ServiceNow Documentation Documentation

Release 0.01

Mark Carter

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CHAPTER 1

Copying Data

1.1 Worknotes

Copying the full set of work notes to another area

```
//Gets all worknotes associated with current
var notes = current.work_notes.getJournalEntry(-1);

var newNotes = "Copied notes ::\n" + notes;
```

1.2 Currency Fields

Copying old funds in current to new funds in another field

```
bCase.new_funds = bCase.new_funds.getReferenceCurrencyCode() + ';' + current.old_
↪funds.getReferenceValue();
```

CHAPTER 2

CORS Error

2.1 How to get around CORS Exception

```
chrome.exe --user-data-dir="C:/Chrome dev session" --disable-web-security
```

Depending on location of Chrome, file can be run with single line below

```
"C:\Program Files (x86)\Google\Chrome\Application\chrome.exe" --user-data-dir="C:/
↪Chrome dev session" --disable-web-security
```

Warning: Goes without saying !! be careful of security

CHAPTER 3

Date Time Servicenow

3.1 Update Review Date

```
(function executeRule(current, previous /*null when async*/) {

    var gdt = new GlideDateTime(current.ends);
    gdt.addDays(90);
    current.u_review_date_custom = gdt;

})(current, previous);
```

Warning: .addDays() will addDays to the time, but does not return a glideDateTime

current.ends is a Date (not DateTime) field

3.2 Comparing Due Date with Start Date

On Change Client Script for Due Date

```
function onChange(control, oldValue, newValue, isLoading, isTemplate) {
   if (isLoading || g_form.getValue("expected_start") == "") {
      return;
   }

  var start_date = g_form.getValue("expected_start");

  //Calls serverside script to check if start date is earlier than due date
  var ajax = new GlideAjax('TransferOrderDateTimeAjax');
  ajax.addParam('sysparm_name','compareDatesAjax');
  ajax.addParam('sysparm_startDate', start_date);
```

```
  ajax.addParam('sysparm_endDate', newValue);
  ajax.getXML(warnIfFalse);

  //Callback will display error if start date is earlier than due date
  function warnIfFalse(response){
    var answer = response.responseXML.documentElement.getAttribute("answer");
    if (answer == "false") {
      g_form.setValue("due_date", "");
      g_form.showErrorBox("due_date", "Due Date must be after Start Date");
    }
  }
}
```

3.3 Comparing Months

This code is used to find the difference between two dateTime in months

```
var start = profileGR.getValue("employment_start_date");
var nowDate = new GlideDateTime().toString();

var year1 = start.split("-")[0];
var month1 = start.split("-")[1];

var year2 = nowDate.split("-")[0];
var month2 = nowDate.split("-")[1];

if (year1 == year2) {
  return month2-month1;
} else {
  var yearDiff = year2 - year1;
  var monthDiff = month2 - month1;
  return  (yearDiff * 12) + monthDiff;
}
```

3.4 Comparing Dates when days doesn't matter (untested)

Uses a milisecond timestamp, works for either Date or Date/Time

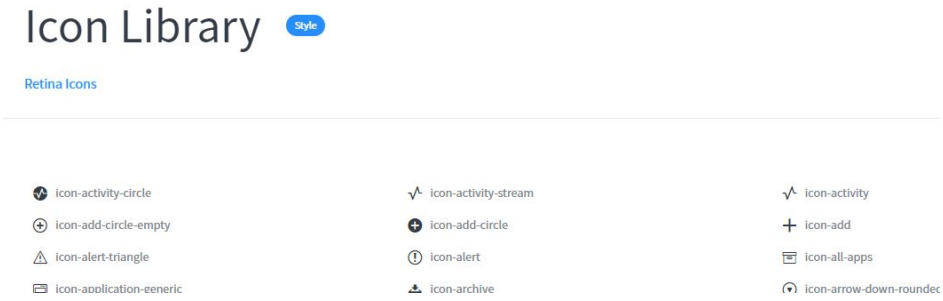
```
newDate(g_form.getValue("expected_start")).getTime() > newDate(g_form.getValue("due_
↪date")).getTime()
```

CHAPTER 4

Design Resources

4.1 Icon Library

http://styleguide.servicenow.com/#/style/icon-library



4.2 Instance Style Guide

https://<instancename>/service-now.com/styles/heisenberg/styleguide/docs/index.html

CHAPTER 5

Emails

5.1 Parsing out Hidden Watermarks

5.1.1 Business Rule on sys_email table

```
(function executeRule(current, previous /*null when async*/) {

    //RegEx to find remove Re: in subject and anything after In-Reply-To:
            current.subject = String(current.subject).replace(/Re:+/i, "");
            current.headers = String(current.headers).replace(/In-Reply-To:<[^>]*>/ig,
↪ "");

    })(current, previous);
```

5.1.2 Summary

We had a client where an email would continually be marked as a reply with a watermark, even after the watermark had been removed. We found in this case, we needed to remove the "RE" in the subject and the "In-Reply-To" in the email header

CHAPTER 6

GlideAjax

6.1 Returning multiple values

You can return more than one value easiest if you return it as a JSON string.

```
var GetUserRecord = Class.create();
GetUserRecord.prototype = Object.extendsObject(AbstractAjaxProcessor, {

        getForCorrectiveItem: function () {
                var userID = this.getParameter("sysparm_user_id");

                var userGR = new GlideRecord("sys_user");
                userGR.addQuery("sys_id", userID);
                userGR.query();

                var userProps = {};

                if (userGR.next()) {
                        userProps.name = userGR.name.toString();
                        userProps.manager = userGR.manager.toString();
                        userProps.department = userGR.department.toString();
                        userProps.location = userGR.location.getDisplayValue();
                }

                var json = new JSON();
                var data = json.encode(userProps);

                return data;
        },

    type: 'GetUserRecord'
});
```

CHAPTER 7

Glide Conditionals

7.1 Matching records using conditions

The business rule below runs when a record is inserted into the table. It orders the approval_conditions record and checks to see if the current inserted record matches the condition set in the approval_condition record.

```
(function executeRule(current, previous /*null when async*/) {

    var approvalConditionsGR = new GlideRecord("approval_conditions_table");
    approvalConditionsGR.orderBy('order');
    approvalConditionsGR.query();

    while (approvalConditionsGR.next()) {
        if (GlideFilter.checkRecord(current, approvalConditionsGR.approval_condition)␣
↪ == true) {
            var approver = approvalConditionsGR.getValue("approver");
            current.approver.setValue(approver);
            return;
        }
    }

})(current, previous);
```

CHAPTER 8

Hiding non-readable Rows in List View

Row Level Security and On Query Business Rules

8.1 Separating Readable Projects By Department

If you ever try placing security by record (or by row), your users may start seeing lists views with a count of Rows removed by Securiy contraints. Even worse they may think there are no more records, when records can easily be on the first and last page with any number of removed rows in between.

Hiding_non-readable_Rows/img/Constraints.JPG

8.1.1 Creating a Before Query Business Rule

The query created in the Business Rule can be thought of as a filter. So let's say one requirement is to allow anyone from the InfoSec Department to see any Contract record. We would start the Business Rule, by wrapping the filter with an if statement.

```
if (gs.hasRole('admin') || userIsInInfoSec()) {
  // Add filter query here
}

function userIsInInfoSec() {
  //Normal Glide Record query to see if user's Dept is InfoSec
}
```

Next, we need to apply the query. Let's say there's a department field on each contract and if a user is in the same department as the one listed in contracts then they should be able to view it.

```
if (gs.hasRole('admin') || userIsInInfoSec()) {
  var uID = gs.getUserID();
  var uGR = new GlideRecord("sys_user");
  uGR.get(uID);

  current.addQuery('department', uGR.department);
}
```

What the query is doing here is returning only records that match department with the current user's department. These will be the only records that will show in list view and will remove the security constraints, as long as they have security rights. Below, we are going to add another query where all contracts in the "Guest" department can be viewed as well.

```
if (gs.hasRole('admin') || userIsInInfoSec()) {
  var uID = gs.getUserID();
  var uGR = new GlideRecord("sys_user");
  uGR.get(uID);

  var q = current.addQuery('department', uGR.department);
  q.addOrCondition('department', 'Guest');
}
```

CHAPTER 9

Metrics

9.1 Metric from Assignment Group to Close

This will require two metric definitions. One will track the assignment group field and the other will track the state field. When the assignment group is filled the metric begins and when the state turns to close, the metric will find the assignment group metric and end the duration.

Metric Definition

Name : **Assignment Group has been populated**
Type : **Script calculation**

```
if (!current.assignment_group.nil()) {
createMetric();
  }

  function createMetric() {
      var mi = new MetricInstance(definition, current);
      if (mi.metricExists())
          return;

      var gr = mi.getNewRecord();
      gr.field_value = current.assignment_group;
    gr.start = current.sys_updated_on;
      gr.calculation_complete = false;
      gr.insert();
  }
```

Metric Definition

Name : **Stop Assignment duration on close**
Type : **Script calculation**

```
  // Close Durations on Closed Complete, Closed Incomplete, or Cancelled
if (current.state == 3 ||  current.state == 4 || current.state == 7) {
    closeDurations(current);
}

function closeDurations(current) {
    var gr = new GlideRecord('metric_instance');
    gr.addQuery('id', current.sys_id);
    gr.addQuery('calculation_complete', false);
    gr.addQuery('definition.name', 'Time to closure');
    gr.query();
    while (gr.next()) {
       var definition = new GlideRecord('metric_definition');
       definition.get(gr.definition);
       var mi = new MetricInstance(definition, current);
       mi.endDuration();
    }
}
```

Warning: Both Metrics need to be placed as "Script calculation" or it will not process correctly

CHAPTER 10

Modules

10.1 Open new window from module

This will require two metric definitions. One will track the assignment group field and the other will track the state field. When the assignment group is filled the metric begins and when the state turns to close, the metric will find the assignment group metric and end the duration.

Module

Link Type : URL (from Arguments:)

In the arguments field use the following:

```
javascript:top.window.open('/sys_user_list.do', '_blank', 'height=700,width=1000
↪');
```

CHAPTER 11

OAuth

11.1 Manual Oauth

Oauth profile needs to be first set up on ServiceNow. After set up, code below can run Oauth for each REST call. This is taken form a SalesForce Integration.

```
var oAuthClient = new sn_auth.GlideOAuthClient();
    var params = {grant_type:"password", username: username, password: password};
    var json = new global.JSON();
    var text = json.encode(params);
    var tokenResponse = oAuthClient.requestToken("nameless-dev-ed.my.salesforce.com",␣
↪text);
    var token = tokenResponse.getToken();

    gs.info("AccessToken:" + token.getAccessToken());
    gs.info("AccessTokenExpiresIn:" + token.getExpiresIn());
    gs.info(" RefreshToken:" + token.getRefreshToken());

    var response, responseBody, status;

    try {

    var restMessage = new sn_ws.RESTMessageV2();
    restMessage.setHttpMethod("get");
    restMessage.setEndpoint("https://nameless-dev-ed.my.salesforce.com/services/data/
↪v39.0/query/?q=SELECT+FirstName,+LastName,+Company,+MobilePhone+from+Lead")
    restMessage.setRequestHeader("Authorization", "Bearer " + token.getAccessToken());

    response = restMessage.execute();
    responseBody = response.haveError() ? response.getErrorMessage() : response.
↪getBody();
    status = response.getStatusCode();

    } catch(ex) {
            responseBody = ex;
```

```
        status = '500';
} finally {
        requestBody = restMessage ? restMessage.getRequestBody():null;
}

gs.info("Request Body: " + requestBody);
gs.info("Response: " + responseBody);
gs.info("HTTP Status: " + status);
```

CHAPTER 12

Reference Qualifiers

12.1 Creating a Dynamic Qualifier

I decided to create a catalog item to request a parking space. One feature I wanted was to only show parking spots depending on which type of spot you want to reserve (ie. VIP, Motorcycle, Normal).

To accomplish that requirement, I decided to go with a dynamic qualifier that changes depending on type selected.

12.1.1 The Script Include

This is probably up for debate, but I decided to keep the same object format for my script include using Class.create() and .prototype.

Script Include Fields

Name : **parkingByParkingType**
Client callable : **True**

```
var parkingByParkingType = Class.create();
parkingByParkingType.prototype = {
    initialize: function() {
    },

        getSpots: function() {

                var result = [];

                var res = new GlideRecord("u_parking_spot");
                        res.addQuery("u_assigned", false);
                        res.addQuery("u_type", current.variables.parking_type);
                        res.query();
```

```
                while ( res.next() ) {
                        result.push(res.sys_id.toString());
                }

                var au = new ArrayUtil();

                return au.unique(result);
        },

    type: 'parkingByParkingType'
};
```

The function of interest is the .getSpots() function. It's a basic query in the u_parking_spot table, but with a Dynamic Query we have acccess to *current* which we can use to add to query. In this example we're using the parking_type variable, which is a selection.

12.1.2 The Dyanmic Filter Option

Ref: https://www.packtpub.com/mapt/book/Networking%20and%20Servers/9781782174219/02/ch02lvl1sec26/Scripting%20Reference%20Qualifiers

12.2 Qualifier that uses multiple queries

```
//getUserGroupsAsArray(), just grabs all user's groups and puts them into an array
var userGroups = getUserGroupsAsArray();

//-----------------------------------------------------
//!  Here each query checks to see if  queried group
//!    is in one of the userGroups array
//-----------------------------------------------------
var portfolioGR = new GlideRecord("pm_portfolio");
var q = portfolioGR.addQuery("u_department.u_ppm_group", 'IN', userGroups);
q.addOrCondition('u_department.parent.u_ppm_group', 'IN', userGroups);
q.addOrCondition('u_department.u_ppm_agency_intake_group', 'IN', userGroups);
q.addOrCondition('u_department.parent.u_ppm_agency_intake_group', 'IN', userGroups);
q.addOrCondition('u_department.u_customer_engagement_group', 'IN', userGroups);
q.addOrCondition('u_department.parent.u_customer_engagement_group', 'IN', userGroups);
portfolioGR.query();

var portfolioArray = [];

while(portfolioGR.next()) {
        portfolioArray.push(portfolioGR.sys_id.toString());
}

//unique() function takes out any duplicates
var arrayUtil = new ArrayUtil();
var cleanPortfolioArray = arrayUtil.unique(portfolioArray);

return 'sys_idIN' + cleanPortfolioArray;
```

CHAPTER 13

RegEx

13.1 Replace with callback

Regex can be used for replacing a string, but if you want to use the string still or store it, you can use a callback function

The code below will find a string, store it in a table, and replace it with the sys_id of the record

```
var body = textWithURLs;
    var newBody = "";

    var trackGR = new GlideRecord("url_table");

    //Here we see the "url" variable will hold each matched string
    // {string}  The return string of each replace will replace the matched string
    var newBody = body.replace(/href\s*=\s*["'][^'"]*["']/ig, function␣
↪createTracking(url) {

      trackGR = new GlideRecord("url_table");
      trackGR.initialize();
      trackGR.u_email_message = current.sys_id.toString();
      var formattedUrl = url.toString().split(/["']/)[1];
      trackGR.u_url_link = formattedUrl;
      var trackID = trackGR.insert();

      return "href='https://devXXXXX.service-now.com/nav_to.do?uri=url_table.do?sys_
↪id=" + trackID + "'";
    });

    textWithURLs = newBody;
```

13.2 Example 2: replace <<EMPLOYEE>>

```
var parsedForm = htmlForm.replace(/&lt;&lt;EMPLOYEENAME&gt;&gt;|<<EMPLOYEENAME>>/ig,␣
↪employeeGR.name);
parsedForm = parsedForm.replace(/&lt;&lt;EMPLOYEEFIRSTNAME&gt;&gt;|<
↪<EMPLOYEEFIRSTNAME>>/ig, employeeGR.first_name);
parsedForm = parsedForm.replace(/&lt;&lt;DATE&gt;&gt;|<<DATE>>/ig, gs.nowDateTime().
↪split(" ")[0]);
```

CHAPTER 14

REST Message v2

14.1 External Cart Orders

There's three pieces I had to use to allow cart orders from an external source

1. Creating the staging table
2. Creating the business rule after insertion into the staging table
3. Setting up the REST Message

14.1.1 Create the Staging Table

I created a table and named it Cart Order (u_cart_order). This will hold four fields used for calling the Cart API to create an order, more on that later.

Column Label	Type	Max length
Req_Id	String	100
Catalog Item	String	40
Errors	String	500
Variables	String	3000

14.1.2 Sending the REST Message

From within another ServiceNow Instance

This can be run however you would want, but I've only tested this using a background script. I don't see why it would fail anywhere else.

```
var request = new sn_ws.RESTMessageV2();
request.setEndpoint('https://dev22614.service-now.com/api/now/table/u_cart_order');
request.setHttpMethod('POST');
```

```
//Eg. UserName="admin", Password="admin" for this code sample.
var user = 'admin';
var password = 'admin';

request.setBasicAuth(user,password);
request.setRequestHeader("Accept","application/json");
request.setRequestHeader('Content-Type','application/json');
request.setRequestBody('{"u_catalog_item":"Blackberry",' +
                           '"u_variables":"original^299-999-9991|' +
                           'replacement^Yes"}');
var response = request.execute();
gs.log(response.getBody());
```

In the requestbody there's two key value's to set up

- **u_catalog_item** Name of the catalog item should be the value
- **u_variables** The value should be a pipe | separated list of variables, with the name of the variable the value separted by a caret ^

14.1.3 Creating the Business Rule

When the REST message is sent, it will populate the Cart Order table that we had created above. What we want to do is create a **BEFORE** business rule to be called on **INSERT** so it can go into the Cart API and make an order depending on what was sent in the REST call.

CHAPTER 15

Sending Attachments via REST

15.1 Overview

This will allow a system to receive a base64 encoded string and set it to the attachment table

15.2 Staging Table

A table should be created that extends the Import Set Row table with the following added fields

Column label	Type	Max length
attachment	String	1,000,000
name	String	
ticket number	String	1,000

15.3 Create a Transform Map

Name	Source table	Target table
Attachment Stage to Queue	Attachment Staging Table	ecc_queue

15.3.1 Field Maps

Source field	Target field
u_attachment	payload
u_name	name
u_ticket_number	source
[Script]	agent
[Script]	topic

Agent Scripts

```
answer = (function transformEntry(source) {

  // Add your code here
  return "AttachmentCreator"; // return the value to be put into the target␣
↪field

})(source);
```

Topic Scripts

```
answer = (function transformEntry(source) {

  // Add your code here
  return "AttachmentCreator"; // return the value to be put into the target␣
↪field

})(source);
```

15.4 Sending the REST Message

The rest message should be sent with the fields below

```
{
"u_name":"Something.jpg:image/jpeg",
"u_ticket_number":"incident:83bff1fddb2d220003ee793ebf961957",
"u_attachment":"e490qugijelkabvrohatge4",
}
```

15.5 Example Business Rule Script for Attachment

```
var target = new GlideRecord('sys_attachment');
target.addQuery('table_name', 'incident');
target.addQuery('table_sys_id', current.sys_id);
target.query();

while(target.next()) {
  var sa = new GlideSysAttachment();
  var binData = sa.getBytes(target);
  var base64Data = GlideStringUtil.base64Encode(binData);

  //Send Attachments
  var requestAttachment = new sn_ws.RESTMessageV2();
  requestAttachment.setEndpoint('https://XXXXX.service-now.com/api/now/
↪import/u_attachment_staging_table');
  requestAttachment.setHttpMethod('POST');

  requestAttachment.setBasicAuth(user,password);
  requestAttachment.setRequestHeader("Accept","application/json");
  requestAttachment.setRequestHeader('Content-Type','application/json');
```

```
  var requestAttachmentJSONBody = createRequestBody("u_name", target.file_
↪name + ":" + target.content_type);
  requestAttachmentJSONBody += addToRequestBody("u_ticket_number", 'incident:
↪' + sysid);
  requestAttachmentJSONBody += addToRequestBody("u_attachment", base64Data);
  requestAttachmentJSONBody += closeRequestBody();

  requestAttachment.setRequestBody(requestAttachmentJSONBody);

  var responseAttachment = requestAttachment.execute();
}
```

The createRequestBody() functions are just used to create a JSON Object with for example {u_name: “targetinfo”, u_ticket_number: “incident:39024903284”}

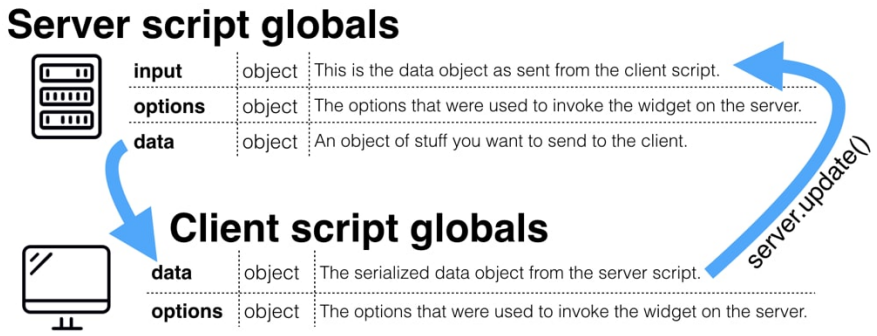
CHAPTER 16

Service Portal

16.1 Overview

This will discuss using Angular and coding widgets to create a Service Portal with as much, if not more, features as the Content Management System

16.2 Understanding How Server Script Works



The Flow of Data from ServiceNow Docs

The Server Script on a widget is executed *onLoad* and can be used to transfer a **data** object from the server to the client. On the client, this data object is very important for fleshing out your portal page.

Let's say you want a widget of vip users and their picture. The server would send the data with that information and the client receives that data object and then displays it the way you desire.

```
data.names = [];

var userGR = new GlideRecord("sys_user");
  userGR.addQuery("vip", true);
  userGR.query();
```

```
while (userGR.next()) {
  data.names.push(userGR.name.toString());
}
```

Once the code reaches the bottom the data object will be sent. So now you have an array of VIP names that you can use.

16.2.1 The Client can send Data also

So let's say you want to give users the ability to change what kind of users they want to see. For example, the user chooses to query for, let's say, all ITIL users.

On the client side code, create an object literal called **input** and fill in the information the server would need. For this example, we can send the string "itil" in the input object. Once we are ready we use *server.update()* to send the input object to the server.

```
var c = this;
var input = {};

$scope.onItilButtonClick = function() {
  input.button = "itil";
  c.server.update();
}
```

After *c.server.update();*, the process then repeats sending whatever data object the server now has back to client, and re-renders if anything changes.

16.2.2 Processing the input sent from client

The server client script gets processed in whole after a *c.server.update()*, so to prevent the original query from being processed, we'll have to wrap what we want in an *if (input) {}* statement. The only difference from the first *onLoad* and the runs from the client is the appearance of the input object.

```
data.names = [];

if (input) {
  var userGR = new GlideRecord("sys_user");
    userGR.addQuery('roles=' + input.button);
    userGR.query();

  while (userGR.next()) {
    data.names.push(userGR.name.toString());
  }
} else {
  var userGR = new GlideRecord("sys_user");
    userGR.addQuery("vip", true);
    userGR.query();

  while (userGR.next()) {
    data.names.push(userGR.name.toString());
  }
}
```

The else statement here is defaulted to searching for vip. When an input is sent to the server it will start a new query looking for whatever role is in input.button.

Code that you want to run on both *onLoad* and when a client re-renders, just put them in the script normally. Such as the initialization of the data.names array on the first line.

Warning: Only data will get sent to the client from the server. If you want to send input back you must put it back into the data object.

```
if (input) {
  data.foo = input.foo
}
```

CHAPTER 17

Sphinx Shortcuts

17.1 Sphinx codes

```
/*
.. code-block:: Javascript

    var someCode = "some more code"

    .. warning::

            Some warning block
*/
```

CHAPTER 18

Syntax Editor

18.1 Location

System Definition > Syntax Editor Macros

CHAPTER 19

Time Card Modifications

19.1 Generate Time Cards based on Resource Allocations

Currently timecards are only generated for the table planned_task and only for the current week

19.1.1 Goal

- Generate timecards when the current user is assigned as a resource allocation
- Generate timecards for upcoming weeks (not just the current week)

19.1.2 Script Include

The only script we need to edit is the **TimeCardAjax** script include. Since this is OOB, it's best to insert-and-stay then mark the original as inactive.

The only OOB function we will be editing is **ajaxFunction_generateTaskCards()**, the rest we will be creating ourselves.

```
ajaxFunction_generateTaskCards: function(){
  //get request info
  this.weekStart = this._getWeekStart();
  this.user = this.getParameter('sysparm_user');
  this.weekEnd = this._getWeekEnd();
  this.newCards = []; //list of cards created
  this.existingCards = this._getExistingCards();
  this.plannedTasks = this._getPlannedTasks();
  this._generateMissingCards(this.plannedTasks);
  this._generateMissingCards(this.tasks);

  //added two functions to be run for Resource Allocations
  this.resourceAllocations = this._getResourceAllocations();
  this._generateMissingAllocations();
```

```
    this._buildResult();
},
```

This is the function that gets run initially, when TimecardAjax is called. What I added were two lines between **this._generateMissingCards(this.plannedTasks)** and **this._buildResult();**.

Both functions should be self explanatory. The **._getResourceAllocation()** grabs all resource allocations for the user and **._generateMissingAllocations()** will generate timecards if there are no timecards associated.

19.1.3 Unit Tests

```
var alloc = new GlideRecord("resource_allocation");
alloc.user = "0ac0a7f7db20220003ee793ebf961970";
var date = new GlideDate();
date.setValue('2016-11-05');
alloc.start_date = date;
var date2 = new GlideDate();
date2.setValue('2016-11-23');
alloc.end_date = date2;
alloc.requested_hours = "30";
alloc.task = "48b1d30ddb95a20003ee793ebf961942"
alloc.resource_plan = "e3bc5091db19a20003ee793ebf961943"
var test = alloc.insert();
gs.log(test);
```

```
var newTask = new GlideRecord("cert_follow_on_task");
newTask.assigned_to = "0ac0a7f7db20220003ee793ebf961970";
newTask.short_description = "Unit Test 08171131";

var taskId = newTask.insert();
gs.log("taskID = " + taskId);

var newRP = new GlideRecord("resource_plan");
  newRP.task = taskId;
  newRP.start_date = "2015-01-01";
  newRP.end_date = "2019-01-01";
  newRP.user_resource = "0ac0a7f7db20220003ee793ebf961970";
  newRP.resource_type = "user";
  newRP.planned_hours = 0;

var resourceId = newRP.insert();
gs.log("resourceID = " + resourceId);

var alloc = new GlideRecord("resource_allocation");
    alloc.user = "0ac0a7f7db20220003ee793ebf961970";
    var date = new GlideDate();
    date.setValue('2016-11-05');
    alloc.start_date = date;
    var date2 = new GlideDate();
    date2.setValue('2016-11-23');
    alloc.end_date = date2;
    alloc.requested_hours = "30";
    alloc.task = taskId;
    alloc.resource_plan = resourceId;
```

```
var allocationId = alloc.insert();
gs.log("allocationdId = " + allocationId);

var alloc2 = new GlideRecord("resource_allocation");
    alloc2.user = "0ac0a7f7db20220003ee793ebf961970";
    var date = new GlideDate();
    date.setValue('2016-11-16');
    alloc2.start_date = date;
    var date2 = new GlideDate();
    date2.setValue('2016-12-02');
    alloc2.end_date = date2;
    alloc2.requested_hours = "30";
    alloc2.task = taskId;
    alloc2.resource_plan = resourceId;

allocationId = alloc2.insert();
gs.log("allocationID2 = " + allocationId);
```

CHAPTER 20

UI Pages

20.1 Triggering on change for select box

To prevent using gel, we can pass in the current value of the select box using *this.value*

20.1.1 HTML

```
<g:evaluate>
  var choiceList = new GlideChoiceList();
  choiceList.add('', '--None--');
  choiceList.add('123', 'OneTwoThree');
  choiceList.add('FourFiveSix', '456');
</g:evaluate>

<select id="document_select" name="document_select" onchange=
↪"myFunction(this.value)">
  <g:options choiceList="${choiceList}" choiceValue="" />
</select>
```

20.1.2 Client Script

```
function myFunction(val) {
  alert(val);
}
```

20.2 Using a passed parameter in HTML field

20.2.1 HTML

```
<g:evaluate var="jvar_document_array"
expression="RP.getWindowProperties().get('sysparm_document_array')" />

<script>
  alert('"${jvar_document_array}"');
</script>
```

20.3 Using a passed parameter in the Client field

20.3.1 Client script

```
if ("${sysparm_checked_out}" == "true") {
  alert('"${sysparm_checked_out}"');
}
```

CHAPTER 21

Working With Variable Sets

21.1 Variable Iteration

Thanks to Andrew Sainz for finding this

```
var item = new GlideRecord('sc_req_item');
item.addQuery('sys_id',current.sysapproval);
item.query();

if(item.next())     {
    for (var key in item.variables)      {
        var v = item.variables[key];

        if (v != '' && !v.nil()) {
            current.u_approval_summary +=v.getGlideObject().getQuestion().getLabel() +
                        ': ' + v.getDisplayValue() + "\n";
        }
    }
}
```

CHAPTER 22

Workflows

22.1 Canceling and Reopening Workflow

```
function server_cancel_business_case(){
    //Cancels all approvals for Business Case and delete workflow
    new WorkflowApprovalUtils().cancelAll(current, "Placed on hold by " + gs.
↪getUser().name);
    new Workflow().deleteWorkflow(current);

    current.u_ppm_bc_state = 'closed_cancelled';
    current.update();
    action.setRedirectURL(current);
}
```

```
//Cancels all approvals for Business Case and delete workflow
new WorkflowApprovalUtils().cancelAll(current, "Re-Opened by " + gs.getUser());
new Workflow().deleteWorkflow(current);
```

22.2 Sending in workflow values with StartFlow

UI Action / Business Rule

```
var wf  = new Workflow ( ); //Get the workflow id
var  wfId  = wf. getWorkflowFromName ( "Print Screen" ) ;
var vars = {};
vars.u_task_sys_id = current.sys_id.toString();
vars.variable2 = "This is var2";
wf. startFlow (wfId , current , "Update" , vars ) ;
```

Within Workflow Script

```
var readValue = workflow.inputs.u_task_sys_id;
//workflow.variables_u_task_sys_id  ... will also work

var projectTaskGR = new GlideRecord("pm_project_task");
projectTaskGR.get("sys_id", readValue);
projectTaskGR.state = 3;
projectTaskGR.update();
```

CHAPTER 23

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