.user\_account\_object module**

**class** `cybox.objects.user_account_object.Group`  
Bases: `cybox.Entity`

An abstract class for account groups.

XML binding class: `<undefined>`

**class** `cybox.objects.user_account_object.GroupList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.user_account_object.GroupListType`

**class** `cybox.objects.user_account_object.Privilege`  
Bases: `cybox.Entity`

An abstract class for account privileges.

XML binding class: <undefined>

**class** `cybox.objects.user_account_object.PrivilegeList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.user_account_object.PrivilegeListType`

**class** `cybox.objects.user_account_object.UserAccount`  
Bases: `cybox.objects.account_object.Account`

XML binding class: `cybox.bindings.user_account_object.UserAccountObjectType`

**full\_name**

Type: `cybox.common.properties.String`

XML Binding class name: `Full_Name`

Dictionary key name: `full_name`

**group\_list**

Type: `cybox.objects.user_account_object.GroupList`

XML Binding class name: `Group_List`

Dictionary key name: `group_list`

**home\_directory**

Type: `cybox.common.properties.String`

XML Binding class name: `Home_Directory`

Dictionary key name: `home_directory`

**last\_login**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Last_Login`

Dictionary key name: `last_login`

**password\_required**

XML Binding class name: password\_required

Dictionary key name: password\_required

**privilege\_list**

Type: *cybox.objects.user\_account\_object.PrivilegeList*

XML Binding class name: Privilege\_List

Dictionary key name: privilege\_list

**script\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Script\_Path

Dictionary key name: script\_path

**user\_password\_age**

Type: *cybox.common.properties.Duration*

XML Binding class name: User\_Password\_Age

Dictionary key name: user\_password\_age

**username**

Type: *cybox.common.properties.String*

XML Binding class name: Username

Dictionary key name: username

Version: 2.1.0.12.dev0

**cybox.objects.volume\_object module**

**class** `cybox.objects.volume_object.FileSystemFlagList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.volume_object.FileSystemFlagListType`

**class** `cybox.objects.volume_object.Volume`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.volume_object.VolumeObjectType`

**actual\_available\_allocation\_units**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Actual\_Available\_Allocation\_Units

Dictionary key name: actual\_available\_allocation\_units

#### **bytes\_per\_sector**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Bytes\_Per\_Sector

Dictionary key name: bytes\_per\_sector

#### **creation\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Creation\_Time

Dictionary key name: creation\_time

#### **device\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Device\_Path

Dictionary key name: device\_path

#### **file\_system\_flag\_list**

Type: *cybox.objects.volume\_object.FileSystemFlagList*

XML Binding class name: File\_System\_Flag\_List

Dictionary key name: file\_system\_flag\_list

#### **file\_system\_type**

Type: *cybox.common.properties.String*

XML Binding class name: File\_System\_Type

Dictionary key name: file\_system\_type

#### **is\_mounted**

XML Binding class name: is\_mounted

Dictionary key name: is\_mounted

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **sectors\_per\_allocation\_unit**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Sectors\_Per\_Allocation\_Unit

Dictionary key name: sectors\_per\_allocation\_unit

#### **serial\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Serial\_Number

Dictionary key name: serial\_number

**total\_allocation\_units**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Total\_Allocation\_Units

Dictionary key name: total\_allocation\_units

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**cybox.objects.whois\_object module**

**class** cybox.objects.whois\_object.**WhoisContact**

Bases: cybox.Entity

XML binding class: cybox.bindings.whois\_object.WhoisContactType

**address**

Type: *cybox.common.properties.String*

XML Binding class name: Address

Dictionary key name: address

**contact\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Contact\_ID

Dictionary key name: contact\_id

**contact\_type**

XML Binding class name: contact\_type

Dictionary key name: contact\_type

**email\_address**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: Email\_Address

Dictionary key name: email\_address

**fax\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Fax\_Number

Dictionary key name: fax\_number

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **organization**

Type: *cybox.common.properties.String*

XML Binding class name: Organization

Dictionary key name: organization

#### **phone\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Phone\_Number

Dictionary key name: phone\_number

**class** `cybox.objects.whois_object.WhoisContacts` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisContactsType`

**class** `cybox.objects.whois_object.WhoisEntry`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.whois_object.WhoisObjectType`

#### **contact\_info**

Type: *cybox.objects.whois\_object.WhoisContact*

XML Binding class name: Contact\_Info

Dictionary key name: contact\_info

#### **creation\_date**

Type: *cybox.common.properties.Date*

XML Binding class name: Creation\_Date

Dictionary key name: creation\_date

#### **dnssec**

XML Binding class name: DNSSEC

Dictionary key name: dnssec

#### **domain\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Domain\_ID

Dictionary key name: domain\_id

#### **domain\_name**

Type: *cybox.objects.uri\_object.URI*  
XML Binding class name: Domain\_Name  
Dictionary key name: domain\_name

**expiration\_date**

Type: *cybox.common.properties.Date*  
XML Binding class name: Expiration\_Date  
Dictionary key name: expiration\_date

**ip\_address**

Type: *cybox.objects.address\_object.Address*  
XML Binding class name: IP\_Address  
Dictionary key name: ip\_address

**lookup\_date**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Lookup\_Date  
Dictionary key name: lookup\_date

**nameservers**

Type: *cybox.objects.whois\_object.WhoisNameservers*  
XML Binding class name: Nameservers  
Dictionary key name: nameservers

**regional\_internet\_registry**

Type: *cybox.common.properties.String*  
XML Binding class name: Regional\_Internet\_Registry  
Dictionary key name: regional\_internet\_registry

**registrants**

Type: *cybox.objects.whois\_object.WhoisRegistrants*  
XML Binding class name: Registrants  
Dictionary key name: registrants

**registrar\_info**

Type: *cybox.objects.whois\_object.WhoisRegistrar*  
XML Binding class name: Registrar\_Info  
Dictionary key name: registrar\_info

**remarks**

Type: *cybox.common.properties.String*  
XML Binding class name: Remarks  
Dictionary key name: remarks

**server\_name**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: Server\_Name

Dictionary key name: server\_name

**sponsoring\_registrar**

Type: *cybox.common.properties.String*

XML Binding class name: Sponsoring\_Registrar

Dictionary key name: sponsoring\_registrar

**status**

Type: *cybox.objects.whois\_object.WhoisStatuses*

XML Binding class name: Status

Dictionary key name: status

**updated\_date**

Type: *cybox.common.properties.Date*

XML Binding class name: Updated\_Date

Dictionary key name: updated\_date

**class** `cybox.objects.whois_object.WhoisNameservers` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisNameserversType`

**class** `cybox.objects.whois_object.WhoisRegistrant`

Bases: *cybox.objects.whois\_object.WhoisContact*

XML binding class: `cybox.bindings.whois_object.WhoisRegistrantInfoType`

**registrant\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Registrant\_ID

Dictionary key name: registrant\_id

**class** `cybox.objects.whois_object.WhoisRegistrants` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisRegistrantsType`

**class** `cybox.objects.whois_object.WhoisRegistrar`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.whois_object.WhoisRegistrarInfoType`

**address**

Type: `cybox.common.properties.String`  
XML Binding class name: Address  
Dictionary key name: address

**contacts**

Type: `cybox.objects.whois_object.WhoisContacts`  
XML Binding class name: Contacts  
Dictionary key name: contacts

**email\_address**

Type: `cybox.objects.address_object.EmailAddress`  
XML Binding class name: Email\_Address  
Dictionary key name: email\_address

**name**

Type: `cybox.common.properties.String`  
XML Binding class name: Name  
Dictionary key name: name

**phone\_number**

Type: `cybox.common.properties.String`  
XML Binding class name: Phone\_Number  
Dictionary key name: phone\_number

**referral\_url**

Type: `cybox.objects.uri_object.URI`  
XML Binding class name: Referral\_URL  
Dictionary key name: referral\_url

**registrar\_guid**

Type: `cybox.common.properties.String`  
XML Binding class name: Registrar\_GUID  
Dictionary key name: registrar\_guid

**registrar\_id**

Type: *cybox.common.properties.String*  
XML Binding class name: Registrar\_ID  
Dictionary key name: registrar\_id

**whois\_server**

Type: *cybox.objects.uri\_object.URI*  
XML Binding class name: Whois\_Server  
Dictionary key name: whois\_server

**class** `cybox.objects.whois_object.WhoisStatus` (*value=None*)  
Bases: *cybox.common.properties.BaseProperty*

XML binding class: `cybox.bindings.whois_object.WhoisStatusType`

**class** `cybox.objects.whois_object.WhoisStatuses` (*\*args*)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisStatusesType`

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**cybox.objects.win\_computer\_account\_object module**

**class** `cybox.objects.win_computer_account_object.FullyQualifiedName`  
Bases: `cybox.Entity`

XML binding class:  
`cybox.bindings.win_computer_account_object.FullyQualifiedNameType`

**full\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Full\_Name  
Dictionary key name: full\_name

**netbeui\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: NetBEUI\_Name  
Dictionary key name: netbeui\_name

**class** `cybox.objects.win_computer_account_object.Kerberos`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_computer_account_object.KerberosType`

**delegation**

Type: *cybox.objects.win\_computer\_account\_object.KerberosDelegation*

XML Binding class name: Delegation

Dictionary key name: delegation

**ticket**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Ticket

Dictionary key name: ticket

**class** `cybox.objects.win_computer_account_object.KerberosDelegation`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_computer_account_object.KerberosDelegationType`

**bitmask**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Bitmask

Dictionary key name: bitmask

**service**

Type: *cybox.objects.win\_computer\_account\_object.KerberosService*

XML Binding class name: Service

Dictionary key name: service

**class** `cybox.objects.win_computer_account_object.KerberosService`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_computer_account_object.KerberosServiceType`

**computer**

Type: *cybox.common.properties.String*

XML Binding class name: Computer

Dictionary key name: computer

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**port**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: Port

Dictionary key name: port

**user**

Type: *cybox.common.properties.String*

XML Binding class name: User

Dictionary key name: user

**class** *cybox.objects.win\_computer\_account\_object.WinComputerAccount*

Bases: *cybox.objects.account\_object.Account*

XML binding class:

*cybox.bindings.win\_computer\_account\_object.WindowsComputerAccountObjectType*

**fully\_qualified\_name**

Type: *cybox.objects.win\_computer\_account\_object.FullyQualifiedName*

XML Binding class name: Fully\_Qualified\_Name

Dictionary key name: fully\_qualified\_name

**kerberos**

Type: *cybox.objects.win\_computer\_account\_object.Kerberos*

XML Binding class name: Kerberos

Dictionary key name: kerberos

**security\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_ID

Dictionary key name: security\_id

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

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**cybox.objects.win\_critical\_section\_object module**

**class** *cybox.objects.win\_critical\_section\_object.WinCriticalSection*

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.win_critical_section_object.WindowsCriticalSectionObjectType`

#### **address**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Address

Dictionary key name: address

#### **spin\_count**

Type: `cybox.common.properties.NonNegativeInteger`

XML Binding class name: Spin\_Count

Dictionary key name: spin\_count

Version: 2.1.0.12.dev0

#### **cybox.objects.win\_driver\_object module**

**class** `cybox.objects.win_driver_object.DeviceObjectList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_driver_object.DeviceObjectListType`

**class** `cybox.objects.win_driver_object.DeviceObjectStruct`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_driver_object.DeviceObjectStructType`

#### **attached\_device\_name**

Type: `cybox.common.properties.String`

XML Binding class name: Attached\_Device\_Name

Dictionary key name: attached\_device\_name

#### **attached\_device\_object**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: Attached\_Device\_Object

Dictionary key name: attached\_device\_object

#### **attached\_to\_device\_name**

Type: `cybox.common.properties.String`

XML Binding class name: Attached\_To\_Device\_Name

Dictionary key name: attached\_to\_device\_name

#### **attached\_to\_device\_object**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: Attached\_To\_Device\_Object  
Dictionary key name: attached\_to\_device\_object

**attached\_to\_driver\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Attached\_To\_Driver\_Name  
Dictionary key name: attached\_to\_driver\_name

**attached\_to\_driver\_object**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: Attached\_To\_Driver\_Object  
Dictionary key name: attached\_to\_driver\_object

**device\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Device\_Name  
Dictionary key name: device\_name

**device\_object**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: Device\_Object  
Dictionary key name: device\_object

**class** `cybox.objects.win_driver_object.WinDriver`

Bases: *cybox.objects.win\_executable\_file\_object.WinExecutableFile*

XML binding class: `cybox.bindings.win_driver_object.WindowsDriverObjectType`

**device\_object\_list**

Type: *cybox.objects.win\_driver\_object.DeviceObjectList*  
XML Binding class name: Device\_Object\_List  
Dictionary key name: device\_object\_list

**driver\_init**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: Driver\_Init  
Dictionary key name: driver\_init

**driver\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Driver\_Name

Dictionary key name: driver\_name

#### **driver\_object\_address**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Driver\_Object\_Address  
Dictionary key name: driver\_object\_address

#### **driver\_start\_io**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Driver\_Start\_IO  
Dictionary key name: driver\_start\_io

#### **driver\_unload**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Driver\_Unload  
Dictionary key name: driver\_unload

#### **image\_base**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Image\_Base  
Dictionary key name: image\_base

#### **image\_size**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Image\_Size  
Dictionary key name: image\_size

#### **irp\_mj\_cleanup**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_CLEANUP  
Dictionary key name: irp\_mj\_cleanup

#### **irp\_mj\_close**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_CLOSE  
Dictionary key name: irp\_mj\_close

#### **irp\_mj\_create**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_CREATE  
Dictionary key name: irp\_mj\_create

#### **irp\_mj\_create\_mailslot**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_CREATE\_MAILSLOT  
Dictionary key name: irp\_mj\_create\_mailslot

#### **irp\_mj\_create\_named\_pipe**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_CREATE\_NAMED\_PIPE  
Dictionary key name: irp\_mj\_create\_named\_pipe

#### **irp\_mj\_device\_change**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_DEVICE\_CHANGE  
Dictionary key name: irp\_mj\_device\_change

#### **irp\_mj\_device\_control**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_DEVICE\_CONTROL  
Dictionary key name: irp\_mj\_device\_control

#### **irp\_mj\_directory\_control**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_DIRECTORY\_CONTROL  
Dictionary key name: irp\_mj\_directory\_control

#### **irp\_mj\_file\_system\_control**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_FILE\_SYSTEM\_CONTROL  
Dictionary key name: irp\_mj\_file\_system\_control

#### **irp\_mj\_flush\_buffers**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_FLUSH\_BUFFERS  
Dictionary key name: irp\_mj\_flush\_buffers

#### **irp\_mj\_internal\_device\_control**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_INTERNAL\_DEVICE\_CONTROL  
Dictionary key name: irp\_mj\_internal\_device\_control

#### **irp\_mj\_lock\_control**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_LOCK\_CONTROL  
Dictionary key name: irp\_mj\_lock\_control

**irp\_mj\_pnp**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_PNP

Dictionary key name: irp\_mj\_pnp

**irp\_mj\_power**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_POWER

Dictionary key name: irp\_mj\_power

**irp\_mj\_query\_ea**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_EA

Dictionary key name: irp\_mj\_query\_ea

**irp\_mj\_query\_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_INFORMATION

Dictionary key name: irp\_mj\_query\_information

**irp\_mj\_query\_quota**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_QUOTA

Dictionary key name: irp\_mj\_query\_quota

**irp\_mj\_query\_security**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_SECURITY

Dictionary key name: irp\_mj\_query\_security

**irp\_mj\_query\_volume\_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_VOLUME\_INFORMATION

Dictionary key name: irp\_mj\_query\_volume\_information

**irp\_mj\_read**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_READ

Dictionary key name: irp\_mj\_read

**irp\_mj\_set\_ea**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_EA

Dictionary key name: irp\_mj\_set\_ea

#### **irp\_mj\_set\_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_INFORMATION

Dictionary key name: irp\_mj\_set\_information

#### **irp\_mj\_set\_quota**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_QUOTA

Dictionary key name: irp\_mj\_set\_quota

#### **irp\_mj\_set\_security**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_SECURITY

Dictionary key name: irp\_mj\_set\_security

#### **irp\_mj\_set\_volume\_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_VOLUME\_INFORMATION

Dictionary key name: irp\_mj\_set\_volume\_information

#### **irp\_mj\_shutdown**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SHUTDOWN

Dictionary key name: irp\_mj\_shutdown

#### **irp\_mj\_system\_control**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SYSTEM\_CONTROL

Dictionary key name: irp\_mj\_system\_control

#### **irp\_mj\_write**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_WRITE

Dictionary key name: irp\_mj\_write

Version: 2.1.0.12.dev0

#### **cybox.objects.win\_event\_log\_object module**

**class** cybox.objects.win\_event\_log\_object.**UnformattedMessageList** (\*args)

Bases: cybox.EntityList

XML binding class:

`cybox.bindings.win_event_log_object.UnformattedMessageListType`

**class** `cybox.objects.win_event_log_object.WinEventLog`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class:

`cybox.bindings.win_event_log_object.WindowsEventLogObjectType`

#### **blob**

Type: `cybox.common.properties.Base64Binary`

XML Binding class name: Blob

Dictionary key name: blob

#### **category**

Type: `cybox.common.properties.String`

XML Binding class name: Category

Dictionary key name: category

#### **category\_num**

Type: `cybox.common.properties.Long`

XML Binding class name: Category\_Num

Dictionary key name: category\_num

#### **correlation\_activity\_id**

Type: `cybox.common.properties.String`

XML Binding class name: Correlation\_Activity\_ID

Dictionary key name: correlation\_activity\_id

#### **correlation\_related\_activity\_id**

Type: `cybox.common.properties.String`

XML Binding class name: Correlation\_Related\_Activity\_ID

Dictionary key name: correlation\_related\_activity\_id

#### **eid**

Type: `cybox.common.properties.Long`

XML Binding class name: EID

Dictionary key name: eid

#### **execution\_process\_id**

Type: `cybox.common.properties.String`

XML Binding class name: Execution\_Process\_ID

Dictionary key name: execution\_process\_id

**execution\_thread\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Execution\_Thread\_ID

Dictionary key name: execution\_thread\_id

**generation\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Generation\_Time

Dictionary key name: generation\_time

**index**

Type: *cybox.common.properties.Long*

XML Binding class name: Index

Dictionary key name: index

**log**

Type: *cybox.common.properties.String*

XML Binding class name: Log

Dictionary key name: log

**machine**

Type: *cybox.common.properties.String*

XML Binding class name: Machine

Dictionary key name: machine

**message**

Type: *cybox.common.properties.String*

XML Binding class name: Message

Dictionary key name: message

**reserved**

Type: *cybox.common.properties.Long*

XML Binding class name: Reserved

Dictionary key name: reserved

**source**

Type: *cybox.common.properties.String*

XML Binding class name: Source

Dictionary key name: source

**type**

Type: *cybox.common.properties.String*  
XML Binding class name: Type  
Dictionary key name: type

**unformatted\_message\_list**

Type: *cybox.objects.win\_event\_log\_object.UnformattedMessageList*  
XML Binding class name: Unformatted\_Message\_List  
Dictionary key name: unformatted\_message\_list

**user**

Type: *cybox.common.properties.String*  
XML Binding class name: User  
Dictionary key name: user

**write\_time**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Write\_Time  
Dictionary key name: write\_time

**Version:** 2.1.0.12.dev0

**cybox.objects.win\_event\_object module**

**class** `cybox.objects.win_event_object.WinEvent`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_event_object.WindowsEventObjectType`

**handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: Handle  
Dictionary key name: handle

**name**

Type: *cybox.common.properties.String*  
XML Binding class name: Name  
Dictionary key name: name

**type\_**

Type: *cybox.common.properties.String*  
XML Binding class name: Type  
Dictionary key name: type

**Version:** 2.1.0.12.dev0

**cybox.objects.win\_executable\_file\_object module**

**class** cybox.objects.win\_executable\_file\_object.DOSHeader

Bases: cybox.Entity

XML binding class: cybox.bindings.win\_executable\_file\_object.DOSHeaderType

**e\_cblp**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_cblp

Dictionary key name: e\_cblp

**e\_cp**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_cp

Dictionary key name: e\_cp

**e\_cparhdr**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_cparhdr

Dictionary key name: e\_cparhdr

**e\_crlc**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_crlc

Dictionary key name: e\_crlc

**e\_cs**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_cs

Dictionary key name: e\_cs

**e\_csum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_csum

Dictionary key name: e\_csum

**e\_ip**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_ip

Dictionary key name: e\_ip

**e\_lfanew**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_lfanew  
Dictionary key name: e\_lfanew

**e\_lfarlc**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_lfarlc  
Dictionary key name: e\_lfarlc

**e\_magic**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_magic  
Dictionary key name: e\_magic

**e\_maxalloc**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_maxalloc  
Dictionary key name: e\_maxalloc

**e\_minalloc**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_minalloc  
Dictionary key name: e\_minalloc

**e\_oemid**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_oemid  
Dictionary key name: e\_oemid

**e\_oeminfo**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_oeminfo  
Dictionary key name: e\_oeminfo

**e\_ovro**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_ovro  
Dictionary key name: e\_ovro

**e\_sp**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_sp  
Dictionary key name: e\_sp

#### **e\_ss**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_ss

Dictionary key name: e\_ss

#### **hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

#### **reserved2**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: reserved2

Dictionary key name: reserved2

**class** *cybox.objects.win\_executable\_file\_object.DataDirectory*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.win\_executable\_file\_object.DataDirectoryType*

#### **architecture**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Architecture

Dictionary key name: architecture

#### **base\_relocation\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Base\_Relocation\_Table

Dictionary key name: base\_relocation\_table

#### **bound\_import**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Bound\_Import

Dictionary key name: bound\_import

#### **certificate\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Certificate\_Table

Dictionary key name: certificate\_table

#### **clr\_runtime\_header**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: CLR\_Runtime\_Header

Dictionary key name: clr\_runtime\_header

#### **debug**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Debug

Dictionary key name: debug

#### **delay\_import\_descriptor**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Delay\_Import\_Descriptor

Dictionary key name: delay\_import\_descriptor

#### **exception\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Exception\_Table

Dictionary key name: exception\_table

#### **export\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Export\_Table

Dictionary key name: export\_table

#### **global\_ptr**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Global\_Ptr

Dictionary key name: global\_ptr

#### **import\_address\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Import\_Address\_Table

Dictionary key name: import\_address\_table

#### **import\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Import\_Table

Dictionary key name: import\_table

#### **load\_config\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Load\_Config\_Table

Dictionary key name: load\_config\_table

**reserved**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Reserved

Dictionary key name: reserved

**resource\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Resource\_Table

Dictionary key name: resource\_table

**tls\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Tls\_Table

Dictionary key name: tls\_table

**class** *cybox.objects.win\_executable\_file\_object*.**Entropy**

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.win\_executable\_file\_object.EntropyType*

**max**

Type: *cybox.common.properties.Float*

XML Binding class name: Max

Dictionary key name: max

**min**

Type: *cybox.common.properties.Float*

XML Binding class name: Min

Dictionary key name: min

**value**

Type: *cybox.common.properties.Float*

XML Binding class name: Value

Dictionary key name: value

**class** *cybox.objects.win\_executable\_file\_object*.**PEBuildInformation**

Bases: *cybox.Entity*

XML binding class:

*cybox.bindings.win\_executable\_file\_object.PEBuildInformationType*

**compiler\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Compiler\_Name

Dictionary key name: compiler\_name

**compiler\_version**

Type: *cybox.common.properties.String*

XML Binding class name: Compiler\_Version

Dictionary key name: compiler\_version

**linker\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Linker\_Name

Dictionary key name: linker\_name

**linker\_version**

Type: *cybox.common.properties.String*

XML Binding class name: Linker\_Version

Dictionary key name: linker\_version

**class** `cybox.objects.win_executable_file_object.PEChecksum`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEChecksumType`

**pe\_computed\_api**

Type: *cybox.common.properties.Long*

XML Binding class name: PE\_Computed\_API

Dictionary key name: pe\_computed\_api

**pe\_file\_api**

Type: *cybox.common.properties.Long*

XML Binding class name: PE\_File\_API

Dictionary key name: pe\_file\_api

**pe\_file\_raw**

Type: *cybox.common.properties.Long*

XML Binding class name: PE\_File\_Raw

Dictionary key name: pe\_file\_raw

**class** `cybox.objects.win_executable_file_object.PEDataDirectoryStruct`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_executable_file_object.PEDataDirectoryStructType`

#### **size**

Type: `cybox.common.properties.NonNegativeInteger`

XML Binding class name: Size

Dictionary key name: size

#### **virtual\_address**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Virtual\_Address

Dictionary key name: virtual\_address

**class** `cybox.objects.win_executable_file_object.PEExportedFunction`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_executable_file_object.PEExportedFunctionType`

#### **entry\_point**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Entry\_Point

Dictionary key name: entry\_point

#### **function\_name**

Type: `cybox.common.properties.String`

XML Binding class name: Function\_Name

Dictionary key name: function\_name

#### **ordinal**

Type: `cybox.common.properties.NonNegativeInteger`

XML Binding class name: Ordinal

Dictionary key name: ordinal

**class** `cybox.objects.win_executable_file_object.PEExportedFunctions (*args)`

Bases: `cybox.EntityList`

XML binding class:

`cybox.bindings.win_executable_file_object.PEExportedFunctionsType`

**class** `cybox.objects.win_executable_file_object.PEExports`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEEExportsType`

#### **exported\_functions**

Type: `cybox.objects.win_executable_file_object.PEExportedFunctions`

XML Binding class name: `Exported_Functions`

Dictionary key name: `exported_functions`

#### **exports\_time\_stamp**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Exports_Time_Stamp`

Dictionary key name: `exports_time_stamp`

#### **name**

Type: `cybox.common.properties.String`

XML Binding class name: `Name`

Dictionary key name: `name`

#### **number\_of\_addresses**

Type: `cybox.common.properties.Long`

XML Binding class name: `Number_Of_Addresses`

Dictionary key name: `number_of_addresses`

#### **number\_of\_functions**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Number_Of_Functions`

Dictionary key name: `number_of_functions`

#### **number\_of\_names**

Type: `cybox.common.properties.Long`

XML Binding class name: `Number_Of_Names`

Dictionary key name: `number_of_names`

**class** `cybox.objects.win_executable_file_object.PEFileHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEFileHeaderType`

#### **characteristics**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Characteristics`

Dictionary key name: `characteristics`

#### hashes

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

#### machine

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Machine

Dictionary key name: machine

#### number\_of\_sections

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number\_Of\_Sections

Dictionary key name: number\_of\_sections

#### number\_of\_symbols

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number\_Of\_Symbols

Dictionary key name: number\_of\_symbols

#### pointer\_to\_symbol\_table

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer\_To\_Symbol\_Table

Dictionary key name: pointer\_to\_symbol\_table

#### size\_of\_optional\_header

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Optional\_Header

Dictionary key name: size\_of\_optional\_header

#### time\_date\_stamp

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Time\_Date\_Stamp

Dictionary key name: time\_date\_stamp

**class** `cybox.objects.win_executable_file_object.PEHeaders`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEHeadersType`

#### dos\_header

Type: `cybox.objects.win_executable_file_object.DOSHeader`  
XML Binding class name: `DOS_Header`  
Dictionary key name: `dos_header`

#### **entropy**

Type: `cybox.objects.win_executable_file_object.Entropy`  
XML Binding class name: `Entropy`  
Dictionary key name: `entropy`

#### **file\_header**

Type: `cybox.objects.win_executable_file_object.PEFileHeader`  
XML Binding class name: `File_Header`  
Dictionary key name: `file_header`

#### **hashes**

Type: `cybox.common.hashes.HashList`  
XML Binding class name: `Hashes`  
Dictionary key name: `hashes`

#### **optional\_header**

Type: `cybox.objects.win_executable_file_object.PEOptionalHeader`  
XML Binding class name: `Optional_Header`  
Dictionary key name: `optional_header`

#### **signature**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `Signature`  
Dictionary key name: `signature`

**class** `cybox.objects.win_executable_file_object.PEImport`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEImportType`

#### **delay\_load**

XML Binding class name: `delay_load`  
Dictionary key name: `delay_load`

#### **file\_name**

Type: `cybox.common.properties.String`  
XML Binding class name: `File_Name`  
Dictionary key name: `file_name`

#### **imported\_functions**

Type: *cybox.objects.win\_executable\_file\_object.PEImportedFunctions*

XML Binding class name: Imported\_Functions

Dictionary key name: imported\_functions

#### **initially\_visible**

XML Binding class name: initially\_visible

Dictionary key name: initially\_visible

#### **virtual\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Virtual\_Address

Dictionary key name: virtual\_address

**class** *cybox.objects.win\_executable\_file\_object.PEImportList* (\*args)

Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.win\_executable\_file\_object.PEImportListType*

**class** *cybox.objects.win\_executable\_file\_object.PEImportedFunction*

Bases: *cybox.Entity*

XML binding class:

*cybox.bindings.win\_executable\_file\_object.PEImportedFunctionType*

#### **bound**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Bound

Dictionary key name: bound

#### **function\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Function\_Name

Dictionary key name: function\_name

#### **hint**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Hint

Dictionary key name: hint

#### **ordinal**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Ordinal

Dictionary key name: ordinal

#### **virtual\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Virtual\_Address

Dictionary key name: virtual\_address

**class** `cybox.objects.win_executable_file_object.PEImportedFunctions` (\*args)  
 Bases: `cybox.EntityList`

XML binding class:

`cybox.bindings.win_executable_file_object.PEImportedFunctionsType`

**class** `cybox.objects.win_executable_file_object.PEOptionalHeader`  
 Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_executable_file_object.PEOptionalHeaderType`

#### **address\_of\_entry\_point**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Address\_Of\_Entry\_Point

Dictionary key name: address\_of\_entry\_point

#### **base\_of\_code**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Base\_Of\_Code

Dictionary key name: base\_of\_code

#### **base\_of\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Base\_Of\_Data

Dictionary key name: base\_of\_data

#### **checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

#### **data\_directory**

Type: *cybox.objects.win\_executable\_file\_object.DataDirectory*  
XML Binding class name: Data\_Directory  
Dictionary key name: data\_directory

#### **dll\_characteristics**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: DLL\_Characteristics  
Dictionary key name: dll\_characteristics

#### **file\_alignment**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: File\_Alignment  
Dictionary key name: file\_alignment

#### **hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Hashes  
Dictionary key name: hashes

#### **image\_base**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Image\_Base  
Dictionary key name: image\_base

#### **loader\_flags**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Loader\_Flags  
Dictionary key name: loader\_flags

#### **magic**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Magic  
Dictionary key name: magic

#### **major\_image\_version**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Major\_Image\_Version  
Dictionary key name: major\_image\_version

#### **major\_linker\_version**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Major\_Linker\_Version  
Dictionary key name: major\_linker\_version

**major\_os\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Major\_OS\_Version

Dictionary key name: major\_os\_version

**major\_subsystem\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Major\_Subsystem\_Version

Dictionary key name: major\_subsystem\_version

**minor\_image\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Minor\_Image\_Version

Dictionary key name: minor\_image\_version

**minor\_linker\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Minor\_Linker\_Version

Dictionary key name: minor\_linker\_version

**minor\_os\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Minor\_OS\_Version

Dictionary key name: minor\_os\_version

**minor\_subsystem\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Minor\_Subsystem\_Version

Dictionary key name: minor\_subsystem\_version

**number\_of\_rva\_and\_sizes**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Number\_Of\_Rva\_And\_Sizes

Dictionary key name: number\_of\_rva\_and\_sizes

**section\_alignment**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Section\_Alignment

Dictionary key name: section\_alignment

**size\_of\_code**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Code

Dictionary key name: size\_of\_code

#### **size\_of\_headers**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Headers

Dictionary key name: size\_of\_headers

#### **size\_of\_heap\_commit**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Heap\_Commit

Dictionary key name: size\_of\_heap\_commit

#### **size\_of\_heap\_reserve**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Heap\_Reserve

Dictionary key name: size\_of\_heap\_reserve

#### **size\_of\_image**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Image

Dictionary key name: size\_of\_image

#### **size\_of\_initialized\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Initialized\_Data

Dictionary key name: size\_of\_initialized\_data

#### **size\_of\_stack\_commit**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Stack\_Commit

Dictionary key name: size\_of\_stack\_commit

#### **size\_of\_stack\_reserve**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Stack\_Reserve

Dictionary key name: size\_of\_stack\_reserve

#### **size\_of\_uninitialized\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Uninitialized\_Data

Dictionary key name: size\_of\_uninitialized\_data

**subsystem**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Subsystem

Dictionary key name: subsystem

**win32\_version\_value**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Win32\_Version\_Value

Dictionary key name: win32\_version\_value

**class** `cybox.objects.win_executable_file_object.PEResource`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEResourceType`

**data**

Type: *cybox.common.properties.String*

XML Binding class name: Data

Dictionary key name: data

**hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

**language**

Type: *cybox.common.properties.String*

XML Binding class name: Language

Dictionary key name: language

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**size**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Size

Dictionary key name: size

**sub\_language**

Type: *cybox.common.properties.String*  
XML Binding class name: Sub\_Language  
Dictionary key name: sub\_language

#### **type\_**

Type: *cybox.common.properties.String*  
XML Binding class name: Type  
Dictionary key name: type

#### **virtual\_address**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Virtual\_Address  
Dictionary key name: virtual\_address

**class** `cybox.objects.win_executable_file_object.PEResourceList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_executable_file_object.PEResourceListType`

**static from\_list** (*pe\_resource\_list*)

**class** `cybox.objects.win_executable_file_object.PESection`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PESectionType`

#### **data\_hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Data\_Hashes  
Dictionary key name: data\_hashes

#### **entropy**

Type: *cybox.objects.win\_executable\_file\_object.Entropy*  
XML Binding class name: Entropy  
Dictionary key name: entropy

#### **header\_hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Header\_Hashes  
Dictionary key name: header\_hashes

#### **section\_header**

Type: *cybox.objects.win\_executable\_file\_object.PESectionHeaderStruct*

XML Binding class name: Section\_Header

Dictionary key name: section\_header

**class** cybox.objects.win\_executable\_file\_object.PESectionHeaderStruct

Bases: cybox.Entity

XML binding class:

cybox.bindings.win\_executable\_file\_object.PESectionHeaderStructType

### **characteristics**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Characteristics

Dictionary key name: characteristics

### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

### **number\_of\_linenumbers**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number\_Of\_Linenumbers

Dictionary key name: number\_of\_linenumbers

### **number\_of\_relocations**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number\_Of\_Relocations

Dictionary key name: number\_of\_relocations

### **pointer\_to\_linenumbers**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer\_To\_Linenumbers

Dictionary key name: pointer\_to\_linenumbers

### **pointer\_to\_raw\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer\_To\_Raw\_Data

Dictionary key name: pointer\_to\_raw\_data

### **pointer\_to\_relocations**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer\_To\_Relocations

Dictionary key name: pointer\_to\_relocations

#### **size\_of\_raw\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Raw\_Data

Dictionary key name: size\_of\_raw\_data

#### **virtual\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Virtual\_Address

Dictionary key name: virtual\_address

#### **virtual\_size**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Virtual\_Size

Dictionary key name: virtual\_size

**class** *cybox.objects.win\_executable\_file\_object.PESectionList* (\*args)

Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.win\_executable\_file\_object.PESectionListType*

**class** *cybox.objects.win\_executable\_file\_object.PEVersionInfoResource*

Bases: *cybox.objects.win\_executable\_file\_object.PEResource*

XML binding class:

*cybox.bindings.win\_executable\_file\_object.PEVersionInfoResourceType*

#### **comments**

Type: *cybox.common.properties.String*

XML Binding class name: Comments

Dictionary key name: comments

#### **companyname**

Type: *cybox.common.properties.String*

XML Binding class name: CompanyName

Dictionary key name: companyname

#### **filedescription**

Type: *cybox.common.properties.String*

XML Binding class name: FileDescription

Dictionary key name: filedescription

**fileversion**

Type: *cybox.common.properties.String*

XML Binding class name: FileVersion

Dictionary key name: fileversion

**internalname**

Type: *cybox.common.properties.String*

XML Binding class name: InternalName

Dictionary key name: internalname

**static keyword\_test** (*pe\_resource\_dict*)

**langid**

Type: *cybox.common.properties.String*

XML Binding class name: LangID

Dictionary key name: langid

**legalcopyright**

Type: *cybox.common.properties.String*

XML Binding class name: LegalCopyright

Dictionary key name: legalcopyright

**legaltrademarks**

Type: *cybox.common.properties.String*

XML Binding class name: LegalTrademarks

Dictionary key name: legaltrademarks

**originalfilename**

Type: *cybox.common.properties.String*

XML Binding class name: OriginalFilename

Dictionary key name: originalfilename

**privatebuild**

Type: *cybox.common.properties.String*

XML Binding class name: PrivateBuild

Dictionary key name: privatebuild

**productname**

Type: *cybox.common.properties.String*

XML Binding class name: ProductName

Dictionary key name: productname

**productversion**

Type: *cybox.common.properties.String*  
XML Binding class name: ProductVersion  
Dictionary key name: productversion

#### **specialbuild**

Type: *cybox.common.properties.String*  
XML Binding class name: SpecialBuild  
Dictionary key name: specialbuild

**class** `cybox.objects.win_executable_file_object.WinExecutableFile`  
Bases: *cybox.objects.win\_file\_object.WinFile*

XML binding class:  
`cybox.bindings.win_executable_file_object.WindowsExecutableFileObjectType`

#### **build\_information**

Type: *cybox.objects.win\_executable\_file\_object.PEBuildInformation*  
XML Binding class name: Build\_Information  
Dictionary key name: build\_information

#### **digital\_signature**

Type: *cybox.common.digitalsignature.DigitalSignature*  
XML Binding class name: Digital\_Signature  
Dictionary key name: digital\_signature

#### **exports**

Type: *cybox.objects.win\_executable\_file\_object.PEExports*  
XML Binding class name: Exports  
Dictionary key name: exports

#### **extraneous\_bytes**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Extraneous\_Bytes  
Dictionary key name: extraneous\_bytes

#### **headers**

Type: *cybox.objects.win\_executable\_file\_object.PEHeaders*  
XML Binding class name: Headers  
Dictionary key name: headers

#### **imports**

Type: *cybox.objects.win\_executable\_file\_object.PEImportList*  
XML Binding class name: Imports

Dictionary key name: imports

#### **pe\_checksum**

Type: *cybox.objects.win\_executable\_file\_object.PEChecksum*

XML Binding class name: PE\_Checksum

Dictionary key name: pe\_checksum

#### **resources**

Type: *cybox.objects.win\_executable\_file\_object.PEResourceList*

XML Binding class name: Resources

Dictionary key name: resources

#### **sections**

Type: *cybox.objects.win\_executable\_file\_object.PESectionList*

XML Binding class name: Sections

Dictionary key name: sections

#### **type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

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### **cybox.objects.win\_file\_object module**

**class** `cybox.objects.win_file_object.Stream`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_file_object.StreamObjectType`

#### **hashes**

(List of values permitted)

Type: *cybox.common.hashes.Hash*

XML Binding class name: Hash

Dictionary key name: hashes

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **size\_in\_bytes**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: *Size\_In\_Bytes*

Dictionary key name: *size\_in\_bytes*

**class** *cybox.objects.win\_file\_object.StreamList* (\*args)

Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.win\_file\_object.StreamListType*

**class** *cybox.objects.win\_file\_object.WinFile*

Bases: *cybox.objects.file\_object.File*

XML binding class: *cybox.bindings.win\_file\_object.WindowsFileObjectType*

#### **drive**

Type: *cybox.common.properties.String*

XML Binding class name: *Drive*

Dictionary key name: *drive*

#### **file\_attributes\_list**

Type: *cybox.objects.win\_file\_object.WindowsFileAttributes*

XML Binding class name: *File\_Attributes\_List*

Dictionary key name: *file\_attributes\_list*

#### **filename\_accessed\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: *Filename\_Accessed\_Time*

Dictionary key name: *filename\_accessed\_time*

#### **filename\_created\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: *Filename\_Created\_Time*

Dictionary key name: *filename\_created\_time*

#### **filename\_modified\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: *Filename\_Modified\_Time*

Dictionary key name: *filename\_modified\_time*

#### **privilege\_list**

Type: *cybox.objects.win\_file\_object.WindowsFilePermissions*

XML Binding class name: *Permissions*

Dictionary key name: permissions

#### **security\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_ID

Dictionary key name: security\_id

#### **security\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Type

Dictionary key name: security\_type

#### **stream\_list**

Type: *cybox.objects.win\_file\_object.StreamList*

XML Binding class name: Stream\_List

Dictionary key name: stream\_list

**class** *cybox.objects.win\_file\_object.WindowsFileAttribute* (*value=None*)

Bases: *cybox.common.properties.String*

XML binding class: *cybox.bindings.win\_file\_object.WindowsFileAttributeType*

**class** *cybox.objects.win\_file\_object.WindowsFileAttributes* (*\*args*)

Bases: *cybox.objects.file\_object.FileAttribute*, *cybox.EntityList*

XML binding class: *cybox.bindings.win\_file\_object.WindowsFileAttributesType*

**class** *cybox.objects.win\_file\_object.WindowsFilePermissions*

Bases: *cybox.objects.file\_object.FilePermissions*, *cybox.Entity*

XML binding class: *cybox.bindings.win\_file\_object.WindowsFilePermissionsType*

#### **full\_control**

XML Binding class name: Full\_Control

Dictionary key name: full\_control

#### **modify**

XML Binding class name: Modify

Dictionary key name: modify

#### **read**

XML Binding class name: Read

Dictionary key name: read

#### **read\_and\_execute**

XML Binding class name: Read\_And\_Execute

Dictionary key name: read\_and\_execute

#### **write**

XML Binding class name: Write

Dictionary key name: write

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### **cybox.objects.win\_filemapping\_object module**

**class** `cybox.objects.win_filemapping_object.WinFilemapping`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class:

`cybox.bindings.win_filemapping_object.WindowsFilemappingObjectType`

#### **actual\_size**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: Actual\_Size

Dictionary key name: actual\_size

#### **file\_handle**

Type: `cybox.objects.win_handle_object.WinHandle`

XML Binding class name: File\_Handle

Dictionary key name: file\_handle

#### **handle**

Type: `cybox.objects.win_handle_object.WinHandle`

XML Binding class name: Handle

Dictionary key name: handle

#### **maximum\_size**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: Maximum\_Size

Dictionary key name: maximum\_size

#### **name**

Type: `cybox.common.properties.String`

XML Binding class name: Name

Dictionary key name: name

#### **page\_protection\_attribute**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Page\_Protection\_Attribute

Dictionary key name: page\_protection\_attribute

#### **page\_protection\_value**

Type: *cybox.common.properties.String*

XML Binding class name: Page\_Protection\_Value

Dictionary key name: page\_protection\_value

#### **security\_attributes**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Attributes

Dictionary key name: security\_attributes

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### **cybox.objects.win\_handle\_object module**

**class** cybox.objects.win\_handle\_object.**WinHandle**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: cybox.bindings.win\_handle\_object.WindowsHandleObjectType

#### **access\_mask**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Access\_Mask

Dictionary key name: access\_mask

#### **id\_**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: ID

Dictionary key name: id

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **object\_address**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: `Object_Address`  
Dictionary key name: `object_address`

#### **pointer\_count**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: `Pointer_Count`  
Dictionary key name: `pointer_count`

#### **type\_**

Type: *cybox.common.properties.String*  
XML Binding class name: `Type`  
Dictionary key name: `type`

**class** `cybox.objects.win_handle_object.WinHandleList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_handle_object.WindowsHandleListType`

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#### **cybox.objects.win\_hook\_object module**

**class** `cybox.objects.win_hook_object.WinHook`  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_hook_object.WindowsHookObjectType`

#### **handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: `Handle`  
Dictionary key name: `handle`

#### **hooking\_function\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: `Hooking_Function_Name`  
Dictionary key name: `hooking_function_name`

#### **hooking\_module**

Type: *cybox.objects.library\_object.Library*  
XML Binding class name: `Hooking_Module`  
Dictionary key name: `hooking_module`

**thread\_id**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Thread\_ID

Dictionary key name: thread\_id

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

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**cybox.objects.win\_kernel\_object module**

class `cybox.objects.win_kernel_object.IDTEntry`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_kernel_object.IDTEntryType`

**offset\_high**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Offset\_High

Dictionary key name: offset\_high

**offset\_low**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Offset\_Low

Dictionary key name: offset\_low

**offset\_middle**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Offset\_Middle

Dictionary key name: offset\_middle

**selector**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Selector

Dictionary key name: selector

**type\_attr**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Type\_Attr

Dictionary key name: type\_attr

**class** `cybox.objects.win_kernel_object.IDTEntryList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_kernel_object.IDTEntryListType`

**class** `cybox.objects.win_kernel_object.SSDTEntry`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_kernel_object.SSDTEntryType`

#### **argument\_table\_base**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `Argument_Table_Base`  
Dictionary key name: `argument_table_base`

#### **hooked**

XML Binding class name: `hooked`  
Dictionary key name: `hooked`

#### **number\_of\_services**

Type: `cybox.common.properties.NonNegativeInteger`  
XML Binding class name: `Number_Of_Services`  
Dictionary key name: `number_of_services`

#### **service\_counter\_table\_base**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `Service_Counter_Table_Base`  
Dictionary key name: `service_counter_table_base`

#### **service\_table\_base**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `Service_Table_Base`  
Dictionary key name: `service_table_base`

**class** `cybox.objects.win_kernel_object.SSDTEntryList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_kernel_object.SSDTEntryListType`

**class** `cybox.objects.win_kernel_object.WinKernel`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.win_kernel_object.WindowsKernelObjectType`

#### **idt**

Type: `cybox.objects.win_kernel_object.IDTEntryList`

XML Binding class name: IDT

Dictionary key name: idt

#### **ssdt**

Type: `cybox.objects.win_kernel_object.SSDTEntryList`

XML Binding class name: SSDT

Dictionary key name: ssdt

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### **cybox.objects.win\_kernel\_hook\_object module**

**class** `cybox.objects.win_kernel_hook_object.WinKernelHook`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class:

`cybox.bindings.win_kernel_hook_object.WindowsKernelHookObjectType`

#### **digital\_signature\_hooked**

Type: `cybox.common.digitalsignature.DigitalSignature`

XML Binding class name: Digital\_Signature\_Hooked

Dictionary key name: digital\_signature\_hooked

#### **digital\_signature\_hooking**

Type: `cybox.common.digitalsignature.DigitalSignature`

XML Binding class name: Digital\_Signature\_Hooking

Dictionary key name: digital\_signature\_hooking

#### **hook\_description**

Type: `cybox.common.properties.String`

XML Binding class name: Hook\_Description

Dictionary key name: hook\_description

#### **hooked\_function**

Type: `cybox.common.properties.String`

XML Binding class name: Hooked\_Function

Dictionary key name: hooked\_function

#### **hooked\_module**

Type: *cybox.common.properties.String*

XML Binding class name: Hooked\_Module

Dictionary key name: hooked\_module

#### **hooking\_address**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Hooking\_Address

Dictionary key name: hooking\_address

#### **hooking\_module**

Type: *cybox.common.properties.String*

XML Binding class name: Hooking\_Module

Dictionary key name: hooking\_module

#### **type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

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#### **cybox.objects.win\_mailslot\_object module**

class `cybox.objects.win_mailslot_object.WinMailslot`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_mailslot_object.WindowsMailslotObjectType`

#### **handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

#### **max\_message\_size**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Max\_Message\_Size

Dictionary key name: max\_message\_size

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**read\_timeout**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Read\_Timeout

Dictionary key name: read\_timeout

**security\_attributes**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Attributes

Dictionary key name: security\_attributes

Version: 2.1.0.12.dev0

**cybox.objects.win\_memory\_page\_region\_object module**

class `cybox.objects.win_memory_page_region_object.WinMemoryPageRegion`

Bases: *cybox.objects.memory\_object.Memory*

XML binding class:

`cybox.bindings.win_memory_page_region_object.WindowsMemoryPageRegionObjectType`

**allocation\_base\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Allocation\_Base\_Address

Dictionary key name: allocation\_base\_address

**allocation\_protect**

Type: *cybox.common.properties.String*

XML Binding class name: Allocation\_Protect

Dictionary key name: allocation\_protect

**block\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Block\_Type

Dictionary key name: block\_type

**extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*

XML Binding class name: Extracted\_Features

Dictionary key name: extracted\_features

**hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

#### **is\_injected**

XML Binding class name: is\_injected

Dictionary key name: is\_injected

#### **is\_mapped**

XML Binding class name: is\_mapped

Dictionary key name: is\_mapped

#### **is\_protected**

XML Binding class name: is\_protected

Dictionary key name: is\_protected

#### **is\_volatile**

XML Binding class name: is\_volatile

Dictionary key name: is\_volatile

#### **memory\_source**

Type: *cybox.common.properties.String*

XML Binding class name: Memory\_Source

Dictionary key name: memory\_source

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **protect**

Type: *cybox.common.properties.String*

XML Binding class name: Protect

Dictionary key name: protect

#### **region\_end\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Region\_End\_Address

Dictionary key name: region\_end\_address

#### **region\_size**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Region\_Size

Dictionary key name: region\_size

**region\_start\_address**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: `Region_Start_Address`  
Dictionary key name: `region_start_address`

**state**

Type: *cybox.common.properties.String*  
XML Binding class name: `State`  
Dictionary key name: `state`

**type\_**

Type: *cybox.common.properties.String*  
XML Binding class name: `Type`  
Dictionary key name: `type`

Version: 2.1.0.12.dev0

**cybox.objects.win\_mutex\_object module**

class `cybox.objects.win_mutex_object.WinMutex`  
Bases: *cybox.objects.mutex\_object.Mutex*

XML binding class: `cybox.bindings.win_mutex_object.WindowsMutexObjectType`

**handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: `Handle`  
Dictionary key name: `handle`

**security\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: `Security_Attributes`  
Dictionary key name: `security_attributes`

Version: 2.1.0.12.dev0

**cybox.objects.win\_network\_route\_entry\_object module**

class `cybox.objects.win_network_route_entry_object.WinNetworkRouteEntry`  
Bases: *cybox.objects.network\_route\_entry\_object.NetworkRouteEntry*

XML binding class:  
`cybox.bindings.win_network_route_entry_object.WindowsNetworkRouteEntryObjectType`

#### **nl\_route\_origin**

Type: *cybox.common.properties.String*

XML Binding class name: NL\_ROUTE\_ORIGIN

Dictionary key name: nl\_route\_origin

#### **nl\_route\_protocol**

Type: *cybox.common.properties.String*

XML Binding class name: NL\_ROUTE\_PROTOCOL

Dictionary key name: nl\_route\_protocol

Version: 2.1.0.12.dev0

### **cybox.objects.win\_network\_share\_object module**

**class** `cybox.objects.win_network_share_object.WinNetworkShare`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.win_network_share_object.WindowsNetworkShareObjectType`

#### **access\_all**

XML Binding class name: ACCESS\_ALL

Dictionary key name: access\_all

#### **access\_atrib**

XML Binding class name: ACCESS\_ATRIB

Dictionary key name: access\_atrib

#### **access\_create**

XML Binding class name: ACCESS\_CREATE

Dictionary key name: access\_create

#### **access\_delete**

XML Binding class name: ACCESS\_DELETE

Dictionary key name: access\_delete

#### **access\_exec**

XML Binding class name: ACCESS\_EXEC

Dictionary key name: access\_exec

#### **access\_perm**

XML Binding class name: ACCESS\_PERM

Dictionary key name: access\_perm

**access\_read**

XML Binding class name: ACCESS\_READ

Dictionary key name: access\_read

**access\_write**

XML Binding class name: ACCESS\_WRITE

Dictionary key name: access\_write

**current\_uses**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Current\_Uses

Dictionary key name: current\_uses

**local\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Local\_Path

Dictionary key name: local\_path

**max\_uses**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Max\_Uses

Dictionary key name: max\_uses

**netname**

Type: *cybox.common.properties.String*

XML Binding class name: Netname

Dictionary key name: netname

**type**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

Version: 2.1.0.12.dev0

**cybox.objects.win\_pipe\_object module**

**class** `cybox.objects.win_pipe_object.WinPipe`

Bases: *cybox.objects.pipe\_object.Pipe*

XML binding class: `cybox.bindings.win_pipe_object.WindowsPipeObjectType`

**default\_time\_out**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Default\_Time\_Out  
Dictionary key name: default\_time\_out

#### **handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: Handle  
Dictionary key name: handle

#### **in\_buffer\_size**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: In\_Buffer\_Size  
Dictionary key name: in\_buffer\_size

#### **max\_instances**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Max\_Instances  
Dictionary key name: max\_instances

#### **open\_mode**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Open\_Mode  
Dictionary key name: open\_mode

#### **out\_buffer\_size**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Out\_Buffer\_Size  
Dictionary key name: out\_buffer\_size

#### **pipe\_mode**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Pipe\_Mode  
Dictionary key name: pipe\_mode

#### **security\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: Security\_Attributes  
Dictionary key name: security\_attributes

Version: 2.1.0.12.dev0

#### **cybox.objects.win\_prefetch\_object module**

**class** `cybox.objects.win_prefetch_object.AccessedDirectoryList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_prefetch_object.AccessedDirectoryListType`

**class** `cybox.objects.win_prefetch_object.AccessedFileList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_prefetch_object.AccessedFileListType`

**class** `cybox.objects.win_prefetch_object.Volume` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_prefetch_object.VolumeType`

#### **deviceitem**

Type: `cybox.objects.device_object.Device`

XML Binding class name: `DeviceItem`

Dictionary key name: `deviceitem`

#### **volumeitem**

Type: `cybox.objects.win_volume_object.WinVolume`

XML Binding class name: `VolumeItem`

Dictionary key name: `volumeitem`

**class** `cybox.objects.win_prefetch_object.WinPrefetch`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.win_prefetch_object.WindowsPrefetchObjectType`

#### **accessed\_directory\_list**

Type: `cybox.objects.win_prefetch_object.AccessedDirectoryList`

XML Binding class name: `Accessed_Directory_List`

Dictionary key name: `accessed_directory_list`

#### **accessed\_file\_list**

Type: `cybox.objects.win_prefetch_object.AccessedFileList`

XML Binding class name: `Accessed_File_List`

Dictionary key name: `accessed_file_list`

#### **application\_file\_name**

Type: `cybox.common.properties.String`

XML Binding class name: `Application_File_Name`

Dictionary key name: application\_file\_name

#### **first\_run**

Type: *cybox.common.properties.DateTime*

XML Binding class name: First\_Run

Dictionary key name: first\_run

#### **last\_run**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Last\_Run

Dictionary key name: last\_run

#### **prefetch\_hash**

Type: *cybox.common.properties.String*

XML Binding class name: Prefetch\_Hash

Dictionary key name: prefetch\_hash

#### **times\_executed**

Type: *cybox.common.properties.Long*

XML Binding class name: Times\_Executed

Dictionary key name: times\_executed

#### **volume**

Type: *cybox.objects.win\_volume\_object.WinVolume*

XML Binding class name: Volume

Dictionary key name: volume

Version: 2.1.0.12.dev0

#### **cybox.objects.win\_process\_object module**

**class** cybox.objects.win\_process\_object.**MemorySectionList** (\*args)

Bases: cybox.EntityList

XML binding class: cybox.bindings.win\_process\_object.MemorySectionListType

**class** cybox.objects.win\_process\_object.**StartupInfo**

Bases: cybox.Entity

XML binding class: cybox.bindings.win\_process\_object.StartupInfoType

#### **dwfillattribute**

Type: *cybox.common.properties.Integer*

XML Binding class name: dwFillAttribute

Dictionary key name: dwfillattribute

#### **dwflags**

Type: *cybox.common.properties.Integer*

XML Binding class name: dwFlags

Dictionary key name: dwflags

#### **dwx**

Type: *cybox.common.properties.Integer*

XML Binding class name: dwX

Dictionary key name: dwx

#### **dwxcntchars**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: dwXCountChars

Dictionary key name: dwxcntchars

#### **dwxsize**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: dwXSize

Dictionary key name: dwxsize

#### **dwy**

Type: *cybox.common.properties.Integer*

XML Binding class name: dwY

Dictionary key name: dwy

#### **dwycntchars**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: dwYCountChars

Dictionary key name: dwycntchars

#### **dwysize**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: dwYSize

Dictionary key name: dwysize

#### **hstderror**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: hStdError

Dictionary key name: hstderror

#### **hstdinput**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: hStdInput

Dictionary key name: hstdinput

#### **hstdoutput**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: hStdOutput

Dictionary key name: hstdoutput

#### **lpdesktop**

Type: *cybox.common.properties.String*

XML Binding class name: lpDesktop

Dictionary key name: lpdesktop

#### **lptitle**

Type: *cybox.common.properties.String*

XML Binding class name: lpTitle

Dictionary key name: lptitle

#### **wshowwindow**

Type: *cybox.common.properties.Integer*

XML Binding class name: wShowWindow

Dictionary key name: wshowwindow

**class** *cybox.objects.win\_process\_object.WinProcess*

Bases: *cybox.objects.process\_object.Process*

XML binding class: *cybox.bindings.win\_process\_object.WindowsProcessObjectType*

#### **aslr\_enabled**

XML Binding class name: aslr\_enabled

Dictionary key name: aslr\_enabled

#### **dep\_enabled**

XML Binding class name: dep\_enabled

Dictionary key name: dep\_enabled

#### **handle\_list**

Type: *cybox.objects.win\_handle\_object.WinHandleList*

XML Binding class name: Handle\_List

Dictionary key name: handle\_list

#### **priority**

Type: *cybox.common.properties.String*

XML Binding class name: Priority

Dictionary key name: priority

#### **section\_list**

Type: *cybox.objects.win\_process\_object.MemorySectionList*

XML Binding class name: Section\_List

Dictionary key name: section\_list

#### **security\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_ID

Dictionary key name: security\_id

#### **security\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Type

Dictionary key name: security\_type

#### **startup\_info**

Type: *cybox.objects.win\_process\_object.StartupInfo*

XML Binding class name: Startup\_Info

Dictionary key name: startup\_info

#### **thread**

(List of values permitted)

Type: *cybox.objects.win\_thread\_object.WinThread*

XML Binding class name: Thread

Dictionary key name: thread

#### **window\_title**

Type: *cybox.common.properties.String*

XML Binding class name: Window\_Title

Dictionary key name: window\_title

Version: 2.1.0.12.dev0

#### **cybox.objects.win\_registry\_key\_object module**

**class** cybox.objects.win\_registry\_key\_object.**RegistrySubkeys** (\*args)

Bases: cybox.EntityList

XML binding class: `cybox.bindings.win_registry_key_object.RegistrySubkeysType`

**class** `cybox.objects.win_registry_key_object.RegistryValue`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_registry_key_object.RegistryValueType`

#### **byte\_runs**

Type: `cybox.common.byterun.ByteRuns`

XML Binding class name: `Byte_Runs`

Dictionary key name: `byte_runs`

#### **data**

Type: `cybox.common.properties.String`

XML Binding class name: `Data`

Dictionary key name: `data`

#### **datatype**

Type: `cybox.common.properties.String`

XML Binding class name: `Datatype`

Dictionary key name: `datatype`

#### **name**

Type: `cybox.common.properties.String`

XML Binding class name: `Name`

Dictionary key name: `name`

**class** `cybox.objects.win_registry_key_object.RegistryValues (*args)`

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_registry_key_object.RegistryValuesType`

**class** `cybox.objects.win_registry_key_object.WinRegistryKey`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class:

`cybox.bindings.win_registry_key_object.WindowsRegistryKeyObjectType`

#### **byte\_runs**

Type: `cybox.common.byterun.ByteRuns`

XML Binding class name: `Byte_Runs`

Dictionary key name: byte\_runs

#### **creator\_username**

Type: *cybox.common.properties.String*

XML Binding class name: Creator\_Username

Dictionary key name: creator\_username

#### **handle\_list**

Type: *cybox.objects.win\_handle\_object.WinHandleList*

XML Binding class name: Handle\_List

Dictionary key name: handle\_list

#### **hive**

Type: *cybox.common.properties.String*

XML Binding class name: Hive

Dictionary key name: hive

#### **key**

Type: *cybox.common.properties.String*

XML Binding class name: Key

Dictionary key name: key

#### **modified\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Modified\_Time

Dictionary key name: modified\_time

#### **number\_subkeys**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Number\_Subkeys

Dictionary key name: number\_subkeys

#### **number\_values**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Number\_Values

Dictionary key name: number\_values

#### **subkeys**

Type: *cybox.objects.win\_registry\_key\_object.RegistrySubkeys*

XML Binding class name: Subkeys

Dictionary key name: subkeys

#### **values**

Type: *cybox.objects.win\_registry\_key\_object.RegistryValues*  
XML Binding class name: Values  
Dictionary key name: values

Version: 2.1.0.12.dev0

#### **cybox.objects.win\_service\_object module**

**class** *cybox.objects.win\_service\_object.ServiceDescriptionList* (\*args)  
Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.win\_service\_object.ServiceDescriptionListType*

**class** *cybox.objects.win\_service\_object.WinService*  
Bases: *cybox.objects.win\_process\_object.WinProcess*

XML binding class: *cybox.bindings.win\_service\_object.WindowsServiceObjectType*

#### **description\_list**

Type: *cybox.objects.win\_service\_object.ServiceDescriptionList*  
XML Binding class name: Description\_List  
Dictionary key name: description\_list

#### **display\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Display\_Name  
Dictionary key name: display\_name

#### **group\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Group\_Name  
Dictionary key name: group\_name

#### **service\_dll**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_DLL  
Dictionary key name: service\_dll

#### **service\_dll\_certificate\_issuer**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_DLL\_Certificate\_Issuer  
Dictionary key name: service\_dll\_certificate\_issuer

**service\_dll\_certificate\_subject**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_DLL\_Certificate\_Subject  
Dictionary key name: service\_dll\_certificate\_subject

**service\_dll\_hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Service\_DLL\_Hashes  
Dictionary key name: service\_dll\_hashes

**service\_dll\_signature\_description**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_DLL\_Signature\_Description  
Dictionary key name: service\_dll\_signature\_description

**service\_dll\_signature\_exists**

XML Binding class name: service\_dll\_signature\_exists  
Dictionary key name: service\_dll\_signature\_exists

**service\_dll\_signature\_verified**

XML Binding class name: service\_dll\_signature\_verified  
Dictionary key name: service\_dll\_signature\_verified

**service\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_Name  
Dictionary key name: service\_name

**service\_status**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_Status  
Dictionary key name: service\_status

**service\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_Type  
Dictionary key name: service\_type

**started\_as**

Type: *cybox.common.properties.String*  
XML Binding class name: Started\_As  
Dictionary key name: started\_as

#### **startup\_command\_line**

Type: *cybox.common.properties.String*  
XML Binding class name: Startup\_Command\_Line  
Dictionary key name: startup\_command\_line

#### **startup\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Startup\_Type  
Dictionary key name: startup\_type

Version: 2.1.0.12.dev0

#### **cybox.objects.win\_semaphore\_object module**

**class** `cybox.objects.win_semaphore_object.WinSemaphore`

Bases: *cybox.objects.semaphore\_object.Semaphore*

XML binding class:  
`cybox.bindings.win_semaphore_object.WindowsSemaphoreObjectType`

#### **handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: Handle  
Dictionary key name: handle

#### **security\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: Security\_Attributes  
Dictionary key name: security\_attributes

Version: 2.1.0.12.dev0

#### **cybox.objects.win\_system\_object module**

**class** `cybox.objects.win_system_object.GlobalFlag`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_system_object.GlobalFlagType`

#### **abbreviation**

Type: *cybox.common.properties.String*  
XML Binding class name: Abbreviation  
Dictionary key name: abbreviation

**destination**

Type: *cybox.common.properties.String*

XML Binding class name: Destination

Dictionary key name: destination

**hexadecimal\_value**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Hexadecimal\_Value

Dictionary key name: hexadecimal\_value

**symbolic\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Symbolic\_Name

Dictionary key name: symbolic\_name

**class** *cybox.objects.win\_system\_object.GlobalFlagList* (\*args)

Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.win\_system\_object.GlobalFlagListType*

**class** *cybox.objects.win\_system\_object.WinSystem*

Bases: *cybox.objects.system\_object.System*

XML binding class: *cybox.bindings.win\_system\_object.WindowsSystemObjectType*

**domain**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Domain

Dictionary key name: domain

**global\_flag\_list**

Type: *cybox.objects.win\_system\_object.GlobalFlagList*

XML Binding class name: Global\_Flag\_List

Dictionary key name: global\_flag\_list

**netbios\_name**

Type: *cybox.common.properties.String*

XML Binding class name: NetBIOS\_Name

Dictionary key name: netbios\_name

**open\_handle\_list**

Type: *cybox.objects.win\_handle\_object.WinHandleList*

XML Binding class name: Open\_Handle\_List

Dictionary key name: open\_handle\_list

**product\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Product\_ID

Dictionary key name: product\_id

**product\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Product\_Name

Dictionary key name: product\_name

**registered\_organization**

Type: *cybox.common.properties.String*

XML Binding class name: Registered\_Organization

Dictionary key name: registered\_organization

**registered\_owner**

Type: *cybox.common.properties.String*

XML Binding class name: Registered\_Owner

Dictionary key name: registered\_owner

**windows\_directory**

Type: *cybox.common.properties.String*

XML Binding class name: Windows\_Directory

Dictionary key name: windows\_directory

**windows\_system\_directory**

Type: *cybox.common.properties.String*

XML Binding class name: Windows\_System\_Directory

Dictionary key name: windows\_system\_directory

**windows\_temp\_directory**

Type: *cybox.common.properties.String*

XML Binding class name: Windows\_Temp\_Directory

Dictionary key name: windows\_temp\_directory

Version: 2.1.0.12.dev0

**cybox.objects.win\_system\_restore\_object module**

**class** `cybox.objects.win_system_restore_object.HiveList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_system_restore_object.HiveListType`

**class** `cybox.objects.win_system_restore_object.WinSystemRestore`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class:  
`cybox.bindings.win_system_restore_object.WindowsSystemRestoreObjectType`

**acl\_change\_sid**

Type: `cybox.common.properties.String`  
XML Binding class name: `ACL_Change_SID`  
Dictionary key name: `acl_change_sid`

**acl\_change\_username**

Type: `cybox.common.properties.String`  
XML Binding class name: `ACL_Change_Username`  
Dictionary key name: `acl_change_username`

**backup\_file\_name**

Type: `cybox.common.properties.String`  
XML Binding class name: `Backup_File_Name`  
Dictionary key name: `backup_file_name`

**change\_event**

Type: `cybox.common.properties.String`  
XML Binding class name: `Change_Event`  
Dictionary key name: `change_event`

**changelog\_entry\_flags**

Type: `cybox.common.properties.String`  
XML Binding class name: `ChangeLog_Entry_Flags`  
Dictionary key name: `changelog_entry_flags`

**changelog\_entry\_sequence\_number**

Type: `cybox.common.properties.Long`  
XML Binding class name: `ChangeLog_Entry_Sequence_Number`  
Dictionary key name: `changelog_entry_sequence_number`

**changelog\_entry\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: ChangeLog\_Entry\_Type  
Dictionary key name: changelog\_entry\_type

**created**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Created  
Dictionary key name: created

**file\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: File\_Attributes  
Dictionary key name: file\_attributes

**new\_file\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: New\_File\_Name  
Dictionary key name: new\_file\_name

**original\_file\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Original\_File\_Name  
Dictionary key name: original\_file\_name

**original\_short\_file\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Original\_Short\_File\_Name  
Dictionary key name: original\_short\_file\_name

**process\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Process\_Name  
Dictionary key name: process\_name

**registry\_hive\_list**

Type: *cybox.objects.win\_system\_restore\_object.HiveList*  
XML Binding class name: Registry\_Hive\_List  
Dictionary key name: registry\_hive\_list

**restore\_point\_description**

Type: *cybox.common.properties.String*

XML Binding class name: Restore\_Point\_Description

Dictionary key name: restore\_point\_description

#### **restore\_point\_full\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Restore\_Point\_Full\_Path

Dictionary key name: restore\_point\_full\_path

#### **restore\_point\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Restore\_Point\_Name

Dictionary key name: restore\_point\_name

#### **restore\_point\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Restore\_Point\_Type

Dictionary key name: restore\_point\_type

**Version:** 2.1.0.12.dev0

### **cybox.objects.win\_task\_object module**

**class** cybox.objects.win\_task\_object.**IComHandlerAction**

Bases: cybox.Entity

XML binding class: cybox.bindings.win\_task\_object.IComHandlerActionType

#### **com\_class\_id**

Type: *cybox.common.properties.String*

XML Binding class name: COM\_Class\_ID

Dictionary key name: com\_class\_id

#### **com\_data**

Type: *cybox.common.properties.String*

XML Binding class name: COM\_Data

Dictionary key name: com\_data

**class** cybox.objects.win\_task\_object.**IExecAction**

Bases: cybox.Entity

XML binding class: cybox.bindings.win\_task\_object.IExecActionType

#### **exec\_arguments**

Type: *cybox.common.properties.String*  
XML Binding class name: Exec\_Arguments  
Dictionary key name: exec\_arguments

#### **exec\_program\_hashes**

Type: *cybox.common.hashses.HashList*  
XML Binding class name: Exec\_Program\_Hashes  
Dictionary key name: exec\_program\_hashes

#### **exec\_program\_path**

Type: *cybox.common.properties.String*  
XML Binding class name: Exec\_Program\_Path  
Dictionary key name: exec\_program\_path

#### **exec\_working\_directory**

Type: *cybox.common.properties.String*  
XML Binding class name: Exec\_Working\_Directory  
Dictionary key name: exec\_working\_directory

**class** `cybox.objects.win_task_object.IShowMessageAction`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_task_object.IShowMessageType`

#### **show\_message\_body**

Type: *cybox.common.properties.String*  
XML Binding class name: Show\_Message\_Body  
Dictionary key name: show\_message\_body

#### **show\_message\_title**

Type: *cybox.common.properties.String*  
XML Binding class name: Show\_Message\_Title  
Dictionary key name: show\_message\_title

**class** `cybox.objects.win_task_object.TaskAction`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_task_object.TaskActionType`

#### **action\_id**

Type: *cybox.common.properties.String*  
XML Binding class name: Action\_ID

Dictionary key name: `action_id`

#### **action\_type**

Type: `cybox.common.properties.String`

XML Binding class name: `Action_Type`

Dictionary key name: `action_type`

#### **icomhandleraction**

Type: `cybox.objects.win_task_object.IComHandlerAction`

XML Binding class name: `IComHandlerAction`

Dictionary key name: `icomhandleraction`

#### **iemailaction**

Type: `cybox.objects.email_message_object.EmailMessage`

XML Binding class name: `IEmailAction`

Dictionary key name: `iemailaction`

#### **iexecaction**

Type: `cybox.objects.win_task_object.IExecAction`

XML Binding class name: `IExecAction`

Dictionary key name: `iexecaction`

#### **ishowmessageaction**

Type: `cybox.objects.win_task_object.IShowMessageAction`

XML Binding class name: `IShowMessageAction`

Dictionary key name: `ishowmessageaction`

**class** `cybox.objects.win_task_object.TaskActionList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_task_object.TaskActionListType`

**class** `cybox.objects.win_task_object.Trigger`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_task_object.TriggerType`

#### **trigger\_begin**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Trigger_Begin`

Dictionary key name: `trigger_begin`

#### **trigger\_delay**

Type: *cybox.common.properties.Duration*

XML Binding class name: Trigger\_Delay

Dictionary key name: trigger\_delay

#### **trigger\_end**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Trigger\_End

Dictionary key name: trigger\_end

#### **trigger\_frequency**

Type: *cybox.common.properties.String*

XML Binding class name: Trigger\_Frequency

Dictionary key name: trigger\_frequency

#### **trigger\_max\_run\_time**

Type: *cybox.common.properties.Duration*

XML Binding class name: Trigger\_Max\_Run\_Time

Dictionary key name: trigger\_max\_run\_time

#### **trigger\_session\_change\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Trigger\_Session\_Change\_Type

Dictionary key name: trigger\_session\_change\_type

#### **trigger\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Trigger\_Type

Dictionary key name: trigger\_type

**class** `cybox.objects.win_task_object.TriggerList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_task_object.TriggerListType`

**class** `cybox.objects.win_task_object.WinTask`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_task_object.WindowsTaskObjectType`

#### **account\_logon\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Account\_Logon\_Type  
Dictionary key name: account\_logon\_type

**account\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Account\_Name  
Dictionary key name: account\_name

**account\_run\_level**

Type: *cybox.common.properties.String*  
XML Binding class name: Account\_Run\_Level  
Dictionary key name: account\_run\_level

**action\_list**

Type: *cybox.objects.win\_task\_object.TaskActionList*  
XML Binding class name: Action\_List  
Dictionary key name: action\_list

**application\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Application\_Name  
Dictionary key name: application\_name

**comment**

Type: *cybox.common.properties.String*  
XML Binding class name: Comment  
Dictionary key name: comment

**creation\_date**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Creation\_Date  
Dictionary key name: creation\_date

**creator**

Type: *cybox.common.properties.String*  
XML Binding class name: Creator  
Dictionary key name: creator

**exit\_code**

Type: *cybox.common.properties.Long*  
XML Binding class name: Exit\_Code  
Dictionary key name: exit\_code

### **flags**

Type: *cybox.common.properties.String*

XML Binding class name: Flags

Dictionary key name: flags

### **max\_run\_time**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Max\_Run\_Time

Dictionary key name: max\_run\_time

### **most\_recent\_run\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Most\_Recent\_Run\_Time

Dictionary key name: most\_recent\_run\_time

### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

### **next\_run\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Next\_Run\_Time

Dictionary key name: next\_run\_time

### **parameters**

Type: *cybox.common.properties.String*

XML Binding class name: Parameters

Dictionary key name: parameters

### **priority**

Type: *cybox.common.properties.String*

XML Binding class name: Priority

Dictionary key name: priority

### **status**

Type: *cybox.common.properties.String*

XML Binding class name: Status

Dictionary key name: status

### **trigger\_list**

Type: *cybox.objects.win\_task\_object.TriggerList*

XML Binding class name: Trigger\_List

Dictionary key name: trigger\_list

#### **work\_item\_data**

Type: *cybox.common.properties.Base64Binary*

XML Binding class name: Work\_Item\_Data

Dictionary key name: work\_item\_data

#### **working\_directory**

Type: *cybox.common.properties.String*

XML Binding class name: Working\_Directory

Dictionary key name: working\_directory

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### **cybox.objects.win\_thread\_object module**

**class** cybox.objects.win\_thread\_object.**WinThread**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: cybox.bindings.win\_thread\_object.WindowsThreadObjectType

#### **context**

Type: *cybox.common.properties.String*

XML Binding class name: Context

Dictionary key name: context

#### **creation\_flags**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Creation\_Flags

Dictionary key name: creation\_flags

#### **creation\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Creation\_Time

Dictionary key name: creation\_time

#### **handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

#### **parameter\_address**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Parameter\_Address  
Dictionary key name: parameter\_address

**priority**

Type: *cybox.common.properties.UnsignedInteger*  
XML Binding class name: Priority  
Dictionary key name: priority

**running\_status**

Type: *cybox.common.properties.String*  
XML Binding class name: Running\_Status  
Dictionary key name: running\_status

**security\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: Security\_Attributes  
Dictionary key name: security\_attributes

**stack\_size**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Stack\_Size  
Dictionary key name: stack\_size

**start\_address**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Start\_Address  
Dictionary key name: start\_address

**thread\_id**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Thread\_ID  
Dictionary key name: thread\_id

Version: 2.1.0.12.dev0

**cybox.objects.win\_user\_object module**

**class** cybox.objects.win\_user\_object.**WinGroup**

Bases: cybox.Entity

XML binding class: cybox.bindings.win\_user\_account\_object.WindowsGroupType

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**class** `cybox.objects.win_user_object.WinGroupList` (\*args)  
 Bases: *cybox.objects.user\_account\_object.GroupList*

XML binding class: `cybox.bindings.user_account_object.GroupListType`

**class** `cybox.objects.win_user_object.WinPrivilege`  
 Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_user_account_object.WindowsPrivilegeType`

### **user\_right**

Type: *cybox.common.properties.String*

XML Binding class name: User\_Right

Dictionary key name: user\_right

**class** `cybox.objects.win_user_object.WinPrivilegeList` (\*args)  
 Bases: *cybox.objects.user\_account\_object.PrivilegeList*

XML binding class: `cybox.bindings.user_account_object.PrivilegeListType`

**class** `cybox.objects.win_user_object.WinUser`  
 Bases: *cybox.objects.user\_account\_object.UserAccount*

XML binding class:  
`cybox.bindings.win_user_account_object.WindowsUserAccountObjectType`

### **group\_list**

Type: *cybox.objects.win\_user\_object.WinGroupList*

XML Binding class name: Group\_List

Dictionary key name: group\_list

### **privilege\_list**

Type: *cybox.objects.win\_user\_object.WinPrivilegeList*

XML Binding class name: Privilege\_List

Dictionary key name: privilege\_list

### **security\_id**

Type: *cybox.common.properties.String*  
XML Binding class name: Security\_ID  
Dictionary key name: security\_id

**security\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Security\_Type  
Dictionary key name: security\_type

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**cybox.objects.win\_volume\_object module**

**class** `cybox.objects.win_volume_object.WinVolume`

Bases: *cybox.objects.volume\_object.Volume*

XML binding class: `cybox.bindings.win_volume_object.WindowsVolumeObjectType`

**attributes\_list**

Type: *cybox.objects.win\_volume\_object.WindowsVolumeAttributesList*  
XML Binding class name: Attributes\_List  
Dictionary key name: attributes\_list

**drive\_Type**

Type: *cybox.common.properties.String*  
XML Binding class name: Drive\_Type  
Dictionary key name: drive\_type

**drive\_letter**

Type: *cybox.common.properties.String*  
XML Binding class name: Drive\_Letter  
Dictionary key name: drive\_letter

**class** `cybox.objects.win_volume_object.WindowsVolumeAttributesList (*args)`

Bases: `cybox.EntityList`

XML binding class:  
`cybox.bindings.win_volume_object.WindowsVolumeAttributesListType`

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**cybox.objects.win\_waitable\_timer\_object module**

**class** `cybox.objects.win_waitable_timer_object.WinWaitableTimer`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.win_waitable_timer_object.WindowsWaitableTimerObjectType`

#### **name**

Type: `cybox.common.properties.String`

XML Binding class name: Name

Dictionary key name: name

#### **security\_attributes**

Type: `cybox.common.properties.String`

XML Binding class name: Security\_Attributes

Dictionary key name: security\_attributes

#### **type\_**

Type: `cybox.common.properties.String`

XML Binding class name: Type

Dictionary key name: type

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### **cybox.objects.x509\_certificate\_object module**

**class** `cybox.objects.x509_certificate_object.RSAPublicKey`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.RSAPublicKeyType`

#### **exponent**

Type: `cybox.common.properties.Integer`

XML Binding class name: Exponent

Dictionary key name: exponent

#### **modulus**

Type: `cybox.common.properties.String`

XML Binding class name: Modulus

Dictionary key name: modulus

**class** `cybox.objects.x509_certificate_object.SubjectPublicKey`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.SubjectPublicKeyType`

#### **public\_key\_algorithm**

Type: *cybox.common.properties.String*  
XML Binding class name: Public\_Key\_Algorithm  
Dictionary key name: public\_key\_algorithm

#### **rsa\_public\_key**

Type: *cybox.objects.x509\_certificate\_object.RSAPublicKey*  
XML Binding class name: RSA\_Public\_Key  
Dictionary key name: rsa\_public\_key

**class** `cybox.objects.x509_certificate_object.Validity`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.ValidityType`

#### **not\_after**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Not\_After  
Dictionary key name: not\_after

#### **not\_before**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Not\_Before  
Dictionary key name: not\_before

**class** `cybox.objects.x509_certificate_object.X509Cert`  
Bases: `cybox.Entity`

XML binding class:  
`cybox.bindings.x509_certificate_object.X509CertificateContentsType`

#### **issuer**

Type: *cybox.common.properties.String*  
XML Binding class name: Issuer  
Dictionary key name: issuer

#### **non\_standard\_extensions**

Type: *cybox.objects.x509\_certificate\_object.X509NonStandardExtensions*  
XML Binding class name: Non\_Standard\_Extensions  
Dictionary key name: non\_standard\_extensions

#### **serial\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Serial\_Number

Dictionary key name: serial\_number

#### **signature\_algorithm**

Type: *cybox.common.properties.String*

XML Binding class name: Signature\_Algorithm

Dictionary key name: signature\_algorithm

#### **standard\_extensions**

Type: *cybox.objects.x509\_certificate\_object.X509V3Extensions*

XML Binding class name: Standard\_Extensions

Dictionary key name: standard\_extensions

#### **subject**

Type: *cybox.common.properties.String*

XML Binding class name: Subject

Dictionary key name: subject

#### **subject\_public\_key**

Type: *cybox.objects.x509\_certificate\_object.SubjectPublicKey*

XML Binding class name: Subject\_Public\_Key

Dictionary key name: subject\_public\_key

#### **validity**

Type: *cybox.objects.x509\_certificate\_object.Validity*

XML Binding class name: Validity

Dictionary key name: validity

#### **version**

Type: *cybox.common.properties.Integer*

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.x509_certificate_object.X509Certificate`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.x509_certificate_object.X509CertificateObjectType`

#### **certificate**

Type: *cybox.objects.x509\_certificate\_object.X509Cert*

XML Binding class name: Certificate

Dictionary key name: certificate

#### **certificate\_signature**

Type: *cybox.objects.x509\_certificate\_object.X509CertificateSignature*

XML Binding class name: Certificate\_Signature

Dictionary key name: certificate\_signature

#### **raw\_certificate**

Type: *cybox.common.properties.String*

XML Binding class name: Raw\_Certificate

Dictionary key name: raw\_certificate

**class** `cybox.objects.x509_certificate_object.X509CertificateSignature`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.x509_certificate_object.X509CertificateSignatureType`

#### **signature**

Type: *cybox.common.properties.String*

XML Binding class name: Signature

Dictionary key name: signature

#### **signature\_algorithm**

Type: *cybox.common.properties.String*

XML Binding class name: Signature\_Algorithm

Dictionary key name: signature\_algorithm

**class** `cybox.objects.x509_certificate_object.X509NonStandardExtensions`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.x509_certificate_object.X509NonStandardExtensionsType`

#### **netscape\_certificate\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Netscape\_Certificate\_Type

Dictionary key name: netscape\_certificate\_type

#### **netscape\_comment**

Type: *cybox.common.properties.String*

XML Binding class name: Netscape\_Comment

Dictionary key name: netscape\_comment

**old\_authority\_key\_identifier**

Type: *cybox.common.properties.String*  
XML Binding class name: Old\_Authority\_Key\_Identifier  
Dictionary key name: old\_authority\_key\_identifier

**old\_primary\_key\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: Old\_Primary\_Key\_Attributes  
Dictionary key name: old\_primary\_key\_attributes

**class** `cybox.objects.x509_certificate_object.X509V3Extensions`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.X509V3ExtensionsType`

**authority\_key\_identifier**

Type: *cybox.common.properties.String*  
XML Binding class name: Authority\_Key\_Identifier  
Dictionary key name: authority\_key\_identifier

**basic\_constraints**

Type: *cybox.common.properties.String*  
XML Binding class name: Basic\_Constraints  
Dictionary key name: basic\_constraints

**certificate\_policies**

Type: *cybox.common.properties.String*  
XML Binding class name: Certificate\_Policies  
Dictionary key name: certificate\_policies

**crl\_distribution\_points**

Type: *cybox.common.properties.String*  
XML Binding class name: CRL\_Distribution\_Points  
Dictionary key name: crl\_distribution\_points

**extended\_key\_usage**

Type: *cybox.common.properties.String*  
XML Binding class name: Extended\_Key\_Usage  
Dictionary key name: extended\_key\_usage

**inhibit\_any\_policy**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Inhibit\_Any\_Policy  
Dictionary key name: inhibit\_any\_policy

**issuer\_alternative\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Issuer\_Alternative\_Name  
Dictionary key name: issuer\_alternative\_name

**key\_usage**

Type: *cybox.common.properties.String*  
XML Binding class name: Key\_Usage  
Dictionary key name: key\_usage

**name\_constraints**

Type: *cybox.common.properties.String*  
XML Binding class name: Name\_Constraints  
Dictionary key name: name\_constraints

**policy\_constraints**

Type: *cybox.common.properties.String*  
XML Binding class name: Policy\_Constraints  
Dictionary key name: policy\_constraints

**policy\_mappings**

Type: *cybox.common.properties.String*  
XML Binding class name: Policy\_Mappings  
Dictionary key name: policy\_mappings

**private\_key\_usage\_period**

Type: *cybox.objects.x509\_certificate\_object.Validity*  
XML Binding class name: Private\_Key\_Usage\_Period  
Dictionary key name: private\_key\_usage\_period

**subject\_alternative\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Subject\_Alternative\_Name  
Dictionary key name: subject\_alternative\_name

**subject\_directory\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: Subject\_Directory\_Attributes  
Dictionary key name: subject\_directory\_attributes

**subject\_key\_identifier**

Type: *cybox.common.properties.String*  
XML Binding class name: Subject\_Key\_Identifier  
Dictionary key name: subject\_key\_identifier

**Module contents**

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**cybox.objects.account\_object module**

**class** `cybox.objects.account_object.Account`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.account_object.AccountObjectType`

**authentication**

(List of values permitted)

Type: *cybox.objects.account\_object.Authentication*  
XML Binding class name: Authentication  
Dictionary key name: authentication

**creation\_date**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Creation\_Date  
Dictionary key name: creation\_date

**description**

Type: *cybox.common.properties.String*  
XML Binding class name: Description  
Dictionary key name: description

**disabled**

XML Binding class name: disabled  
Dictionary key name: disabled

**domain**

Type: *cybox.common.properties.String*  
XML Binding class name: Domain  
Dictionary key name: domain

#### **last\_accessed\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Last\_Accessed\_Time

Dictionary key name: last\_accessed\_time

#### **locked\_out**

XML Binding class name: locked\_out

Dictionary key name: locked\_out

#### **modified\_date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Modified\_Date

Dictionary key name: modified\_date

**class** `cybox.objects.account_object.Authentication`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.account_object.AuthenticationType`

#### **authentication\_data**

Type: *cybox.common.properties.String*

XML Binding class name: Authentication\_Data

Dictionary key name: authentication\_data

#### **authentication\_token\_protection\_mechanism**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Authentication-Token-Protection-Mechanism

Dictionary key name: authentication\_token\_protection\_mechanism

#### **authentication\_type**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Authentication\_Type

Dictionary key name: authentication\_type

#### **structured\_authentication\_mechanism**

Type: *cybox.objects.account\_object.StructuredAuthenticationMechanism*

XML Binding class name: Structured\_Authentication\_Mechanism

Dictionary key name: structured\_authentication\_mechanism

**class** `cybox.objects.account_object.StructuredAuthenticationMechanism`  
Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.account_object.StructuredAuthenticationMechanismType`

#### **description**

Type: `cybox.common.properties.String`

XML Binding class name: Description

Dictionary key name: description

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#### **cybox.objects.address\_object module**

**class** `cybox.objects.address_object.Address` (*address\_value=None, category=None*)  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.address_object.AddressObjectType`

#### **address\_value**

Type: `cybox.common.properties.String`

XML Binding class name: Address\_Value

Dictionary key name: address\_value

#### **category**

XML Binding class name: category

Dictionary key name: category

#### **is\_destination**

XML Binding class name: is\_destination

Dictionary key name: is\_destination

#### **is\_source**

XML Binding class name: is\_source

Dictionary key name: is\_source

#### **is\_spoofed**

XML Binding class name: is\_spoofed

Dictionary key name: is\_spoofed

#### **vlan\_name**

Type: *cybox.common.properties.String*

XML Binding class name: VLAN\_Name

Dictionary key name: vlan\_name

#### **vlan\_num**

Type: *cybox.common.properties.Integer*

XML Binding class name: VLAN\_Num

Dictionary key name: vlan\_num

**class** `cybox.objects.address_object.EmailAddress` (*addr\_string=None*)

Bases: *cybox.objects.address\_object.Address*

Convenience class for creating email addresses.

Note that this is not an actual CyBOX type.

XML binding class: `cybox.bindings.address_object.AddressObjectType`

**classmethod** `istypeof` (*obj*)

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#### **cybox.objects.api\_object module**

**class** `cybox.objects.api_object.API`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.api_object.APIObjectType`

#### **address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Address

Dictionary key name: address

#### **description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

#### **function\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Function\_Name

Dictionary key name: function\_name

**normalized\_function\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Normalized\_Function\_Name  
Dictionary key name: normalized\_function\_name

**platform**

Type: *cybox.common.platform\_specification.PlatformSpecification*  
XML Binding class name: Platform  
Dictionary key name: platform

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**cybox.objects.archive\_file\_object module**

**class** `cybox.objects.archive_file_object.ArchiveFile`

Bases: *cybox.objects.file\_object.File*

XML binding class: `cybox.bindings.file_object.FileObjectType`

**archive\_format**

Type: *cybox.common.properties.String*  
XML Binding class name: Archive\_Format  
Dictionary key name: archive\_format

**archived\_file**

(List of values permitted)  
Type: *cybox.objects.file\_object.File*  
XML Binding class name: Archived\_File  
Dictionary key name: archived\_file

**comment**

Type: *cybox.common.properties.String*  
XML Binding class name: Comment  
Dictionary key name: comment

**decryption\_key**

Type: *cybox.common.properties.String*  
XML Binding class name: Decryption\_Key  
Dictionary key name: decryption\_key

**encryption\_algorithm**

Type: *cybox.common.properties.String*

XML Binding class name: Encryption\_Algorithm

Dictionary key name: encryption\_algorithm

#### **file\_count**

Type: *cybox.common.properties.Integer*

XML Binding class name: File\_Count

Dictionary key name: file\_count

#### **version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

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### **cybox.objects.arp\_cache\_object module**

**class** `cybox.objects.arp_cache_object.ARPCache`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.arp_cache_object.ARPCacheObjectType`

#### **arp\_cache\_entry**

(List of values permitted)

Type: *cybox.objects.arp\_cache\_object.ARPCacheEntry*

XML Binding class name: ARP\_Cache\_Entry

Dictionary key name: arp\_cache\_entry

**class** `cybox.objects.arp_cache_object.ARPCacheEntry`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.arp_cache_object.ARPCacheEntryType`

#### **ip\_address**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IP\_Address

Dictionary key name: ip\_address

#### **network\_interface**

Type: *cybox.objects.system\_object.NetworkInterface*

XML Binding class name: Network\_Interface

Dictionary key name: network\_interface

**physical\_address**

Type: *cybox.common.properties.String*

XML Binding class name: *Physical\_Address*

Dictionary key name: *physical\_address*

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: *Type*

Dictionary key name: *type*

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**cybox.objects.artifact\_object module**

**class** *cybox.objects.artifact\_object.Artifact* (*data=None, type\_=None*)

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: <undefined>

**static from\_dict** (*artifact\_dict*)

**static from\_obj** (*artifact\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** *cybox.objects.artifact\_object.Base64Encoding*

Bases: *cybox.objects.artifact\_object.Encoding*

XML binding class: <undefined>

**pack** (*data*)

**unpack** (*packed\_data*)

**class** *cybox.objects.artifact\_object.Bz2Compression*

Bases: *cybox.objects.artifact\_object.Compression*

XML binding class: <undefined>

**pack** (*data*)

**unpack** (*packed\_data*)

**class** *cybox.objects.artifact\_object.Compression* (*compression\_mechanism=None*)

Bases: *cybox.objects.artifact\_object.Packaging*

A Compression packaging layer

Currently only zlib and bz2 are supported. Also, `compression_mechanism_ref` is not currently supported.

XML binding class: <undefined>

**static from\_dict** (*compression\_dict*)

**static from\_obj** (*compression\_obj*)

**static get\_object** (*mechanism*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.objects.artifact_object.Encoding`  
Bases: `cybox.objects.artifact_object.Packaging`

An encoding packaging layer.

Currently only base64 with a standard alphabet is supported.

XML binding class: <undefined>

**static from\_dict** (*encoding\_dict*)

**static from\_obj** (*encoding\_obj*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.objects.artifact_object.Encryption` (*encryption\_mechanism=None, encryption\_key=None*)  
Bases: `cybox.objects.artifact_object.Packaging`

An encryption packaging layer.

XML binding class: <undefined>

**static from\_dict** (*encryption\_dict*)

**static from\_obj** (*encryption\_obj*)

**static get\_object** (*mechanism, key*)

**to\_dict** ()

**to\_obj** (*return\_obj=None, ns\_info=None*)

**class** `cybox.objects.artifact_object.Packaging`  
Bases: `cybox.Entity`

An individual packaging layer.

XML binding class: <undefined>

**pack** (*data*)

This should accept byte data and return byte data

**unpack** (*packed\_data*)

This should accept byte data and return byte data

**class** `cybox.objects.artifact_object.PasswordProtectedZipEncryption` (*key*)

Bases: `cybox.objects.artifact_object.Encryption`

XML binding class: <undefined>

**unpack** (*packed\_data*)

**class** `cybox.objects.artifact_object.RawArtifact` (*value=None*)

Bases: `cybox.common.properties.String`

XML binding class: `cybox.bindings.artifact_object.RawArtifactType`

**byte\_order**

XML Binding class name: `byte_order`

Dictionary key name: `byte_order`

**class** `cybox.objects.artifact_object.XOREncryption` (*key*)

Bases: `cybox.objects.artifact_object.Encryption`

XML binding class: <undefined>

**pack** (*data*)

**unpack** (*packed\_data*)

**class** `cybox.objects.artifact_object.ZlibCompression`

Bases: `cybox.objects.artifact_object.Compression`

XML binding class: <undefined>

**pack** (*data*)

**unpack** (*packed\_data*)

**Version:** 2.1.0.12.dev0

### `cybox.objects.as_object` module

`cybox.objects.as_object.AS`

alias of `AutonomousSystem` | XML binding class: `cybox.bindings.as_object.ASObjectType`

**class** `cybox.objects.as_object.AutonomousSystem`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.as_object.ASObjectType`

#### **handle**

Type: `cybox.common.properties.String`  
XML Binding class name: Handle  
Dictionary key name: handle

#### **name**

Type: `cybox.common.properties.String`  
XML Binding class name: Name  
Dictionary key name: name

#### **number**

Type: `cybox.common.properties.NonNegativeInteger`  
XML Binding class name: Number  
Dictionary key name: number

#### **regional\_internet\_registry**

Type: `cybox.common.properties.String`  
XML Binding class name: Regional\_Internet\_Registry  
Dictionary key name: regional\_internet\_registry

**Version:** 2.1.0.12.dev0

### **cybox.objects.code\_object module**

**class** `cybox.objects.code_object.Code`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.code_object.CodeObjectType`

#### **code\_language**

Type: `cybox.common.properties.String`  
XML Binding class name: Code\_Language  
Dictionary key name: code\_language

#### **code\_segment**

Type: `cybox.common.properties.String`

XML Binding class name: Code\_Segment

Dictionary key name: code\_segment

#### **code\_segment\_xor**

Type: *cybox.objects.code\_object.CodeSegmentXOR*

XML Binding class name: Code\_Segment\_XOR

Dictionary key name: code\_segment\_xor

#### **description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

#### **digital\_signatures**

Type: *cybox.common.digitalsignature.DigitalSignatureList*

XML Binding class name: Digital\_Signatures

Dictionary key name: digital\_signatures

#### **discovery\_method**

Type: *cybox.common.measuresource.MeasureSource*

XML Binding class name: Discovery\_Method

Dictionary key name: discovery\_method

#### **extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*

XML Binding class name: Extracted\_Features

Dictionary key name: extracted\_features

#### **processor\_family**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Processor\_Family

Dictionary key name: processor\_family

#### **purpose**

Type: *cybox.common.properties.String*

XML Binding class name: Purpose

Dictionary key name: purpose

#### **start\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Start\_Address

Dictionary key name: start\_address

### **targeted\_platforms**

Type: *cybox.objects.code\_object.TargetedPlatforms*

XML Binding class name: Targeted\_Platforms

Dictionary key name: targeted\_platforms

### **type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**class** *cybox.objects.code\_object.CodeSegmentXOR* (*value=None*)

Bases: *cybox.common.properties.String*

XML binding class: *cybox.bindings.code\_object.CodeSegmentXORType*

### **xor\_pattern**

XML Binding class name: xor\_pattern

Dictionary key name: xor\_pattern

**class** *cybox.objects.code\_object.TargetedPlatforms* (*\*args*)

Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.code\_object.TargetedPlatformsType*

**Version:** 2.1.0.12.dev0

## **cybox.objects.device\_object module**

**class** *cybox.objects.device\_object.Device*

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: *cybox.bindings.device\_object.DeviceObjectType*

### **description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

### **device\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Device\_Type

Dictionary key name: device\_type

#### **firmware\_version**

Type: *cybox.common.properties.String*

XML Binding class name: Firmware\_Version

Dictionary key name: firmware\_version

#### **manufacturer**

Type: *cybox.common.properties.String*

XML Binding class name: Manufacturer

Dictionary key name: manufacturer

#### **model**

Type: *cybox.common.properties.String*

XML Binding class name: Model

Dictionary key name: model

#### **serial\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Serial\_Number

Dictionary key name: serial\_number

Version: 2.1.0.12.dev0

### **cybox.objects.disk\_object module**

**class** cybox.objects.disk\_object.**Disk**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: cybox.bindings.disk\_object.DiskObjectType

#### **disk\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Disk\_Name

Dictionary key name: disk\_name

#### **disk\_size**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Disk\_Size

Dictionary key name: disk\_size

#### **free\_space**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: Free\_Space  
Dictionary key name: free\_space

#### **partition\_list**

Type: *cybox.objects.disk\_object.PartitionList*  
XML Binding class name: Partition\_List  
Dictionary key name: partition\_list

#### **type**

Type: *cybox.common.properties.String*  
XML Binding class name: Type  
Dictionary key name: type

**class** `cybox.objects.disk_object.PartitionList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.disk_object.PartitionListType`

**Version:** 2.1.0.12.dev0

#### **cybox.objects.disk\_partition\_object module**

**class** `cybox.objects.disk_partition_object.DiskPartition`  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.disk_partition_object.DiskPartitionObjectType`

#### **created**

Type: *cybox.common.properties.String*  
XML Binding class name: Created  
Dictionary key name: created

#### **device\_name**

Type: *cybox.common.properties.Name*  
XML Binding class name: Device\_Name  
Dictionary key name: device\_name

#### **mount\_point**

Type: *cybox.common.properties.String*  
XML Binding class name: Mount\_Point  
Dictionary key name: mount\_point

**partition\_id**

Type: *cybox.common.properties.Integer*

XML Binding class name: Partition\_ID

Dictionary key name: partition\_id

**partition\_length**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Partition\_Length

Dictionary key name: partition\_length

**partition\_offset**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Partition\_Offset

Dictionary key name: partition\_offset

**space\_left**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Space\_Left

Dictionary key name: space\_left

**space\_used**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Space\_Used

Dictionary key name: space\_used

**total\_space**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Total\_Space

Dictionary key name: total\_space

**type**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Type

Dictionary key name: type

**Version:** 2.1.0.12.dev0

**cybox.objects.dns\_cache\_object module**

**class** `cybox.objects.dns_cache_object.DNSCache`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.dns_cache_object.DNSCacheObjectType`

### **dns\_cache\_entry**

(List of values permitted)

Type: *cybox.objects.dns\_cache\_object.DNSCacheEntry*

XML Binding class name: `DNS_Cache_Entry`

Dictionary key name: `dns_cache_entry`

**class** `cybox.objects.dns_cache_object.DNSCacheEntry`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.dns_cache_object.DNSCacheEntryType`

### **dns\_entry**

Type: *cybox.objects.dns\_record\_object.DNSRecord*

XML Binding class name: `DNS_Entry`

Dictionary key name: `dns_entry`

### **t11**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: `TTL`

Dictionary key name: `t11`

**Version:** 2.1.0.12.dev0

## **cybox.objects.dns\_query\_object module**

**class** `cybox.objects.dns_query_object.DNSQuery`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.dns_query_object.DNSQueryObjectType`

### **additional\_records**

Type: *cybox.objects.dns\_query\_object.DNSResourceRecords*

XML Binding class name: `Additional_Records`

Dictionary key name: `additional_records`

### **answer\_resource\_records**

Type: *cybox.objects.dns\_query\_object.DNSResourceRecords*

XML Binding class name: `Answer_Resource_Records`

Dictionary key name: `answer_resource_records`

### **authority\_resource\_records**

Type: *cybox.objects.dns\_query\_object.DNSResourceRecords*  
XML Binding class name: Authority\_Resource\_Records  
Dictionary key name: authority\_resource\_records

**date\_ran**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Date\_Ran  
Dictionary key name: date\_ran

**question**

Type: *cybox.objects.dns\_query\_object.DNSQuestion*  
XML Binding class name: Question  
Dictionary key name: question

**service\_used**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_Used  
Dictionary key name: service\_used

**successful**

XML Binding class name: successful  
Dictionary key name: successful

**transaction\_id**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Transaction\_ID  
Dictionary key name: transaction\_id

**class** *cybox.objects.dns\_query\_object.DNSQuestion*  
Bases: *cybox.Entity*

XML binding class: *cybox.bindings.dns\_query\_object.DNSQuestionType*

**qclass**

Type: *cybox.common.properties.String*  
XML Binding class name: QClass  
Dictionary key name: qclass

**qname**

Type: *cybox.objects.uri\_object.URI*  
XML Binding class name: QName  
Dictionary key name: qname

### **qtype**

Type: *cybox.common.properties.String*

XML Binding class name: QType

Dictionary key name: qtype

**class** `cybox.objects.dns_query_object.DNSResourceRecords` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.dns_query_object.DNSResourceRecordsType`

Version: 2.1.0.12.dev0

### **cybox.objects.dns\_record\_object module**

**class** `cybox.objects.dns_record_object.DNSRecord`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.dns_record_object.DNSRecordObjectType`

### **address\_class**

Type: *cybox.common.properties.String*

XML Binding class name: Address\_Class

Dictionary key name: address\_class

### **data\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Data\_Length

Dictionary key name: data\_length

### **description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

### **domain\_name**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: Domain\_Name

Dictionary key name: domain\_name

### **entry\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Entry\_Type

Dictionary key name: entry\_type

#### **flags**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Flags

Dictionary key name: flags

#### **ip\_address**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IP\_Address

Dictionary key name: ip\_address

#### **queried\_date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Queried\_Date

Dictionary key name: queried\_date

#### **record\_data**

XML Binding class name: Record\_Data

Dictionary key name: record\_data

#### **record\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Record\_Name

Dictionary key name: record\_name

#### **record\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Record\_Type

Dictionary key name: record\_type

#### **ttl**

Type: *cybox.common.properties.Integer*

XML Binding class name: TTL

Dictionary key name: ttl

**Version:** 2.1.0.12.dev0

### **cybox.objects.domain\_name\_object module**

**class** `cybox.objects.domain_name_object.DomainName`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.domain_name_object.DomainNameObjectType`

**type\_**

XML Binding class name: `type_`

Dictionary key name: `type`

**value**

Type: `cybox.common.properties.String`

XML Binding class name: `Value`

Dictionary key name: `value`

Version: 2.1.0.12.dev0

**cybox.objects.email\_message\_object module**

**class** `cybox.objects.email_message_object.AttachmentReference` (*object\_reference=None*)  
Bases: `cybox.ObjectReference`

XML binding class: `cybox.bindings.email_message_object.AttachmentReferenceType`

**class** `cybox.objects.email_message_object.Attachments` (*\*args*)  
Bases: `cybox.ReferenceList`

XML binding class: `cybox.bindings.email_message_object.AttachmentsType`

**class** `cybox.objects.email_message_object.EmailHeader`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.email_message_object.EmailHeaderType`

**bcc**

Type: `cybox.objects.email_message_object.EmailRecipients`

XML Binding class name: `BCC`

Dictionary key name: `bcc`

**boundary**

Type: `cybox.common.properties.String`

XML Binding class name: `Boundary`

Dictionary key name: `boundary`

**cc**

Type: *cybox.objects.email\_message\_object.EmailRecipients*

XML Binding class name: CC

Dictionary key name: cc

**content\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Type

Dictionary key name: content\_type

**date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Date

Dictionary key name: date

**errors\_to**

Type: *cybox.common.properties.String*

XML Binding class name: Errors\_To

Dictionary key name: errors\_to

**from\_**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: From

Dictionary key name: from

**in\_reply\_to**

Type: *cybox.common.properties.String*

XML Binding class name: In\_Reply\_To

Dictionary key name: in\_reply\_to

**message\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Message\_ID

Dictionary key name: message\_id

**mime\_version**

Type: *cybox.common.properties.String*

XML Binding class name: MIME\_Version

Dictionary key name: mime\_version

**precedence**

Type: *cybox.common.properties.String*

XML Binding class name: Precedence

Dictionary key name: precedence

#### **received\_lines**

Type: *cybox.objects.email\_message\_object.ReceivedLineList*

XML Binding class name: Received\_Lines

Dictionary key name: received\_lines

#### **reply\_to**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: Reply\_To

Dictionary key name: reply\_to

#### **sender**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: Sender

Dictionary key name: sender

#### **subject**

Type: *cybox.common.properties.String*

XML Binding class name: Subject

Dictionary key name: subject

#### **to**

Type: *cybox.objects.email\_message\_object.EmailRecipients*

XML Binding class name: To

Dictionary key name: to

#### **user\_agent**

Type: *cybox.common.properties.String*

XML Binding class name: User\_Agent

Dictionary key name: user\_agent

#### **x\_mailer**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Mailer

Dictionary key name: x\_mailer

#### **x\_originating\_ip**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: X\_Originating\_IP

Dictionary key name: x\_originating\_ip

**x\_priority**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: X\_Priority

Dictionary key name: x\_priority

**class** *cybox.objects.email\_message\_object.EmailMessage*

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: *cybox.bindings.email\_message\_object.EmailMessageObjectType*

**attachments**

Type: *cybox.objects.email\_message\_object.Attachments*

XML Binding class name: Attachments

Dictionary key name: attachments

**email\_server**

Type: *cybox.common.properties.String*

XML Binding class name: Email\_Server

Dictionary key name: email\_server

**header**

Type: *cybox.objects.email\_message\_object.EmailHeader*

XML Binding class name: Header

Dictionary key name: header

**links**

Type: *cybox.objects.email\_message\_object.Links*

XML Binding class name: Links

Dictionary key name: links

**raw\_body**

Type: *cybox.common.properties.String*

XML Binding class name: Raw\_Body

Dictionary key name: raw\_body

**raw\_header**

Type: *cybox.common.properties.String*

XML Binding class name: Raw\_Header

Dictionary key name: raw\_header

**class** *cybox.objects.email\_message\_object.EmailRecipients* (\*args)

Bases: *cybox.EntityList*

XML binding class: `cybox.bindings.email_message_object.EmailRecipientsType`

**class** `cybox.objects.email_message_object.LinkReference` (*object\_reference=None*)  
Bases: `cybox.ObjectReference`

XML binding class: `cybox.bindings.email_message_object.LinkReferenceType`

**class** `cybox.objects.email_message_object.Links` (*\*args*)  
Bases: `cybox.ReferenceList`

XML binding class: `cybox.bindings.email_message_object.LinksType`

**class** `cybox.objects.email_message_object.ReceivedLine`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.email_message_object.EmailReceivedLineType`

**by**

Type: `cybox.common.properties.String`

XML Binding class name: By

Dictionary key name: by

**for\_**

Type: `cybox.common.properties.String`

XML Binding class name: For

Dictionary key name: for

**from\_**

Type: `cybox.common.properties.String`

XML Binding class name: From

Dictionary key name: from

**id\_**

Type: `cybox.common.properties.String`

XML Binding class name: ID

Dictionary key name: id

**timestamp**

Type: `cybox.common.properties.DateTime`

XML Binding class name: Timestamp

Dictionary key name: timestamp

**via**

Type: *cybox.common.properties.String*

XML Binding class name: Via

Dictionary key name: via

**with\_**

Type: *cybox.common.properties.String*

XML Binding class name: With

Dictionary key name: with

**class** `cybox.objects.email_message_object.ReceivedLineList` (\*args)  
Bases: `cybox.EntityList`

XML binding class:

`cybox.bindings.email_message_object.EmailReceivedLineListType`

**Version:** 2.1.0.12.dev0

**cybox.objects.file\_object module**

**class** `cybox.objects.file_object.EPJumpCode`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.file_object.EPJumpCodeType`

**depth**

Type: *cybox.common.properties.Integer*

XML Binding class name: Depth

Dictionary key name: depth

**opcodes**

Type: *cybox.common.properties.String*

XML Binding class name: Opcodes

Dictionary key name: opcodes

**class** `cybox.objects.file_object.EntryPointSignature`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.file_object.EntryPointSignatureType`

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**class** `cybox.objects.file_object.EntryPointSignatureList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.file_object.EntryPointSignatureListType`

**class** `cybox.objects.file_object.File`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.file_object.FileObjectType`

**accessed\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Accessed\_Time

Dictionary key name: accessed\_time

**add\_hash** (*hash\_*)

**byte\_runs**

Type: *cybox.common.byterun.ByteRuns*

XML Binding class name: Byte\_Runs

Dictionary key name: byte\_runs

**compression\_comment**

Type: *cybox.common.properties.String*

XML Binding class name: Compression\_Comment

Dictionary key name: compression\_comment

**compression\_method**

Type: *cybox.common.properties.String*

XML Binding class name: Compression\_Method

Dictionary key name: compression\_method

**compression\_version**

Type: *cybox.common.properties.String*  
XML Binding class name: Compression\_Version  
Dictionary key name: compression\_version

**created\_time**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Created\_Time  
Dictionary key name: created\_time

**decryption\_key**

Type: *cybox.common.properties.String*  
XML Binding class name: Decryption\_Key  
Dictionary key name: decryption\_key

**device\_path**

Type: *cybox.common.properties.String*  
XML Binding class name: Device\_Path  
Dictionary key name: device\_path

**digital\_signatures**

Type: *cybox.common.digitalsignature.DigitalSignatureList*  
XML Binding class name: Digital\_Signatures  
Dictionary key name: digital\_signatures

**encryption\_algorithm**

Type: *cybox.common.properties.String*  
XML Binding class name: Encryption\_Algorithm  
Dictionary key name: encryption\_algorithm

**extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*  
XML Binding class name: Extracted\_Features  
Dictionary key name: extracted\_features

**file\_attributes\_list**

Type: *cybox.objects.file\_object.FileAttribute*  
XML Binding class name: File\_Attributes\_List  
Dictionary key name: file\_attributes\_list

**file\_extension**

Type: *cybox.common.properties.String*

XML Binding class name: File\_Extension

Dictionary key name: file\_extension

#### **file\_format**

Type: *cybox.common.properties.String*

XML Binding class name: File\_Format

Dictionary key name: file\_format

#### **file\_name**

Type: *cybox.common.properties.String*

XML Binding class name: File\_Name

Dictionary key name: file\_name

#### **file\_path**

Type: *cybox.objects.file\_object.FilePath*

XML Binding class name: File\_Path

Dictionary key name: file\_path

#### **full\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Full\_Path

Dictionary key name: full\_path

#### **hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

#### **is\_masqueraded**

XML Binding class name: is\_masqueraded

Dictionary key name: is\_masqueraded

#### **is\_packed**

XML Binding class name: is\_packed

Dictionary key name: is\_packed

#### **magic\_number**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Magic\_Number

Dictionary key name: magic\_number

#### **modified\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Modified\_Time

Dictionary key name: modified\_time

#### **packer\_list**

Type: *cybox.objects.file\_object.PackerList*

XML Binding class name: Packer\_List

Dictionary key name: packer\_list

#### **peak\_entropy**

Type: *cybox.common.properties.Double*

XML Binding class name: Peak\_Entropy

Dictionary key name: peak\_entropy

#### **permissions**

Type: *cybox.objects.file\_object.FilePermissions*

XML Binding class name: Permissions

Dictionary key name: permissions

#### **size\_in\_bytes**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Size\_In\_Bytes

Dictionary key name: size\_in\_bytes

#### **sym\_links**

Type: *cybox.objects.file\_object.SymLinksList*

XML Binding class name: Sym\_Links

Dictionary key name: sym\_links

#### **user\_owner**

Type: *cybox.common.properties.String*

XML Binding class name: User\_Owner

Dictionary key name: user\_owner

**class** `cybox.objects.file_object.FileAttribute`

Bases: `cybox.Entity`

An abstract class for file attributes.

XML binding class: <undefined>

**class** `cybox.objects.file_object.FilePath(*args, **kwargs)`

Bases: *cybox.common.properties.String*

XML binding class: `cybox.bindings.file_object.FilePathType`

```
static from_dict (filepath_dict)
static from_obj (filepath_obj)
is_plain ()
to_dict ()
to_obj (return_obj=None, ns_info=None)
```

```
class cybox.objects.file_object.FilePermissions
Bases: cybox.Entity
An abstract class for file permissions.
```

XML binding class: <undefined>

```
class cybox.objects.file_object.Packer
Bases: cybox.Entity
```

XML binding class: cybox.bindings.file\_object.PackerType

#### **detected\_entrypoint\_signatures**

```
Type: cybox.objects.file_object.EntryPointSignatureList
XML Binding class name: Detected_Entrypoint_Signatures
Dictionary key name: detected_entrypoint_signatures
```

#### **entry\_point**

```
Type: cybox.common.properties.HexBinary
XML Binding class name: Entry_Point
Dictionary key name: entry_point
```

#### **ep\_jump\_codes**

```
Type: cybox.objects.file_object.EPJumpCode
XML Binding class name: EP_Jump_Codes
Dictionary key name: ep_jump_codes
```

#### **name**

```
Type: cybox.common.properties.String
XML Binding class name: Name
Dictionary key name: name
```

#### **signature**

```
Type: cybox.common.properties.String
XML Binding class name: Signature
Dictionary key name: signature
```

**type\_**Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**version**Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.file_object.PackerList` (\*args)Bases: `cybox.EntityList`XML binding class: `cybox.bindings.file_object.PackerListType`**class** `cybox.objects.file_object.SymLinksList` (\*args)Bases: `cybox.EntityList`XML binding class: `cybox.bindings.file_object.SymLinksListType`**Version:** 2.1.0.12.dev0**cybox.objects.gui\_dialogbox\_object module****class** `cybox.objects.gui_dialogbox_object.GUIDialogbox`Bases: *cybox.objects.gui\_object.GUI*XML binding class: `cybox.bindings.gui_dialogbox_object.GUIDialogboxObjectType`**box\_caption**Type: *cybox.common.properties.String*

XML Binding class name: Box\_Caption

Dictionary key name: box\_caption

**box\_text**Type: *cybox.common.properties.String*

XML Binding class name: Box\_Text

Dictionary key name: box\_text

**Version:** 2.1.0.12.dev0

### **cybox.objects.gui\_object module**

**class** `cybox.objects.gui_object.GUI`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.gui_object.GUIObjectType`

#### **height**

Type: `cybox.common.properties.Integer`

XML Binding class name: Height

Dictionary key name: height

#### **width**

Type: `cybox.common.properties.Integer`

XML Binding class name: Width

Dictionary key name: width

**Version:** 2.1.0.12.dev0

### **cybox.objects.gui\_window\_object module**

**class** `cybox.objects.gui_window_object.GUIWindow`

Bases: `cybox.objects.gui_object.GUI`

XML binding class: `cybox.bindings.gui_window_object.GUIWindowObjectType`

#### **owner\_window**

Type: `cybox.common.properties.String`

XML Binding class name: Owner\_Window

Dictionary key name: owner\_window

#### **parent\_window**

Type: `cybox.common.properties.String`

XML Binding class name: Parent\_Window

Dictionary key name: parent\_window

#### **window\_display\_name**

Type: `cybox.common.properties.String`

XML Binding class name: Window\_Display\_Name

Dictionary key name: window\_display\_name

**Version:** 2.1.0.12.dev0

**cybox.objects.hostname\_object module****class** `cybox.objects.hostname_object.Hostname`Bases: `cybox.common.object_properties.ObjectProperties`XML binding class: `cybox.bindings.hostname_object.HostnameObjectType`**hostname\_value**Type: `cybox.common.properties.String`XML Binding class name: `Hostname_Value`Dictionary key name: `hostname_value`**is\_domain\_name**XML Binding class name: `is_domain_name`Dictionary key name: `is_domain_name`**naming\_system**

(List of values permitted)

Type: `cybox.common.properties.String`XML Binding class name: `Naming_System`Dictionary key name: `naming_system`

Version: 2.1.0.12.dev0

**cybox.objects.http\_session\_object module****class** `cybox.objects.http_session_object.HTTPClientRequest`Bases: `cybox.Entity`XML binding class: `cybox.bindings.http_session_object.HTTPClientRequestType`**http\_message\_body**Type: `cybox.objects.http_session_object.HTTPMessage`XML Binding class name: `HTTP_Message_Body`Dictionary key name: `http_message_body`**http\_request\_header**Type: `cybox.objects.http_session_object.HTTPRequestHeader`XML Binding class name: `HTTP_Request_Header`Dictionary key name: `http_request_header`**http\_request\_line**

Type: *cybox.objects.http\_session\_object.HTTPRequestLine*

XML Binding class name: HTTP\_Request\_Line

Dictionary key name: http\_request\_line

**class** `cybox.objects.http_session_object.HTTPMessage`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPMessageType`

### **length**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Length

Dictionary key name: length

### **message\_body**

Type: *cybox.common.properties.String*

XML Binding class name: Message\_Body

Dictionary key name: message\_body

**class** `cybox.objects.http_session_object.HTTPRequestHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPRequestHeaderType`

### **parsed\_header**

Type: *cybox.objects.http\_session\_object.HTTPRequestHeaderFields*

XML Binding class name: Parsed\_Header

Dictionary key name: parsed\_header

### **raw\_header**

Type: *cybox.common.properties.String*

XML Binding class name: Raw\_Header

Dictionary key name: raw\_header

**class** `cybox.objects.http_session_object.HTTPRequestHeaderFields`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.http_session_object.HTTPRequestHeaderFieldsType`

### **accept**

Type: *cybox.common.properties.String*  
XML Binding class name: Accept  
Dictionary key name: accept

**accept\_charset**

Type: *cybox.common.properties.String*  
XML Binding class name: Accept\_Charset  
Dictionary key name: accept\_charset

**accept\_datetime**

Type: *cybox.common.properties.String*  
XML Binding class name: Accept\_Datetime  
Dictionary key name: accept\_datetime

**accept\_encoding**

Type: *cybox.common.properties.String*  
XML Binding class name: Accept\_Encoding  
Dictionary key name: accept\_encoding

**accept\_language**

Type: *cybox.common.properties.String*  
XML Binding class name: Accept\_Language  
Dictionary key name: accept\_language

**authorization**

Type: *cybox.common.properties.String*  
XML Binding class name: Authorization  
Dictionary key name: authorization

**cache\_control**

Type: *cybox.common.properties.String*  
XML Binding class name: Cache\_Control  
Dictionary key name: cache\_control

**connection**

Type: *cybox.common.properties.String*  
XML Binding class name: Connection  
Dictionary key name: connection

**content\_length**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Content\_Length  
Dictionary key name: content\_length

#### **content\_md5**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_MD5

Dictionary key name: content\_md5

#### **content\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Type

Dictionary key name: content\_type

#### **cookie**

Type: *cybox.common.properties.String*

XML Binding class name: Cookie

Dictionary key name: cookie

#### **date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Date

Dictionary key name: date

#### **dnt**

Type: *cybox.common.properties.String*

XML Binding class name: DNT

Dictionary key name: dnt

#### **expect**

Type: *cybox.common.properties.String*

XML Binding class name: Expect

Dictionary key name: expect

#### **from\_**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: From

Dictionary key name: from

#### **host**

Type: *cybox.objects.http\_session\_object.HostField*

XML Binding class name: Host

Dictionary key name: host

#### **if\_match**

Type: *cybox.common.properties.String*

XML Binding class name: `If_Match`

Dictionary key name: `if_match`

#### **if\_modified\_since**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `If_Modified_Since`

Dictionary key name: `if_modified_since`

#### **if\_none\_match**

Type: `cybox.common.properties.String`

XML Binding class name: `If_None_Match`

Dictionary key name: `if_none_match`

#### **if\_range**

Type: `cybox.common.properties.String`

XML Binding class name: `If_Range`

Dictionary key name: `if_range`

#### **if\_unmodified\_since**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `If_Unmodified_Since`

Dictionary key name: `if_unmodified_since`

#### **max\_forwards**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Max_Forwards`

Dictionary key name: `max_forwards`

#### **pragma**

Type: `cybox.common.properties.String`

XML Binding class name: `Pragma`

Dictionary key name: `pragma`

#### **proxy\_authorization**

Type: `cybox.common.properties.String`

XML Binding class name: `Proxy_Authorization`

Dictionary key name: `proxy_authorization`

#### **range\_**

Type: `cybox.common.properties.String`

XML Binding class name: `Range`

Dictionary key name: `range`

**referer**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: Referer

Dictionary key name: referer

**te**

Type: *cybox.common.properties.String*

XML Binding class name: TE

Dictionary key name: te

**user\_agent**

Type: *cybox.common.properties.String*

XML Binding class name: User\_Agent

Dictionary key name: user\_agent

**via**

Type: *cybox.common.properties.String*

XML Binding class name: Via

Dictionary key name: via

**warning**

Type: *cybox.common.properties.String*

XML Binding class name: Warning

Dictionary key name: warning

**x\_att\_deviceid**

Type: *cybox.common.properties.String*

XML Binding class name: X\_ATT\_DeviceId

Dictionary key name: x\_att\_deviceid

**x\_forwarded\_for**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Forwarded\_For

Dictionary key name: x\_forwarded\_for

**x\_forwarded\_proto**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Forwarded\_Proto

Dictionary key name: x\_forwarded\_proto

**x\_requested\_with**

Type: *cybox.common.properties.String*

XML Binding class name: X\_Requested\_With

Dictionary key name: x\_requested\_with

#### **x\_wap\_profile**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: X\_Wap\_Profile

Dictionary key name: x\_wap\_profile

**class** cybox.objects.http\_session\_object.**HTTPRequestLine**

Bases: cybox.Entity

XML binding class: cybox.bindings.http\_session\_object.HTTPRequestLineType

#### **http\_method**

Type: *cybox.common.properties.String*

XML Binding class name: HTTP\_Method

Dictionary key name: http\_method

#### **value**

Type: *cybox.common.properties.String*

XML Binding class name: Value

Dictionary key name: value

#### **version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

**class** cybox.objects.http\_session\_object.**HTTPRequestResponse**

Bases: cybox.Entity

XML binding class: cybox.bindings.http\_session\_object.HTTPRequestResponseType

#### **http\_client\_request**

Type: *cybox.objects.http\_session\_object.HTTPClientRequest*

XML Binding class name: HTTP\_Client\_Request

Dictionary key name: http\_client\_request

#### **http\_provisional\_server\_response**

Type: *cybox.objects.http\_session\_object.HTTPServerResponse*

XML Binding class name: HTTP\_Provisional\_Server\_Response

Dictionary key name: http\_provisional\_server\_response

### **http\_server\_response**

Type: *cybox.objects.http\_session\_object.HTTPServerResponse*

XML Binding class name: HTTP\_Server\_Response

Dictionary key name: http\_server\_response

### **ordinal\_position**

XML Binding class name: ordinal\_position

Dictionary key name: ordinal\_position

**class** `cybox.objects.http_session_object.HTTPResponseHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPResponseHeaderType`

### **parsed\_header**

Type: *cybox.objects.http\_session\_object.HTTPResponseHeaderFields*

XML Binding class name: Parsed\_Header

Dictionary key name: parsed\_header

### **raw\_header**

Type: *cybox.common.properties.String*

XML Binding class name: Raw\_Header

Dictionary key name: raw\_header

**class** `cybox.objects.http_session_object.HTTPResponseHeaderFields`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.http_session_object.HTTPResponseHeaderFieldsType`

### **accept\_ranges**

Type: *cybox.common.properties.String*

XML Binding class name: Accept\_Ranges

Dictionary key name: accept\_ranges

### **access\_control\_allow\_origin**

Type: *cybox.common.properties.String*

XML Binding class name: Access\_Control-Allow-Origin

Dictionary key name: access\_control\_allow\_origin

### **age**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Age  
Dictionary key name: age

**cache\_control**

Type: *cybox.common.properties.String*  
XML Binding class name: Cache\_Control  
Dictionary key name: cache\_control

**connection**

Type: *cybox.common.properties.String*  
XML Binding class name: Connection  
Dictionary key name: connection

**content\_disposition**

Type: *cybox.common.properties.String*  
XML Binding class name: Content\_Disposition  
Dictionary key name: content\_disposition

**content\_encoding**

Type: *cybox.common.properties.String*  
XML Binding class name: Content\_Encoding  
Dictionary key name: content\_encoding

**content\_language**

Type: *cybox.common.properties.String*  
XML Binding class name: Content\_Language  
Dictionary key name: content\_language

**content\_length**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Content\_Length  
Dictionary key name: content\_length

**content\_location**

Type: *cybox.common.properties.String*  
XML Binding class name: Content\_Location  
Dictionary key name: content\_location

**content\_md5**

Type: *cybox.common.properties.String*  
XML Binding class name: Content\_MD5  
Dictionary key name: content\_md5

#### **content\_range**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Range

Dictionary key name: content\_range

#### **content\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Content\_Type

Dictionary key name: content\_type

#### **date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Date

Dictionary key name: date

#### **etag**

Type: *cybox.common.properties.String*

XML Binding class name: ETag

Dictionary key name: etag

#### **expires**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Expires

Dictionary key name: expires

#### **last\_modified**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Last\_Modified

Dictionary key name: last\_modified

#### **link**

Type: *cybox.common.properties.String*

XML Binding class name: Link

Dictionary key name: link

#### **location**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: Location

Dictionary key name: location

#### **p3p**

Type: *cybox.common.properties.String*

XML Binding class name: P3P

Dictionary key name: p3p

#### **pragma**

Type: *cybox.common.properties.String*

XML Binding class name: Pragma

Dictionary key name: pragma

#### **proxy\_authenticate**

Type: *cybox.common.properties.String*

XML Binding class name: Proxy\_Authenticate

Dictionary key name: proxy\_authenticate

#### **refresh**

Type: *cybox.common.properties.String*

XML Binding class name: Refresh

Dictionary key name: refresh

#### **retry\_after**

Type: *cybox.common.properties.Integer*

XML Binding class name: Retry\_After

Dictionary key name: retry\_after

#### **server**

Type: *cybox.common.properties.String*

XML Binding class name: Server

Dictionary key name: server

#### **set\_cookie**

Type: *cybox.common.properties.String*

XML Binding class name: Set\_Cookie

Dictionary key name: set\_cookie

#### **strict\_transport\_security**

Type: *cybox.common.properties.String*

XML Binding class name: Strict\_Transport\_Security

Dictionary key name: strict\_transport\_security

#### **trailer**

Type: *cybox.common.properties.String*

XML Binding class name: Trailer

Dictionary key name: trailer

**transfer\_encoding**

Type: *cybox.common.properties.String*  
XML Binding class name: Transfer\_Encoding  
Dictionary key name: transfer\_encoding

**vary**

Type: *cybox.common.properties.String*  
XML Binding class name: Vary  
Dictionary key name: vary

**via**

Type: *cybox.common.properties.String*  
XML Binding class name: Via  
Dictionary key name: via

**warning**

Type: *cybox.common.properties.String*  
XML Binding class name: Warning  
Dictionary key name: warning

**www\_authenticate**

Type: *cybox.common.properties.String*  
XML Binding class name: WWW\_Authenticate  
Dictionary key name: www\_authenticate

**x\_content\_type\_options**

Type: *cybox.common.properties.String*  
XML Binding class name: X\_Content\_Type\_Options  
Dictionary key name: x\_content\_type\_options

**x\_frame\_options**

Type: *cybox.common.properties.String*  
XML Binding class name: X\_Frame\_Options  
Dictionary key name: x\_frame\_options

**x\_powered\_by**

Type: *cybox.common.properties.String*  
XML Binding class name: X\_Powered\_By  
Dictionary key name: x\_powered\_by

**x\_ua\_compatible**

Type: *cybox.common.properties.String*

XML Binding class name: X-UA-Compatible

Dictionary key name: x\_ua\_compatible

#### **x\_xss\_protection**

Type: *cybox.common.properties.String*

XML Binding class name: X\_XSS\_Protection

Dictionary key name: x\_xss\_protection

**class** `cybox.objects.http_session_object.HTTPServerResponse`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPServerResponseType`

#### **http\_message\_body**

Type: *cybox.objects.http\_session\_object.HTTPMessage*

XML Binding class name: HTTP\_Message\_Body

Dictionary key name: http\_message\_body

#### **http\_response\_header**

Type: *cybox.objects.http\_session\_object.HTTPResponseHeader*

XML Binding class name: HTTP\_Response\_Header

Dictionary key name: http\_response\_header

#### **http\_status\_line**

Type: *cybox.objects.http\_session\_object.HTTPStatusLine*

XML Binding class name: HTTP\_Status\_Line

Dictionary key name: http\_status\_line

**class** `cybox.objects.http_session_object.HTTPSession`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.http_session_object.HTTPSessionObjectType`

#### **http\_request\_response**

(List of values permitted)

Type: *cybox.objects.http\_session\_object.HTTPRequestResponse*

XML Binding class name: HTTP\_Request\_Response

Dictionary key name: http\_request\_response

**class** `cybox.objects.http_session_object.HTTPStatusLine`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPStatusLineType`

#### **reason\_phrase**

Type: *cybox.common.properties.String*

XML Binding class name: Reason\_Phrase

Dictionary key name: reason\_phrase

#### **status\_code**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Status\_Code

Dictionary key name: status\_code

#### **version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.http_session_object.HostField`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HostFieldType`

#### **domain\_name**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: Domain\_Name

Dictionary key name: domain\_name

#### **port**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: Port

Dictionary key name: port

**Version:** 2.1.0.12.dev0

### **cybox.objects.image\_file\_object module**

**class** `cybox.objects.image_file_object.ImageFile`

Bases: *cybox.objects.file\_object.File*

XML binding class: `cybox.bindings.file_object.FileObjectType`

#### **bits\_per\_pixel**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Bits\_Per\_Pixel

Dictionary key name: bits\_per\_pixel

#### **compression\_algorithm**

Type: *cybox.common.properties.String*

XML Binding class name: Compression\_Algorithm

Dictionary key name: compression\_algorithm

#### **image\_file\_format**

Type: *cybox.common.properties.String*

XML Binding class name: Image\_File\_Format

Dictionary key name: image\_file\_format

#### **image\_height**

Type: *cybox.common.properties.Integer*

XML Binding class name: Image\_Height

Dictionary key name: image\_height

#### **image\_is\_compressed**

XML Binding class name: image\_is\_compressed

Dictionary key name: image\_is\_compressed

#### **image\_width**

Type: *cybox.common.properties.Integer*

XML Binding class name: Image\_Width

Dictionary key name: image\_width

**Version:** 2.1.0.12.dev0

### **cybox.objects.library\_object module**

**class** `cybox.objects.library_object.Library`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.library_object.LibraryObjectType`

#### **base\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Base\_Address

Dictionary key name: base\_address

#### **extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*  
XML Binding class name: `Extracted_Features`  
Dictionary key name: `extracted_features`

**name**

Type: *cybox.common.properties.String*  
XML Binding class name: `Name`  
Dictionary key name: `name`

**path**

Type: *cybox.common.properties.String*  
XML Binding class name: `Path`  
Dictionary key name: `path`

**size**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: `Size`  
Dictionary key name: `size`

**type\_**

Type: *cybox.common.properties.String*  
XML Binding class name: `Type`  
Dictionary key name: `type`

**version**

Type: *cybox.common.properties.String*  
XML Binding class name: `Version`  
Dictionary key name: `version`

**Version:** 2.1.0.12.dev0

**cybox.objects.link\_object module**

**class** `cybox.objects.link_object.Link` (*value=None, type\_=None*)  
Bases: *cybox.objects.uri\_object.URI*

XML binding class: `cybox.bindings.link_object.LinkObjectType`

**url\_label**

Type: *cybox.common.properties.String*  
XML Binding class name: `URL_Label`  
Dictionary key name: `url_label`

**Version:** 2.1.0.12.dev0

**cybox.objects.linux\_package\_object module****class** `cybox.objects.linux_package_object.LinuxPackage`Bases: `cybox.common.object_properties.ObjectProperties`XML binding class: `cybox.bindings.linux_package_object.LinuxPackageObjectType`**architecture**

TypedField subclass for VocabString fields.

Type: `cybox.common.vocabs.VocabString`

XML Binding class name: Architecture

Dictionary key name: architecture

**category**Type: `cybox.common.properties.String`

XML Binding class name: Category

Dictionary key name: category

**description**Type: `cybox.common.properties.String`

XML Binding class name: Description

Dictionary key name: description

**epoch**Type: `cybox.common.properties.String`

XML Binding class name: Epoch

Dictionary key name: epoch

**evr**Type: `cybox.common.properties.String`

XML Binding class name: EVR

Dictionary key name: evr

**name**Type: `cybox.common.properties.String`

XML Binding class name: Name

Dictionary key name: name

**release**Type: `cybox.common.properties.String`

XML Binding class name: Release

Dictionary key name: release

#### **vendor**

Type: *cybox.common.properties.String*

XML Binding class name: Vendor

Dictionary key name: vendor

#### **version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.linux_package_object.LinuxPackageArchitecture` (*value=None*)

Bases: *cybox.common.vocabs.VocabString*

XML binding class: `cybox.bindings.cybox_common.ControlledVocabularyStringType`

**Version:** 2.1.0.12.dev0

### **cybox.objects.memory\_object module**

**class** `cybox.objects.memory_object.Memory`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.memory_object.MemoryObjectType`

#### **block\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Block\_Type

Dictionary key name: block\_type

#### **extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*

XML Binding class name: Extracted\_Features

Dictionary key name: extracted\_features

#### **hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

**is\_injected**

XML Binding class name: `is_injected`

Dictionary key name: `is_injected`

**is\_mapped**

XML Binding class name: `is_mapped`

Dictionary key name: `is_mapped`

**is\_protected**

XML Binding class name: `is_protected`

Dictionary key name: `is_protected`

**is\_volatile**

XML Binding class name: `is_volatile`

Dictionary key name: `is_volatile`

**memory\_source**

Type: `cybox.common.properties.String`

XML Binding class name: `Memory_Source`

Dictionary key name: `memory_source`

**name**

Type: `cybox.common.properties.String`

XML Binding class name: `Name`

Dictionary key name: `name`

**region\_end\_address**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Region_End_Address`

Dictionary key name: `region_end_address`

**region\_size**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Region_Size`

Dictionary key name: `region_size`

**region\_start\_address**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Region_Start_Address`

Dictionary key name: `region_start_address`

Version: 2.1.0.12.dev0

### cybox.objects.mutex\_object module

**class** cybox.objects.mutex\_object.**Mutex**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.mutex_object.MutexObjectType`

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **named**

XML Binding class name: named

Dictionary key name: named

**Version:** 2.1.0.12.dev0

### cybox.objects.network\_connection\_object module

**class** cybox.objects.network\_connection\_object.**Layer7Connections**

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_connection_object.Layer7ConnectionsType`

#### **dns\_query**

(List of values permitted)

Type: *cybox.objects.dns\_query\_object.DNSQuery*

XML Binding class name: DNS\_Query

Dictionary key name: dns\_query

#### **http\_session**

Type: *cybox.objects.http\_session\_object.HTTPSession*

XML Binding class name: HTTP\_Session

Dictionary key name: http\_session

**class** cybox.objects.network\_connection\_object.**NetworkConnection**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.network_connection_object.NetworkConnectionObjectType`

**creation\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Creation\_Time

Dictionary key name: creation\_time

**destination\_socket\_address**

Type: *cybox.objects.socket\_address\_object.SocketAddress*

XML Binding class name: Destination\_Socket\_Address

Dictionary key name: destination\_socket\_address

**destination\_tcp\_state**

XML Binding class name: Destination\_TCP\_State

Dictionary key name: destination\_tcp\_state

**layer3\_protocol**

Type: *cybox.common.properties.String*

XML Binding class name: Layer3\_Protocol

Dictionary key name: layer3\_protocol

**layer4\_protocol**

Type: *cybox.common.properties.String*

XML Binding class name: Layer4\_Protocol

Dictionary key name: layer4\_protocol

**layer7\_connections**

Type: *cybox.objects.network\_connection\_object.Layer7Connections*

XML Binding class name: Layer7\_Connections

Dictionary key name: layer7\_connections

**layer7\_protocol**

Type: *cybox.common.properties.String*

XML Binding class name: Layer7\_Protocol

Dictionary key name: layer7\_protocol

**source\_socket\_address**

Type: *cybox.objects.socket\_address\_object.SocketAddress*

XML Binding class name: Source\_Socket\_Address

Dictionary key name: source\_socket\_address

**source\_tcp\_state**

XML Binding class name: Source\_TCP\_State

Dictionary key name: source\_tcp\_state

### **tls\_used**

XML Binding class name: `tls_used`

Dictionary key name: `tls_used`

Version: 2.1.0.12.dev0

### **cybox.objects.network\_packet\_object module**

**class** `cybox.objects.network_packet_object.ARP`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ARPTyp`

### **hardware\_addr\_size**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Hardware_Addr_Size`

Dictionary key name: `hardware_addr_size`

### **hardware\_addr\_type**

Type: `cybox.common.properties.String`

XML Binding class name: `Hardware_Addr_Type`

Dictionary key name: `hardware_addr_type`

### **op\_type**

Type: `cybox.common.properties.String`

XML Binding class name: `Op_Type`

Dictionary key name: `op_type`

### **proto\_addr\_size**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Proto_Addr_Size`

Dictionary key name: `proto_addr_size`

### **proto\_addr\_type**

Type: `cybox.common.properties.String`

XML Binding class name: `Proto_Addr_Type`

Dictionary key name: `proto_addr_type`

### **recip\_hardware\_addr**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Recip_Hardware_Addr`

Dictionary key name: `recip_hardware_addr`

**recip\_protocol\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Recip\_Protocol\_Addr

Dictionary key name: recip\_protocol\_addr

**sender\_hardware\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Sender\_Hardware\_Addr

Dictionary key name: sender\_hardware\_addr

**sender\_protocol\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Sender\_Protocol\_Addr

Dictionary key name: sender\_protocol\_addr

**class** `cybox.objects.network_packet_object.AuthenticationHeader`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.AuthenticationHeaderType`

**Authentication\_Data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Authentication\_Data

Dictionary key name: authentication\_data

**header\_ext\_len**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Header\_Ext\_Len

Dictionary key name: header\_ext\_len

**next\_header**

Type: *cybox.common.properties.String*

XML Binding class name: Next\_Header

Dictionary key name: next\_header

**security\_parameters\_index**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Security\_Parameters\_Index

Dictionary key name: security\_parameters\_index

**sequence\_number**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Sequence\_Number

Dictionary key name: sequence\_number

**class** `cybox.objects.network_packet_object.DestinationOptions`

Bases: `cybox.objects.network_packet_object._IPv6ExtHeader`

XML binding class: `cybox.bindings.network_packet_object.DestinationOptionsType`

**class** `cybox.objects.network_packet_object.EncapsulatingSecurityPayload`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.EncapsulatingSecurityPayloadType`

#### **authentication\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Authentication\_Data

Dictionary key name: authentication\_data

#### **next\_header**

Type: *cybox.common.properties.String*

XML Binding class name: Next\_Header

Dictionary key name: next\_header

#### **padding**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Padding

Dictionary key name: padding

#### **padding\_len**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Padding\_Len

Dictionary key name: padding\_len

#### **payload\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Payload\_Data

Dictionary key name: payload\_data

#### **security\_parameters\_index**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Security\_Parameters\_Index

Dictionary key name: security\_parameters\_index

#### **sequence\_number**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Sequence\_Number

Dictionary key name: sequence\_number

**class** `cybox.objects.network_packet_object.EthernetHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.EthernetHeaderType`

#### **checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

#### **destination\_mac\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Destination\_MAC\_Addr

Dictionary key name: destination\_mac\_addr

#### **source\_mac\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Source\_MAC\_Addr

Dictionary key name: source\_mac\_addr

#### **type\_or\_length**

Type: *cybox.objects.network\_packet\_object.TypeLength*

XML Binding class name: Type\_Or\_Length

Dictionary key name: type\_or\_length

**class** `cybox.objects.network_packet_object.EthernetInterface`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.EthernetInterfaceType`

#### **ethernet\_header**

Type: *cybox.objects.network\_packet\_object.EthernetHeader*

XML Binding class name: Ethernet\_Header

Dictionary key name: ethernet\_header

**class** `cybox.objects.network_packet_object.Fragment`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.FragmentType`

#### **fragment**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Fragment`

Dictionary key name: `fragment`

#### **fragment\_header**

Type: `cybox.objects.network_packet_object.FragmentHeader`

XML Binding class name: `Fragment_Header`

Dictionary key name: `fragment_header`

**class** `cybox.objects.network_packet_object.FragmentHeader`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.FragmentHeaderType`

#### **fragment\_offset**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Fragment_Offset`

Dictionary key name: `fragment_offset`

#### **identification**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Identification`

Dictionary key name: `identification`

#### **m\_flag**

Type: `cybox.common.properties.String`

XML Binding class name: `M_Flag`

Dictionary key name: `m_flag`

#### **next\_header**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Next_Header`

Dictionary key name: `next_header`

**class** `cybox.objects.network_packet_object.FragmentationRequired`  
Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.FragmentationRequiredType`

#### **fragmentation\_required**

XML Binding class name: `Fragmentation_Required`

Dictionary key name: `fragmentation_required`

#### **next\_hop\_mtu**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Next_Hop_MTU`

Dictionary key name: `next_hop_mtu`

**class** `cybox.objects.network_packet_object.HopByHopOptions`

Bases: `cybox.objects.network_packet_object._IPv6ExtHeader`

XML binding class: `cybox.bindings.network_packet_object.HopByHopOptionsType`

**class** `cybox.objects.network_packet_object.ICMPv4AddressMaskReply`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4AddressMaskReplyType`

#### **address\_mask**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Address_Mask`

Dictionary key name: `address_mask`

#### **address\_mask\_reply**

XML Binding class name: `Address_Mask_Reply`

Dictionary key name: `address_mask_reply`

**class** `cybox.objects.network_packet_object.ICMPv4AddressMaskRequest`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4AddressMaskRequestType`

#### **address\_mask**

Type: `cybox.objects.address_object.Address`

XML Binding class name: Address\_Mask

Dictionary key name: address\_mask

#### **address\_mask\_request**

XML Binding class name: Address\_Mask\_Request

Dictionary key name: address\_mask\_request

**class** cybox.objects.network\_packet\_object.ICMPv4DestinationUnreachable

Bases: cybox.Entity

XML binding class:

cybox.bindings.network\_packet\_object.ICMPv4DestinationUnreachableType

#### **communication\_administratively\_prohibited**

XML Binding class name: Communication\_Administratively\_Prohibited

Dictionary key name: communication\_administratively\_prohibited

#### **destination\_host\_unknown**

XML Binding class name: Destination\_Host\_Unknown

Dictionary key name: destination\_host\_unknown

#### **destination\_host\_unreachable**

XML Binding class name: Destination\_Host\_Unreachable

Dictionary key name: destination\_host\_unreachable

#### **destination\_network\_unknown**

XML Binding class name: Destination\_Network\_Unknown

Dictionary key name: destination\_network\_unknown

#### **destination\_network\_unreachable**

XML Binding class name: Destination\_Network\_Unreachable

Dictionary key name: destination\_network\_unreachable

#### **destination\_port\_unreachable**

XML Binding class name: Destination\_Port\_Unreachable

Dictionary key name: destination\_port\_unreachable

#### **destination\_protocol\_unreachable**

XML Binding class name: Destination\_Protocol\_Unreachable

Dictionary key name: destination\_protocol\_unreachable

#### **fragmentation\_required**

Type: `cybox.objects.network_packet_object.FragmentationRequired`

XML Binding class name: `Fragmentation_Required`

Dictionary key name: `fragmentation_required`

#### **host\_administratively\_prohibited**

XML Binding class name: `Host_Administratively_Prohibited`

Dictionary key name: `host_administratively_prohibited`

#### **host\_precedence\_violation**

XML Binding class name: `Host_Precedence_Violation`

Dictionary key name: `host_precedence_violation`

#### **host\_unreachable\_for\_tos**

XML Binding class name: `Host_Unreachable_For_TOS`

Dictionary key name: `host_unreachable_for_tos`

#### **network\_administratively\_prohibited**

XML Binding class name: `Network_Administratively_Prohibited`

Dictionary key name: `network_administratively_prohibited`

#### **network\_unreachable\_for\_tos**

XML Binding class name: `Network_Unreachable_For_TOS`

Dictionary key name: `network_unreachable_for_tos`

#### **precedence\_cutoff\_in\_effect**

XML Binding class name: `Precedence_Cutoff_In_Effect`

Dictionary key name: `precedence_cutoff_in_effect`

#### **source\_host\_isolated**

XML Binding class name: `Source_Host_Isolated`

Dictionary key name: `source_host_isolated`

#### **source\_route\_failed**

XML Binding class name: `Source_Route_Failed`

Dictionary key name: `source_route_failed`

**class** `cybox.objects.network_packet_object.ICMPv4EchoReply`

Bases: `cybox.objects.network_packet_object._ICMPEchoReply`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4EchoReplyType`

**class** `cybox.objects.network_packet_object.ICMPv4EchoRequest`

Bases: `cybox.objects.network_packet_object._ICMPEchoRequest`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4EchoRequestType`

**class** `cybox.objects.network_packet_object.ICMPv4ErrorMessage`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4ErrorMessageType`

#### **destination\_unreachable**

Type: `cybox.objects.network_packet_object.ICMPv4DestinationUnreachable`

XML Binding class name: `Destination_Unreachable`

Dictionary key name: `destination_unreachable`

#### **error\_msg\_content**

Type: `cybox.objects.network_packet_object.ICMPv4ErrorMessageContent`

XML Binding class name: `Error_Msg_Content`

Dictionary key name: `error_msg_content`

#### **redirect\_message**

Type: `cybox.objects.network_packet_object.ICMPv4RedirectMessage`

XML Binding class name: `Redirect_Message`

Dictionary key name: `redirect_message`

#### **source\_quench**

Type: `cybox.objects.network_packet_object.ICMPv4SourceQuench`

XML Binding class name: `Source_Quench`

Dictionary key name: `source_quench`

#### **time\_exceeded**

Type: `cybox.objects.network_packet_object.ICMPv4TimeExceeded`

XML Binding class name: `Time_Exceeded`

Dictionary key name: `time_exceeded`

**class** `cybox.objects.network_packet_object.ICMPv4ErrorMessageContent`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4ErrorMessageContentType`

#### **first\_eight\_bytes**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `First_Eight_Bytes`

Dictionary key name: `first_eight_bytes`

#### **ip\_header**

Type: `cybox.objects.network_packet_object.IPv4Header`

XML Binding class name: `IP_Header`

Dictionary key name: `ip_header`

**class** `cybox.objects.network_packet_object.ICMPv4Header`

Bases: `cybox.objects.network_packet_object._ICMPHeader`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4HeaderType`

**class** `cybox.objects.network_packet_object.ICMPv4InfoMessage`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4InfoMessageType`

#### **address\_mask\_reply**

Type: `cybox.objects.network_packet_object.ICMPv4AddressMaskReply`

XML Binding class name: `Address_Mask_Reply`

Dictionary key name: `address_mask_reply`

#### **address\_mask\_request**

Type: `cybox.objects.network_packet_object.ICMPv4AddressMaskRequest`

XML Binding class name: `Address_Mask_Request`

Dictionary key name: `address_mask_request`

#### **echo\_reply**

Type: `cybox.objects.network_packet_object.ICMPv4EchoReply`

XML Binding class name: `Echo_Reply`

Dictionary key name: `echo_reply`

#### **echo\_request**

Type: `cybox.objects.network_packet_object.ICMPv4EchoRequest`

XML Binding class name: `Echo_Request`

Dictionary key name: `echo_request`

#### **info\_msg\_content**

Type: `cybox.objects.network_packet_object.ICMPv4InfoMessageContent`

XML Binding class name: `Info_Msg_Content`

Dictionary key name: `info_msg_content`

#### **timestamp\_reply**

Type: *cybox.objects.network\_packet\_object.ICMPv4TimestampReply*

XML Binding class name: `Timestamp_Reply`

Dictionary key name: `timestamp_reply`

#### **timestamp\_request**

Type: *cybox.objects.network\_packet\_object.ICMPv4TimestampRequest*

XML Binding class name: `Timestamp_Request`

Dictionary key name: `timestamp_request`

**class** `cybox.objects.network_packet_object.ICMPv4InfoMessageContent`

Bases: `cybox.objects.network_packet_object._ICMPInfoMessageContent`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv4InfoMessageContentType`

**class** `cybox.objects.network_packet_object.ICMPv4Packet`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4PacketType`

#### **error\_msg**

Type: *cybox.objects.network\_packet\_object.ICMPv4ErrorMessage*

XML Binding class name: `Error_Msg`

Dictionary key name: `error_msg`

#### **icmpv4\_header**

Type: *cybox.objects.network\_packet\_object.ICMPv4Header*

XML Binding class name: `ICMPv4_Header`

Dictionary key name: `icmpv4_header`

#### **info\_msg**

Type: *cybox.objects.network\_packet\_object.ICMPv4InfoMessage*

XML Binding class name: `Info_Msg`

Dictionary key name: `info_msg`

#### **traceroute**

Type: *cybox.objects.network\_packet\_object.ICMPv4Traceroute*

XML Binding class name: `Traceroute`

Dictionary key name: `traceroute`

**class** `cybox.objects.network_packet_object.ICMPv4RedirectMessage`  
Bases: `cybox.Entity`

XML binding class:  
`cybox.bindings.network_packet_object.ICMPv4RedirectMessageType`

#### **host\_redirect**

XML Binding class name: `Host_Redirect`  
Dictionary key name: `host_redirect`

#### **ip\_address**

Type: `cybox.objects.address_object.Address`  
XML Binding class name: `IP_Address`  
Dictionary key name: `ip_address`

#### **network\_redirect**

XML Binding class name: `Network_Redirect`  
Dictionary key name: `network_redirect`

#### **tos\_host\_redirect**

XML Binding class name: `ToS_Host_Redirect`  
Dictionary key name: `tos_host_redirect`

#### **tos\_network\_redirect**

XML Binding class name: `ToS_Network_Redirect`  
Dictionary key name: `tos_network_redirect`

**class** `cybox.objects.network_packet_object.ICMPv4SourceQuench`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4SourceQuenchType`

#### **source\_quench**

XML Binding class name: `Source_Quench`  
Dictionary key name: `source_quench`

**class** `cybox.objects.network_packet_object.ICMPv4TimeExceeded`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4TimeExceededType`

**frag\_reassembly\_time\_exceeded**

XML Binding class name: Frag\_Reassembly\_Time\_Exceeded

Dictionary key name: frag\_reassembly\_time\_exceeded

**ttl\_exceeded\_in\_transit**

XML Binding class name: TTL\_Exceeded\_In\_Transit

Dictionary key name: ttl\_exceeded\_in\_transit

**class** cybox.objects.network\_packet\_object.ICMPv4TimestampReply

Bases: cybox.Entity

XML binding class:

cybox.bindings.network\_packet\_object.ICMPv4TimestampReplyType

**originate\_timestamp**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Originate\_Timestamp

Dictionary key name: originate\_timestamp

**receive\_timestamp**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Receive\_Timestamp

Dictionary key name: receive\_timestamp

**timestamp\_reply**

XML Binding class name: Timestamp\_Reply

Dictionary key name: timestamp\_reply

**transmit\_timestamp**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Transmit\_Timestamp

Dictionary key name: transmit\_timestamp

**class** cybox.objects.network\_packet\_object.ICMPv4TimestampRequest

Bases: cybox.Entity

XML binding class:

cybox.bindings.network\_packet\_object.ICMPv4TimestampRequestType

**originate\_timestamp**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Originate\_Timestamp

Dictionary key name: originate\_timestamp

#### **timestamp**

XML Binding class name: Timestamp

Dictionary key name: timestamp

**class** cybox.objects.network\_packet\_object.ICMPv4Traceroute

Bases: cybox.Entity

XML binding class: cybox.bindings.network\_packet\_object.ICMPv4TracerouteType

#### **identifier**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Identifier

Dictionary key name: identifier

#### **outbound\_hop\_count**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Outbound\_Hop\_Count

Dictionary key name: outbound\_hop\_count

#### **outbound\_packet\_forward\_success**

XML Binding class name: Outbound\_Packet\_Forward\_Success

Dictionary key name: outbound\_packet\_forward\_success

#### **outbound\_packet\_no\_route**

XML Binding class name: Outbound\_Packet\_no\_Route

Dictionary key name: outbound\_packet\_no\_route

#### **output\_link\_mtu**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Output\_Link\_MTU

Dictionary key name: output\_link\_mtu

#### **output\_link\_speed**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Output\_Link\_Speed

Dictionary key name: output\_link\_speed

#### **return\_hop\_count**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Return\_Hop\_Count

Dictionary key name: return\_hop\_count

**class** cybox.objects.network\_packet\_object.ICMPv6DestinationUnreachable

Bases: cybox.Entity

XML binding class:

cybox.bindings.network\_packet\_object.ICMPv6DestinationUnreachableType

#### **address\_unreachable**

XML Binding class name: Address\_Unreachable

Dictionary key name: address\_unreachable

#### **beyond\_scope**

XML Binding class name: Beyond\_Scope

Dictionary key name: beyond\_scope

#### **comm\_prohibited**

XML Binding class name: Comm\_Prohibited

Dictionary key name: comm\_prohibited

#### **no\_route**

XML Binding class name: No\_Route

Dictionary key name: no\_route

#### **port\_unreachable**

XML Binding class name: Port\_Unreachable

Dictionary key name: port\_unreachable

#### **reject\_route**

XML Binding class name: Reject\_Route

Dictionary key name: reject\_route

#### **src\_addr\_failed\_policy**

XML Binding class name: Src\_Addr\_Failed\_Policy

Dictionary key name: src\_addr\_failed\_policy

**class** cybox.objects.network\_packet\_object.ICMPv6EchoReply

Bases: cybox.objects.network\_packet\_object.\_ICMPEchoReply

XML binding class: cybox.bindings.network\_packet\_object.ICMPv6EchoReplyType

**class** `cybox.objects.network_packet_object.ICMPv6EchoRequest`  
Bases: `cybox.objects.network_packet_object._ICMPEchoRequest`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6EchoRequestType`

**class** `cybox.objects.network_packet_object.ICMPv6ErrorMessage`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6ErrorMessageType`

#### **destination\_unreachable**

Type: `cybox.objects.network_packet_object.ICMPv6DestinationUnreachable`

XML Binding class name: `Destination_Unreachable`

Dictionary key name: `destination_unreachable`

#### **invoking\_packet**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Invoking_Packet`

Dictionary key name: `invoking_packet`

#### **packet\_too\_big**

Type: `cybox.objects.network_packet_object.ICMPv6PacketTooBig`

XML Binding class name: `Packet_Too_Big`

Dictionary key name: `packet_too_big`

#### **parameter\_problem**

Type: `cybox.objects.network_packet_object.ICMPv6ParameterProblem`

XML Binding class name: `Parameter_Problem`

Dictionary key name: `parameter_problem`

#### **time\_exceeded**

Type: `cybox.objects.network_packet_object.ICMPv6TimeExceeded`

XML Binding class name: `Time_Exceeded`

Dictionary key name: `time_exceeded`

**class** `cybox.objects.network_packet_object.ICMPv6Header`  
Bases: `cybox.objects.network_packet_object._ICMPHeader`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6HeaderType`

**class** `cybox.objects.network_packet_object.ICMPv6InfoMessage`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6InfoMessageType`

#### **echo\_reply**

Type: `cybox.objects.network_packet_object.ICMPv6EchoReply`  
XML Binding class name: `Echo_Reply`  
Dictionary key name: `echo_reply`

#### **echo\_request**

Type: `cybox.objects.network_packet_object.ICMPv6EchoRequest`  
XML Binding class name: `Echo_Request`  
Dictionary key name: `echo_request`

#### **info\_msg\_content**

Type: `cybox.objects.network_packet_object.ICMPv6InfoMessageContent`  
XML Binding class name: `Info_Msg_Content`  
Dictionary key name: `info_msg_content`

**class** `cybox.objects.network_packet_object.ICMPv6InfoMessageContent`  
Bases: `cybox.objects.network_packet_object._ICMPInfoMessageContent`

XML binding class:  
`cybox.bindings.network_packet_object.ICMPv6InfoMessageContentType`

**class** `cybox.objects.network_packet_object.ICMPv6Packet`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6PacketType`

#### **error\_msg**

Type: `cybox.objects.network_packet_object.ICMPv6ErrorMessage`  
XML Binding class name: `Error_Msg`  
Dictionary key name: `error_msg`

#### **icmpv6\_header**

Type: `cybox.objects.network_packet_object.ICMPv6Header`  
XML Binding class name: `ICMPv6_Header`  
Dictionary key name: `icmpv6_header`

**info\_msg**

Type: *cybox.objects.network\_packet\_object.ICMPv6InfoMessage*

XML Binding class name: Info\_Msg

Dictionary key name: info\_msg

**class** `cybox.objects.network_packet_object.ICMPv6PacketTooBig`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6PacketTooBigType`

**mtu**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: MTU

Dictionary key name: mtu

**packet\_too\_big**

XML Binding class name: Packet\_Too\_Big

Dictionary key name: packet\_too\_big

**class** `cybox.objects.network_packet_object.ICMPv6ParameterProblem`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.ICMPv6ParameterProblemType`

**erroneous\_header\_field**

XML Binding class name: Erroneous\_Header\_Field

Dictionary key name: erroneous\_header\_field

**pointer**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer

Dictionary key name: pointer

**unrecognized\_ipv6\_option**

XML Binding class name: Unrecognized\_IPv6\_Option

Dictionary key name: unrecognized\_ipv6\_option

**unrecognized\_next\_header\_type**

XML Binding class name: Unrecognized\_Next\_Header\_Type

Dictionary key name: unrecognized\_next\_header\_type

**class** `cybox.objects.network_packet_object.ICMPv6TimeExceeded`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv6TimeExceededType`

**fragment\_reassem\_time\_exceeded**

XML Binding class name: `Fragment_Reassem_Time_Exceeded`  
Dictionary key name: `fragment_reassem_time_exceeded`

**hop\_limit\_exceeded**

XML Binding class name: `Hop_Limit_Exceeded`  
Dictionary key name: `hop_limit_exceeded`

**class** `cybox.objects.network_packet_object.IPv4Flags`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv4FlagsType`

**do\_not\_fragment**

Type: `cybox.common.properties.String`  
XML Binding class name: `Do_Not_Fragment`  
Dictionary key name: `do_not_fragment`

**more\_fragments**

Type: `cybox.common.properties.String`  
XML Binding class name: `More_Fragments`  
Dictionary key name: `more_fragments`

**reserved**

Type: `cybox.common.properties.Integer`  
XML Binding class name: `Reserved`  
Dictionary key name: `reserved`

**class** `cybox.objects.network_packet_object.IPv4Header`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv4HeaderType`

**checksum**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Checksum

Dictionary key name: checksum

#### **dest\_ipv4\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Dest\_IPv4\_Addr

Dictionary key name: dest\_ipv4\_addr

#### **dscp**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: DSCP

Dictionary key name: dscp

#### **ecn**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: ECN

Dictionary key name: ecn

#### **flags**

Type: *cybox.objects.network\_packet\_object.IPv4Flags*

XML Binding class name: Flags

Dictionary key name: flags

#### **fragment\_offset**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Fragment\_Offset

Dictionary key name: fragment\_offset

#### **header\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Header\_Length

Dictionary key name: header\_length

#### **identification**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Identification

Dictionary key name: identification

#### **ip\_version**

Type: *cybox.common.properties.String*

XML Binding class name: IP\_Version

Dictionary key name: ip\_version

**option**

(List of values permitted)

Type: *cybox.objects.network\_packet\_object.IPv4Option*

XML Binding class name: Option

Dictionary key name: option

**protocol**

Type: *cybox.common.properties.String*

XML Binding class name: Protocol

Dictionary key name: protocol

**src\_ipv4\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Src\_IPv4\_Addr

Dictionary key name: src\_ipv4\_addr

**total\_length**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Total\_Length

Dictionary key name: total\_length

**ttl**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: TTL

Dictionary key name: ttl

**class** *cybox.objects.network\_packet\_object.IPv4Option*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.IPv4OptionType*

**class\_**

Type: *cybox.common.properties.String*

XML Binding class name: Class

Dictionary key name: class

**copy\_flag**

Type: *cybox.common.properties.String*

XML Binding class name: Copy\_Flag

Dictionary key name: copy\_flag

**option**

Type: *cybox.common.properties.String*

XML Binding class name: Option

Dictionary key name: option

**class** `cybox.objects.network_packet_object.IPv4Packet`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv4PacketType`

#### **data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Data

Dictionary key name: data

#### **ipv4\_header**

Type: *cybox.objects.network\_packet\_object.IPv4Header*

XML Binding class name: IPv4\_Header

Dictionary key name: ipv4\_header

**class** `cybox.objects.network_packet_object.IPv6ExtHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv6ExtHeaderType`

#### **authentication\_header**

Type: *cybox.objects.network\_packet\_object.AuthenticationHeader*

XML Binding class name: Authentication\_Header

Dictionary key name: authentication\_header

#### **destination\_options**

(List of values permitted)

Type: *cybox.objects.network\_packet\_object.DestinationOptions*

XML Binding class name: Destination\_Options

Dictionary key name: destination\_options

#### **encapsulating\_security\_payload**

Type: *cybox.objects.network\_packet\_object.EncapsulatingSecurityPayload*

XML Binding class name: Encapsulating\_Security\_Payload

Dictionary key name: encapsulating\_security\_payload

#### **fragment**

Type: *cybox.objects.network\_packet\_object.Fragment*

XML Binding class name: Fragment

Dictionary key name: fragment

#### **hop\_by\_hop\_options**

Type: *cybox.objects.network\_packet\_object.HopByHopOptions*

XML Binding class name: Hop\_by\_Hop\_Options

Dictionary key name: hop\_by\_hop\_options

#### **routing**

Type: *cybox.objects.network\_packet\_object.Routing*

XML Binding class name: Routing

Dictionary key name: routing

**class** *cybox.objects.network\_packet\_object.IPv6Header*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.IPv6HeaderType*

#### **dest\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Dest\_IPv6\_Addr

Dictionary key name: dest\_ipv6\_addr

#### **flow\_label**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Flow\_Label

Dictionary key name: flow\_label

#### **ip\_version**

Type: *cybox.common.properties.String*

XML Binding class name: IP\_Version

Dictionary key name: ip\_version

#### **next\_header**

Type: *cybox.common.properties.String*

XML Binding class name: Next\_Header

Dictionary key name: next\_header

#### **payload\_length**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Payload\_Length

Dictionary key name: payload\_length

**src\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Src\_IPv6\_Addr

Dictionary key name: src\_ipv6\_addr

**traffic\_class**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Traffic\_Class

Dictionary key name: traffic\_class

**ttl**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: TTL

Dictionary key name: ttl

**class** *cybox.objects.network\_packet\_object.IPv6Option*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.IPv6OptionType*

**do\_not\_recogn\_action**

Type: *cybox.common.properties.String*

XML Binding class name: Do\_Not\_Recogn\_Action

Dictionary key name: do\_not\_recogn\_action

**option\_byte**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Option\_Byte

Dictionary key name: option\_byte

**packet\_change**

Type: *cybox.common.properties.String*

XML Binding class name: Packet\_Change

Dictionary key name: packet\_change

**class** *cybox.objects.network\_packet\_object.IPv6Packet*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.IPv6PacketType*

**data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Data

Dictionary key name: data

#### **ext\_headers**

(List of values permitted)

Type: *cybox.objects.network\_packet\_object.Ipv6ExtHeader*

XML Binding class name: Ext\_Headers

Dictionary key name: ext\_headers

#### **ipv6\_header**

Type: *cybox.objects.network\_packet\_object.Ipv6Header*

XML Binding class name: Ipv6\_Header

Dictionary key name: ipv6\_header

**class** *cybox.objects.network\_packet\_object*.**InternetLayer**

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.InternetLayerType*

#### **icmpv4**

Type: *cybox.objects.network\_packet\_object.ICMPv4Packet*

XML Binding class name: ICMPv4

Dictionary key name: icmpv4

#### **icmpv6**

Type: *cybox.objects.network\_packet\_object.ICMPv6Packet*

XML Binding class name: ICMPv6

Dictionary key name: icmpv6

#### **ipv4**

Type: *cybox.objects.network\_packet\_object.Ipv4Packet*

XML Binding class name: Ipv4

Dictionary key name: ipv4

#### **ipv6**

Type: *cybox.objects.network\_packet\_object.Ipv6Packet*

XML Binding class name: Ipv6

Dictionary key name: ipv6

**class** *cybox.objects.network\_packet\_object*.**LinkLayer**

Bases: *cybox.Entity*

XML binding class: `cybox.bindings.network_packet_object.LinkLayerType`

### **logical\_protocols**

Type: `cybox.objects.network_packet_object.LogicalProtocol`

XML Binding class name: `Logical_Protocols`

Dictionary key name: `logical_protocols`

### **physical\_interface**

Type: `cybox.objects.network_packet_object.PhysicalInterface`

XML Binding class name: `Physical_Interface`

Dictionary key name: `physical_interface`

**class** `cybox.objects.network_packet_object.LogicalProtocol`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.LogicalProtocolType`

### **arp\_rarp**

Type: `cybox.objects.network_packet_object.ARP`

XML Binding class name: `ARP_RARP`

Dictionary key name: `arp_rarp`

### **ndp**

Type: `cybox.objects.network_packet_object.NDP`

XML Binding class name: `NDP`

Dictionary key name: `ndp`

**class** `cybox.objects.network_packet_object.NDP`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NDPType`

### **icmpv6\_header**

Type: `cybox.objects.network_packet_object.ICMPv6Header`

XML Binding class name: `ICMPv6_Header`

Dictionary key name: `icmpv6_header`

### **neighbor\_advertisement**

Type: `cybox.objects.network_packet_object.NeighborAdvertisement`

XML Binding class name: `Neighbor_Advertisement`

Dictionary key name: `neighbor_advertisement`

#### **neighbor\_solicitation**

Type: *cybox.objects.network\_packet\_object.NeighborSolicitation*

XML Binding class name: Neighbor\_Solicitation

Dictionary key name: neighbor\_solicitation

#### **redirect**

Type: *cybox.objects.network\_packet\_object.Redirect*

XML Binding class name: Redirect

Dictionary key name: redirect

#### **router\_advertisement**

Type: *cybox.objects.network\_packet\_object.RouterAdvertisement*

XML Binding class name: Router\_Advertisement

Dictionary key name: router\_advertisement

#### **router\_solicitation**

Type: *cybox.objects.network\_packet\_object.RouterSolicitation*

XML Binding class name: Router\_Solicitation

Dictionary key name: router\_solicitation

**class** `cybox.objects.network_packet_object.NDPLinkAddr`

Bases: `cybox.Entity`

Abstract Type

XML binding class: `cybox.bindings.network_packet_object.NDPLinkAddrType`

#### **length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

#### **link\_layer\_mac\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Link\_Layer\_MAC\_Addr

Dictionary key name: link\_layer\_mac\_addr

**class** `cybox.objects.network_packet_object.NDPMTU`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NDPMTUType`

**length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

**mtu**

Type: *cybox.common.properties.Integer*

XML Binding class name: MTU

Dictionary key name: mtu

**class** `cybox.objects.network_packet_object.NDPPrefixInfo`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NDPPrefixInfoType`

**addr\_config\_flag**

XML Binding class name: `addr_config_flag`

Dictionary key name: `addr_config_flag`

**length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

**link\_flag**

XML Binding class name: `link_flag`

Dictionary key name: `link_flag`

**preferred\_lifetime**

Type: *cybox.common.properties.Integer*

XML Binding class name: Preferred\_Lifetime

Dictionary key name: `preferred_lifetime`

**prefix**

Type: *cybox.objects.network\_packet\_object.Prefix*

XML Binding class name: Prefix

Dictionary key name: prefix

**prefix\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Prefix\_Length

Dictionary key name: `prefix_length`

**valid\_lifetime**

Type: *cybox.common.properties.Integer*

XML Binding class name: `Valid_Lifetime`

Dictionary key name: `valid_lifetime`

**class** `cybox.objects.network_packet_object.NDPRedirectedHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NDPRedirectedHeaderType`

**ipheader\_and\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `IPHeader_And_Data`

Dictionary key name: `ipheader_and_data`

**length**

Type: *cybox.common.properties.Integer*

XML Binding class name: `Length`

Dictionary key name: `length`

**class** `cybox.objects.network_packet_object.NeighborAdvertisement`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.NeighborAdvertisementType`

**options**

Type: *cybox.objects.network\_packet\_object.NeighborOptions*

XML Binding class name: `Options`

Dictionary key name: `options`

**override\_flag**

XML Binding class name: `override_flag`

Dictionary key name: `override_flag`

**router\_flag**

XML Binding class name: `router_flag`

Dictionary key name: `router_flag`

**solicited\_flag**

XML Binding class name: solicited\_flag

Dictionary key name: solicited\_flag

#### **target\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Target\_IPv6\_Addr

Dictionary key name: target\_ipv6\_addr

**class** `cybox.objects.network_packet_object.NeighborOptions`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NeighborOptionsType`

#### **target\_link\_addr**

Type: *cybox.objects.network\_packet\_object.NDPLinkAddr*

XML Binding class name: Target\_Link\_Addr

Dictionary key name: target\_link\_addr

**class** `cybox.objects.network_packet_object.NeighborSolicitation`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.NeighborSolicitationType`

#### **options**

Type: *cybox.objects.network\_packet\_object.NeighborSolicitationOptions*

XML Binding class name: Options

Dictionary key name: options

#### **target\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Target\_IPv6\_Addr

Dictionary key name: target\_ipv6\_addr

**class** `cybox.objects.network_packet_object.NeighborSolicitationOptions`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.NeighborSolicitationOptionsType`

#### **src\_link\_addr**

Type: *cybox.objects.network\_packet\_object.NDPLinkAddr*

XML Binding class name: Src\_Link\_Addr

Dictionary key name: src\_link\_addr

**class** `cybox.objects.network_packet_object.NetworkPacket`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.network_packet_object.NetworkPacketObjectType`

#### **internet\_layer**

Type: `cybox.objects.network_packet_object.InternetLayer`

XML Binding class name: Internet\_Layer

Dictionary key name: internet\_layer

#### **link\_layer**

Type: `cybox.objects.network_packet_object.LinkLayer`

XML Binding class name: Link\_Layer

Dictionary key name: link\_layer

#### **transport\_layer**

Type: `cybox.objects.network_packet_object.TransportLayer`

XML Binding class name: Transport\_Layer

Dictionary key name: transport\_layer

**class** `cybox.objects.network_packet_object.OptionData`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.OptionDataType`

#### **option\_data\_len**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Option\_Data\_Len

Dictionary key name: option\_data\_len

#### **option\_type**

Type: `cybox.objects.network_packet_object.IPv6Option`

XML Binding class name: Option\_Type

Dictionary key name: option\_type

#### **pad1**

Type: `cybox.objects.network_packet_object.Pad1`

XML Binding class name: Pad1

Dictionary key name: pad1

**padn**

Type: *cybox.objects.network\_packet\_object.PadN*

XML Binding class name: PadN

Dictionary key name: padn

**class** `cybox.objects.network_packet_object.Pad1`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.Pad1Type`

**octet**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Octet

Dictionary key name: octet

**class** `cybox.objects.network_packet_object.PadN`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.PadNType`

**octet**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Octet

Dictionary key name: octet

**option\_data**

Type: *cybox.common.properties.Integer*

XML Binding class name: Option\_Data

Dictionary key name: option\_data

**option\_data\_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Option\_Data\_Length

Dictionary key name: option\_data\_length

**class** `cybox.objects.network_packet_object.PhysicalInterface`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.PhysicalInterfaceType`

### **ethernet**

Type: *cybox.objects.network\_packet\_object.EthernetInterface*

XML Binding class name: Ethernet

Dictionary key name: ethernet

**class** `cybox.objects.network_packet_object.Prefix`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.PrefixType`

### **ip\_addr\_prefix**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IP\_Addr\_Prefix

Dictionary key name: ip\_addr\_prefix

### **ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IPv6\_Addr

Dictionary key name: ipv6\_addr

**class** `cybox.objects.network_packet_object.Redirect`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.RedirectType`

### **dest\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Dest\_IPv6\_Addr

Dictionary key name: dest\_ipv6\_addr

### **options**

Type: *cybox.objects.network\_packet\_object.RedirectOptions*

XML Binding class name: Options

Dictionary key name: options

### **target\_ipv6\_addr**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Target\_IPv6\_Addr

Dictionary key name: target\_ipv6\_addr

**class** `cybox.objects.network_packet_object.RedirectOptions`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.NeighborOptionsType`

**redirected\_header**

Type: `cybox.objects.network_packet_object.NDPRedirectedHeader`

XML Binding class name: `Redirected_Header`

Dictionary key name: `redirected_header`

**target\_link\_addr**

Type: `cybox.objects.network_packet_object.NDPLinkAddr`

XML Binding class name: `Target_Link_Addr`

Dictionary key name: `target_link_addr`

**class** `cybox.objects.network_packet_object.RouterAdvertisement`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.RouterAdvertisementType`

**cur\_hop\_limit**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Cur_Hop_Limit`

Dictionary key name: `cur_hop_limit`

**managed\_address\_config\_flag**

XML Binding class name: `managed_address_config_flag`

Dictionary key name: `managed_address_config_flag`

**options**

Type: `cybox.objects.network_packet_object.RouterAdvertisementOptions`

XML Binding class name: `Options`

Dictionary key name: `options`

**other\_config\_flag**

XML Binding class name: `other_config_flag`

Dictionary key name: `other_config_flag`

**reachable\_time**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Reachable_Time`

Dictionary key name: `reachable_time`

**retrans\_timer**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Retrans\_Timer  
Dictionary key name: retrans\_timer

#### **router\_lifetime**

Type: *cybox.common.properties.Integer*  
XML Binding class name: Router\_Lifetime  
Dictionary key name: router\_lifetime

**class** `cybox.objects.network_packet_object.RouterAdvertisementOptions`  
Bases: `cybox.Entity`

XML binding class:  
`cybox.bindings.network_packet_object.RouterAdvertisementOptionsType`

#### **mtu**

Type: *cybox.objects.network\_packet\_object.NDPMTU*  
XML Binding class name: MTU  
Dictionary key name: mtu

#### **prefix\_info**

Type: *cybox.objects.network\_packet\_object.NDPPrefixInfo*  
XML Binding class name: Prefix\_Info  
Dictionary key name: prefix\_info

#### **src\_link\_addr**

Type: *cybox.objects.network\_packet\_object.NDPLinkAddr*  
XML Binding class name: Src\_Link\_Addr  
Dictionary key name: src\_link\_addr

**class** `cybox.objects.network_packet_object.RouterSolicitation`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.RouterSolicitationType`

#### **options**

(List of values permitted)  
Type: *cybox.objects.network\_packet\_object.RouterSolicitationOptions*  
XML Binding class name: Options  
Dictionary key name: options

**class** `cybox.objects.network_packet_object.RouterSolicitationOptions`  
Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.network_packet_object.RouterSolicitationOptionsType`

#### **src\_link\_addr**

Type: `cybox.objects.network_packet_object.NDPLinkAddr`

XML Binding class name: `Src_Link_Addr`

Dictionary key name: `src_link_addr`

**class** `cybox.objects.network_packet_object.Routing`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.RoutingType`

#### **header\_ext\_len**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Header_Ext_Len`

Dictionary key name: `header_ext_len`

#### **next\_header**

Type: `cybox.common.properties.String`

XML Binding class name: `Next_Header`

Dictionary key name: `next_header`

#### **routing\_type**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Routing_Type`

Dictionary key name: `routing_type`

#### **segments\_left**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Segments_Left`

Dictionary key name: `segments_left`

#### **type\_specific\_data**

Type: `cybox.common.properties.String`

XML Binding class name: `Type_Specific_Data`

Dictionary key name: `type_specific_data`

**class** `cybox.objects.network_packet_object.TCP`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TCPType`

#### **data**

Type: *cybox.common.data\_segment.DataSegment*

XML Binding class name: Data

Dictionary key name: data

#### **options**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Options

Dictionary key name: options

#### **tcp\_header**

Type: *cybox.objects.network\_packet\_object.TCPHeader*

XML Binding class name: TCP\_Header

Dictionary key name: tcp\_header

**class** *cybox.objects.network\_packet\_object.TCPFlags*

Bases: *cybox.Entity*

XML binding class: *cybox.bindings.network\_packet\_object.TCPFlagsType*

#### **ack**

XML Binding class name: ack

Dictionary key name: ack

#### **cwr**

XML Binding class name: cwr

Dictionary key name: cwr

#### **ece**

XML Binding class name: ece

Dictionary key name: ece

#### **fin**

XML Binding class name: fin

Dictionary key name: fin

#### **ns**

XML Binding class name: ns

Dictionary key name: ns

#### **psh**

XML Binding class name: psh

Dictionary key name: psh

#### **rst**

XML Binding class name: rst

Dictionary key name: rst

#### **syn**

XML Binding class name: syn

Dictionary key name: syn

#### **urg**

XML Binding class name: urg

Dictionary key name: urg

**class** `cybox.objects.network_packet_object.TCPHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TCPHeaderType`

#### **ack\_num**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: ACK\_Num

Dictionary key name: ack\_num

#### **checksum**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Checksum

Dictionary key name: checksum

#### **data\_offset**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Data\_Offset

Dictionary key name: data\_offset

#### **dest\_port**

Type: `cybox.objects.port_object.Port`

XML Binding class name: Dest\_Port

Dictionary key name: dest\_port

#### **reserved**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Reserved

Dictionary key name: reserved

#### **seq\_num**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Seq\_Num

Dictionary key name: seq\_num

#### **src\_port**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: Src\_Port

Dictionary key name: src\_port

#### **tcp\_flags**

Type: *cybox.objects.network\_packet\_object.TCPFlags*

XML Binding class name: TCP\_Flags

Dictionary key name: tcp\_flags

#### **urg\_ptr**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Urg\_Ptr

Dictionary key name: urg\_ptr

#### **window**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Window

Dictionary key name: window

**class** `cybox.objects.network_packet_object.TransportLayer`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TransportLayerType`

#### **tcp**

Type: *cybox.objects.network\_packet\_object.TCP*

XML Binding class name: TCP

Dictionary key name: tcp

#### **udp**

Type: *cybox.objects.network\_packet\_object.UDP*

XML Binding class name: UDP

Dictionary key name: udp

**class** `cybox.objects.network_packet_object.TypeLength`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TypeLengthType`

#### **internet\_layer\_type**

Type: `cybox.common.properties.String`  
XML Binding class name: `Internet_Layer_Type`  
Dictionary key name: `internet_layer_type`

#### **length**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `Length`  
Dictionary key name: `length`

**class** `cybox.objects.network_packet_object.UDP`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.UDPType`

#### **data**

Type: `cybox.common.data_segment.DataSegment`  
XML Binding class name: `Data`  
Dictionary key name: `data`

#### **udp\_header**

Type: `cybox.objects.network_packet_object.UDPHeader`  
XML Binding class name: `UDP_Header`  
Dictionary key name: `udp_header`

**class** `cybox.objects.network_packet_object.UDPHeader`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.UDPHeaderType`

#### **checksum**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: `Checksum`  
Dictionary key name: `checksum`

**destport**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: DestPort

Dictionary key name: destport

**length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

**srcport**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: SrcPort

Dictionary key name: srcport

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**cybox.objects.network\_route\_entry\_object module**

**class** `cybox.objects.network_route_entry_object.NetworkRouteEntry`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.network_route_entry_object.NetworkRouteEntryObjectType`

**destination\_address**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Destination\_Address

Dictionary key name: destination\_address

**gateway\_address**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: Gateway\_Address

Dictionary key name: gateway\_address

**interface**

Type: *cybox.common.properties.String*

XML Binding class name: Interface

Dictionary key name: interface

**is\_autoconfigure\_address**

XML Binding class name: is\_autoconfigure\_address

Dictionary key name: `is_autoconfigure_address`

**is\_immortal**

XML Binding class name: `is_immortal`

Dictionary key name: `is_immortal`

**is\_ipv6**

XML Binding class name: `is_ipv6`

Dictionary key name: `is_ipv6`

**is\_loopback**

XML Binding class name: `is_loopback`

Dictionary key name: `is_loopback`

**is\_publish**

XML Binding class name: `is_publish`

Dictionary key name: `is_publish`

**metric**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: `Metric`

Dictionary key name: `metric`

**netmask**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Netmask`

Dictionary key name: `netmask`

**origin**

Type: `cybox.objects.address_object.Address`

XML Binding class name: `Origin`

Dictionary key name: `origin`

**preferred\_lifetime**

Type: `cybox.common.properties.Duration`

XML Binding class name: `Preferred_Lifetime`

Dictionary key name: `preferred_lifetime`

**protocol**

Type: `cybox.common.properties.String`

XML Binding class name: `Protocol`

Dictionary key name: `protocol`

**route\_age**

Type: *cybox.common.properties.Duration*

XML Binding class name: Route\_Age

Dictionary key name: route\_age

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**valid\_lifetime**

Type: *cybox.common.properties.Duration*

XML Binding class name: Valid\_Lifetime

Dictionary key name: valid\_lifetime

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**cybox.objects.network\_route\_object module**

**class** `cybox.objects.network_route_object.NetRoute`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.network_route_object.NetRouteObjectType`

**description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

**is\_autoconfigure\_address**

XML Binding class name: is\_autoconfigure\_address

Dictionary key name: is\_autoconfigure\_address

**is\_immortal**

XML Binding class name: is\_immortal

Dictionary key name: is\_immortal

**is\_ipv6**

XML Binding class name: is\_ipv6

Dictionary key name: is\_ipv6

**is\_loopback**

XML Binding class name: `is_loopback`

Dictionary key name: `is_loopback`

#### **is\_publish**

XML Binding class name: `is_publish`

Dictionary key name: `is_publish`

#### **network\_route\_entries**

Type: `cybox.objects.network_route_object.NetworkRouteEntries`

XML Binding class name: `Network_Route_Entries`

Dictionary key name: `network_route_entries`

#### **preferred\_lifetime**

Type: `cybox.common.properties.Duration`

XML Binding class name: `Preferred_Lifetime`

Dictionary key name: `preferred_lifetime`

#### **route\_age**

Type: `cybox.common.properties.Duration`

XML Binding class name: `Route_Age`

Dictionary key name: `route_age`

#### **valid\_lifetime**

Type: `cybox.common.properties.Duration`

XML Binding class name: `Valid_Lifetime`

Dictionary key name: `valid_lifetime`

**class** `cybox.objects.network_route_object.NetworkRouteEntries` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.network_route_object.NetworkRouteEntriesType`

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### **cybox.objects.network\_socket\_object module**

**class** `cybox.objects.network_socket_object.NetworkSocket`

Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class: `cybox.bindings.network_socket_object.NetworkSocketObjectType`

#### **address\_family**

Type: *cybox.common.properties.String*  
XML Binding class name: Address\_Family  
Dictionary key name: address\_family

**domain**

Type: *cybox.common.properties.String*  
XML Binding class name: Domain  
Dictionary key name: domain

**is\_blocking**

XML Binding class name: is\_blocking  
Dictionary key name: is\_blocking

**is\_listening**

XML Binding class name: is\_listening  
Dictionary key name: is\_listening

**local\_address**

Type: *cybox.objects.socket\_address\_object.SocketAddress*  
XML Binding class name: Local\_Address  
Dictionary key name: local\_address

**options**

Type: *cybox.objects.network\_socket\_object.SocketOptions*  
XML Binding class name: Options  
Dictionary key name: options

**protocol**

Type: *cybox.common.properties.String*  
XML Binding class name: Protocol  
Dictionary key name: protocol

**remote\_address**

Type: *cybox.objects.socket\_address\_object.SocketAddress*  
XML Binding class name: Remote\_Address  
Dictionary key name: remote\_address

**socket\_descriptor**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Socket\_Descriptor  
Dictionary key name: socket\_descriptor

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**class** `cybox.objects.network_socket_object.SocketOptions`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_socket_object.SocketOptionsType`

#### **ip\_multicast\_if**

Type: *cybox.common.properties.String*

XML Binding class name: IP\_MULTICAST\_IF

Dictionary key name: ip\_multicast\_if

#### **ip\_multicast\_if2**

Type: *cybox.common.properties.String*

XML Binding class name: IP\_MULTICAST\_IF2

Dictionary key name: ip\_multicast\_if2

#### **ip\_multicast\_loop**

XML Binding class name: IP\_MULTICAST\_LOOP

Dictionary key name: ip\_multicast\_loop

#### **ip\_tos**

Type: *cybox.common.properties.String*

XML Binding class name: IP\_TOS

Dictionary key name: ip\_tos

#### **so\_broadcast**

XML Binding class name: SO\_BROADCAST

Dictionary key name: so\_broadcast

#### **so\_conditional\_accept**

XML Binding class name: SO\_CONDITIONAL\_ACCEPT

Dictionary key name: so\_conditional\_accept

#### **so\_debug**

XML Binding class name: SO\_DEBUG

Dictionary key name: so\_debug

#### **so\_dontlinger**

XML Binding class name: SO\_DONTLINGER

Dictionary key name: `so_dontlinger`

#### **so\_dontroute**

XML Binding class name: `SO_DONTRROUTE`

Dictionary key name: `so_dontroute`

#### **so\_group\_priority**

Type: `cybox.common.properties.UnsignedInteger`

XML Binding class name: `SO_GROUP_PRIORITY`

Dictionary key name: `so_group_priority`

#### **so\_keepalive**

XML Binding class name: `SO_KEEPALIVE`

Dictionary key name: `so_keepalive`

#### **so\_linger**

Type: `cybox.common.properties.UnsignedInteger`

XML Binding class name: `SO_LINGER`

Dictionary key name: `so_linger`

#### **so\_oobinline**

XML Binding class name: `SO_OOBINLINE`

Dictionary key name: `so_oobinline`

#### **so\_rcvbuf**

Type: `cybox.common.properties.UnsignedInteger`

XML Binding class name: `SO_RCVBUF`

Dictionary key name: `so_rcvbuf`

#### **so\_rcvtimeo**

Type: `cybox.common.properties.UnsignedInteger`

XML Binding class name: `SO_RCVTIMEO`

Dictionary key name: `so_rcvtimeo`

#### **so\_reuseaddr**

XML Binding class name: `SO_REUSEADDR`

Dictionary key name: `so_reuseaddr`

#### **so\_sndbuf**

Type: `cybox.common.properties.UnsignedInteger`

XML Binding class name: `SO_SNDBUF`

Dictionary key name: `so_sndbuf`

**so\_sndtimeo**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_SNDTIMEO

Dictionary key name: so\_sndtimeo

**so\_timeout**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_TIMEOUT

Dictionary key name: so\_timeout

**so\_update\_accept\_context**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO\_UPDATE\_ACCEPT\_CONTEXT

Dictionary key name: so\_update\_accept\_context

**tcp\_nodelay**

XML Binding class name: TCP\_NODELAY

Dictionary key name: tcp\_nodelay

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**cybox.objects.network\_subnet\_object module**

**class** `cybox.objects.network_subnet_object.NetworkSubnet`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.network_subnet_object.NetworkSubnetObjectType`

**description**

Type: *cybox.common.structured\_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**number\_of\_ip\_addresses**

Type: *cybox.common.properties.Integer*

XML Binding class name: Number\_Of\_IP\_Addresses

Dictionary key name: number\_of\_ip\_addresses

#### **routes**

Type: *cybox.objects.network\_subnet\_object.Routes*

XML Binding class name: Routes

Dictionary key name: routes

**class** `cybox.objects.network_subnet_object.Routes` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.network_subnet_object.RoutesType`

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#### **cybox.objects.pdf\_file\_object module**

**class** `cybox.objects.pdf_file_object.PDFDocumentInformationDictionary`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.pdf_file_object.PDFDocumentInformationDictionaryType`

#### **author**

Type: *cybox.common.properties.String*

XML Binding class name: Author

Dictionary key name: author

#### **creationdate**

Type: *cybox.common.properties.DateTime*

XML Binding class name: CreationDate

Dictionary key name: creationdate

#### **creator**

Type: *cybox.common.properties.String*

XML Binding class name: Creator

Dictionary key name: creator

#### **keywords**

Type: *cybox.common.properties.String*

XML Binding class name: Keywords

Dictionary key name: keywords

#### **moddate**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: ModDate  
Dictionary key name: moddate

**producer**

Type: *cybox.common.properties.String*  
XML Binding class name: Producer  
Dictionary key name: producer

**subject**

Type: *cybox.common.properties.String*  
XML Binding class name: Subject  
Dictionary key name: subject

**title**

Type: *cybox.common.properties.String*  
XML Binding class name: Title  
Dictionary key name: title

**trapped**

Type: *cybox.common.properties.String*  
XML Binding class name: Trapped  
Dictionary key name: trapped

**class** `cybox.objects.pdf_file_object.PDFFile`  
Bases: *cybox.objects.file\_object.File*

XML binding class: `cybox.bindings.pdf_file_object.PDFFileObjectType`

**metadata**

Type: *cybox.objects.pdf\_file\_object.PDFFileMetadata*  
XML Binding class name: Metadata  
Dictionary key name: metadata

**version**

Type: *cybox.common.properties.Double*  
XML Binding class name: Version  
Dictionary key name: version

**class** `cybox.objects.pdf_file_object.PDFFileMetadata`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.pdf_file_object.PDFFileMetadataType`

**document\_information\_dictionary**

Type: *cybox.objects.pdf\_file\_object.PDFDocumentInformationDictionary*

XML Binding class name: Document\_Information\_Dictionary

Dictionary key name: document\_information\_dictionary

**encrypted**

XML Binding class name: encrypted

Dictionary key name: encrypted

**keyword\_counts**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCounts*

XML Binding class name: Keyword\_Counts

Dictionary key name: keyword\_counts

**number\_of\_cross\_reference\_tables**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Number\_Of\_Cross\_Reference\_Tables

Dictionary key name: number\_of\_cross\_reference\_tables

**number\_of\_indirect\_objects**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Number\_Of\_Indirect\_Objects

Dictionary key name: number\_of\_indirect\_objects

**number\_oftrailers**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Number\_Of\_Trailers

Dictionary key name: number\_oftrailers

**optimized**

XML Binding class name: optimized

Dictionary key name: optimized

**class** `cybox.objects.pdf_file_object.PDFKeywordCount`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.pdf_file_object.PDFKeywordCountType`

**non\_obfuscated\_count**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Non\_Obfuscated\_Count

Dictionary key name: non\_obfuscated\_count

#### **obfuscated\_count**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Obfuscated\_Count

Dictionary key name: obfuscated\_count

**class** `cybox.objects.pdf_file_object.PDFKeywordCounts`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.pdf_file_object.PDFKeywordCountsType`

#### **aa\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: AA\_Count

Dictionary key name: aa\_count

#### **ascii85decode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: ASCII85Decode\_Count

Dictionary key name: ascii85decode\_count

#### **asciixdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: ASCIIHexDecode\_Count

Dictionary key name: asciixdecode\_count

#### **ccittfaxdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: CCITTFaxDecode\_Count

Dictionary key name: ccittfaxdecode\_count

#### **dctdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: DCTDecode\_Count

Dictionary key name: dctdecode\_count

#### **encrypt\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: Encrypt\_Count

Dictionary key name: encrypt\_count

#### **flatedecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: FlateDecode\_Count

Dictionary key name: flatedecode\_count

#### **javascript\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: JavaScript\_Count

Dictionary key name: javascript\_count

#### **jbig2decode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: JBIG2Decode\_Count

Dictionary key name: jbig2decode\_count

#### **js\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: JS\_Count

Dictionary key name: js\_count

#### **launch\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: Launch\_Count

Dictionary key name: launch\_count

#### **lzwdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: LZWDecode\_Count

Dictionary key name: lzwdecode\_count

#### **objstm\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: ObjStm\_Count

Dictionary key name: objstm\_count

#### **openaction\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: OpenAction\_Count

Dictionary key name: openaction\_count

#### **page\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: Page\_Count

Dictionary key name: page\_count

#### **richmedia\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: RichMedia\_Count

Dictionary key name: richmedia\_count

#### **runlengthdecode\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: RunLengthDecode\_Count

Dictionary key name: runlengthdecode\_count

#### **xfa\_count**

Type: *cybox.objects.pdf\_file\_object.PDFKeywordCount*

XML Binding class name: XFA\_Count

Dictionary key name: xfa\_count

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### **cybox.objects.pipe\_object module**

**class** `cybox.objects.pipe_object.Pipe`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.pipe_object.PipeObjectType`

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **named**

XML Binding class name: named

Dictionary key name: named

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### **cybox.objects.port\_object module**

**class** `cybox.objects.port_object.Port`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.port_object.PortObjectType`

#### **layer4\_protocol**

Type: *cybox.common.properties.String*

XML Binding class name: Layer4\_Protocol

Dictionary key name: layer4\_protocol

#### **port\_value**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Port\_Value

Dictionary key name: port\_value

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### **cybox.objects.process\_object module**

**class** `cybox.objects.process_object.ArgumentList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.process_object.ArgumentListType`

**class** `cybox.objects.process_object.ChildPIDList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.process_object.ChildPIDListType`

**class** `cybox.objects.process_object.ImageInfo`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.process_object.ImageInfoType`

#### **command\_line**

Type: *cybox.common.properties.String*

XML Binding class name: Command\_Line

Dictionary key name: command\_line

#### **current\_directory**

Type: *cybox.common.properties.String*

XML Binding class name: Current\_Directory

Dictionary key name: current\_directory

#### **file\_name**

Type: *cybox.common.properties.String*  
 XML Binding class name: File\_Name  
 Dictionary key name: file\_name

**path**

Type: *cybox.common.properties.String*  
 XML Binding class name: Path  
 Dictionary key name: path

**class** `cybox.objects.process_object.NetworkConnectionList` (\*args)  
 Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.process_object.NetworkConnectionListType`

**class** `cybox.objects.process_object.PortList` (\*args)  
 Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.process_object.PortListType`

**class** `cybox.objects.process_object.Process`  
 Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.process_object.ProcessObjectType`

**argument\_list**

Type: *cybox.objects.process\_object.ArgumentList*  
 XML Binding class name: Argument\_List  
 Dictionary key name: argument\_list

**child\_pid\_list**

Type: *cybox.objects.process\_object.ChildPIDList*  
 XML Binding class name: Child\_PID\_List  
 Dictionary key name: child\_pid\_list

**creation\_time**

Type: *cybox.common.properties.DateTime*  
 XML Binding class name: Creation\_Time  
 Dictionary key name: creation\_time

**environment\_variable\_list**

Type: *cybox.common.environment\_variable.EnvironmentVariableList*

XML Binding class name: Environment\_Variable\_List

Dictionary key name: environment\_variable\_list

#### **extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*

XML Binding class name: Extracted\_Features

Dictionary key name: extracted\_features

#### **image\_info**

Type: *cybox.objects.process\_object.ImageInfo*

XML Binding class name: Image\_Info

Dictionary key name: image\_info

#### **is\_hidden**

XML Binding class name: is\_hidden

Dictionary key name: is\_hidden

#### **kernel\_time**

Type: *cybox.common.properties.Duration*

XML Binding class name: Kernel\_Time

Dictionary key name: kernel\_time

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **network\_connection\_list**

Type: *cybox.objects.process\_object.NetworkConnectionList*

XML Binding class name: Network\_Connection\_List

Dictionary key name: network\_connection\_list

#### **parent\_pid**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Parent\_PID

Dictionary key name: parent\_pid

#### **pid**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: PID

Dictionary key name: pid

#### **port\_list**

Type: *cybox.objects.process\_object.PortList*  
XML Binding class name: Port\_List  
Dictionary key name: port\_list

**start\_time**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Start\_Time  
Dictionary key name: start\_time

**user\_time**

Type: *cybox.common.properties.Duration*  
XML Binding class name: User\_Time  
Dictionary key name: user\_time

**username**

Type: *cybox.common.properties.String*  
XML Binding class name: Username  
Dictionary key name: username

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**cybox.objects.product\_object module**

**class** *cybox.objects.product\_object.Product*

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: *cybox.bindings.product\_object.ProductObjectType*

**edition**

Type: *cybox.common.properties.String*  
XML Binding class name: Edition  
Dictionary key name: edition

**language**

Type: *cybox.common.properties.String*  
XML Binding class name: Language  
Dictionary key name: language

**product**

Type: *cybox.common.properties.String*  
XML Binding class name: Product  
Dictionary key name: product

#### **update**

Type: *cybox.common.properties.String*

XML Binding class name: Update

Dictionary key name: update

#### **vendor**

Type: *cybox.common.properties.String*

XML Binding class name: Vendor

Dictionary key name: vendor

#### **version**

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

**Version:** 2.1.0.12.dev0

### **cybox.objects.semaphore\_object module**

**class** `cybox.objects.semaphore_object.Semaphore`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.semaphore_object.SemaphoreObjectType`

#### **current\_count**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Current\_Count

Dictionary key name: current\_count

#### **maximum\_count**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Maximum\_Count

Dictionary key name: maximum\_count

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **named**

XML Binding class name: named

Dictionary key name: named

Version: 2.1.0.12.dev0

### **cybox.objects.sms\_message\_object module**

**class** cybox.objects.sms\_message\_object.**SMSMessage**

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: cybox.bindings.sms\_message\_object.SMSMessageObjectType

#### **bits\_per\_character**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Bits\_Per\_Character

Dictionary key name: bits\_per\_character

#### **body**

Type: *cybox.common.properties.String*

XML Binding class name: Body

Dictionary key name: body

#### **encoding**

Type: *cybox.common.properties.String*

XML Binding class name: Encoding

Dictionary key name: encoding

#### **is\_premium**

XML Binding class name: is\_premium

Dictionary key name: is\_premium

#### **length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Length

Dictionary key name: length

#### **recipient\_phone\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Recipient\_Phone\_Number

Dictionary key name: recipient\_phone\_number

#### **sender\_phone\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Sender\_Phone\_Number

Dictionary key name: sender\_phone\_number

#### **sent\_datetime**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Sent\_DateTime

Dictionary key name: sent\_datetime

#### **size**

Type: *cybox.common.properties.Integer*

XML Binding class name: Size

Dictionary key name: size

#### **user\_data\_header**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: User\_Data\_Header

Dictionary key name: user\_data\_header

**Version:** 2.1.0.12.dev0

### **cybox.objects.socket\_address\_object module**

**class** `cybox.objects.socket_address_object.SocketAddress`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.socket_address_object.SocketAddressObjectType`

#### **hostname**

Type: *cybox.objects.hostname\_object.Hostname*

XML Binding class name: Hostname

Dictionary key name: hostname

#### **ip\_address**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IP\_Address

Dictionary key name: ip\_address

#### **port**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: Port

Dictionary key name: port

**Version:** 2.1.0.12.dev0

**cybox.objects.system\_object module**

**class** `cybox.objects.system_object.BIOSInfo`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.system_object.BIOSInfoType`

**bios\_date**

Type: `cybox.common.properties.Date`  
XML Binding class name: `BIOS_Date`  
Dictionary key name: `bios_date`

**bios\_manufacturer**

Type: `cybox.common.properties.String`  
XML Binding class name: `BIOS_Manufacturer`  
Dictionary key name: `bios_manufacturer`

**bios\_release\_date**

Type: `cybox.common.properties.Date`  
XML Binding class name: `BIOS_Release_Date`  
Dictionary key name: `bios_release_date`

**bios\_serial\_number**

Type: `cybox.common.properties.String`  
XML Binding class name: `BIOS_Serial_Number`  
Dictionary key name: `bios_serial_number`

**bios\_version**

Type: `cybox.common.properties.String`  
XML Binding class name: `BIOS_Version`  
Dictionary key name: `bios_version`

**class** `cybox.objects.system_object.DHCPServerList (*args)`  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.system_object.DHCPServerListType`

**class** `cybox.objects.system_object.IPGatewayList (*args)`  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.system_object.IPGatewayListType`

**class** `cybox.objects.system_object.IPInfo`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.system_object.IPInfoType`

#### **ip\_address**

Type: `cybox.objects.address_object.Address`  
XML Binding class name: `IP_Address`  
Dictionary key name: `ip_address`

#### **subnet\_mask**

Type: `cybox.objects.address_object.Address`  
XML Binding class name: `Subnet_Mask`  
Dictionary key name: `subnet_mask`

**class** `cybox.objects.system_object.IPInfoList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.system_object.IPInfoListType`

**class** `cybox.objects.system_object.NetworkInterface`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.system_object.NetworkInterfaceType`

#### **adapter**

Type: `cybox.common.properties.String`  
XML Binding class name: `Adapter`  
Dictionary key name: `adapter`

#### **description**

Type: `cybox.common.properties.String`  
XML Binding class name: `Description`  
Dictionary key name: `description`

#### **dhcp\_lease\_expires**

Type: `cybox.common.properties.DateTime`  
XML Binding class name: `DHCP_Lease_Expires`  
Dictionary key name: `dhcp_lease_expires`

**dhcp\_lease\_obtained**

Type: *cybox.common.properties.DateTime*  
 XML Binding class name: DHCP\_Lease\_Obtained  
 Dictionary key name: dhcp\_lease\_obtained

**dhcp\_server\_list**

Type: *cybox.objects.system\_object.DHCPServerList*  
 XML Binding class name: DHCP\_Server\_List  
 Dictionary key name: dhcp\_server\_list

**ip\_gateway\_list**

Type: *cybox.objects.system\_object.IPGatewayList*  
 XML Binding class name: IP\_Gateway\_List  
 Dictionary key name: ip\_gateway\_list

**ip\_list**

Type: *cybox.objects.system\_object.IPInfoList*  
 XML Binding class name: IP\_List  
 Dictionary key name: ip\_list

**mac**

Type: *cybox.common.properties.String*  
 XML Binding class name: MAC  
 Dictionary key name: mac

**class** *cybox.objects.system\_object.NetworkInterfaceList* (\*args)  
 Bases: *cybox.EntityList*

XML binding class: *cybox.bindings.system\_object.NetworkInterfaceListType*

**class** *cybox.objects.system\_object.OS*  
 Bases: *cybox.Entity*

XML binding class: *cybox.bindings.system\_object.OSType*

**bitness**

Type: *cybox.common.properties.String*  
 XML Binding class name: Bitness  
 Dictionary key name: bitness

**build\_number**

Type: *cybox.common.properties.String*  
XML Binding class name: Build\_Number  
Dictionary key name: build\_number

#### **environment\_variable\_list**

Type: *cybox.common.environment\_variable.EnvironmentVariableList*  
XML Binding class name: Environment\_Variable\_List  
Dictionary key name: environment\_variable\_list

#### **install\_date**

Type: *cybox.common.properties.Date*  
XML Binding class name: Install\_Date  
Dictionary key name: install\_date

#### **patch\_level**

Type: *cybox.common.properties.String*  
XML Binding class name: Patch\_Level  
Dictionary key name: patch\_level

#### **platform**

Type: *cybox.common.platform\_specification.PlatformSpecification*  
XML Binding class name: Platform  
Dictionary key name: platform

**class** `cybox.objects.system_object.System`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.system_object.SystemObjectType`

#### **available\_physical\_memory**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: Available\_Physical\_Memory  
Dictionary key name: available\_physical\_memory

#### **bios\_info**

Type: *cybox.objects.system\_object.BIOSInfo*  
XML Binding class name: BIOS\_Info  
Dictionary key name: bios\_info

#### **date**

Type: *cybox.common.properties.Date*  
XML Binding class name: Date

Dictionary key name: date

#### **hostname**

Type: *cybox.common.properties.String*

XML Binding class name: Hostname

Dictionary key name: hostname

#### **local\_time**

Type: *cybox.common.properties.Time*

XML Binding class name: Local\_Time

Dictionary key name: local\_time

#### **network\_interface\_list**

Type: *cybox.objects.system\_object.NetworkInterfaceList*

XML Binding class name: Network\_Interface\_List

Dictionary key name: network\_interface\_list

#### **os**

Type: *cybox.objects.system\_object.OS*

XML Binding class name: OS

Dictionary key name: os

#### **processor**

Type: *cybox.common.properties.String*

XML Binding class name: Processor

Dictionary key name: processor

#### **system\_time**

Type: *cybox.common.properties.Time*

XML Binding class name: System\_Time

Dictionary key name: system\_time

#### **timezone\_dst**

Type: *cybox.common.properties.String*

XML Binding class name: Timezone\_DST

Dictionary key name: timezone\_dst

#### **timezone\_standard**

Type: *cybox.common.properties.String*

XML Binding class name: Timezone\_Standard

Dictionary key name: timezone\_standard

#### **total\_physical\_memory**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: Total\_Physical\_Memory  
Dictionary key name: total\_physical\_memory

#### **uptime**

Type: *cybox.common.properties.Duration*  
XML Binding class name: Uptime  
Dictionary key name: uptime

#### **username**

Type: *cybox.common.properties.String*  
XML Binding class name: Username  
Dictionary key name: username

**Version:** 2.1.0.12.dev0

### **cybox.objects.uri\_object module**

**class** `cybox.objects.uri_object.URI` (*value=None, type\_=None*)  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.uri_object.URIOBJECTType`

#### **type\_**

XML Binding class name: type\_  
Dictionary key name: type

#### **value**

Type: *cybox.common.properties.AnyURI*  
XML Binding class name: Value  
Dictionary key name: value

**Version:** 2.1.0.12.dev0

### **cybox.objects.user\_account\_object module**

**class** `cybox.objects.user_account_object.Group`  
Bases: `cybox.Entity`

An abstract class for account groups.

XML binding class: <undefined>

**class** `cybox.objects.user_account_object.GroupList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.user_account_object.GroupListType`

**class** `cybox.objects.user_account_object.Privilege`  
Bases: `cybox.Entity`

An abstract class for account privileges.

XML binding class: <undefined>

**class** `cybox.objects.user_account_object.PrivilegeList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.user_account_object.PrivilegeListType`

**class** `cybox.objects.user_account_object.UserAccount`  
Bases: `cybox.objects.account_object.Account`

XML binding class: `cybox.bindings.user_account_object.UserAccountObjectType`

#### **full\_name**

Type: `cybox.common.properties.String`

XML Binding class name: Full\_Name

Dictionary key name: full\_name

#### **group\_list**

Type: `cybox.objects.user_account_object.GroupList`

XML Binding class name: Group\_List

Dictionary key name: group\_list

#### **home\_directory**

Type: `cybox.common.properties.String`

XML Binding class name: Home\_Directory

Dictionary key name: home\_directory

#### **last\_login**

Type: `cybox.common.properties.DateTime`

XML Binding class name: Last\_Login

Dictionary key name: last\_login

#### **password\_required**

XML Binding class name: password\_required

Dictionary key name: password\_required

#### **privilege\_list**

Type: *cybox.objects.user\_account\_object.PrivilegeList*

XML Binding class name: Privilege\_List

Dictionary key name: privilege\_list

#### **script\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Script\_Path

Dictionary key name: script\_path

#### **user\_password\_age**

Type: *cybox.common.properties.Duration*

XML Binding class name: User\_Password\_Age

Dictionary key name: user\_password\_age

#### **username**

Type: *cybox.common.properties.String*

XML Binding class name: Username

Dictionary key name: username

Version: 2.1.0.12.dev0

### **cybox.objects.volume\_object module**

**class** `cybox.objects.volume_object.FileSystemFlagList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.volume_object.FileSystemFlagListType`

**class** `cybox.objects.volume_object.Volume`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.volume_object.VolumeObjectType`

#### **actual\_available\_allocation\_units**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Actual\_Available\_Allocation\_Units

Dictionary key name: actual\_available\_allocation\_units

#### **bytes\_per\_sector**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Bytes\_Per\_Sector

Dictionary key name: bytes\_per\_sector

#### **creation\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Creation\_Time

Dictionary key name: creation\_time

#### **device\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Device\_Path

Dictionary key name: device\_path

#### **file\_system\_flag\_list**

Type: *cybox.objects.volume\_object.FileSystemFlagList*

XML Binding class name: File\_System\_Flag\_List

Dictionary key name: file\_system\_flag\_list

#### **file\_system\_type**

Type: *cybox.common.properties.String*

XML Binding class name: File\_System\_Type

Dictionary key name: file\_system\_type

#### **is\_mounted**

XML Binding class name: is\_mounted

Dictionary key name: is\_mounted

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **sectors\_per\_allocation\_unit**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Sectors\_Per\_Allocation\_Unit

Dictionary key name: sectors\_per\_allocation\_unit

#### **serial\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Serial\_Number

Dictionary key name: serial\_number

**total\_allocation\_units**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Total\_Allocation\_Units

Dictionary key name: total\_allocation\_units

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**cybox.objects.whois\_object module**

**class** cybox.objects.whois\_object.**WhoisContact**

Bases: cybox.Entity

XML binding class: cybox.bindings.whois\_object.WhoisContactType

**address**

Type: *cybox.common.properties.String*

XML Binding class name: Address

Dictionary key name: address

**contact\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Contact\_ID

Dictionary key name: contact\_id

**contact\_type**

XML Binding class name: contact\_type

Dictionary key name: contact\_type

**email\_address**

Type: *cybox.objects.address\_object.EmailAddress*

XML Binding class name: Email\_Address

Dictionary key name: email\_address

**fax\_number**

Type: *cybox.common.properties.String*

XML Binding class name: Fax\_Number

Dictionary key name: fax\_number

**name**

Type: *cybox.common.properties.String*  
XML Binding class name: Name  
Dictionary key name: name

**organization**

Type: *cybox.common.properties.String*  
XML Binding class name: Organization  
Dictionary key name: organization

**phone\_number**

Type: *cybox.common.properties.String*  
XML Binding class name: Phone\_Number  
Dictionary key name: phone\_number

**class** `cybox.objects.whois_object.WhoisContacts` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisContactsType`

**class** `cybox.objects.whois_object.WhoisEntry`  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.whois_object.WhoisObjectType`

**contact\_info**

Type: *cybox.objects.whois\_object.WhoisContact*  
XML Binding class name: Contact\_Info  
Dictionary key name: contact\_info

**creation\_date**

Type: *cybox.common.properties.Date*  
XML Binding class name: Creation\_Date  
Dictionary key name: creation\_date

**dnssec**

XML Binding class name: DNSSEC  
Dictionary key name: dnssec

**domain\_id**

Type: *cybox.common.properties.String*  
XML Binding class name: Domain\_ID  
Dictionary key name: domain\_id

**domain\_name**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: Domain\_Name

Dictionary key name: domain\_name

**expiration\_date**

Type: *cybox.common.properties.Date*

XML Binding class name: Expiration\_Date

Dictionary key name: expiration\_date

**ip\_address**

Type: *cybox.objects.address\_object.Address*

XML Binding class name: IP\_Address

Dictionary key name: ip\_address

**lookup\_date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Lookup\_Date

Dictionary key name: lookup\_date

**nameservers**

Type: *cybox.objects.whois\_object.WhoisNameservers*

XML Binding class name: Nameservers

Dictionary key name: nameservers

**regional\_internet\_registry**

Type: *cybox.common.properties.String*

XML Binding class name: Regional\_Internet\_Registry

Dictionary key name: regional\_internet\_registry

**registrants**

Type: *cybox.objects.whois\_object.WhoisRegistrants*

XML Binding class name: Registrants

Dictionary key name: registrants

**registrar\_info**

Type: *cybox.objects.whois\_object.WhoisRegistrar*

XML Binding class name: Registrar\_Info

Dictionary key name: registrar\_info

**remarks**

Type: *cybox.common.properties.String*

XML Binding class name: Remarks

Dictionary key name: remarks

#### **server\_name**

Type: *cybox.objects.uri\_object.URI*

XML Binding class name: Server\_Name

Dictionary key name: server\_name

#### **sponsoring\_registrar**

Type: *cybox.common.properties.String*

XML Binding class name: Sponsoring\_Registrar

Dictionary key name: sponsoring\_registrar

#### **status**

Type: *cybox.objects.whois\_object.WhoisStatuses*

XML Binding class name: Status

Dictionary key name: status

#### **updated\_date**

Type: *cybox.common.properties.Date*

XML Binding class name: Updated\_Date

Dictionary key name: updated\_date

**class** `cybox.objects.whois_object.WhoisNameservers` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisNameserversType`

**class** `cybox.objects.whois_object.WhoisRegistrant`

Bases: *cybox.objects.whois\_object.WhoisContact*

XML binding class: `cybox.bindings.whois_object.WhoisRegistrantInfoType`

#### **registrant\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Registrant\_ID

Dictionary key name: registrant\_id

**class** `cybox.objects.whois_object.WhoisRegistrants` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisRegistrantsType`

**class** `cybox.objects.whois_object.WhoisRegistrar`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.whois_object.WhoisRegistrarInfoType`

**address**

Type: `cybox.common.properties.String`  
XML Binding class name: Address  
Dictionary key name: address

**contacts**

Type: `cybox.objects.whois_object.WhoisContacts`  
XML Binding class name: Contacts  
Dictionary key name: contacts

**email\_address**

Type: `cybox.objects.address_object.EmailAddress`  
XML Binding class name: Email\_Address  
Dictionary key name: email\_address

**name**

Type: `cybox.common.properties.String`  
XML Binding class name: Name  
Dictionary key name: name

**phone\_number**

Type: `cybox.common.properties.String`  
XML Binding class name: Phone\_Number  
Dictionary key name: phone\_number

**referral\_url**

Type: `cybox.objects.uri_object.URI`  
XML Binding class name: Referral\_URL  
Dictionary key name: referral\_url

**registrar\_guid**

Type: `cybox.common.properties.String`  
XML Binding class name: Registrar\_GUID  
Dictionary key name: registrar\_guid

**registrar\_id**

Type: *cybox.common.properties.String*  
XML Binding class name: Registrar\_ID  
Dictionary key name: registrar\_id

**whois\_server**

Type: *cybox.objects.uri\_object.URI*  
XML Binding class name: Whois\_Server  
Dictionary key name: whois\_server

**class** `cybox.objects.whois_object.WhoisStatus` (*value=None*)  
Bases: *cybox.common.properties.BaseProperty*

XML binding class: `cybox.bindings.whois_object.WhoisStatusType`

**class** `cybox.objects.whois_object.WhoisStatuses` (*\*args*)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisStatusesType`

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**cybox.objects.win\_computer\_account\_object module**

**class** `cybox.objects.win_computer_account_object.FullyQualifiedName`  
Bases: `cybox.Entity`

XML binding class:  
`cybox.bindings.win_computer_account_object.FullyQualifiedNameType`

**full\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Full\_Name  
Dictionary key name: full\_name

**netbeui\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: NetBEUI\_Name  
Dictionary key name: netbeui\_name

**class** `cybox.objects.win_computer_account_object.Kerberos`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_computer_account_object.KerberosType`

#### **delegation**

Type: *cybox.objects.win\_computer\_account\_object.KerberosDelegation*

XML Binding class name: Delegation

Dictionary key name: delegation

#### **ticket**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Ticket

Dictionary key name: ticket

**class** `cybox.objects.win_computer_account_object.KerberosDelegation`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_computer_account_object.KerberosDelegationType`

#### **bitmask**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Bitmask

Dictionary key name: bitmask

#### **service**

Type: *cybox.objects.win\_computer\_account\_object.KerberosService*

XML Binding class name: Service

Dictionary key name: service

**class** `cybox.objects.win_computer_account_object.KerberosService`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_computer_account_object.KerberosServiceType`

#### **computer**

Type: *cybox.common.properties.String*

XML Binding class name: Computer

Dictionary key name: computer

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**port**

Type: *cybox.objects.port\_object.Port*

XML Binding class name: Port

Dictionary key name: port

**user**

Type: *cybox.common.properties.String*

XML Binding class name: User

Dictionary key name: user

**class** `cybox.objects.win_computer_account_object.WinComputerAccount`

Bases: *cybox.objects.account\_object.Account*

XML binding class:

`cybox.bindings.win_computer_account_object.WindowsComputerAccountObjectType`

**fully\_qualified\_name**

Type: *cybox.objects.win\_computer\_account\_object.FullyQualifiedName*

XML Binding class name: Fully\_Qualified\_Name

Dictionary key name: fully\_qualified\_name

**kerberos**

Type: *cybox.objects.win\_computer\_account\_object.Kerberos*

XML Binding class name: Kerberos

Dictionary key name: kerberos

**security\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_ID

Dictionary key name: security\_id

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

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**cybox.objects.win\_critical\_section\_object module**

**class** `cybox.objects.win_critical_section_object.WinCriticalSection`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.win_critical_section_object.WindowsCriticalSectionObjectType`

#### **address**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Address

Dictionary key name: address

#### **spin\_count**

Type: `cybox.common.properties.NonNegativeInteger`

XML Binding class name: Spin\_Count

Dictionary key name: spin\_count

Version: 2.1.0.12.dev0

### **cybox.objects.win\_driver\_object module**

**class** `cybox.objects.win_driver_object.DeviceObjectList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_driver_object.DeviceObjectListType`

**class** `cybox.objects.win_driver_object.DeviceObjectStruct`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_driver_object.DeviceObjectStructType`

#### **attached\_device\_name**

Type: `cybox.common.properties.String`

XML Binding class name: Attached\_Device\_Name

Dictionary key name: attached\_device\_name

#### **attached\_device\_object**

Type: `cybox.common.properties.UnsignedLong`

XML Binding class name: Attached\_Device\_Object

Dictionary key name: attached\_device\_object

#### **attached\_to\_device\_name**

Type: `cybox.common.properties.String`

XML Binding class name: Attached\_To\_Device\_Name

Dictionary key name: attached\_to\_device\_name

**attached\_to\_device\_object**

Type: *cybox.common.properties.UnsignedLong*  
 XML Binding class name: Attached\_To\_Device\_Object  
 Dictionary key name: attached\_to\_device\_object

**attached\_to\_driver\_name**

Type: *cybox.common.properties.String*  
 XML Binding class name: Attached\_To\_Driver\_Name  
 Dictionary key name: attached\_to\_driver\_name

**attached\_to\_driver\_object**

Type: *cybox.common.properties.UnsignedLong*  
 XML Binding class name: Attached\_To\_Driver\_Object  
 Dictionary key name: attached\_to\_driver\_object

**device\_name**

Type: *cybox.common.properties.String*  
 XML Binding class name: Device\_Name  
 Dictionary key name: device\_name

**device\_object**

Type: *cybox.common.properties.UnsignedLong*  
 XML Binding class name: Device\_Object  
 Dictionary key name: device\_object

**class** `cybox.objects.win_driver_object.WinDriver`

Bases: *cybox.objects.win\_executable\_file\_object.WinExecutableFile*

XML binding class: `cybox.bindings.win_driver_object.WindowsDriverObjectType`

**device\_object\_list**

Type: *cybox.objects.win\_driver\_object.DeviceObjectList*  
 XML Binding class name: Device\_Object\_List  
 Dictionary key name: device\_object\_list

**driver\_init**

Type: *cybox.common.properties.UnsignedLong*  
 XML Binding class name: Driver\_Init  
 Dictionary key name: driver\_init

**driver\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Driver\_Name  
Dictionary key name: driver\_name

**driver\_object\_address**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Driver\_Object\_Address  
Dictionary key name: driver\_object\_address

**driver\_start\_io**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Driver\_Start\_IO  
Dictionary key name: driver\_start\_io

**driver\_unload**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Driver\_Unload  
Dictionary key name: driver\_unload

**image\_base**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Image\_Base  
Dictionary key name: image\_base

**image\_size**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Image\_Size  
Dictionary key name: image\_size

**irp\_mj\_cleanup**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_CLEANUP  
Dictionary key name: irp\_mj\_cleanup

**irp\_mj\_close**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_CLOSE  
Dictionary key name: irp\_mj\_close

**irp\_mj\_create**

Type: *cybox.common.properties.UnsignedLong*  
XML Binding class name: IRP\_MJ\_CREATE  
Dictionary key name: irp\_mj\_create

**irp\_mj\_create\_mailslot**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_CREATE\_MAILSLLOT

Dictionary key name: irp\_mj\_create\_mailslot

**irp\_mj\_create\_named\_pipe**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_CREATE\_NAMED\_PIPE

Dictionary key name: irp\_mj\_create\_named\_pipe

**irp\_mj\_device\_change**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_DEVICE\_CHANGE

Dictionary key name: irp\_mj\_device\_change

**irp\_mj\_device\_control**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_DEVICE\_CONTROL

Dictionary key name: irp\_mj\_device\_control

**irp\_mj\_directory\_control**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_DIRECTORY\_CONTROL

Dictionary key name: irp\_mj\_directory\_control

**irp\_mj\_file\_system\_control**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_FILE\_SYSTEM\_CONTROL

Dictionary key name: irp\_mj\_file\_system\_control

**irp\_mj\_flush\_buffers**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_FLUSH\_BUFFERS

Dictionary key name: irp\_mj\_flush\_buffers

**irp\_mj\_internal\_device\_control**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_INTERNAL\_DEVICE\_CONTROL

Dictionary key name: irp\_mj\_internal\_device\_control

**irp\_mj\_lock\_control**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_LOCK\_CONTROL

Dictionary key name: irp\_mj\_lock\_control

#### **irp\_mj\_pnp**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_PNP

Dictionary key name: irp\_mj\_pnp

#### **irp\_mj\_power**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_POWER

Dictionary key name: irp\_mj\_power

#### **irp\_mj\_query\_ea**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_EA

Dictionary key name: irp\_mj\_query\_ea

#### **irp\_mj\_query\_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_INFORMATION

Dictionary key name: irp\_mj\_query\_information

#### **irp\_mj\_query\_quota**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_QUOTA

Dictionary key name: irp\_mj\_query\_quota

#### **irp\_mj\_query\_security**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_SECURITY

Dictionary key name: irp\_mj\_query\_security

#### **irp\_mj\_query\_volume\_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_QUERY\_VOLUME\_INFORMATION

Dictionary key name: irp\_mj\_query\_volume\_information

#### **irp\_mj\_read**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_READ

Dictionary key name: irp\_mj\_read

**irp\_mj\_set\_ea**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_EA

Dictionary key name: irp\_mj\_set\_ea

**irp\_mj\_set\_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_INFORMATION

Dictionary key name: irp\_mj\_set\_information

**irp\_mj\_set\_quota**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_QUOTA

Dictionary key name: irp\_mj\_set\_quota

**irp\_mj\_set\_security**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_SECURITY

Dictionary key name: irp\_mj\_set\_security

**irp\_mj\_set\_volume\_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SET\_VOLUME\_INFORMATION

Dictionary key name: irp\_mj\_set\_volume\_information

**irp\_mj\_shutdown**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SHUTDOWN

Dictionary key name: irp\_mj\_shutdown

**irp\_mj\_system\_control**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_SYSTEM\_CONTROL

Dictionary key name: irp\_mj\_system\_control

**irp\_mj\_write**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP\_MJ\_WRITE

Dictionary key name: irp\_mj\_write

Version: 2.1.0.12.dev0

### **cybox.objects.win\_event\_log\_object module**

**class** `cybox.objects.win_event_log_object.UnformattedMessageList` (\*args)  
Bases: `cybox.EntityList`

XML binding class:

`cybox.bindings.win_event_log_object.UnformattedMessageListType`

**class** `cybox.objects.win_event_log_object.WinEventLog`  
Bases: `cybox.common.object_properties.ObjectProperties`

XML binding class:

`cybox.bindings.win_event_log_object.WindowsEventLogObjectType`

#### **blob**

Type: `cybox.common.properties.Base64Binary`

XML Binding class name: Blob

Dictionary key name: blob

#### **category**

Type: `cybox.common.properties.String`

XML Binding class name: Category

Dictionary key name: category

#### **category\_num**

Type: `cybox.common.properties.Long`

XML Binding class name: Category\_Num

Dictionary key name: category\_num

#### **correlation\_activity\_id**

Type: `cybox.common.properties.String`

XML Binding class name: Correlation\_Activity\_ID

Dictionary key name: correlation\_activity\_id

#### **correlation\_related\_activity\_id**

Type: `cybox.common.properties.String`

XML Binding class name: Correlation\_Related\_Activity\_ID

Dictionary key name: correlation\_related\_activity\_id

#### **eid**

Type: `cybox.common.properties.Long`

XML Binding class name: EID

Dictionary key name: eid

#### **execution\_process\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Execution\_Process\_ID

Dictionary key name: execution\_process\_id

#### **execution\_thread\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Execution\_Thread\_ID

Dictionary key name: execution\_thread\_id

#### **generation\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Generation\_Time

Dictionary key name: generation\_time

#### **index**

Type: *cybox.common.properties.Long*

XML Binding class name: Index

Dictionary key name: index

#### **log**

Type: *cybox.common.properties.String*

XML Binding class name: Log

Dictionary key name: log

#### **machine**

Type: *cybox.common.properties.String*

XML Binding class name: Machine

Dictionary key name: machine

#### **message**

Type: *cybox.common.properties.String*

XML Binding class name: Message

Dictionary key name: message

#### **reserved**

Type: *cybox.common.properties.Long*

XML Binding class name: Reserved

Dictionary key name: reserved

#### **source**

Type: *cybox.common.properties.String*  
XML Binding class name: Source  
Dictionary key name: source

**type**

Type: *cybox.common.properties.String*  
XML Binding class name: Type  
Dictionary key name: type

**unformatted\_message\_list**

Type: *cybox.objects.win\_event\_log\_object.UnformattedMessageList*  
XML Binding class name: Unformatted\_Message\_List  
Dictionary key name: unformatted\_message\_list

**user**

Type: *cybox.common.properties.String*  
XML Binding class name: User  
Dictionary key name: user

**write\_time**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Write\_Time  
Dictionary key name: write\_time

Version: 2.1.0.12.dev0

**cybox.objects.win\_event\_object module**

**class** `cybox.objects.win_event_object.WinEvent`  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_event_object.WindowsEventObjectType`

**handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: Handle  
Dictionary key name: handle

**name**

Type: *cybox.common.properties.String*  
XML Binding class name: Name  
Dictionary key name: name

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

Version: 2.1.0.12.dev0

**cybox.objects.win\_executable\_file\_object module**

**class** `cybox.objects.win_executable_file_object.DOSHeader`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.DOSHeaderType`

**e\_cblp**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_cblp

Dictionary key name: e\_cblp

**e\_cp**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_cp

Dictionary key name: e\_cp

**e\_cparhdr**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_cparhdr

Dictionary key name: e\_cparhdr

**e\_crlc**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_crlc

Dictionary key name: e\_crlc

**e\_cs**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_cs

Dictionary key name: e\_cs

**e\_csum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_csum

Dictionary key name: e\_csum

#### **e\_ip**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_ip

Dictionary key name: e\_ip

#### **e\_lfanew**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_lfanew

Dictionary key name: e\_lfanew

#### **e\_lfarlc**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_lfarlc

Dictionary key name: e\_lfarlc

#### **e\_magic**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_magic

Dictionary key name: e\_magic

#### **e\_maxalloc**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_maxalloc

Dictionary key name: e\_maxalloc

#### **e\_minalloc**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_minalloc

Dictionary key name: e\_minalloc

#### **e\_oemid**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_oemid

Dictionary key name: e\_oemid

#### **e\_oeminfo**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: e\_oeminfo

Dictionary key name: e\_oeminfo

#### **e\_ovro**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_ovro  
Dictionary key name: e\_ovro

#### **e\_sp**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_sp  
Dictionary key name: e\_sp

#### **e\_ss**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: e\_ss  
Dictionary key name: e\_ss

#### **hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Hashes  
Dictionary key name: hashes

#### **reserved2**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: reserved2  
Dictionary key name: reserved2

**class** `cybox.objects.win_executable_file_object.DataDirectory`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.DataDirectoryType`

#### **architecture**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*  
XML Binding class name: Architecture  
Dictionary key name: architecture

#### **base\_relocation\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*  
XML Binding class name: Base\_Relocation\_Table  
Dictionary key name: base\_relocation\_table

#### **bound\_import**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*  
XML Binding class name: Bound\_Import

Dictionary key name: bound\_import

#### **certificate\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Certificate\_Table

Dictionary key name: certificate\_table

#### **clr\_runtime\_header**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: CLR\_Runtime\_Header

Dictionary key name: clr\_runtime\_header

#### **debug**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Debug

Dictionary key name: debug

#### **delay\_import\_descriptor**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Delay\_Import\_Descriptor

Dictionary key name: delay\_import\_descriptor

#### **exception\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Exception\_Table

Dictionary key name: exception\_table

#### **export\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Export\_Table

Dictionary key name: export\_table

#### **global\_ptr**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Global\_Ptr

Dictionary key name: global\_ptr

#### **import\_address\_table**

Type: *cybox.objects.win\_executable\_file\_object.PEDataDirectoryStruct*

XML Binding class name: Import\_Address\_Table

Dictionary key name: import\_address\_table

#### **import\_table**

Type: `cybox.objects.win_executable_file_object.PEDataDirectoryStruct`  
 XML Binding class name: `Import_Table`  
 Dictionary key name: `import_table`

**load\_config\_table**

Type: `cybox.objects.win_executable_file_object.PEDataDirectoryStruct`  
 XML Binding class name: `Load_Config_Table`  
 Dictionary key name: `load_config_table`

**reserved**

Type: `cybox.objects.win_executable_file_object.PEDataDirectoryStruct`  
 XML Binding class name: `Reserved`  
 Dictionary key name: `reserved`

**resource\_table**

Type: `cybox.objects.win_executable_file_object.PEDataDirectoryStruct`  
 XML Binding class name: `Resource_Table`  
 Dictionary key name: `resource_table`

**tls\_table**

Type: `cybox.objects.win_executable_file_object.PEDataDirectoryStruct`  
 XML Binding class name: `Tls_Table`  
 Dictionary key name: `tls_table`

**class** `cybox.objects.win_executable_file_object.Entropy`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.EntropyType`

**max**

Type: `cybox.common.properties.Float`  
 XML Binding class name: `Max`  
 Dictionary key name: `max`

**min**

Type: `cybox.common.properties.Float`  
 XML Binding class name: `Min`  
 Dictionary key name: `min`

**value**

Type: `cybox.common.properties.Float`  
 XML Binding class name: `Value`

Dictionary key name: value

**class** `cybox.objects.win_executable_file_object.PEBuildInformation`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_executable_file_object.PEBuildInformationType`

#### **compiler\_name**

Type: `cybox.common.properties.String`

XML Binding class name: `Compiler_Name`

Dictionary key name: `compiler_name`

#### **compiler\_version**

Type: `cybox.common.properties.String`

XML Binding class name: `Compiler_Version`

Dictionary key name: `compiler_version`

#### **linker\_name**

Type: `cybox.common.properties.String`

XML Binding class name: `Linker_Name`

Dictionary key name: `linker_name`

#### **linker\_version**

Type: `cybox.common.properties.String`

XML Binding class name: `Linker_Version`

Dictionary key name: `linker_version`

**class** `cybox.objects.win_executable_file_object.PEChecksum`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEChecksumType`

#### **pe\_computed\_api**

Type: `cybox.common.properties.Long`

XML Binding class name: `PE_Computed_API`

Dictionary key name: `pe_computed_api`

#### **pe\_file\_api**

Type: `cybox.common.properties.Long`

XML Binding class name: `PE_File_API`

Dictionary key name: `pe_file_api`

**pe\_file\_raw**

Type: *cybox.common.properties.Long*

XML Binding class name: PE\_File\_Raw

Dictionary key name: pe\_file\_raw

**class** `cybox.objects.win_executable_file_object.PEDataDirectoryStruct`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_executable_file_object.PEDataDirectoryStructType`

**size**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Size

Dictionary key name: size

**virtual\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Virtual\_Address

Dictionary key name: virtual\_address

**class** `cybox.objects.win_executable_file_object.PEExportedFunction`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_executable_file_object.PEExportedFunctionType`

**entry\_point**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Entry\_Point

Dictionary key name: entry\_point

**function\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Function\_Name

Dictionary key name: function\_name

**ordinal**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Ordinal

Dictionary key name: ordinal

**class** `cybox.objects.win_executable_file_object.PEExportedFunctions` (\*args)  
Bases: `cybox.EntityList`

XML binding class:

`cybox.bindings.win_executable_file_object.PEExportedFunctionsType`

**class** `cybox.objects.win_executable_file_object.PEExports`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEExportsType`

#### **exported\_functions**

Type: `cybox.objects.win_executable_file_object.PEExportedFunctions`

XML Binding class name: `Exported_Functions`

Dictionary key name: `exported_functions`

#### **exports\_time\_stamp**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Exports_Time_Stamp`

Dictionary key name: `exports_time_stamp`

#### **name**

Type: `cybox.common.properties.String`

XML Binding class name: `Name`

Dictionary key name: `name`

#### **number\_of\_addresses**

Type: `cybox.common.properties.Long`

XML Binding class name: `Number_Of_Addresses`

Dictionary key name: `number_of_addresses`

#### **number\_of\_functions**

Type: `cybox.common.properties.Integer`

XML Binding class name: `Number_Of_Functions`

Dictionary key name: `number_of_functions`

#### **number\_of\_names**

Type: `cybox.common.properties.Long`

XML Binding class name: `Number_Of_Names`

Dictionary key name: `number_of_names`

**class** `cybox.objects.win_executable_file_object.PEFileHeader`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEFileHeaderType`

#### **characteristics**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: Characteristics  
Dictionary key name: characteristics

#### **hashes**

Type: `cybox.common.hashes.HashList`  
XML Binding class name: Hashes  
Dictionary key name: hashes

#### **machine**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: Machine  
Dictionary key name: machine

#### **number\_of\_sections**

Type: `cybox.common.properties.NonNegativeInteger`  
XML Binding class name: Number\_Of\_Sections  
Dictionary key name: number\_of\_sections

#### **number\_of\_symbols**

Type: `cybox.common.properties.NonNegativeInteger`  
XML Binding class name: Number\_Of\_Symbols  
Dictionary key name: number\_of\_symbols

#### **pointer\_to\_symbol\_table**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: Pointer\_To\_Symbol\_Table  
Dictionary key name: pointer\_to\_symbol\_table

#### **size\_of\_optional\_header**

Type: `cybox.common.properties.HexBinary`  
XML Binding class name: Size\_Of\_Optional\_Header  
Dictionary key name: size\_of\_optional\_header

#### **time\_date\_stamp**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Time\_Date\_Stamp

Dictionary key name: time\_date\_stamp

**class** `cybox.objects.win_executable_file_object.PEHeaders`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEHeadersType`

#### **dos\_header**

Type: *cybox.objects.win\_executable\_file\_object.DOSHeader*

XML Binding class name: DOS\_Header

Dictionary key name: dos\_header

#### **entropy**

Type: *cybox.objects.win\_executable\_file\_object.Entropy*

XML Binding class name: Entropy

Dictionary key name: entropy

#### **file\_header**

Type: *cybox.objects.win\_executable\_file\_object.PEFileHeader*

XML Binding class name: File\_Header

Dictionary key name: file\_header

#### **hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

#### **optional\_header**

Type: *cybox.objects.win\_executable\_file\_object.PEOptionalHeader*

XML Binding class name: Optional\_Header

Dictionary key name: optional\_header

#### **signature**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Signature

Dictionary key name: signature

**class** `cybox.objects.win_executable_file_object.PEImport`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEImportType`

**delay\_load**

XML Binding class name: delay\_load

Dictionary key name: delay\_load

**file\_name**

Type: *cybox.common.properties.String*

XML Binding class name: File\_Name

Dictionary key name: file\_name

**imported\_functions**

Type: *cybox.objects.win\_executable\_file\_object.PEImportedFunctions*

XML Binding class name: Imported\_Functions

Dictionary key name: imported\_functions

**initially\_visible**

XML Binding class name: initially\_visible

Dictionary key name: initially\_visible

**virtual\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Virtual\_Address

Dictionary key name: virtual\_address

**class** `cybox.objects.win_executable_file_object.PEImportList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_executable_file_object.PEImportListType`

**class** `cybox.objects.win_executable_file_object.PEImportedFunction`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_executable_file_object.PEImportedFunctionType`

**bound**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Bound

Dictionary key name: bound

**function\_name**

Type: *cybox.common.properties.String*

XML Binding class name: `Function_Name`

Dictionary key name: `function_name`

#### **hint**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Hint`

Dictionary key name: `hint`

#### **ordinal**

Type: `cybox.common.properties.NonNegativeInteger`

XML Binding class name: `Ordinal`

Dictionary key name: `ordinal`

#### **virtual\_address**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Virtual_Address`

Dictionary key name: `virtual_address`

**class** `cybox.objects.win_executable_file_object.PEImportedFunctions` (\*args)  
Bases: `cybox.EntityList`

XML binding class:

`cybox.bindings.win_executable_file_object.PEImportedFunctionsType`

**class** `cybox.objects.win_executable_file_object.PEOptionalHeader`  
Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.win_executable_file_object.PEOptionalHeaderType`

#### **address\_of\_entry\_point**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Address_Of_Entry_Point`

Dictionary key name: `address_of_entry_point`

#### **base\_of\_code**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: `Base_Of_Code`

Dictionary key name: `base_of_code`

#### **base\_of\_data**

Type: `cybox.common.properties.HexBinary`

XML Binding class name: Base\_Of\_Data

Dictionary key name: base\_of\_data

#### **checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

#### **data\_directory**

Type: *cybox.objects.win\_executable\_file\_object.DataDirectory*

XML Binding class name: Data\_Directory

Dictionary key name: data\_directory

#### **dll\_characteristics**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: DLL\_Characteristics

Dictionary key name: dll\_characteristics

#### **file\_alignment**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: File\_Alignment

Dictionary key name: file\_alignment

#### **hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

#### **image\_base**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Image\_Base

Dictionary key name: image\_base

#### **loader\_flags**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Loader\_Flags

Dictionary key name: loader\_flags

#### **magic**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Magic

Dictionary key name: magic

**major\_image\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Major\_Image\_Version

Dictionary key name: major\_image\_version

**major\_linker\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Major\_Linker\_Version

Dictionary key name: major\_linker\_version

**major\_os\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Major\_OS\_Version

Dictionary key name: major\_os\_version

**major\_subsystem\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Major\_Subsystem\_Version

Dictionary key name: major\_subsystem\_version

**minor\_image\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Minor\_Image\_Version

Dictionary key name: minor\_image\_version

**minor\_linker\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Minor\_Linker\_Version

Dictionary key name: minor\_linker\_version

**minor\_os\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Minor\_OS\_Version

Dictionary key name: minor\_os\_version

**minor\_subsystem\_version**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Minor\_Subsystem\_Version

Dictionary key name: minor\_subsystem\_version

**number\_of\_rva\_and\_sizes**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Number\_Of\_Rva\_And\_Sizes

Dictionary key name: number\_of\_rva\_and\_sizes

#### **section\_alignment**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Section\_Alignment

Dictionary key name: section\_alignment

#### **size\_of\_code**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Code

Dictionary key name: size\_of\_code

#### **size\_of\_headers**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Headers

Dictionary key name: size\_of\_headers

#### **size\_of\_heap\_commit**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Heap\_Commit

Dictionary key name: size\_of\_heap\_commit

#### **size\_of\_heap\_reserve**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Heap\_Reserve

Dictionary key name: size\_of\_heap\_reserve

#### **size\_of\_image**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Image

Dictionary key name: size\_of\_image

#### **size\_of\_initialized\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Initialized\_Data

Dictionary key name: size\_of\_initialized\_data

#### **size\_of\_stack\_commit**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size\_Of\_Stack\_Commit

Dictionary key name: size\_of\_stack\_commit

#### **size\_of\_stack\_reserve**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Size\_Of\_Stack\_Reserve  
Dictionary key name: size\_of\_stack\_reserve

#### **size\_of\_uninitialized\_data**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Size\_Of\_Uninitialized\_Data  
Dictionary key name: size\_of\_uninitialized\_data

#### **subsystem**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Subsystem  
Dictionary key name: subsystem

#### **win32\_version\_value**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Win32\_Version\_Value  
Dictionary key name: win32\_version\_value

**class** `cybox.objects.win_executable_file_object.PEResource`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEResourceType`

#### **data**

Type: *cybox.common.properties.String*  
XML Binding class name: Data  
Dictionary key name: data

#### **hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Hashes  
Dictionary key name: hashes

#### **language**

Type: *cybox.common.properties.String*  
XML Binding class name: Language  
Dictionary key name: language

#### **name**

Type: *cybox.common.properties.String*  
XML Binding class name: Name  
Dictionary key name: name

**size**

Type: *cybox.common.properties.PositiveInteger*  
XML Binding class name: Size  
Dictionary key name: size

**sub\_language**

Type: *cybox.common.properties.String*  
XML Binding class name: Sub\_Language  
Dictionary key name: sub\_language

**type\_**

Type: *cybox.common.properties.String*  
XML Binding class name: Type  
Dictionary key name: type

**virtual\_address**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Virtual\_Address  
Dictionary key name: virtual\_address

**class** `cybox.objects.win_executable_file_object.PEResourceList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_executable_file_object.PEResourceListType`

**static from\_list** (*pe\_resource\_list*)

**class** `cybox.objects.win_executable_file_object.PESection`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PESectionType`

**data\_hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Data\_Hashes  
Dictionary key name: data\_hashes

**entropy**

Type: *cybox.objects.win\_executable\_file\_object.Entropy*

XML Binding class name: Entropy

Dictionary key name: entropy

#### **header\_hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Header\_Hashes

Dictionary key name: header\_hashes

#### **section\_header**

Type: *cybox.objects.win\_executable\_file\_object.PESectionHeaderStruct*

XML Binding class name: Section\_Header

Dictionary key name: section\_header

**class** *cybox.objects.win\_executable\_file\_object.PESectionHeaderStruct*

Bases: *cybox.Entity*

XML binding class:

*cybox.bindings.win\_executable\_file\_object.PESectionHeaderStructType*

#### **characteristics**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Characteristics

Dictionary key name: characteristics

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **number\_of\_linenumbers**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number\_Of\_Linenumbers

Dictionary key name: number\_of\_linenumbers

#### **number\_of\_relocations**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number\_Of\_Relocations

Dictionary key name: number\_of\_relocations

#### **pointer\_to\_linenumbers**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer\_To\_Linenumbers

Dictionary key name: pointer\_to\_linenumbers

**pointer\_to\_raw\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Pointer_To_Raw_Data`

Dictionary key name: `pointer_to_raw_data`

**pointer\_to\_relocations**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Pointer_To_Relocations`

Dictionary key name: `pointer_to_relocations`

**size\_of\_raw\_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Size_Of_Raw_Data`

Dictionary key name: `size_of_raw_data`

**virtual\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Virtual_Address`

Dictionary key name: `virtual_address`

**virtual\_size**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Virtual_Size`

Dictionary key name: `virtual_size`

**class** `cybox.objects.win_executable_file_object.PESectionList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_executable_file_object.PESectionListType`

**class** `cybox.objects.win_executable_file_object.PEVersionInfoResource`

Bases: `cybox.objects.win_executable_file_object.PEResource`

XML binding class:

`cybox.bindings.win_executable_file_object.PEVersionInfoResourceType`

**comments**

Type: *cybox.common.properties.String*

XML Binding class name: `Comments`

Dictionary key name: `comments`

**companyname**

Type: *cybox.common.properties.String*

XML Binding class name: CompanyName

Dictionary key name: companyname

**filedescription**

Type: *cybox.common.properties.String*

XML Binding class name: FileDescription

Dictionary key name: filedescription

**fileversion**

Type: *cybox.common.properties.String*

XML Binding class name: FileVersion

Dictionary key name: fileversion

**internalname**

Type: *cybox.common.properties.String*

XML Binding class name: InternalName

Dictionary key name: internalname

**static keyword\_test** (*pe\_resource\_dict*)

**langid**

Type: *cybox.common.properties.String*

XML Binding class name: LangID

Dictionary key name: langid

**legalcopyright**

Type: *cybox.common.properties.String*

XML Binding class name: LegalCopyright

Dictionary key name: legalcopyright

**legaltrademarks**

Type: *cybox.common.properties.String*

XML Binding class name: LegalTrademarks

Dictionary key name: legaltrademarks

**originalfilename**

Type: *cybox.common.properties.String*

XML Binding class name: OriginalFilename

Dictionary key name: originalfilename

**privatebuild**

Type: *cybox.common.properties.String*  
 XML Binding class name: PrivateBuild  
 Dictionary key name: privatebuild

**productname**

Type: *cybox.common.properties.String*  
 XML Binding class name: ProductName  
 Dictionary key name: productname

**productversion**

Type: *cybox.common.properties.String*  
 XML Binding class name: ProductVersion  
 Dictionary key name: productversion

**specialbuild**

Type: *cybox.common.properties.String*  
 XML Binding class name: SpecialBuild  
 Dictionary key name: specialbuild

**class** `cybox.objects.win_executable_file_object.WinExecutableFile`  
 Bases: *cybox.objects.win\_file\_object.WinFile*

XML binding class:  
`cybox.bindings.win_executable_file_object.WindowsExecutableFileObjectType`

**build\_information**

Type: *cybox.objects.win\_executable\_file\_object.PEBuildInformation*  
 XML Binding class name: Build\_Information  
 Dictionary key name: build\_information

**digital\_signature**

Type: *cybox.common.digitalsignature.DigitalSignature*  
 XML Binding class name: Digital\_Signature  
 Dictionary key name: digital\_signature

**exports**

Type: *cybox.objects.win\_executable\_file\_object.PEExports*  
 XML Binding class name: Exports  
 Dictionary key name: exports

**extraneous\_bytes**

Type: *cybox.common.properties.Integer*  
 XML Binding class name: Extraneous\_Bytes

Dictionary key name: `extraneous_bytes`

#### **headers**

Type: `cybox.objects.win_executable_file_object.PEHeaders`

XML Binding class name: Headers

Dictionary key name: headers

#### **imports**

Type: `cybox.objects.win_executable_file_object.PEImportList`

XML Binding class name: Imports

Dictionary key name: imports

#### **pe\_checksum**

Type: `cybox.objects.win_executable_file_object.PEChecksum`

XML Binding class name: PE\_Checksum

Dictionary key name: pe\_checksum

#### **resources**

Type: `cybox.objects.win_executable_file_object.PEResourceList`

XML Binding class name: Resources

Dictionary key name: resources

#### **sections**

Type: `cybox.objects.win_executable_file_object.PESectionList`

XML Binding class name: Sections

Dictionary key name: sections

#### **type\_**

Type: `cybox.common.properties.String`

XML Binding class name: Type

Dictionary key name: type

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### **cybox.objects.win\_file\_object module**

**class** `cybox.objects.win_file_object.Stream`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_file_object.StreamObjectType`

#### **hashes**

(List of values permitted)  
 Type: *cybox.common.hashes.Hash*  
 XML Binding class name: Hash  
 Dictionary key name: hashes

**name**

Type: *cybox.common.properties.String*  
 XML Binding class name: Name  
 Dictionary key name: name

**size\_in\_bytes**

Type: *cybox.common.properties.UnsignedLong*  
 XML Binding class name: Size\_In\_Bytes  
 Dictionary key name: size\_in\_bytes

**class** `cybox.objects.win_file_object.StreamList` (\*args)  
 Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_file_object.StreamListType`

**class** `cybox.objects.win_file_object.WinFile`  
 Bases: *cybox.objects.file\_object.File*

XML binding class: `cybox.bindings.win_file_object.WindowsFileType`

**drive**

Type: *cybox.common.properties.String*  
 XML Binding class name: Drive  
 Dictionary key name: drive

**file\_attributes\_list**

Type: *cybox.objects.win\_file\_object.WindowsFileAttributes*  
 XML Binding class name: File\_Attributes\_List  
 Dictionary key name: file\_attributes\_list

**filename\_accessed\_time**

Type: *cybox.common.properties.DateTime*  
 XML Binding class name: Filename\_Accessed\_Time  
 Dictionary key name: filename\_accessed\_time

**filename\_created\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: `Filename_Created_Time`

Dictionary key name: `filename_created_time`

**filename\_modified\_time**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Filename_Modified_Time`

Dictionary key name: `filename_modified_time`

**privilege\_list**

Type: `cybox.objects.win_file_object.WindowsFilePermissions`

XML Binding class name: `Permissions`

Dictionary key name: `permissions`

**security\_id**

Type: `cybox.common.properties.String`

XML Binding class name: `Security_ID`

Dictionary key name: `security_id`

**security\_type**

Type: `cybox.common.properties.String`

XML Binding class name: `Security_Type`

Dictionary key name: `security_type`

**stream\_list**

Type: `cybox.objects.win_file_object.StreamList`

XML Binding class name: `Stream_List`

Dictionary key name: `stream_list`

**class** `cybox.objects.win_file_object.WindowsFileAttribute` (*value=None*)

Bases: `cybox.common.properties.String`

XML binding class: `cybox.bindings.win_file_object.WindowsFileAttributeType`

**class** `cybox.objects.win_file_object.WindowsFileAttributes` (*\*args*)

Bases: `cybox.objects.file_object.FileAttribute`, `cybox.EntityList`

XML binding class: `cybox.bindings.win_file_object.WindowsFileAttributesType`

**class** `cybox.objects.win_file_object.WindowsFilePermissions`

Bases: `cybox.objects.file_object.FilePermissions`, `cybox.Entity`

XML binding class: `cybox.bindings.win_file_object.WindowsFilePermissionsType`

**full\_control**

XML Binding class name: Full\_Control

Dictionary key name: full\_control

**modify**

XML Binding class name: Modify

Dictionary key name: modify

**read**

XML Binding class name: Read

Dictionary key name: read

**read\_and\_execute**

XML Binding class name: Read\_And\_Execute

Dictionary key name: read\_and\_execute

**write**

XML Binding class name: Write

Dictionary key name: write

**Version:** 2.1.0.12.dev0**cybox.objects.win\_filemapping\_object module****class** cybox.objects.win\_filemapping\_object.**WinFilemapping**Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

cybox.bindings.win\_filemapping\_object.WindowsFilemappingObjectType

**actual\_size**Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Actual\_Size

Dictionary key name: actual\_size

**file\_handle**Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: File\_Handle

Dictionary key name: file\_handle

**handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

#### **maximum\_size**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Maximum\_Size

Dictionary key name: maximum\_size

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **page\_protection\_attribute**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Page\_Protection\_Attribute

Dictionary key name: page\_protection\_attribute

#### **page\_protection\_value**

Type: *cybox.common.properties.String*

XML Binding class name: Page\_Protection\_Value

Dictionary key name: page\_protection\_value

#### **security\_attributes**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Attributes

Dictionary key name: security\_attributes

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### **cybox.objects.win\_handle\_object module**

**class** `cybox.objects.win_handle_object.WinHandle`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_handle_object.WindowsHandleObjectType`

#### **access\_mask**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Access\_Mask

Dictionary key name: access\_mask

**id\_**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: ID

Dictionary key name: id

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**object\_address**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Object\_Address

Dictionary key name: object\_address

**pointer\_count**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Pointer\_Count

Dictionary key name: pointer\_count

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

**class** `cybox.objects.win_handle_object.WinHandleList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_handle_object.WindowsHandleListType`

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**cybox.objects.win\_hook\_object module**

**class** `cybox.objects.win_hook_object.WinHook`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_hook_object.WindowsHookObjectType`

**handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

#### **hooking\_function\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Hooking\_Function\_Name

Dictionary key name: hooking\_function\_name

#### **hooking\_module**

Type: *cybox.objects.library\_object.Library*

XML Binding class name: Hooking\_Module

Dictionary key name: hooking\_module

#### **thread\_id**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Thread\_ID

Dictionary key name: thread\_id

#### **type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

Version: 2.1.0.12.dev0

### **cybox.objects.win\_kernel\_hook\_object module**

**class** `cybox.objects.win_kernel_hook_object.WinKernelHook`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.win_kernel_hook_object.WindowsKernelHookObjectType`

#### **digital\_signature\_hooked**

Type: *cybox.common.digitalsignature.DigitalSignature*

XML Binding class name: Digital\_Signature\_Hooked

Dictionary key name: digital\_signature\_hooked

#### **digital\_signature\_hooking**

Type: *cybox.common.digitalsignature.DigitalSignature*

XML Binding class name: Digital\_Signature\_Hooking

Dictionary key name: digital\_signature\_hooking

**hook\_description**

Type: *cybox.common.properties.String*

XML Binding class name: Hook\_Description

Dictionary key name: hook\_description

**hooked\_function**

Type: *cybox.common.properties.String*

XML Binding class name: Hooked\_Function

Dictionary key name: hooked\_function

**hooked\_module**

Type: *cybox.common.properties.String*

XML Binding class name: Hooked\_Module

Dictionary key name: hooked\_module

**hooking\_address**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Hooking\_Address

Dictionary key name: hooking\_address

**hooking\_module**

Type: *cybox.common.properties.String*

XML Binding class name: Hooking\_Module

Dictionary key name: hooking\_module

**type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

Version: 2.1.0.12.dev0

**cybox.objects.win\_kernel\_object module**

**class** `cybox.objects.win_kernel_object.IDTEntry`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_kernel_object.IDTEntryType`

**offset\_high**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Offset\_High

Dictionary key name: offset\_high

#### **offset\_low**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Offset\_Low

Dictionary key name: offset\_low

#### **offset\_middle**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Offset\_Middle

Dictionary key name: offset\_middle

#### **selector**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Selector

Dictionary key name: selector

#### **type\_attr**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Type\_Attr

Dictionary key name: type\_attr

**class** `cybox.objects.win_kernel_object.IDTEntryList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_kernel_object.IDTEntryListType`

**class** `cybox.objects.win_kernel_object.SSDTEntry`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_kernel_object.SSDTEntryType`

#### **argument\_table\_base**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Argument\_Table\_Base

Dictionary key name: argument\_table\_base

#### **hooked**

XML Binding class name: hooked

Dictionary key name: hooked

#### **number\_of\_services**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Number\_Of\_Services  
Dictionary key name: number\_of\_services

#### **service\_counter\_table\_base**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Service\_Counter\_Table\_Base  
Dictionary key name: service\_counter\_table\_base

#### **service\_table\_base**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Service\_Table\_Base  
Dictionary key name: service\_table\_base

**class** `cybox.objects.win_kernel_object.SSDTEntryList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_kernel_object.SSDTEntryListType`

**class** `cybox.objects.win_kernel_object.WinKernel`  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_kernel_object.WindowsKernelObjectType`

#### **idt**

Type: *cybox.objects.win\_kernel\_object.IDTEntryList*  
XML Binding class name: IDT  
Dictionary key name: idt

#### **ssdt**

Type: *cybox.objects.win\_kernel\_object.SSDTEntryList*  
XML Binding class name: SSDT  
Dictionary key name: ssdt

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### **cybox.objects.win\_mailslot\_object module**

**class** `cybox.objects.win_mailslot_object.WinMailslot`  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_mailslot_object.WindowsMailslotObjectType`

#### **handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

#### **max\_message\_size**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Max\_Message\_Size

Dictionary key name: max\_message\_size

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

#### **read\_timeout**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Read\_Timeout

Dictionary key name: read\_timeout

#### **security\_attributes**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Attributes

Dictionary key name: security\_attributes

Version: 2.1.0.12.dev0

### **cybox.objects.win\_memory\_page\_region\_object module**

**class** `cybox.objects.win_memory_page_region_object.WinMemoryPageRegion`

Bases: *cybox.objects.memory\_object.Memory*

XML binding class:

`cybox.bindings.win_memory_page_region_object.WindowsMemoryPageRegionObjectType`

#### **allocation\_base\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Allocation\_Base\_Address

Dictionary key name: allocation\_base\_address

#### **allocation\_protect**

Type: *cybox.common.properties.String*

XML Binding class name: Allocation\_Protect  
Dictionary key name: allocation\_protect

**block\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Block\_Type  
Dictionary key name: block\_type

**extracted\_features**

Type: *cybox.common.extracted\_features.ExtractedFeatures*  
XML Binding class name: Extracted\_Features  
Dictionary key name: extracted\_features

**hashes**

Type: *cybox.common.hashes.HashList*  
XML Binding class name: Hashes  
Dictionary key name: hashes

**is\_injected**

XML Binding class name: is\_injected  
Dictionary key name: is\_injected

**is\_mapped**

XML Binding class name: is\_mapped  
Dictionary key name: is\_mapped

**is\_protected**

XML Binding class name: is\_protected  
Dictionary key name: is\_protected

**is\_volatile**

XML Binding class name: is\_volatile  
Dictionary key name: is\_volatile

**memory\_source**

Type: *cybox.common.properties.String*  
XML Binding class name: Memory\_Source  
Dictionary key name: memory\_source

**name**

Type: *cybox.common.properties.String*  
XML Binding class name: Name  
Dictionary key name: name

#### **protect**

Type: *cybox.common.properties.String*

XML Binding class name: Protect

Dictionary key name: protect

#### **region\_end\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Region\_End\_Address

Dictionary key name: region\_end\_address

#### **region\_size**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Region\_Size

Dictionary key name: region\_size

#### **region\_start\_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Region\_Start\_Address

Dictionary key name: region\_start\_address

#### **state**

Type: *cybox.common.properties.String*

XML Binding class name: State

Dictionary key name: state

#### **type\_**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

Version: 2.1.0.12.dev0

### **cybox.objects.win\_mutex\_object module**

**class** `cybox.objects.win_mutex_object.WinMutex`

Bases: *cybox.objects.mutex\_object.Mutex*

XML binding class: `cybox.bindings.win_mutex_object.WindowsMutexObjectType`

#### **handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

#### **security\_attributes**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Attributes

Dictionary key name: security\_attributes

**Version:** 2.1.0.12.dev0

### **cybox.objects.win\_network\_route\_entry\_object module**

**class** `cybox.objects.win_network_route_entry_object.WinNetworkRouteEntry`

Bases: *cybox.objects.network\_route\_entry\_object.NetworkRouteEntry*

XML binding class:

`cybox.bindings.win_network_route_entry_object.WindowsNetworkRouteEntryObjectType`

#### **nl\_route\_origin**

Type: *cybox.common.properties.String*

XML Binding class name: NL\_ROUTE\_ORIGIN

Dictionary key name: nl\_route\_origin

#### **nl\_route\_protocol**

Type: *cybox.common.properties.String*

XML Binding class name: NL\_ROUTE\_PROTOCOL

Dictionary key name: nl\_route\_protocol

**Version:** 2.1.0.12.dev0

### **cybox.objects.win\_network\_share\_object module**

**class** `cybox.objects.win_network_share_object.WinNetworkShare`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.win_network_share_object.WindowsNetworkShareObjectType`

#### **access\_all**

XML Binding class name: ACCESS\_ALL

Dictionary key name: access\_all

#### **access\_attrib**

XML Binding class name: ACCESS\_ATTRIB  
Dictionary key name: access\_atrib

**access\_create**

XML Binding class name: ACCESS\_CREATE  
Dictionary key name: access\_create

**access\_delete**

XML Binding class name: ACCESS\_DELETE  
Dictionary key name: access\_delete

**access\_exec**

XML Binding class name: ACCESS\_EXEC  
Dictionary key name: access\_exec

**access\_perm**

XML Binding class name: ACCESS\_PERM  
Dictionary key name: access\_perm

**access\_read**

XML Binding class name: ACCESS\_READ  
Dictionary key name: access\_read

**access\_write**

XML Binding class name: ACCESS\_WRITE  
Dictionary key name: access\_write

**current\_uses**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Current\_Uses  
Dictionary key name: current\_uses

**local\_path**

Type: *cybox.common.properties.String*  
XML Binding class name: Local\_Path  
Dictionary key name: local\_path

**max\_uses**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Max\_Uses  
Dictionary key name: max\_uses

**netname**

Type: *cybox.common.properties.String*

XML Binding class name: Netname

Dictionary key name: netname

**type**

Type: *cybox.common.properties.String*

XML Binding class name: Type

Dictionary key name: type

Version: 2.1.0.12.dev0

**cybox.objects.win\_pipe\_object module**

**class** `cybox.objects.win_pipe_object.WinPipe`

Bases: *cybox.objects.pipe\_object.Pipe*

XML binding class: `cybox.bindings.win_pipe_object.WindowsPipeObjectType`

**default\_time\_out**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Default\_Time\_Out

Dictionary key name: default\_time\_out

**handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

**in\_buffer\_size**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: In\_Buffer\_Size

Dictionary key name: in\_buffer\_size

**max\_instances**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Max\_Instances

Dictionary key name: max\_instances

**open\_mode**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Open\_Mode

Dictionary key name: open\_mode

#### **out\_buffer\_size**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Out\_Buffer\_Size

Dictionary key name: out\_buffer\_size

#### **pipe\_mode**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pipe\_Mode

Dictionary key name: pipe\_mode

#### **security\_attributes**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Attributes

Dictionary key name: security\_attributes

Version: 2.1.0.12.dev0

### **cybox.objects.win\_prefetch\_object module**

**class** `cybox.objects.win_prefetch_object.AccessedDirectoryList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_prefetch_object.AccessedDirectoryListType`

**class** `cybox.objects.win_prefetch_object.AccessedFileList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_prefetch_object.AccessedFileListType`

**class** `cybox.objects.win_prefetch_object.Volume` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_prefetch_object.VolumeType`

#### **deviceitem**

Type: *cybox.objects.device\_object.Device*

XML Binding class name: DeviceItem

Dictionary key name: deviceitem

#### **volumeitem**

Type: *cybox.objects.win\_volume\_object.WinVolume*

XML Binding class name: VolumeItem

Dictionary key name: volumeitem

**class** `cybox.objects.win_prefetch_object.WinPrefetch`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: `cybox.bindings.win_prefetch_object.WindowsPrefetchObjectType`

#### **accessed\_directory\_list**

Type: *cybox.objects.win\_prefetch\_object.AccessedDirectoryList*

XML Binding class name: Accessed\_Directory\_List

Dictionary key name: accessed\_directory\_list

#### **accessed\_file\_list**

Type: *cybox.objects.win\_prefetch\_object.AccessedFileList*

XML Binding class name: Accessed\_File\_List

Dictionary key name: accessed\_file\_list

#### **application\_file\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Application\_File\_Name

Dictionary key name: application\_file\_name

#### **first\_run**

Type: *cybox.common.properties.DateTime*

XML Binding class name: First\_Run

Dictionary key name: first\_run

#### **last\_run**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Last\_Run

Dictionary key name: last\_run

#### **prefetch\_hash**

Type: *cybox.common.properties.String*

XML Binding class name: Prefetch\_Hash

Dictionary key name: prefetch\_hash

#### **times\_executed**

Type: *cybox.common.properties.Long*

XML Binding class name: Times\_Executed

Dictionary key name: times\_executed

#### **volume**

Type: *cybox.objects.win\_volume\_object.WinVolume*

XML Binding class name: Volume

Dictionary key name: volume

Version: 2.1.0.12.dev0

### **cybox.objects.win\_process\_object module**

**class** `cybox.objects.win_process_object.MemorySectionList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_process_object.MemorySectionListType`

**class** `cybox.objects.win_process_object.StartupInfo`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_process_object.StartupInfoType`

#### **dwfillattribute**

Type: *cybox.common.properties.Integer*

XML Binding class name: dwFillAttribute

Dictionary key name: dwfillattribute

#### **dwflags**

Type: *cybox.common.properties.Integer*

XML Binding class name: dwFlags

Dictionary key name: dwflags

#### **dwx**

Type: *cybox.common.properties.Integer*

XML Binding class name: dwX

Dictionary key name: dwx

#### **dwxcntchars**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: dwXCountChars

Dictionary key name: dwxcntchars

#### **dwxsize**

Type: *cybox.common.properties.PositiveInteger*  
XML Binding class name: dwXSize  
Dictionary key name: dwxsize

**dwy**

Type: *cybox.common.properties.Integer*  
XML Binding class name: dwY  
Dictionary key name: dwy

**dwycountchars**

Type: *cybox.common.properties.PositiveInteger*  
XML Binding class name: dwYCountChars  
Dictionary key name: dwycountchars

**dwysize**

Type: *cybox.common.properties.PositiveInteger*  
XML Binding class name: dwYSize  
Dictionary key name: dwysize

**hstderror**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: hStdError  
Dictionary key name: hstderror

**hstdinput**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: hStdInput  
Dictionary key name: hstdinput

**hstdoutput**

Type: *cybox.objects.win\_handle\_object.WinHandle*  
XML Binding class name: hStdOutput  
Dictionary key name: hstdoutput

**lpdesktop**

Type: *cybox.common.properties.String*  
XML Binding class name: lpDesktop  
Dictionary key name: lpdesktop

**lptitle**

Type: *cybox.common.properties.String*  
XML Binding class name: lpTitle  
Dictionary key name: lptitle

#### **wshowwindow**

Type: *cybox.common.properties.Integer*

XML Binding class name: wShowWindow

Dictionary key name: wshowwindow

**class** *cybox.objects.win\_process\_object.WinProcess*

Bases: *cybox.objects.process\_object.Process*

XML binding class: *cybox.bindings.win\_process\_object.WindowsProcessObjectType*

#### **aslr\_enabled**

XML Binding class name: aslr\_enabled

Dictionary key name: aslr\_enabled

#### **dep\_enabled**

XML Binding class name: dep\_enabled

Dictionary key name: dep\_enabled

#### **handle\_list**

Type: *cybox.objects.win\_handle\_object.WinHandleList*

XML Binding class name: Handle\_List

Dictionary key name: handle\_list

#### **priority**

Type: *cybox.common.properties.String*

XML Binding class name: Priority

Dictionary key name: priority

#### **section\_list**

Type: *cybox.objects.win\_process\_object.MemorySectionList*

XML Binding class name: Section\_List

Dictionary key name: section\_list

#### **security\_id**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_ID

Dictionary key name: security\_id

#### **security\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Type

Dictionary key name: security\_type

#### **startup\_info**

Type: *cybox.objects.win\_process\_object.StartupInfo*

XML Binding class name: Startup\_Info

Dictionary key name: startup\_info

#### **thread**

(List of values permitted)

Type: *cybox.objects.win\_thread\_object.WinThread*

XML Binding class name: Thread

Dictionary key name: thread

#### **window\_title**

Type: *cybox.common.properties.String*

XML Binding class name: Window\_Title

Dictionary key name: window\_title

**Version:** 2.1.0.12.dev0

### **cybox.objects.win\_registry\_key\_object module**

**class** `cybox.objects.win_registry_key_object.RegistrySubkeys` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_registry_key_object.RegistrySubkeysType`

**class** `cybox.objects.win_registry_key_object.RegistryValue`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_registry_key_object.RegistryValueType`

#### **byte\_runs**

Type: *cybox.common.byterun.ByteRuns*

XML Binding class name: Byte\_Runs

Dictionary key name: byte\_runs

#### **data**

Type: *cybox.common.properties.String*

XML Binding class name: Data

Dictionary key name: data

#### **datatype**

Type: *cybox.common.properties.String*

XML Binding class name: Datatype

Dictionary key name: datatype

#### **name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**class** `cybox.objects.win_registry_key_object.RegistryValues` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_registry_key_object.RegistryValuesType`

**class** `cybox.objects.win_registry_key_object.WinRegistryKey`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.win_registry_key_object.WindowsRegistryKeyObjectType`

#### **byte\_runs**

Type: *cybox.common.byterun.ByteRuns*

XML Binding class name: Byte\_Runs

Dictionary key name: byte\_runs

#### **creator\_username**

Type: *cybox.common.properties.String*

XML Binding class name: Creator\_Username

Dictionary key name: creator\_username

#### **handle\_list**

Type: *cybox.objects.win\_handle\_object.WinHandleList*

XML Binding class name: Handle\_List

Dictionary key name: handle\_list

#### **hive**

Type: *cybox.common.properties.String*

XML Binding class name: Hive

Dictionary key name: hive

**key**

Type: *cybox.common.properties.String*

XML Binding class name: Key

Dictionary key name: key

**modified\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Modified\_Time

Dictionary key name: modified\_time

**number\_subkeys**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Number\_Subkeys

Dictionary key name: number\_subkeys

**number\_values**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Number\_Values

Dictionary key name: number\_values

**subkeys**

Type: *cybox.objects.win\_registry\_key\_object.RegistrySubkeys*

XML Binding class name: Subkeys

Dictionary key name: subkeys

**values**

Type: *cybox.objects.win\_registry\_key\_object.RegistryValues*

XML Binding class name: Values

Dictionary key name: values

Version: 2.1.0.12.dev0

**cybox.objects.win\_semaphore\_object module**

**class** `cybox.objects.win_semaphore_object.WinSemaphore`

Bases: *cybox.objects.semaphore\_object.Semaphore*

XML binding class:

`cybox.bindings.win_semaphore_object.WindowsSemaphoreObjectType`

**handle**

Type: *cybox.objects.win\_handle\_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

#### **security\_attributes**

Type: *cybox.common.properties.String*

XML Binding class name: Security\_Attributes

Dictionary key name: security\_attributes

Version: 2.1.0.12.dev0

### **cybox.objects.win\_service\_object module**

**class** `cybox.objects.win_service_object.ServiceDescriptionList` (\*args)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_service_object.ServiceDescriptionListType`

**class** `cybox.objects.win_service_object.WinService`

Bases: *cybox.objects.win\_process\_object.WinProcess*

XML binding class: `cybox.bindings.win_service_object.WindowsServiceObjectType`

#### **description\_list**

Type: *cybox.objects.win\_service\_object.ServiceDescriptionList*

XML Binding class name: Description\_List

Dictionary key name: description\_list

#### **display\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Display\_Name

Dictionary key name: display\_name

#### **group\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Group\_Name

Dictionary key name: group\_name

#### **service\_dll**

Type: *cybox.common.properties.String*

XML Binding class name: Service\_DLL

Dictionary key name: service\_dll

**service\_dll\_certificate\_issuer**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_DLL\_Certificate\_Issuer  
Dictionary key name: service\_dll\_certificate\_issuer

**service\_dll\_certificate\_subject**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_DLL\_Certificate\_Subject  
Dictionary key name: service\_dll\_certificate\_subject

**service\_dll\_hashes**

Type: *cybox.common.hashses.HashList*  
XML Binding class name: Service\_DLL\_Hashes  
Dictionary key name: service\_dll\_hashes

**service\_dll\_signature\_description**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_DLL\_Signature\_Description  
Dictionary key name: service\_dll\_signature\_description

**service\_dll\_signature\_exists**

XML Binding class name: service\_dll\_signature\_exists  
Dictionary key name: service\_dll\_signature\_exists

**service\_dll\_signature\_verified**

XML Binding class name: service\_dll\_signature\_verified  
Dictionary key name: service\_dll\_signature\_verified

**service\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_Name  
Dictionary key name: service\_name

**service\_status**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_Status  
Dictionary key name: service\_status

**service\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Service\_Type  
Dictionary key name: service\_type

**started\_as**

Type: *cybox.common.properties.String*

XML Binding class name: Started\_As

Dictionary key name: started\_as

**startup\_command\_line**

Type: *cybox.common.properties.String*

XML Binding class name: Startup\_Command\_Line

Dictionary key name: startup\_command\_line

**startup\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Startup\_Type

Dictionary key name: startup\_type

Version: 2.1.0.12.dev0

**cybox.objects.win\_system\_object module**

**class** `cybox.objects.win_system_object.GlobalFlag`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_system_object.GlobalFlagType`

**abbreviation**

Type: *cybox.common.properties.String*

XML Binding class name: Abbreviation

Dictionary key name: abbreviation

**destination**

Type: *cybox.common.properties.String*

XML Binding class name: Destination

Dictionary key name: destination

**hexadecimal\_value**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Hexadecimal\_Value

Dictionary key name: hexadecimal\_value

**symbolic\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Symbolic\_Name

Dictionary key name: `symbolic_name`

**class** `cybox.objects.win_system_object.GlobalFlagList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_system_object.GlobalFlagListType`

**class** `cybox.objects.win_system_object.WinSystem`  
Bases: `cybox.objects.system_object.System`

XML binding class: `cybox.bindings.win_system_object.WindowsSystemObjectType`

#### **domain**

(List of values permitted)

Type: `cybox.common.properties.String`

XML Binding class name: `Domain`

Dictionary key name: `domain`

#### **global\_flag\_list**

Type: `cybox.objects.win_system_object.GlobalFlagList`

XML Binding class name: `Global_Flag_List`

Dictionary key name: `global_flag_list`

#### **netbios\_name**

Type: `cybox.common.properties.String`

XML Binding class name: `NetBIOS_Name`

Dictionary key name: `netbios_name`

#### **open\_handle\_list**

Type: `cybox.objects.win_handle_object.WinHandleList`

XML Binding class name: `Open_Handle_List`

Dictionary key name: `open_handle_list`

#### **product\_id**

Type: `cybox.common.properties.String`

XML Binding class name: `Product_ID`

Dictionary key name: `product_id`

#### **product\_name**

Type: `cybox.common.properties.String`

XML Binding class name: `Product_Name`

Dictionary key name: `product_name`

#### **registered\_organization**

Type: *cybox.common.properties.String*  
XML Binding class name: Registered\_Organization  
Dictionary key name: registered\_organization

#### **registered\_owner**

Type: *cybox.common.properties.String*  
XML Binding class name: Registered\_Owner  
Dictionary key name: registered\_owner

#### **windows\_directory**

Type: *cybox.common.properties.String*  
XML Binding class name: Windows\_Directory  
Dictionary key name: windows\_directory

#### **windows\_system\_directory**

Type: *cybox.common.properties.String*  
XML Binding class name: Windows\_System\_Directory  
Dictionary key name: windows\_system\_directory

#### **windows\_temp\_directory**

Type: *cybox.common.properties.String*  
XML Binding class name: Windows\_Temp\_Directory  
Dictionary key name: windows\_temp\_directory

**Version:** 2.1.0.12.dev0

### **cybox.objects.win\_system\_restore\_object module**

**class** `cybox.objects.win_system_restore_object.HiveList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_system_restore_object.HiveListType`

**class** `cybox.objects.win_system_restore_object.WinSystemRestore`  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:  
`cybox.bindings.win_system_restore_object.WindowsSystemRestoreObjectType`

#### **acl\_change\_sid**

Type: *cybox.common.properties.String*  
XML Binding class name: ACL\_Change\_SID  
Dictionary key name: acl\_change\_sid

**acl\_change\_username**

Type: *cybox.common.properties.String*  
XML Binding class name: ACL\_Change\_Username  
Dictionary key name: acl\_change\_username

**backup\_file\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Backup\_File\_Name  
Dictionary key name: backup\_file\_name

**change\_event**

Type: *cybox.common.properties.String*  
XML Binding class name: Change\_Event  
Dictionary key name: change\_event

**changelog\_entry\_flags**

Type: *cybox.common.properties.String*  
XML Binding class name: ChangeLog\_Entry\_Flags  
Dictionary key name: changelog\_entry\_flags

**changelog\_entry\_sequence\_number**

Type: *cybox.common.properties.Long*  
XML Binding class name: ChangeLog\_Entry\_Sequence\_Number  
Dictionary key name: changelog\_entry\_sequence\_number

**changelog\_entry\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: ChangeLog\_Entry\_Type  
Dictionary key name: changelog\_entry\_type

**created**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Created  
Dictionary key name: created

**file\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: File\_Attributes  
Dictionary key name: file\_attributes

**new\_file\_name**

Type: *cybox.common.properties.String*

XML Binding class name: New\_File\_Name

Dictionary key name: new\_file\_name

**original\_file\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Original\_File\_Name

Dictionary key name: original\_file\_name

**original\_short\_file\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Original\_Short\_File\_Name

Dictionary key name: original\_short\_file\_name

**process\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Process\_Name

Dictionary key name: process\_name

**registry\_hive\_list**

Type: *cybox.objects.win\_system\_restore\_object.HiveList*

XML Binding class name: Registry\_Hive\_List

Dictionary key name: registry\_hive\_list

**restore\_point\_description**

Type: *cybox.common.properties.String*

XML Binding class name: Restore\_Point\_Description

Dictionary key name: restore\_point\_description

**restore\_point\_full\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Restore\_Point\_Full\_Path

Dictionary key name: restore\_point\_full\_path

**restore\_point\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Restore\_Point\_Name

Dictionary key name: restore\_point\_name

**restore\_point\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Restore\_Point\_Type

Dictionary key name: restore\_point\_type

Version: 2.1.0.12.dev0

### **cybox.objects.win\_task\_object module**

**class** cybox.objects.win\_task\_object.IComHandlerAction

Bases: cybox.Entity

XML binding class: cybox.bindings.win\_task\_object.IComHandlerActionType

#### **com\_class\_id**

Type: *cybox.common.properties.String*

XML Binding class name: COM\_Class\_ID

Dictionary key name: com\_class\_id

#### **com\_data**

Type: *cybox.common.properties.String*

XML Binding class name: COM\_Data

Dictionary key name: com\_data

**class** cybox.objects.win\_task\_object.IExecAction

Bases: cybox.Entity

XML binding class: cybox.bindings.win\_task\_object.IExecActionType

#### **exec\_arguments**

Type: *cybox.common.properties.String*

XML Binding class name: Exec\_Arguments

Dictionary key name: exec\_arguments

#### **exec\_program\_hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Exec\_Program\_Hashes

Dictionary key name: exec\_program\_hashes

#### **exec\_program\_path**

Type: *cybox.common.properties.String*

XML Binding class name: Exec\_Program\_Path

Dictionary key name: exec\_program\_path

#### **exec\_working\_directory**

Type: *cybox.common.properties.String*  
XML Binding class name: Exec\_Working\_Directory  
Dictionary key name: exec\_working\_directory

**class** `cybox.objects.win_task_object.IShowMessageAction`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_task_object.IShowMessageType`

#### **show\_message\_body**

Type: *cybox.common.properties.String*  
XML Binding class name: Show\_Message\_Body  
Dictionary key name: show\_message\_body

#### **show\_message\_title**

Type: *cybox.common.properties.String*  
XML Binding class name: Show\_Message\_Title  
Dictionary key name: show\_message\_title

**class** `cybox.objects.win_task_object.TaskAction`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_task_object.TaskActionType`

#### **action\_id**

Type: *cybox.common.properties.String*  
XML Binding class name: Action\_ID  
Dictionary key name: action\_id

#### **action\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Action\_Type  
Dictionary key name: action\_type

#### **icomhandleraction**

Type: *cybox.objects.win\_task\_object.IComHandlerAction*  
XML Binding class name: IComHandlerAction  
Dictionary key name: icomhandleraction

#### **icemailaction**

Type: *cybox.objects.email\_message\_object.EmailMessage*  
XML Binding class name: IEmailAction  
Dictionary key name: iemailaction

#### **iexecaction**

Type: *cybox.objects.win\_task\_object.IExecAction*  
XML Binding class name: IExecAction  
Dictionary key name: iexecaction

#### **ishowmessageaction**

Type: *cybox.objects.win\_task\_object.IShowMessageAction*  
XML Binding class name: IShowMessageAction  
Dictionary key name: ishowmessageaction

**class** `cybox.objects.win_task_object.TaskActionList` (\*args)  
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_task_object.TaskActionListType`

**class** `cybox.objects.win_task_object.Trigger`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_task_object.TriggerType`

#### **trigger\_begin**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Trigger\_Begin  
Dictionary key name: trigger\_begin

#### **trigger\_delay**

Type: *cybox.common.properties.Duration*  
XML Binding class name: Trigger\_Delay  
Dictionary key name: trigger\_delay

#### **trigger\_end**

Type: *cybox.common.properties.DateTime*  
XML Binding class name: Trigger\_End  
Dictionary key name: trigger\_end

#### **trigger\_frequency**

Type: *cybox.common.properties.String*  
XML Binding class name: Trigger\_Frequency

Dictionary key name: trigger\_frequency

**trigger\_max\_run\_time**

Type: *cybox.common.properties.Duration*  
XML Binding class name: Trigger\_Max\_Run\_Time  
Dictionary key name: trigger\_max\_run\_time

**trigger\_session\_change\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Trigger\_Session\_Change\_Type  
Dictionary key name: trigger\_session\_change\_type

**trigger\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Trigger\_Type  
Dictionary key name: trigger\_type

**class** cybox.objects.win\_task\_object.**TriggerList** (\*args)  
Bases: cybox.EntityList

XML binding class: cybox.bindings.win\_task\_object.TriggerListType

**class** cybox.objects.win\_task\_object.**WinTask**  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class: cybox.bindings.win\_task\_object.WindowsTaskObjectType

**account\_logon\_type**

Type: *cybox.common.properties.String*  
XML Binding class name: Account\_Logon\_Type  
Dictionary key name: account\_logon\_type

**account\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Account\_Name  
Dictionary key name: account\_name

**account\_run\_level**

Type: *cybox.common.properties.String*  
XML Binding class name: Account\_Run\_Level  
Dictionary key name: account\_run\_level

**action\_list**

Type: *cybox.objects.win\_task\_object.TaskActionList*

XML Binding class name: Action\_List

Dictionary key name: action\_list

**application\_name**

Type: *cybox.common.properties.String*

XML Binding class name: Application\_Name

Dictionary key name: application\_name

**comment**

Type: *cybox.common.properties.String*

XML Binding class name: Comment

Dictionary key name: comment

**creation\_date**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Creation\_Date

Dictionary key name: creation\_date

**creator**

Type: *cybox.common.properties.String*

XML Binding class name: Creator

Dictionary key name: creator

**exit\_code**

Type: *cybox.common.properties.Long*

XML Binding class name: Exit\_Code

Dictionary key name: exit\_code

**flags**

Type: *cybox.common.properties.String*

XML Binding class name: Flags

Dictionary key name: flags

**max\_run\_time**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Max\_Run\_Time

Dictionary key name: max\_run\_time

**most\_recent\_run\_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: `Most_Recent_Run_Time`

Dictionary key name: `most_recent_run_time`

**name**

Type: `cybox.common.properties.String`

XML Binding class name: `Name`

Dictionary key name: `name`

**next\_run\_time**

Type: `cybox.common.properties.DateTime`

XML Binding class name: `Next_Run_Time`

Dictionary key name: `next_run_time`

**parameters**

Type: `cybox.common.properties.String`

XML Binding class name: `Parameters`

Dictionary key name: `parameters`

**priority**

Type: `cybox.common.properties.String`

XML Binding class name: `Priority`

Dictionary key name: `priority`

**status**

Type: `cybox.common.properties.String`

XML Binding class name: `Status`

Dictionary key name: `status`

**trigger\_list**

Type: `cybox.objects.win_task_object.TriggerList`

XML Binding class name: `Trigger_List`

Dictionary key name: `trigger_list`

**work\_item\_data**

Type: `cybox.common.properties.Base64Binary`

XML Binding class name: `Work_Item_Data`

Dictionary key name: `work_item_data`

**working\_directory**

Type: `cybox.common.properties.String`

XML Binding class name: `Working_Directory`

Dictionary key name: `working_directory`

Version: 2.1.0.12.dev0

**cybox.objects.win\_thread\_object module****class** `cybox.objects.win_thread_object.WinThread`Bases: `cybox.common.object_properties.ObjectProperties`XML binding class: `cybox.bindings.win_thread_object.WindowsThreadObjectType`**context**Type: `cybox.common.properties.String`

XML Binding class name: Context

Dictionary key name: context

**creation\_flags**Type: `cybox.common.properties.HexBinary`

XML Binding class name: Creation\_Flags

Dictionary key name: creation\_flags

**creation\_time**Type: `cybox.common.properties.DateTime`

XML Binding class name: Creation\_Time

Dictionary key name: creation\_time

**handle**Type: `cybox.objects.win_handle_object.WinHandle`

XML Binding class name: Handle

Dictionary key name: handle

**parameter\_address**Type: `cybox.common.properties.HexBinary`

XML Binding class name: Parameter\_Address

Dictionary key name: parameter\_address

**priority**Type: `cybox.common.properties.UnsignedInteger`

XML Binding class name: Priority

Dictionary key name: priority

**running\_status**Type: `cybox.common.properties.String`

XML Binding class name: Running\_Status

Dictionary key name: running\_status

#### **security\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: Security\_Attributes  
Dictionary key name: security\_attributes

#### **stack\_size**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Stack\_Size  
Dictionary key name: stack\_size

#### **start\_address**

Type: *cybox.common.properties.HexBinary*  
XML Binding class name: Start\_Address  
Dictionary key name: start\_address

#### **thread\_id**

Type: *cybox.common.properties.NonNegativeInteger*  
XML Binding class name: Thread\_ID  
Dictionary key name: thread\_id

Version: 2.1.0.12.dev0

### **cybox.objects.win\_user\_object module**

**class** `cybox.objects.win_user_object.WinGroup`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_user_account_object.WindowsGroupType`

#### **name**

Type: *cybox.common.properties.String*  
XML Binding class name: Name  
Dictionary key name: name

**class** `cybox.objects.win_user_object.WinGroupList` (\*args)  
Bases: `cybox.objects.user_account_object.GroupList`

XML binding class: `cybox.bindings.user_account_object.GroupListType`

**class** `cybox.objects.win_user_object.WinPrivilege`  
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_user_account_object.WindowsPrivilegeType`

#### **user\_right**

Type: `cybox.common.properties.String`

XML Binding class name: `User_Right`

Dictionary key name: `user_right`

**class** `cybox.objects.win_user_object.WinPrivilegeList` (\*args)

Bases: `cybox.objects.user_account_object.PrivilegeList`

XML binding class: `cybox.bindings.user_account_object.PrivilegeListType`

**class** `cybox.objects.win_user_object.WinUser`

Bases: `cybox.objects.user_account_object.UserAccount`

XML binding class:

`cybox.bindings.win_user_account_object.WindowsUserAccountObjectType`

#### **group\_list**

Type: `cybox.objects.win_user_object.WinGroupList`

XML Binding class name: `Group_List`

Dictionary key name: `group_list`

#### **privilege\_list**

Type: `cybox.objects.win_user_object.WinPrivilegeList`

XML Binding class name: `Privilege_List`

Dictionary key name: `privilege_list`

#### **security\_id**

Type: `cybox.common.properties.String`

XML Binding class name: `Security_ID`

Dictionary key name: `security_id`

#### **security\_type**

Type: `cybox.common.properties.String`

XML Binding class name: `Security_Type`

Dictionary key name: `security_type`

Version: 2.1.0.12.dev0

### cybox.objects.win\_volume\_object module

**class** cybox.objects.win\_volume\_object.**WinVolume**  
Bases: *cybox.objects.volume\_object.Volume*

XML binding class: cybox.bindings.win\_volume\_object.WindowsVolumeObjectType

#### **attributes\_list**

Type: *cybox.objects.win\_volume\_object.WindowsVolumeAttributesList*  
XML Binding class name: Attributes\_List  
Dictionary key name: attributes\_list

#### **drive\_Type**

Type: *cybox.common.properties.String*  
XML Binding class name: Drive\_Type  
Dictionary key name: drive\_type

#### **drive\_letter**

Type: *cybox.common.properties.String*  
XML Binding class name: Drive\_Letter  
Dictionary key name: drive\_letter

**class** cybox.objects.win\_volume\_object.**WindowsVolumeAttributesList** (\*args)  
Bases: cybox.EntityList

XML binding class:  
cybox.bindings.win\_volume\_object.WindowsVolumeAttributesListType

**Version:** 2.1.0.12.dev0

### cybox.objects.win\_waitable\_timer\_object module

**class** cybox.objects.win\_waitable\_timer\_object.**WinWaitableTimer**  
Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:  
cybox.bindings.win\_waitable\_timer\_object.WindowsWaitableTimerObjectType

#### **name**

Type: *cybox.common.properties.String*  
XML Binding class name: Name

Dictionary key name: name

#### **security\_attributes**

Type: *cybox.common.properties.String*  
 XML Binding class name: Security\_Attributes  
 Dictionary key name: security\_attributes

#### **type\_**

Type: *cybox.common.properties.String*  
 XML Binding class name: Type  
 Dictionary key name: type

Version: 2.1.0.12.dev0

### **cybox.objects.x509\_certificate\_object module**

**class** `cybox.objects.x509_certificate_object.RSAPublicKey`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.RSAPublicKeyType`

#### **exponent**

Type: *cybox.common.properties.Integer*  
 XML Binding class name: Exponent  
 Dictionary key name: exponent

#### **modulus**

Type: *cybox.common.properties.String*  
 XML Binding class name: Modulus  
 Dictionary key name: modulus

**class** `cybox.objects.x509_certificate_object.SubjectPublicKey`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.SubjectPublicKeyType`

#### **public\_key\_algorithm**

Type: *cybox.common.properties.String*  
 XML Binding class name: Public\_Key\_Algorithm  
 Dictionary key name: public\_key\_algorithm

#### **rsa\_public\_key**

Type: *cybox.objects.x509\_certificate\_object.RSAPublicKey*

XML Binding class name: `RSA_Public_Key`

Dictionary key name: `rsa_public_key`

**class** `cybox.objects.x509_certificate_object.Validity`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.ValidityType`

#### **not\_after**

Type: *cybox.common.properties.DateTime*

XML Binding class name: `Not_After`

Dictionary key name: `not_after`

#### **not\_before**

Type: *cybox.common.properties.DateTime*

XML Binding class name: `Not_Before`

Dictionary key name: `not_before`

**class** `cybox.objects.x509_certificate_object.X509Cert`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.x509_certificate_object.X509CertificateContentsType`

#### **issuer**

Type: *cybox.common.properties.String*

XML Binding class name: `Issuer`

Dictionary key name: `issuer`

#### **non\_standard\_extensions**

Type: *cybox.objects.x509\_certificate\_object.X509NonStandardExtensions*

XML Binding class name: `Non_Standard_Extensions`

Dictionary key name: `non_standard_extensions`

#### **serial\_number**

Type: *cybox.common.properties.String*

XML Binding class name: `Serial_Number`

Dictionary key name: `serial_number`

#### **signature\_algorithm**

Type: *cybox.common.properties.String*

XML Binding class name: Signature\_Algorithm

Dictionary key name: signature\_algorithm

#### **standard\_extensions**

Type: *cybox.objects.x509\_certificate\_object.X509V3Extensions*

XML Binding class name: Standard\_Extensions

Dictionary key name: standard\_extensions

#### **subject**

Type: *cybox.common.properties.String*

XML Binding class name: Subject

Dictionary key name: subject

#### **subject\_public\_key**

Type: *cybox.objects.x509\_certificate\_object.SubjectPublicKey*

XML Binding class name: Subject\_Public\_Key

Dictionary key name: subject\_public\_key

#### **validity**

Type: *cybox.objects.x509\_certificate\_object.Validity*

XML Binding class name: Validity

Dictionary key name: validity

#### **version**

Type: *cybox.common.properties.Integer*

XML Binding class name: Version

Dictionary key name: version

**class** `cybox.objects.x509_certificate_object.X509Certificate`

Bases: *cybox.common.object\_properties.ObjectProperties*

XML binding class:

`cybox.bindings.x509_certificate_object.X509CertificateObjectType`

#### **certificate**

Type: *cybox.objects.x509\_certificate\_object.X509Cert*

XML Binding class name: Certificate

Dictionary key name: certificate

#### **certificate\_signature**

Type: *cybox.objects.x509\_certificate\_object.X509CertificateSignature*

XML Binding class name: Certificate\_Signature

Dictionary key name: certificate\_signature

#### **raw\_certificate**

Type: *cybox.common.properties.String*

XML Binding class name: Raw\_Certificate

Dictionary key name: raw\_certificate

**class** `cybox.objects.x509_certificate_object.X509CertificateSignature`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.x509_certificate_object.X509CertificateSignatureType`

#### **signature**

Type: *cybox.common.properties.String*

XML Binding class name: Signature

Dictionary key name: signature

#### **signature\_algorithm**

Type: *cybox.common.properties.String*

XML Binding class name: Signature\_Algorithm

Dictionary key name: signature\_algorithm

**class** `cybox.objects.x509_certificate_object.X509NonStandardExtensions`

Bases: `cybox.Entity`

XML binding class:

`cybox.bindings.x509_certificate_object.X509NonStandardExtensionsType`

#### **netscape\_certificate\_type**

Type: *cybox.common.properties.String*

XML Binding class name: Netscape\_Certificate\_Type

Dictionary key name: netscape\_certificate\_type

#### **netscape\_comment**

Type: *cybox.common.properties.String*

XML Binding class name: Netscape\_Comment

Dictionary key name: netscape\_comment

#### **old\_authority\_key\_identifier**

Type: *cybox.common.properties.String*

XML Binding class name: Old\_Authority\_Key\_Identifier

Dictionary key name: old\_authority\_key\_identifier

**old\_primary\_key\_attributes**

Type: *cybox.common.properties.String*

XML Binding class name: Old\_Primary\_Key\_Attributes

Dictionary key name: old\_primary\_key\_attributes

**class** `cybox.objects.x509_certificate_object.X509V3Extensions`

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.X509V3ExtensionsType`

**authority\_key\_identifier**

Type: *cybox.common.properties.String*

XML Binding class name: Authority\_Key\_Identifier

Dictionary key name: authority\_key\_identifier

**basic\_constraints**

Type: *cybox.common.properties.String*

XML Binding class name: Basic\_Constraints

Dictionary key name: basic\_constraints

**certificate\_policies**

Type: *cybox.common.properties.String*

XML Binding class name: Certificate\_Policies

Dictionary key name: certificate\_policies

**crl\_distribution\_points**

Type: *cybox.common.properties.String*

XML Binding class name: CRL\_Distribution\_Points

Dictionary key name: crl\_distribution\_points

**extended\_key\_usage**

Type: *cybox.common.properties.String*

XML Binding class name: Extended\_Key\_Usage

Dictionary key name: extended\_key\_usage

**inhibit\_any\_policy**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Inhibit\_Any\_Policy

Dictionary key name: inhibit\_any\_policy

**issuer\_alternative\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Issuer\_Alternative\_Name  
Dictionary key name: issuer\_alternative\_name

**key\_usage**

Type: *cybox.common.properties.String*  
XML Binding class name: Key\_Usage  
Dictionary key name: key\_usage

**name\_constraints**

Type: *cybox.common.properties.String*  
XML Binding class name: Name\_Constraints  
Dictionary key name: name\_constraints

**policy\_constraints**

Type: *cybox.common.properties.String*  
XML Binding class name: Policy\_Constraints  
Dictionary key name: policy\_constraints

**policy\_mappings**

Type: *cybox.common.properties.String*  
XML Binding class name: Policy\_Mappings  
Dictionary key name: policy\_mappings

**private\_key\_usage\_period**

Type: *cybox.objects.x509\_certificate\_object.Validity*  
XML Binding class name: Private\_Key\_Usage\_Period  
Dictionary key name: private\_key\_usage\_period

**subject\_alternative\_name**

Type: *cybox.common.properties.String*  
XML Binding class name: Subject\_Alternative\_Name  
Dictionary key name: subject\_alternative\_name

**subject\_directory\_attributes**

Type: *cybox.common.properties.String*  
XML Binding class name: Subject\_Directory\_Attributes  
Dictionary key name: subject\_directory\_attributes

**subject\_key\_identifier**

Type: *cybox.common.properties.String*  
XML Binding class name: Subject\_Key\_Identifier  
Dictionary key name: subject\_key\_identifier

### 3.1.4 Utility Classes and Functions

Version: 2.1.0.12.dev0

#### cybox.utils package

##### Submodules

Version: 2.1.0.12.dev0

#### cybox.utils.autoentity module

cybox.utils.autoentity.**make\_class\_ref**(cls)  
 cybox.utils.autoentity.**setup**(app)

Version: 2.1.0.12.dev0

#### cybox.utils.caches module

**exception** cybox.utils.caches.**CacheMiss**

Bases: `exceptions.Exception`

Item was not found in a cache.

cybox.utils.caches.**cache\_clear**()

Clear the global cache

cybox.utils.caches.**cache\_count**()

Get the number of items in the global cache

cybox.utils.caches.**cache\_get**(id\_)

Retrieve a value from the global cache

cybox.utils.caches.**cache\_put**(value, id\_=None)

Save a value in the global cache

Version: 2.1.0.12.dev0

**cybox.utils.idgen module** Methods for generating IDs for Objects and Observables

**exception** cybox.utils.idgen.**InvalidMethodError**(method)

Bases: `exceptions.ValueError`

cybox.utils.idgen.**set\_id\_namespace**(namespace)

Set the namespace for the module-level ID Generator

cybox.utils.idgen.**set\_id\_method**(method)

Set the method for the module-level ID Generator

cybox.utils.idgen.**create\_id**(prefix=None)

Create an ID using the module-level ID Generator

Version: 2.1.0.12.dev0

#### cybox.utils.nsparser module

**exception** cybox.utils.nsparser.**UnknownObjectType**

Bases: `exceptions.Exception`

## Module contents

Common utility methods

`cybox.utils.denormalize_from_xml` (*value*, *delimiter*)  
`cybox.utils.get_class_for_object_type` (*object\_type*)  
`cybox.utils.normalize_to_xml` (*value*, *delimiter*)  
`cybox.utils.unwrap_cdata` (*value*)  
Remove CDATA wrapping from *value* if present  
`cybox.utils.wrap_cdata` (*value*)

**Version:** 2.1.0.12.dev0

## `cybox.utils.autoentity` module

`cybox.utils.autoentity.make_class_ref` (*cls*)  
`cybox.utils.autoentity.setup` (*app*)

**Version:** 2.1.0.12.dev0

## `cybox.utils.caches` module

**exception** `cybox.utils.caches.CacheMiss`

Bases: `exceptions.Exception`

Item was not found in a cache.

`cybox.utils.caches.cache_clear` ()  
Clear the global cache

`cybox.utils.caches.cache_count` ()  
Get the number of items in the global cache

`cybox.utils.caches.cache_get` (*id\_*)  
Retrieve a value from the global cache

`cybox.utils.caches.cache_put` (*value*, *id\_=None*)  
Save a value in the global cache

**Version:** 2.1.0.12.dev0

## `cybox.utils.idgen` module

Methods for generating IDs for Objects and Observables

**exception** `cybox.utils.idgen.InvalidMethodError` (*method*)

Bases: `exceptions.ValueError`

`cybox.utils.idgen.set_id_namespace` (*namespace*)  
Set the namespace for the module-level ID Generator

`cybox.utils.idgen.set_id_method` (*method*)  
Set the method for the module-level ID Generator

`cybox.utils.idgen.create_id` (*prefix=None*)  
Create an ID using the module-level ID Generator

Version: 2.1.0.12.dev0

### cybox.utils.nsparser module

exception cybox.utils.nsparser.UnknownObjectType

Bases: exceptions.Exception

## 3.1.5 CybOX Helper module

Version: 2.1.0.12.dev0

### cybox.helper module

CybOX Common Indicator API

An api for creating observables for common indicators: ipv4 addresses, domain names, file hashes, and urls.

cybox.helper.create\_domain\_name\_observable(*domain\_name*)

Create a CybOX Observable representing a domain name.

cybox.helper.create\_email\_address\_observable(*email\_address*)

Create a CybOX Observable representing an IPv4 address

cybox.helper.create\_file\_hash\_observable(*fn, hash\_value*)

Create a CybOX Observable representing a file hash.

cybox.helper.create\_ipv4\_list\_observables(*list\_ipv4\_addresses*)

Create a list of CybOX Observables, each representing an IPv4 address

cybox.helper.create\_ipv4\_observable(*ipv4\_address*)

Create a CybOX Observable representing an IPv4 address

cybox.helper.create\_url\_observable(*url*)

Version: 2.1.0.12.dev0

## 3.2 API Coverage

The *python-cybox* APIs currently provide partial coverage of all CybOX-defined constructs. Development is ongoing toward the goal of providing full CybOX language support in the APIs. Until such time that full coverage is provided, an overview of which constructs are available in these APIs will be maintained below.

### 3.2.1 CybOX Features

CybOX Construct	API Coverage	Documentation
Composite Observable	Full	<i>cybox.core.observable.ObservableComposition</i>
Event	Partial	<i>cybox.core.event.Event</i>
Object	Partial	<i>cybox.core.object.Object</i>
Observables	Partial	<i>cybox.core.observable.Observables</i>
Observable	Partial	<i>cybox.core.observable.Observable</i>
Relationships	Partial	

### 3.2.2 CybOX Objects

CybOX Construct	API Coverage	Documentation
Account Object	Full	<code>cybox.objects.account_object.Account</code>
Address Object	Full	<code>cybox.objects.address_object.Address</code>
API Object	Full	<code>cybox.objects.api_object.API</code>
Archive File Object	Full	<code>cybox.objects.archive_file_object.ArchiveFile</code>
ARP Cache Object	Full	<code>cybox.objects.arp_cache_object.ARPCache</code>
Artifact Object	Full	<code>cybox.objects.artifact_object.Artifact</code>
AS Object	Full	<code>cybox.objects.as_object.AutonomousSystem</code>
Code Object	Full	<code>cybox.objects.code_object.Code</code>
Custom Object	× None	
Device Object	Full	<code>cybox.objects.device_object.Device</code>
Disk Object	Full	<code>cybox.objects.disk_object.Disk</code>
Disk Partition Object	Full	<code>cybox.objects.disk_partition_object.DiskPartition</code>
DNS Cache Object	Full	<code>cybox.objects.dns_cache_object.DNSCache</code>
DNS Query Object	Full	<code>cybox.objects.dns_query_object.DNSQuery</code>
DNS Record Object	Full	<code>cybox.objects.dns_record_object.DNSRecord</code>
Domain Name Object	Full	<code>cybox.objects.domain_name_object.DomainName</code>
Email Message Object	Full	<code>cybox.objects.email_message_object.EmailMessage</code>
File Object	Full	<code>cybox.objects.file_object.File</code>
GUI Dialogbox Object	Full	<code>cybox.objects.gui_dialogbox_object.GUIDialogbox</code>
GUI Object	Full	<code>cybox.objects.gui_object.GUI</code>
GUI Window Object	Full	<code>cybox.objects.gui_window_object.GUIWindow</code>
HTTP Session Object	Full	<code>cybox.objects.http_session_object.HTTPSession</code>
Hostname Object	Full	<code>cybox.objects.hostname_object.Hostname</code>
Image File Object	Full	<code>cybox.objects.image_file_object.ImageFile</code>
Library Object	Full	<code>cybox.objects.library_object.Library</code>
Link Object	Full	<code>cybox.objects.link_object.Link</code>
Linux Package Object	Full	<code>cybox.objects.linux_package_object.LinuxPackage</code>
Memory Object	Full	<code>cybox.objects.memory_object.Memory</code>
Mutex Object	Full	<code>cybox.objects.mutex_object.Mutex</code>
Network Connection Object	Full	<code>cybox.objects.network_connection_object.NetworkConnec</code>
Network Flow Object	× None	
Network Packet Object	Full	<code>cybox.objects.network_packet_object.NetworkPacket</code>
Network Route Entry Object	Full	<code>cybox.objects.network_route_entry_object.NetworkRoute</code>
Network Route Object	Full	<code>cybox.objects.network_route_object.NetRoute</code>
Network Socket Object	Full	<code>cybox.objects.network_socket_object.NetworkSocket</code>
Network Subnet Object	Full	<code>cybox.objects.network_subnet_object.NetworkSubnet</code>
PDF File Object	Partial	<code>cybox.objects.pdf_file_object.PDFFile</code>
Pipe Object	Full	<code>cybox.objects.pipe_object.Pipe</code>
Port Object	Full	<code>cybox.objects.port_object.Port</code>
Process Object	Full	<code>cybox.objects.process_object.Process</code>
Product Object	Full	<code>cybox.objects.product_object.Product</code>
Semaphore Object	Full	<code>cybox.objects.semaphore_object.Semaphore</code>
SMS Message Object	Full	<code>cybox.objects.sms_message_object.SMSMessage</code>
Socket Address Object	Full	<code>cybox.objects.socket_address_object.SocketAddress</code>
System Object	Partial	<code>cybox.objects.system_object.System</code>
URI Object	Full	<code>cybox.objects.uri_object.URI</code>
URL History Object	× None	
Unix File Object	× None	

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Unix Network Route Entry Object	× None	
Unix Pipe Object	× None	
Unix Process Object	× None	
Unix User Account Object	× None	
Unix Volume Object	× None	
User Account Object	Full	<code>cybox.objects.user_account_object.UserAccount</code>
User Session Object	× None	
Volume Object	Full	<code>cybox.objects.volume_object.Volume</code>
Whois Object	Full	<code>cybox.objects.whois_object.WhoisEntry</code>
Win Computer Account Object	Full	<code>cybox.objects.win_computer_account_object.WinComputerAccount</code>
Win Critical Section Object	Full	<code>cybox.objects.win_critical_section_object.WinCriticalSection</code>
Win Driver Object	Full	<code>cybox.objects.win_driver_object.WinDriver</code>
Win Event Log Object	Full	<code>cybox.objects.win_event_log_object.WinEventLog</code>
Win Event Object	Full	<code>cybox.objects.win_event_object.WinEvent</code>
Win Executable File Object	Full	<code>cybox.objects.win_executable_file_object.WinExecutableFile</code>
Win File Object	Full	<code>cybox.objects.win_file_object.WinFile</code>
Win Filemapping Object	Full	<code>cybox.objects.win_filemapping_object.WinFilemapping</code>
Win Handle Object	Full	<code>cybox.objects.win_handle_object.WinHandle</code>
Win Hook Object	Full	<code>cybox.objects.win_hook_object.WinHook</code>
Win Kernel Hook Object	Full	<code>cybox.objects.win_kernel_hook_object.WinKernelHook</code>
Win Kernel Object	Full	<code>cybox.objects.win_kernel_object.WinKernel</code>
Win Mailslot Object	Full	<code>cybox.objects.win_mailslot_object.WinMailslot</code>
Win Memory Page Region Object	Full	<code>cybox.objects.win_memory_page_region_object.WinMemoryPageRegion</code>
Win Mutex Object	Full	<code>cybox.objects.win_mutex_object.WinMutex</code>
Win Network Route Entry Object	Full	<code>cybox.objects.win_network_route_entry_object.WinNetworkRouteEntry</code>
Win Network Share Object	Full	<code>cybox.objects.win_network_share_object.WinNetworkShare</code>
Win Pipe Object	Full	<code>cybox.objects.win_pipe_object.WinPipe</code>
Win Prefetch Object	Full	<code>cybox.objects.win_prefetch_object.WinPrefetch</code>
Win Process Object	Full	<code>cybox.objects.win_process_object.WinProcess</code>
Win Registry Key Object	Full	<code>cybox.objects.win_registry_key_object.WinRegistryKey</code>
Win Semaphore Object	Full	<code>cybox.objects.win_semaphore_object.WinSemaphore</code>
Win Service Object	Full	<code>cybox.objects.win_service_object.WinService</code>
Win System Object	Full	<code>cybox.objects.win_system_object.WinSystem</code>
Win System Restore Object	Full	<code>cybox.objects.win_system_restore_object.WinSystemRestore</code>
Win Task Object	Full	<code>cybox.objects.win_task_object.WinTask</code>
Win Thread Object	Full	<code>cybox.objects.win_thread_object.WinThread</code>
Win User Account Object	Full	<code>cybox.objects.win_user_object.WinUser</code>
Win Volume Object	Full	<code>cybox.objects.win_volume_object.WinVolume</code>
Win Waitable Timer Object	Full	<code>cybox.objects.win_waitable_timer_object.WinWaitableTimer</code>
X509 Certificate Object	Full	<code>cybox.objects.x509_certificate_object.X509Certificate</code>

### 3.2.3 CybOX Vocabularies

CybOX Construct	API Coverage	Documentation
ActionArgumentNameVocab-1.0	Full	<code>cybox.common.vocabs.ActionArgumentName</code>
ActionNameVocab-1.0	× None (replaced by version 1.1)	
ActionNameVocab-1.1	Full	<code>cybox.common.vocabs.ActionName</code>
ActionObjectAssociationTypeVocab-1.0	Full	<code>cybox.common.vocabs.AssociationType</code>
ActionRelationshipTypeVocab-1.0	× None	
ActionTypeVocab-1.0	Full	<code>cybox.common.vocabs.ActionType</code>
CharacterEncodingVocab-1.0	Full	<code>cybox.common.vocabs.CharacterEncoding</code>
EventTypeVocab-1.0	× None (replaced by version 1.0.1)	
EventTypeVocab-1.0.1	Full	<code>cybox.common.vocabs.EventType</code>
HashNameVocab-1.0	Full	<code>cybox.common.vocabs.HashName</code>
InformationSourceTypeVocab-1.0	Full	<code>cybox.common.vocabs.InformationSourceType</code>
ObjectRelationshipVocab-1.0	× None (replaced by version 1.1)	
ObjectRelationshipVocab-1.1	Full	<code>cybox.common.vocabs.ObjectRelationship</code>
ObjectStateVocab-1.0	× None	
ToolTypeVocab-1.0	× None (replaced by version 1.1)	
ToolTypeVocab-1.1	Full	<code>cybox.common.vocabs.ToolType</code>

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