
domogik-plugin-rainhour

Release 0.1

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1	Plugin rainhour	1
1.1	Purpose	1
1.2	Dependencies	3
1.3	Plugin configuration	3
1.4	Create the domogik devices	3
1.5	Start the plugin	5
1.6	Set up your widgets on the user interface	5
2	Development informations	7
2.1	“Meteo France” Rain Forecast API	7
3	Changelog	11
3.1	0.1	11
3.2	1.0	11

Plugin rainhour

1.1 Purpose

The plugin allows you to display rain forecast from “Meteo France” for the next hour This service is available online here (Service only available for the cities of France):

<http://www.meteofrance.com/previsions-meteo-france/previsions-pluie/lias>

<http://www.meteofrance.com/previsions-meteo-france/previsions-pluie/nancy/54000>

PRÉVISIONS DE PLUIE - NANCY (54000) ★ Partager ▼

Pas de précipitations prévues dans l'heure (de 22h55 à 23h55)

de 22h55 à 23h55 Prévisions actualisées à 22h45

PAS DE PRÉCIPITATIONS

22h55	23h05	23h15	23h25	23h35	23h45	23h55

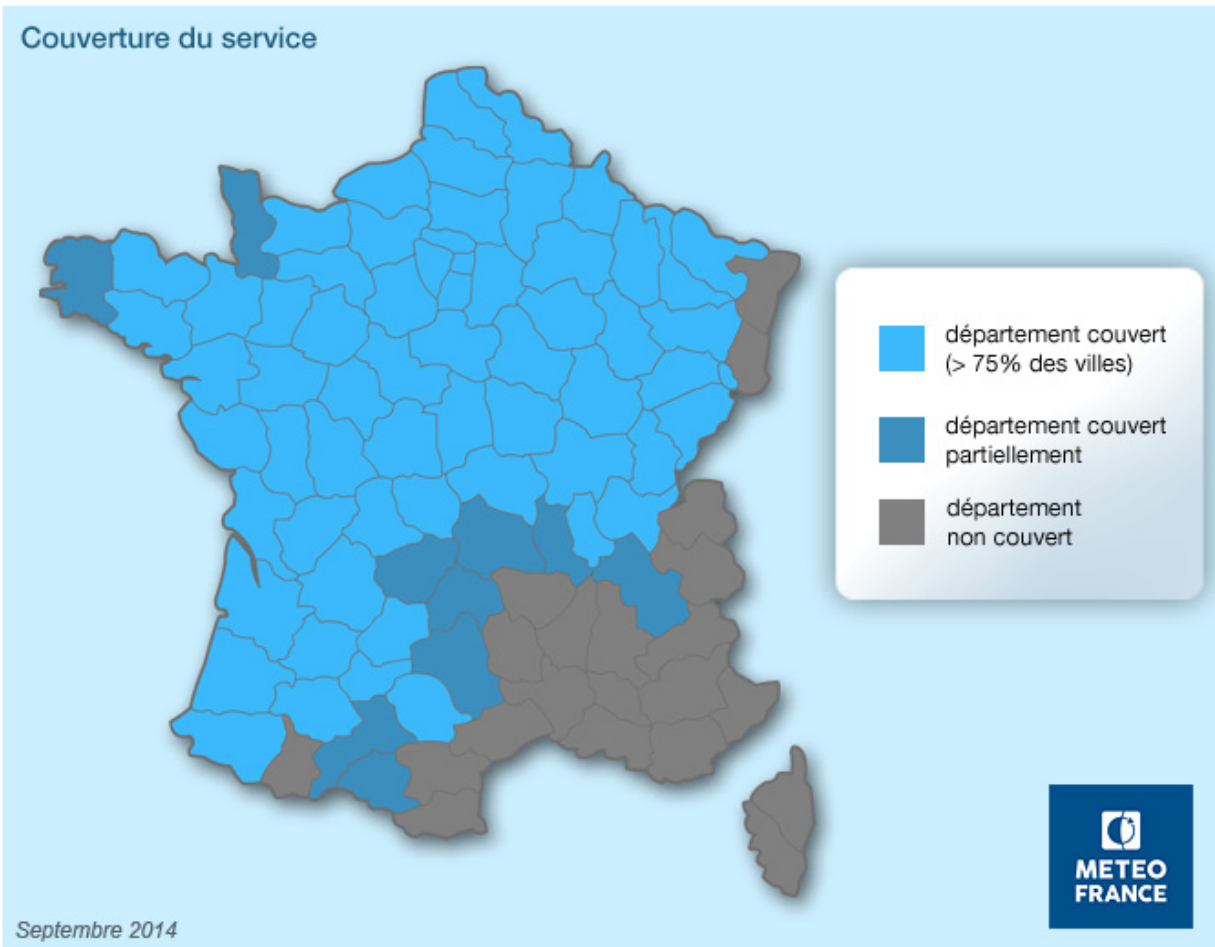
- Précipitations fortes
- Précipitations modérées
- Précipitations faibles
- Pas de précipitations
- Données indisponibles

► [Couverture du service](#)

This service gives the forecast chance of rain for the next hour with a precision of 5 minutes. Every 5 minutes, this forecast is updated.

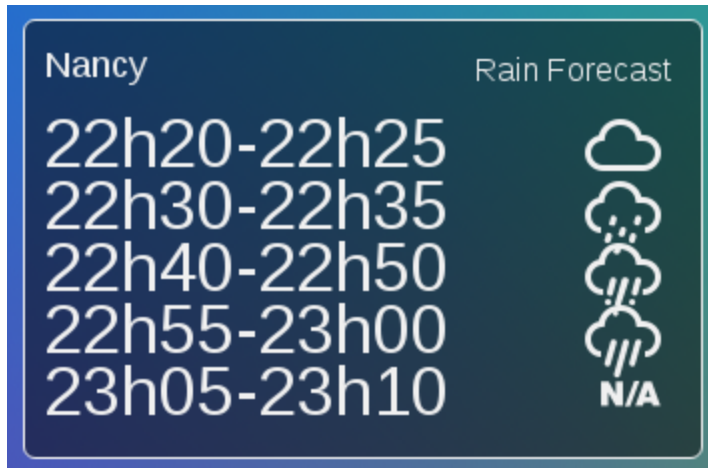
For development, there is a API available to use the data provide (see dev page for information)

The cover of this service is not available on all cities because of reliefs, here is the coverage map “Météo France”:



The plugin display the data provided in the form of icons like this: With 5 cases of possible forecasts available in the “Meteo France” API :

- No rain (value 1)
- Light rain (value 2)
- Moderate rain (value 3)
- Heavy rain (value 4)
- No data (value 0)



1.2 Dependencies

No dependencies needed

1.3 Plugin configuration

No configuration needed for the plugin

1.4 Create the domogik devices

1.4.1 Device parameters configuration

Two parameters are needed for a domogik device creation

Key	Type	Description
location	DT_String	ID "Meteo France" of the location
locationname	DT_String	Location Name (for displaying in widget)

Admin/Advanced page of the plugin **can create the device** with the location ID/Name with a search functionality:

The screenshot shows the Domogik web interface. The browser title is 'Domogik - Chromium'. The address bar shows 'hades:40406/plugin_rainhour/plugin-rainhour.hades#'. The navigation menu includes 'Admin', 'Clients', 'Scenarios', 'Views', 'Users', 'Rest and MQ API', and 'Logout'. The main content area is titled 'Client plugin-rainhour.hades' and has a status of 'alive'. Below this is a 'Search location' section with an input field containing 'salin' and a 'Search' button. The 'Result' section shows a table of locations found:

Location	ID (Click to create device)	Rain forecast
Salins (77148)	774390	True
Salins (15200)	152200	True
Chteau-Salins (57170)	571320	True
Miserey-Salines (25480)	253810	True
Chilly-sur-Salins (39110)	391470	True
Mazerolles-le-Salin (25170)	253710	True
Rosires-aux-Salines (54110)	544620	True
Salins-les-Bains (39110)	395000	True

At the bottom, there is a 'Last errors in plugin log' section with a URL: 'hades:40406/client/plugin-rainhour.hades/dmg_devices/new/type/rainhour.forecast?location=571320&locationname=Chteau-Salins (57170)'.

Just click on the link and you will be redirected to the device creation page with pre-filled parameters:

The screenshot shows a web browser window with the URL `hades:40406/client/plugin-rainhour.hades/dmg_devices/new/type/rainhour.forecast?location=571320&locationname=Chteau-Salins?`. The interface has a dark blue header with navigation links: Admin, Clients, Scenarios, Views, Users, Rest and MQ API, and Logout. Below the header, the main content area is titled "Client plugin-rainhour.hades" and contains a breadcrumb trail: rainhour (alive) > Informations > Configuration > Domogik devices > Brain details > Advanced > Documentation. The current page is "Domogik devices".

The main heading is "Create a new device : rainhour.forecast". Under "Main parameters", there are three input fields: "Device name" (with a tooltip "The display name for this device"), "Description" (with a tooltip "A description for this device"), and "Reference" (with a tooltip "A reference for this device").

Under "Global parameters", there is a note: "Global parameters are parameters which are not directly related to the device handled by the plugin. They are related to the way the plugin will handle the device." There are two input fields: "location" (with value "571320" and tooltip "The location ID (use 'Advanced' tab to search your location)") and "locationname" (with value "Chteau-Salins (57170)" and tooltip "The locationName (Only for display in widget)"). A blue "Create the device" button is at the bottom.

The plugin provided 2 sensors for use in a scenario:

- **RainInHour** (Boolean 'true' if rain in the next hour)
- **heavyRainInHour** (Boolean 'true' if heavy rain in the next hour)

1.5 Start the plugin

You can now start the plugin (start button) and use the created devices.

1.6 Set up your widgets on the user interface

You can now place the widgets of your devices features on the user interface.

This is 2 types of widgets to choose:

Here is the 2 widgets **rainhour forecast** and **rainhour forecast 2** with the 2 sensors boolean widgets:



Development informations

2.1 “Meteo France” Rain Forecast API

Two URL are available for use:

- One for the location ID search:

```
http://www.meteofrance.com/mf3-rpc-portlet/rest/lieu/facet/pluie/search/<string to search>
```

The result is a list of JSON object.

Example:

```
http://www.meteofrance.com/mf3-rpc-portlet/rest/lieu/facet/pluie/search/senlis
[ {
  "id" : "606120",
  "onTheSnowSkiId" : 0,
  "nomAffiche" : "Senlis (60300)",
  "type" : "VILLE_FRANCE",
  "slug" : "senlis",
  "codePostal" : "60300",
  "timezone" : "Europe/Paris",
  "altitude" : 76,
  "altitudeMin" : 0,
  "altitudeMax" : 0,
  "distance" : 0.0,
  "nbHabitants" : 16907,
  "lat" : 49.206837,
  "lon" : 2.586072,
  "directDisplay" : false,
  "nbView" : 0,
  "lastMareeDate" : null,
  "parent" : null,
  "positionAffichageCarteX" : 0,
  "positionAffichageCarteY" : 0,
  "value" : "Senlis (60300)",
  "pluieAvalaible" : true
},
...
], {
  "id" : "807330",
  "onTheSnowSkiId" : 0,
  "nomAffiche" : "Senlis-le-Sec (80300)",
  "type" : "VILLE_FRANCE",
```

```
"slug" : "senlis-le-sec",
"codePostal" : "80300",
"timezone" : "Europe/Paris",
"altitude" : 82,
"altitudeMin" : 0,
"altitudeMax" : 0,
"distance" : 0.0,
"nbHabitants" : 286,
"lat" : 50.025027,
"lon" : 2.57755,
"directDisplay" : false,
"nbView" : 0,
"lastMareeDate" : null,
"parent" : null,
"positionAffichageCarteX" : 0,
"positionAffichageCarteY" : 0,
"value" : "Senlis-le-Sec (80300)",
"pluieAvalaible" : true
} ]
```

If the search is negative, the result is a empty list:

```
http://www.meteofrance.com/mf3-rpc-portlet/rest/lieu/facet/pluie//search/strasbourg
[]
```

- The second URL is use to get the rain forecast for the next hour with the “id” provide in the previous search:

```
http://www.meteofrance.com/mf3-rpc-portlet/rest/pluie/<id>
```

The result is a list of JSON object.

Example:

```
http://www.meteofrance.com/mf3-rpc-portlet/rest/pluie/606120
{
  "idLieu" : "606120",
  "echeance" : "201604130810",
  "lastUpdate" : "08h00",
  "isAvailable" : true,
  "hasData" : true,
  "niveauPluieText" : [ "De08h10 à 08h15 : Précipitations faibles", "De08h15 à 08h30 : Précipitations m
  "dataCadran" : [ {
    "niveauPluieText" : "Précipitations faibles",
    "niveauPluie" : 2,
    "color" : "5ec5ed"
  }, {
    "niveauPluieText" : "Précipitations modérées",
    "niveauPluie" : 3,
    "color" : "009ee0"
  }, {
    "niveauPluieText" : "Précipitations modérées",
    "niveauPluie" : 3,
    "color" : "009ee0"
  }, {
    "niveauPluieText" : "Précipitations modérées",
    "niveauPluie" : 3,
    "color" : "009ee0"
  }, {
    "niveauPluieText" : "Précipitations faibles",
    "niveauPluie" : 2,
```

```

    "color" : "5ec5ed"
  }, {
    "niveauPluieText" : "Précipitations faibles",
    "niveauPluie" : 2,
    "color" : "5ec5ed"
  }, {
    "niveauPluieText" : "Précipitations faibles",
    "niveauPluie" : 2,
    "color" : "5ec5ed"
  }, {
    "niveauPluieText" : "Précipitations faibles",
    "niveauPluie" : 2,
    "color" : "5ec5ed"
  }, {
    "niveauPluieText" : "Précipitations faibles",
    "niveauPluie" : 2,
    "color" : "5ec5ed"
  }, {
    "niveauPluieText" : "Précipitations faibles",
    "niveauPluie" : 2,
    "color" : "5ec5ed"
  }, {
    "niveauPluieText" : "Pas de précipitations",
    "niveauPluie" : 1,
    "color" : "ffffff"
  }, {
    "niveauPluieText" : "Pas de précipitations",
    "niveauPluie" : 1,
    "color" : "ffffff"
  } ]
}

```

If the id is unknown, the result is a JSON object with no rain data:

```

{
  "idLieu" : "785131",
  "echeance" : null,
  "lastUpdate" : null,
  "isAvailable" : false,
  "hasData" : false,
  "niveauPluieText" : null,
  "dataCadran" : null
}

```

There are 2 data types available in the JSON object of rain forecast:

- one in text format like that:

Exemple "niveauPluieText":

```

[ "De08h50 à 09h50 : Pas de précipitations" ]
[ "De08h10 à 08h15 : Précipitations faibles", "De08h15 à 08h30 : Précipitations modérées", "De08h30 à 08h35 : Précipitations fortes" ]
[ "De22h05 à 23h05 : Données indisponibles" ]

```

I use a function in the plugin to convert this text data into a string used by the "rainhour 2" widget:

Text forecast converted to value forecast:

```

[u'De20h05 20h10 : Pas de précipitations', u'De20h10 20h15 : Précipitations modérées', u'De20h15 20h20 : Précipitations fortes', u'De20h20 20h25 : Données indisponibles']
=> "20h05-20h10:1,20h10-20h15:3,20h15-20h20:1,20h20-20h30:2,20h30-21h05:1"

```

- the second in value format like that:

```
{
  "niveauPluieText" : "Pas de précipitations",
  "niveauPluie" : 1,
  "color" : "ffffff"
}
```

For the 12 x 5mn period of a hour.

Possible value for “niveauPluie”:

```
0 : "Données indisponibles"
1 : "Pas de précipitations"
2 : "Précipitations faibles"
3 : "Précipitations modérées"
4 : "Précipitations fortes"
```

If sum of value = 12, no raining is provided : “Pas de précipitations”

If sum of value = 48 : heavy rain is expected in the all next hour.

Changelog

3.1 0.1

- Plugin creation

3.2 1.0

- First stable version