

Script Include for Custom API Logic

User Story: As a ServiceNow Administrator, I want to create a reusable Script Include that calculates the total unresolved incidents for a given user so that it can be leveraged across different workflows and integrations via a REST API.

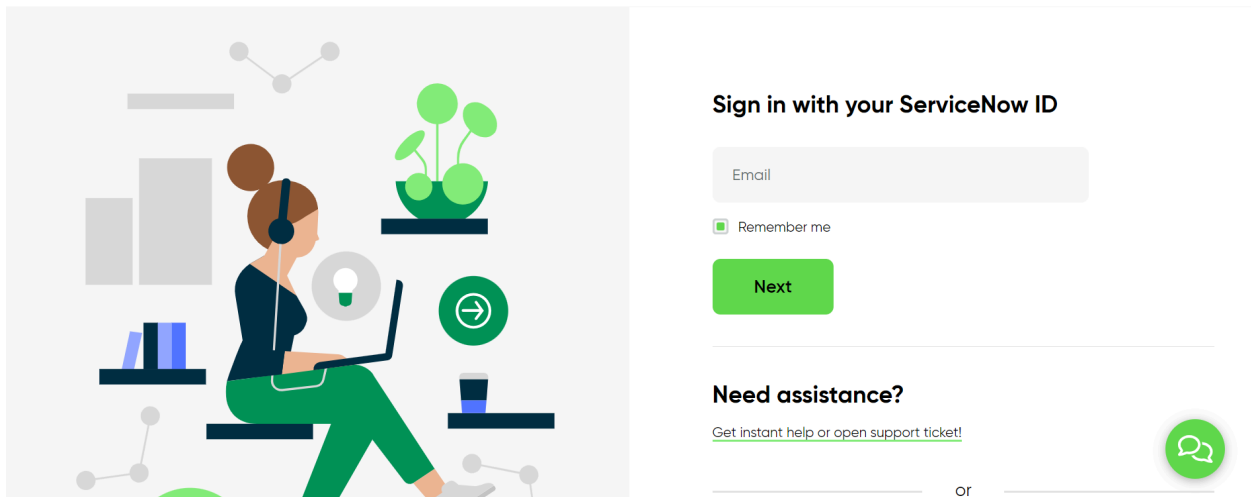
Objective: Document the steps required to create a reusable Script Include and a REST API endpoint in ServiceNow. The solution will enable the organization to retrieve the total count of unresolved incidents assigned to a specific user through an API call. This ensures consistency, reusability, and maintainability.

Skills: Script Include, Scripted REST API, REST API Explorer.

Solution:

Step 1 : Sign into ServiceNow.

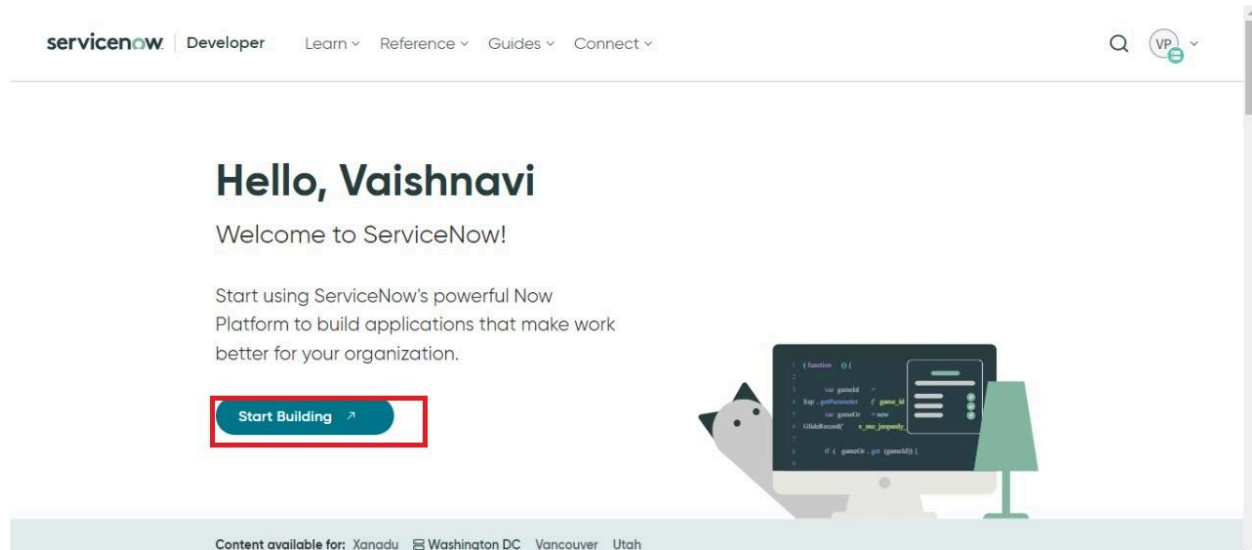
servicenow. | Developer Program



Step 2 : Sign up for a developer account on the ServiceNow Developer site
“<https://developer.servicenow.com>”.

Step 3 : Once logged in, navigate to the "Personal Developer Instance" section.

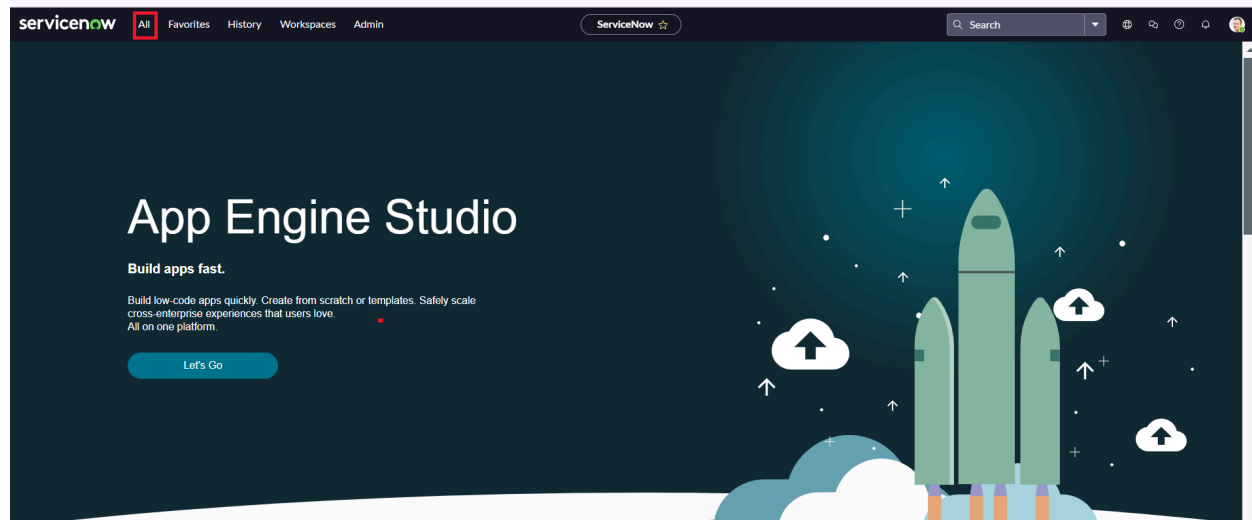
Click on "Request Instance" to create a new ServiceNow instance.



Step 4 : Fill out the required information and submit the request.

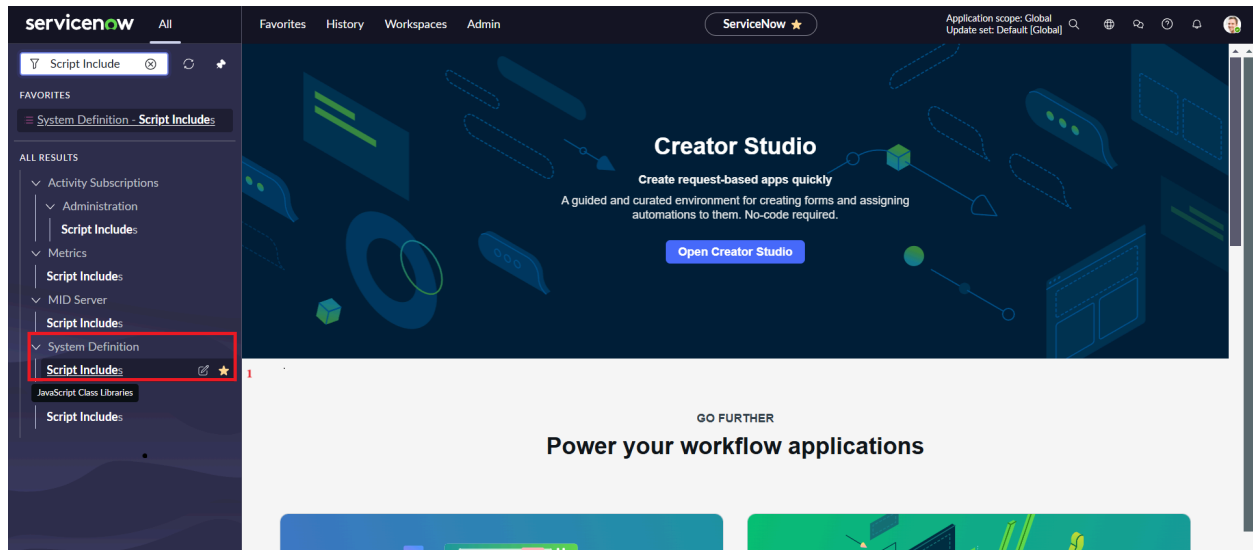
Step 5 : You'll receive an email with the instance details once it's ready.

Step 6 : Log in to your ServiceNow instance using the provided credentials.
Now you will navigate to the ServiceNow.



Step 7 :

1. Open “Script Include”
2. Under System Definition



3. Create New

Script Includes					Actions on selected rows...
Name	Application	Active	Description	Updated	
Search	Search	Search	Search	Search	
AbstractAjaxProcessor	Global	true	Base ajax processor class that other aja...	2014-06-24 20:05:38	
AbstractApplicationServicePopulator	Global	true	Abstract script include for populating c...	2019-12-02 08:33:20	
AbstractAppseelHttpClient	User Experience Analytics API	true	AppseelHttpClient interface with all meth...	2022-06-08 10:17:17	
AbstractDBObject	Global	true	Provides common methods for classes base...	2013-07-01 18:33:17	
AbstractList	Global	true		2012-02-07 16:35:39	
AbstractMatchingDimension	Global	true	Base class for matching dimensions.	2016-05-12 13:22:54	
AbstractMobileCallableInclude	Global	true	Base class that other mobile callable sc...	2024-02-08 06:31:49	
AbstractSchedulePageRESTWrapper	Schedule Pages	true	Base schedule page wrapper class that of...	2020-05-01 08:00:17	
AbstractScriptProcessor	Global	true		2016-12-14 11:27:12	
AbstractTimelineSchedulePage	Global	true	Abstract timeline script include for all...	2013-06-20 13:52:00	
AbstractTransaction	Global	true	Abstract Baseclass for a single Processo...	2008-09-24 02:54:06	
AbstractUpdateUIActionUtil	Global	true	Update UI Action util to help determine ...	2016-09-29 07:16:55	
AccessAnalyzeExecutor	Access Analyzer	true		2023-06-01 22:43:06	
AccessAnalyzerUtil	Access Analyzer	true		2023-12-03 20:44:40	
AccessControlUtils	Global	true	This is a wrapper Script Include to allo...	2024-03-03 10:38:43	
AccessFinder	Scoped App Author	true		2015-11-04 17:10:38	
AccessibleApplicationDataBuilder	App Engine Studio	true	Builds the App Engine Studio API respons...	2022-07-18 10:00:33	
AccessValidator	App Engine Studio	true	Validates whether a user can view/edit/c...	2021-06-02 07:29:00	
Account	Global	true	Account API Service Class	2017-12-13 15:27:31	

Step 8 : Fill the details as below

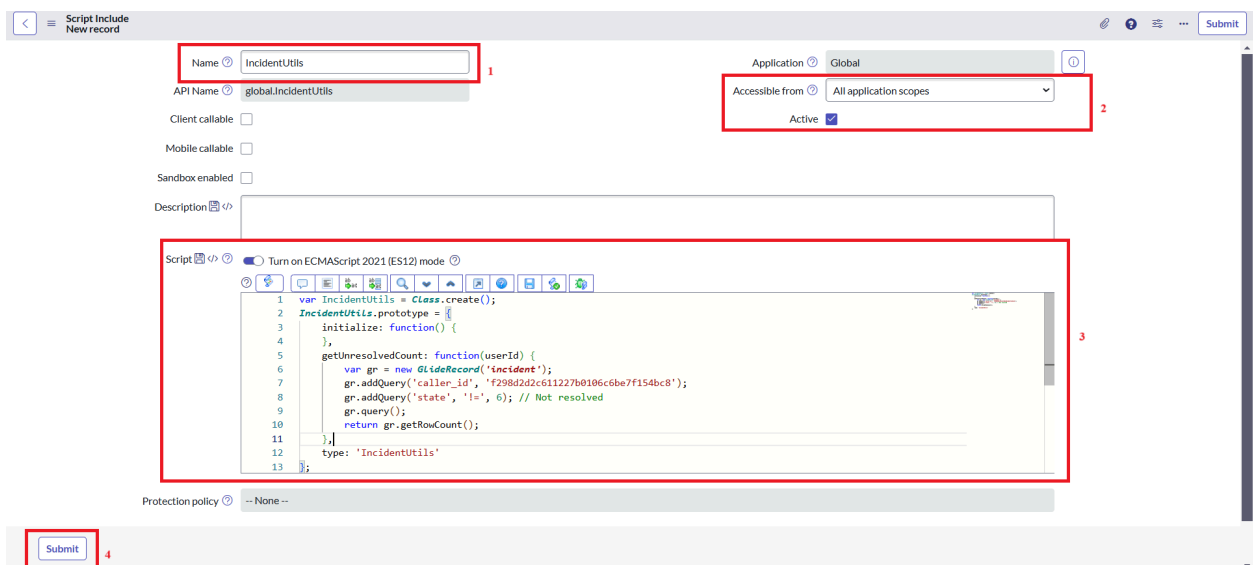
1. Name: IncidentUtils
2. Accessible From: All Application Scope
3. In the Script section, please paste the below Script as shown below.

Step 9 : Copy the script which shown below

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

  getUnresolvedCount: function(userId) {
    var gr = new GlideRecord('incident');
    gr.addQuery('caller_id', 'f298d2d2c611227b0106c6be7f154bc8');
    gr.addQuery('state', '!=', 6); // Not resolved
    gr.query();
    return gr.getRowCount();
  },

  type: 'IncidentUtils'
};
```



The screenshot shows the 'Script Include' configuration page in the SmartBridge console. The 'Name' field is set to 'IncidentUtils' (labeled 1). The 'API Name' is 'global.IncidentUtils'. The 'Application' is set to 'Global' (labeled 2). The 'Accessible from' dropdown is set to 'All application scopes'. The 'Active' checkbox is checked. The 'Script' section (labeled 3) contains the JavaScript code for the IncidentUtils class. The 'Protection policy' is set to 'None' (labeled 4). The 'Submit' button is at the bottom right.

Name 1

API Name

Client callable ☐

Mobile callable ☐

Sandbox enabled ☐

Description

Application 2

Accessible from

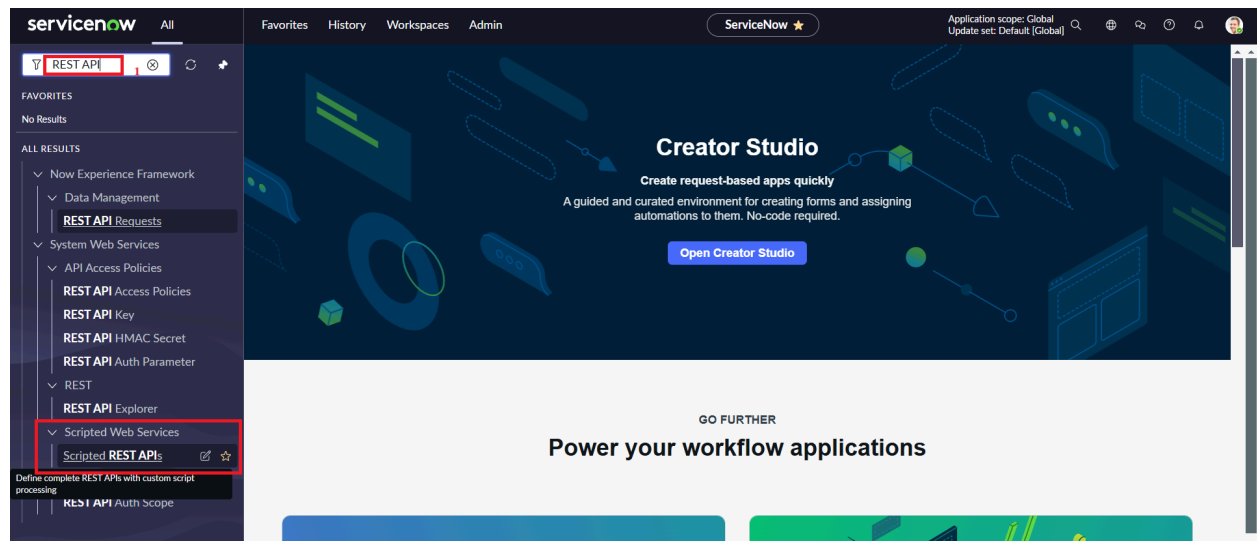
Active ☒

Script 3

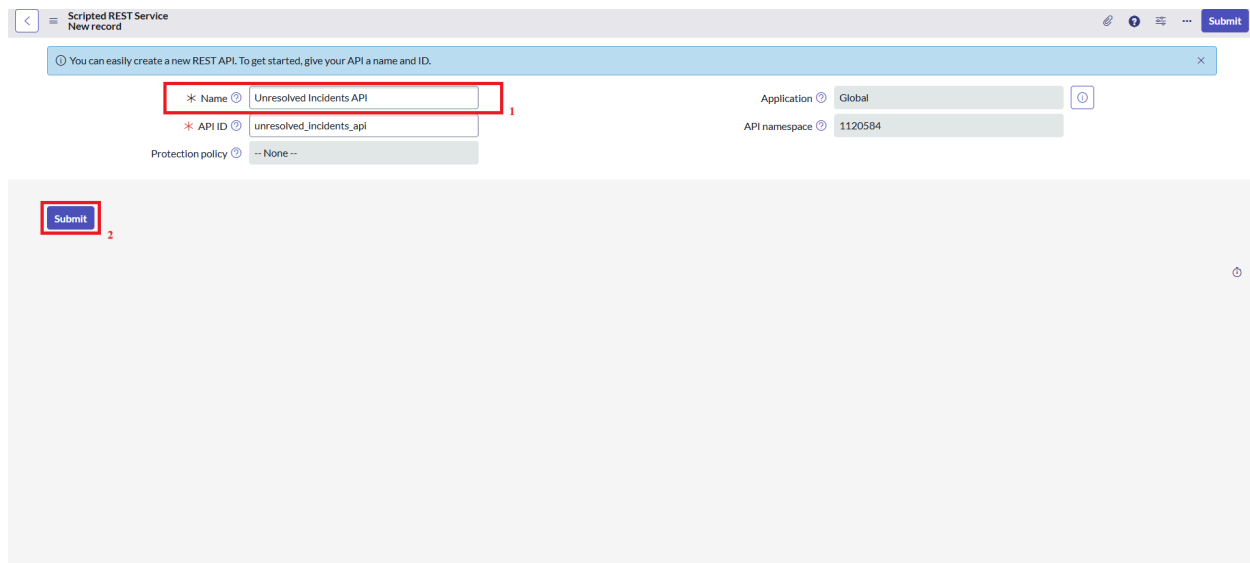
Protection policy

Submit 4

Step 10 : Create new REST API



Name	API ID	Base API path	Active	Is versioned
Account	account	/api/now/account	true	true
ACE Contents	ace	/api/now/ace	true	false
Action	action	/api/sn_ex_sp/action	true	false
Activity Picker Usage Monitoring	activity_picker_usage_monitoring	/api/sn_pa_designer/activity_picker_usag...	true	false
ActivitySubscriptions	actsub	/api/now/actsub	true	true
Admin Center API	adminx	/api/sn_admin_center/adminx	true	false
Advance Chat Settings	advance_chat_settings	/api/now/advance_chat_settings	true	false
AES Role Builder Application API	application	/api/sn_role_builder/application	true	true
Agent Initiated Message	agent_initiated_message	/api/now/agent_initiated_message	true	false
Agent Schedule	agent_schedule	/api/now/agent_schedule	true	false
AI Search Assist (Internal API)	aisa	/api/now/aisa	true	false
AI Search Assist Action (Internal API)	aisa_action	/api/now/aisa_action	true	false
App Engine Studio Applications API	applications	/api/sn_app_eng_studio/applications	true	true
App Engine Studio Plugin Activations	plugin_activations	/api/sn_app_eng_studio/plugin_activations	true	true
App Engine Studio Resources Content API	resources_content	/api/sn_app_eng_studio/resources_content	true	true
App Engine Studio Template Category API	object_template_category	/api/sn_app_eng_studio/object_template_c...	true	true
App Engine Studio Templates API	templates	/api/sn_app_eng_studio/templates	true	false
App Engine Studio User Intake	app_engine_studio_user_intake	/api/sn_app_eng_studio/app_engine_studio...	true	true
Application Intake Provision	provision	/api/sn_app_intake/provision	true	true



Scripted REST Service
New record

You can easily create a new REST API. To get started, give your API a name and ID.

* Name 1

* API ID

Application

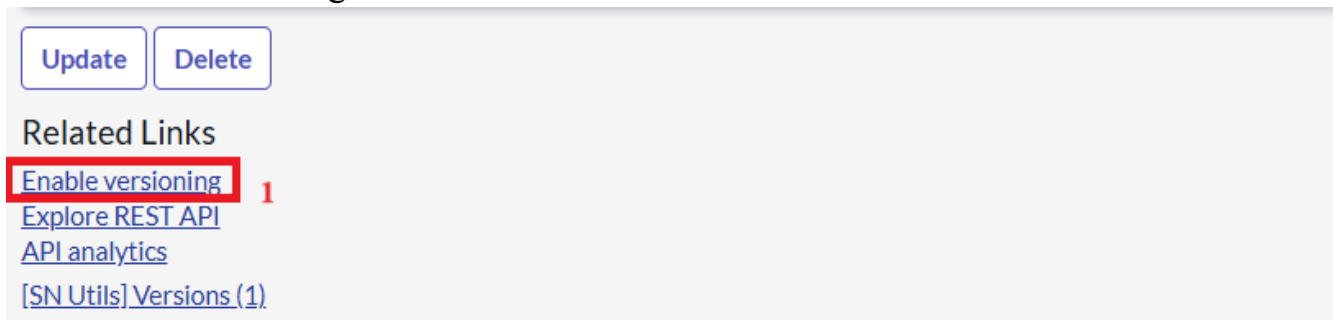
API namespace

Protection policy

2

Step 11 :

1. REST API Name: Unresolved REST API
2. API ID will auto populate
3. Click on Submit.
4. As soon as we submit, below the Update and Delete buttons, we can see “Enable Versioning” and we need to make sure the version should be v1 as shown in the following.



Related Links

[Enable versioning](#) 1

[Explore REST API](#)

[API analytics](#)

[\[SN Utils\] Versions \(1\)](#)

Enable versioning

×

Close

When you enable versioning for this API, all related resource records use a version-specific URL. To continue supporting resources without a version number in the URL, make version v1 the default version.

☒ Make version v1 default

Cancel

OK

5. Click on OK

Step 12 :

1. After selecting the versioning, we need to add resources below.
2. Click on the Resources Section and click on New.

Update Delete

Related Links

[Enable versioning](#)
[Explore REST API](#)
[API analytics](#)
[\[SN Utils\] Versions \(1\)](#)

Resources

Request Headers

Query Parameters

≡

▼

Name

Search


⊙

🔗

—

New

API definition = demo api

Name	HTTP method	Relative path	Resource path	API version	Active
<div>  No records to display </div>					

Step 13 :

1. As soon as we click New fill the details.
2. Name: “get_unresolved_incidents”
3. API Version: v1
4. HTTP Method: GET
5. Relative Path: /unresolved/{userId} as shown in the below.

Scripted REST Resource
get_unresolved_incidents

API definition ⓘ Unresolved Incidents API ⓘ 1

* Name ⓘ get_unresolved_incidents

Application ⓘ Global ⓘ

* API version ⓘ v1 ⓘ 2

Active ⓘ ☒

Request routing

The route configuration specifies the 'HTTP method' and 'Relative path'. These fields determine how HTTP clients access this resource. The relative path identifies the sub-path to this resource relative to the base API path. The relative URI can contain path parameters such as 'abc/{id}'. The requesting client specifies the id value, available to the script at runtime via the: [Request API](#). [More Info](#)

* HTTP method ⓘ GET ⓘ 3



Relative path ⓘ /unresolved/{userId} ⓘ 4

Resource path ⓘ /api/1120584/v1/unresolved_incidents_api/unresolved/{userId}

Default resource path ⓘ /api/1120584/unresolved_incidents_api/unresolved/{userId}

Implement the resource

Access request details including URI path parameters, query parameters, headers, and the request body using the: [Request API](#). Configure the response including setting the HTTP status code, response body, and any response headers using the: [Response API](#). [More Info](#)

* Script ⓘ  ⓘ  ⓘ Turn on ECMAScript 2021 (ES12) mode ⓘ

6. Now we should add a “Scripted REST resource” script to the resource as shown in the below.

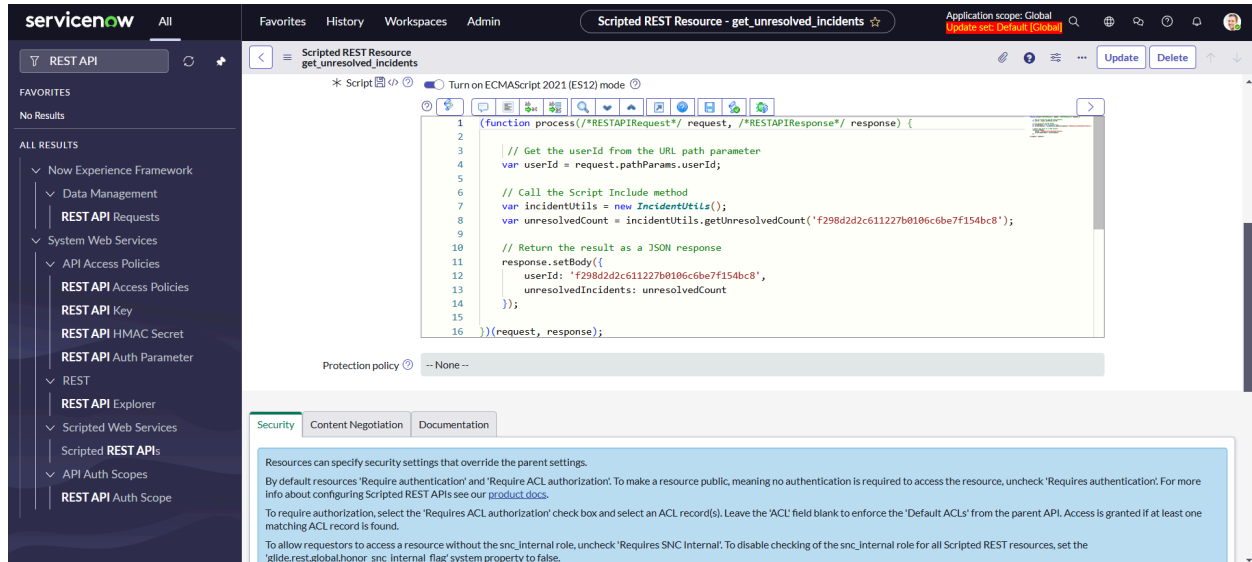
```
(function process(/*RESTAPIRequest*/ request, /*RESTAPIResponse*/ response) {

    // Get the userId from the URL path parameter
    var userId = request.pathParams.userId;

    // Call the Script Include method
    var incidentUtils = new IncidentUtils();
    var unresolvedCount =
incidentUtils.getUnresolvedCount('f298d2d2c611227b0106c6be7f154bc8');

    // Return the result as a JSON response
    response.setBody({
        userId: 'f298d2d2c611227b0106c6be7f154bc8',
        unresolvedIncidents: unresolvedCount
    });

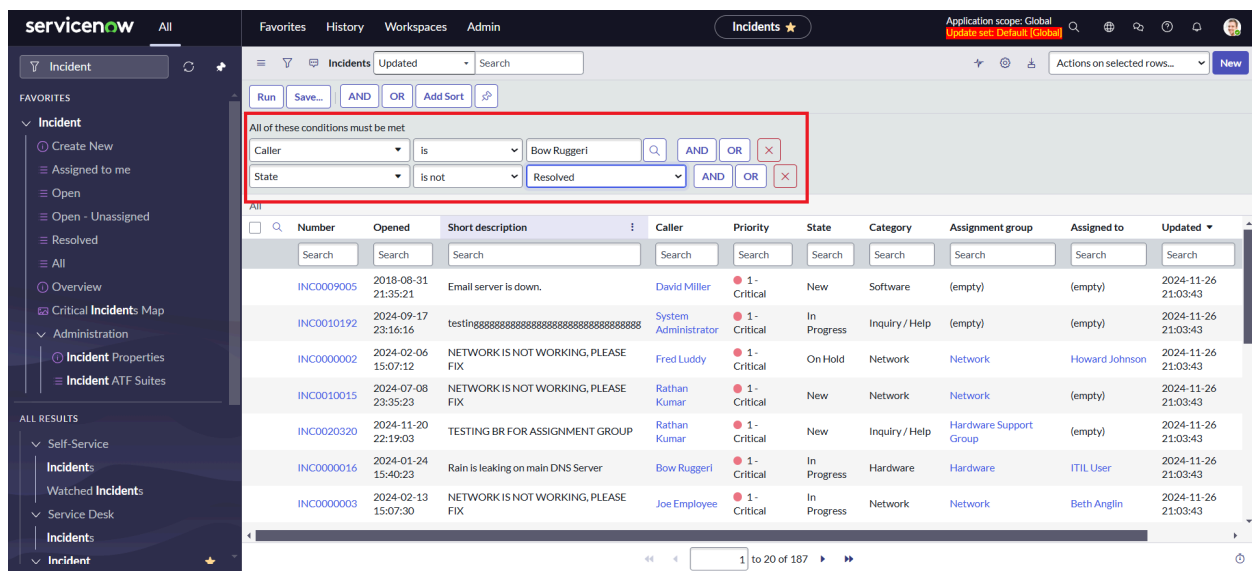
})(request, response);
```

7. Click on Submit.

Step 14:

1. Before testing we need to validate Unresolved incidents for the userID
In this particular use case I have chosen the user as “Bow Ruggeri” as shown
below.



2. Now add a filter condition “Caller is Bow Ruggeri” AND “State is Unresolved” and run.

3. In this particular scenario we have 11 Unresolved Incidents for Bow Ruggeri.

servicenow Incidents

Application scope: Global Update set: Default (Global)

Incidents Updated Search

All > Caller = Bow Ruggeri > State != Resolved

Number	Opened	Short description	Caller	Priority	State	Category	Assignment group	Assigned to	Updated	Updated by
INC0000014	2024-01-18 15:37:35	Missing my home directory	Bow Ruggeri	1 - Critical	In Progress	Inquiry / Help	(empty)	Bud Richman	2024-11-26 21:03:43	system
INC0000016	2024-01-24 15:40:23	Rain is leaking on main DNS Server	Bow Ruggeri	1 - Critical	In Progress	Hardware	Hardware	ITIL User	2024-11-26 21:03:43	system
INC0010122	2024-08-26 23:32:38	testinggg	Bow Ruggeri	1 - Critical	In Progress	Inquiry / Help	(empty)	(empty)	2024-11-26 21:03:43	system
INC0000038	2024-02-19 16:36:44	ERROR, ERROR, ERROR, ERROR	Bow Ruggeri	4 - Low	In Progress	Software	Service Desk	Luke Wilson	2024-11-11 03:22:58	admin
INC0000058	2016-08-10 09:37:45	Performance problems with email	Bow Ruggeri	5 - Planning	In Progress	Inquiry / Help	(empty)	(empty)	2024-09-18 22:52:35	admin
INC0010135	2024-08-27 00:22:32	q123	Bow Ruggeri	5 - Planning	In Progress	Inquiry / Help	(empty)	(empty)	2024-09-18 22:52:32	admin
INC0010144	2024-08-27 01:55:25	test	Bow Ruggeri	5 - Planning	In Progress	Inquiry / Help	(empty)	(empty)	2024-09-18 22:52:32	admin
INC0010146	2024-08-27 02:00:14	test	Bow Ruggeri	5 - Planning	In Progress	Inquiry / Help	(empty)	(empty)	2024-09-18 22:52:31	admin
INC0010147	2024-08-27 02:01:45	123	Bow Ruggeri	5 - Planning	In Progress	Inquiry / Help	(empty)	(empty)	2024-09-18 22:52:30	admin
INC0010194	2024-09-18 22:50:39	zxcvbnm	Bow Ruggeri	5 - Planning	In Progress	Inquiry / Help	(empty)	Bow Ruggeri	2024-09-18 22:51:13	admin
2024-02-14		Mv desk phone does	Bow						2024-05-14	

1 to 11 of 11

4. Now we need to validate and test the API. In order to get the output of “11 Unresolved incidents for “Bow Ruggeri” and we will test this API by using REST API Explorer.

Result:

1. We can validate the API with this “API Namespace: 1120584” in Scripted REST Service

Scripted REST API - Unresolved Incidents API

Application scope: Global Update set: Default (Global)

Scripted REST Service Unresolved Incidents API

Name Unresolved Incidents API

API ID unresolved_incidents_api

Active ☒

Protection policy -- None --

Application Global

API namespace 1120584

Base API path /api/1120584/unresolved_incidents_api

Security Versioning Content Negotiation Documentation

Default ACLs may be selected to apply to all resources, but individual resources can override this setting. The Default ACLs are enforced for a resource when:

- The resource 'Requires authentication' and 'Requires ACL authorization' fields are selected, and
- The resource itself does not reference any ACL records

Access is granted if at least one matching ACL record is found.

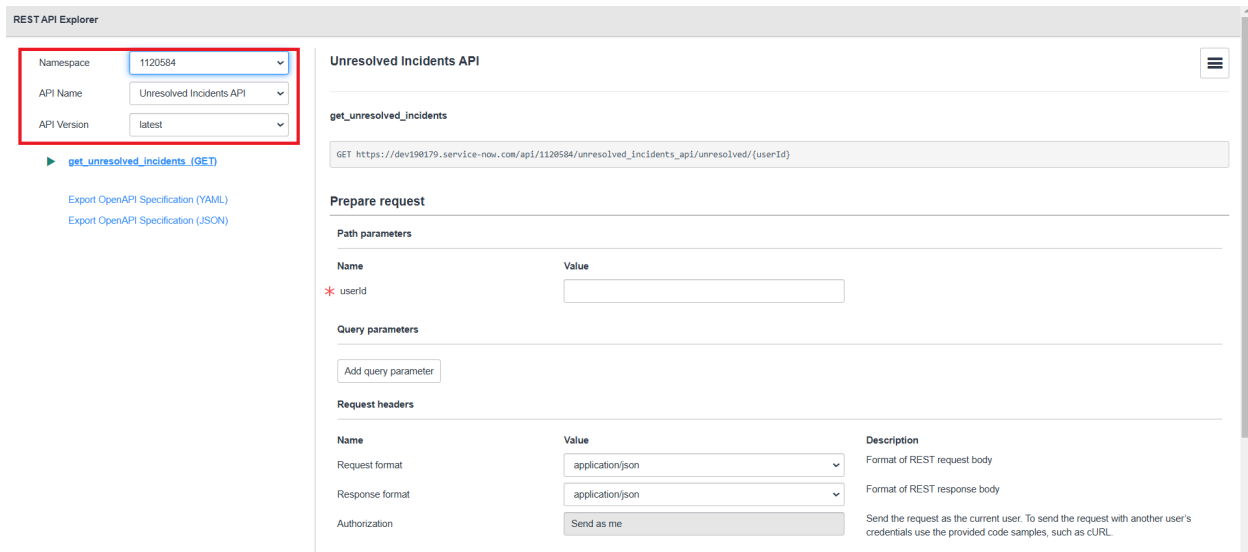
More Info

Default ACLs Scripted REST External Default

2. We need to mention the same namespace ID in REST API Explorer to test the API as shown in the below

3. Namespace: 1120584

4. API Name: Unresolved Incidents API
5. API Version: Latest or v1



REST API Explorer

Namespace: 1120584
API Name: Unresolved Incidents API
API Version: latest

get_unresolved_incidents (GET)

Export OpenAPI Specification (YAML)
Export OpenAPI Specification (JSON)

Unresolved Incidents API

get_unresolved_incidents

GET https://dev198179.service-now.com/api/1120584/unresolved_incidents_api/unresolved/{userId}

Prepare request

Path parameters

Name	Value
* userId	

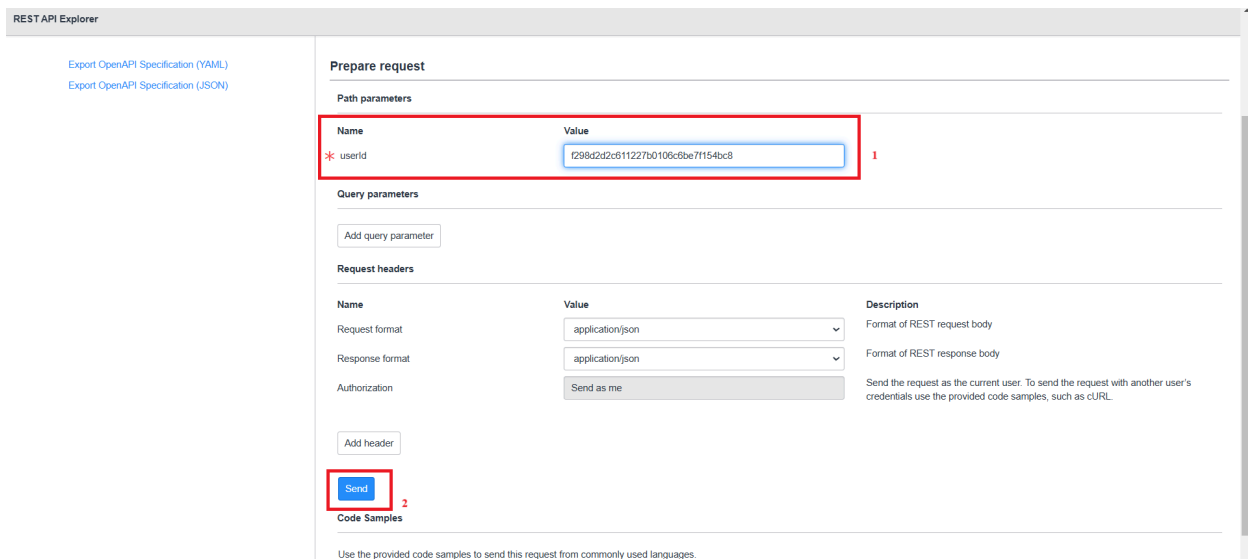
Query parameters

Add query parameter

Request headers

Name	Value	Description
Request format	application/json	Format of REST request body
Response format	application/json	Format of REST response body
Authorization	Send as me	Send the request as the current user. To send the request with another user's credentials use the provided code samples, such as cURL.

6. Now add “Bow Ruggeri” userId to the value
“f298d2d2c611227b0106c6be7f154bc8” and click on “Send” as shown in the below.



REST API Explorer

Export OpenAPI Specification (YAML)
Export OpenAPI Specification (JSON)

Prepare request

Path parameters

Name	Value
* userId	f298d2d2c611227b0106c6be7f154bc8

Query parameters

Add query parameter

Request headers

Name	Value	Description
Request format	application/json	Format of REST request body
Response format	application/json	Format of REST response body
Authorization	Send as me	Send the request as the current user. To send the request with another user's credentials use the provided code samples, such as cURL.

Add header

Send

Code Samples

Use the provided code samples to send this request from commonly used languages.

6. If the implementation is correct, the API should return a JSON response similar to the following:

REST API Explorer

Response

Status code	200 OK
Execution time (ms)	828
Headers	
Cache-Control	no-cache, no-store, must-revalidate, max-age=-1
Connection	keep-alive
Content-Encoding	gzip
Content-Type	application/json; charset=UTF-8
Date	Wed, 27 Nov 2024 06:13:18 GMT
Expires	0
Keep-Alive	timeout=70
Pragma	no-store, no-cache
Server	ServiceNow
Server-Timing	sem_wait,dur=0, sesh_wait,dur=0
Strict-Transport-Security	max-age=63072000; includeSubDomains
Transfer-Encoding	chunked
X-Content-Type-Options	nosniff
X-Is-Logged-In	true
X-Transaction-Id	ec4891728302

Response Body

```
{
  "result": {
    "userId": "f298d2d2c611227b0106c6be7f154bc8",
    "unresolvedIncidents": 11
  }
}
```