ServiceNow Change Management Approval Process

Contents

Requirements

1. NetBrain requirements
   a. We have credentials of NetBrain, and know which domain and tenant is in use.
   b. ServiceNow instance should be able to reach out to NetBrain server (no firewall)
2. ServiceNow requirements
   a. We have to create custom field in "Change Management" form
   b. We have to configure 2 business rules

Change Management workflow

To understand the use case of the NetBrain Change management workflow, please refer below. This document concerns a portion of the Change management workflow – the approval process.
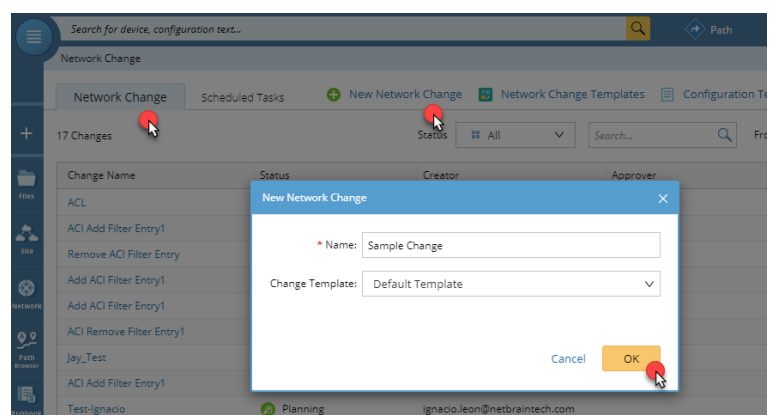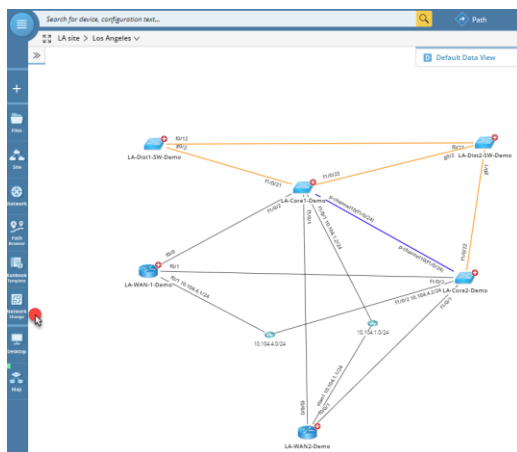https://www.netbraintech.com/docs/ie80/help/index.html?manage-network-change.htm

Approval Process Integration workflow

Step 0: Requester creates Change Management runbook
Click **Network Change** on the taskbar.
In the **Network Change** pane, click **New Change**.
In the **New Network Change** dialog, enter the task name, select a template and click **OK**.


In the runbook pane, you can define the network change task node by node in the runbook. More

details on that can be found here:
https://www.netbraintech.com/docs/ie80/help/index.html?create-network-change.htm

The approval node in the runbook is shown in this figure as "planning". As the approval process proceeds, the status is updated in this node.

The user cannot push changes to devices until the status is "approved".
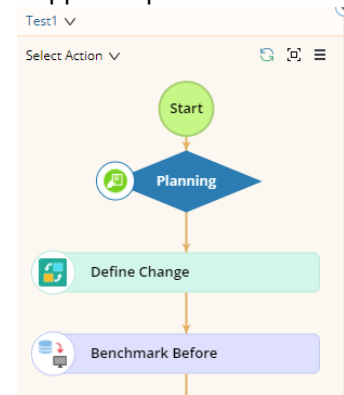
Step 1: Requester binds the NetBrain Change Management ID with the ServiceNow Change Request

Requester copies the ID, pastes it in the ServiceNow field, and update the form.

When the binding is successful, you see the following log in NetBrain.

Step 2: Requester changes ServiceNow's Change Request status from "Non requested" to "Requested"

When the status update is successful, you see the following log in NetBrain.

Step 3: Approver changes ServiceNow's Change Request status to "Approved"

When the status update is successful, you see the following log in NetBrain.

Form Customization in ServiceNow

A field has to be added to the Change Request form called "NetBrain CM ID".
The identifier for the field is 'u_netbrain_cm_id'.

Steps:

1. Navigate to change request table.

2. Right-click the form header and select the appropriate option for your version:

   - Configure > Form Layout

3. In the Create new field section, fill in the following fields:

   - Name: Enter the name of the field – NetBrain CM ID

   - Database column name: Enter the database name for the field - u_netbrain_cm_id

   - Type: Select to "string"

   - Field length: Select a field length. This field is visible only for certain field types.

4. Click Add.

5. Click Save.

NetBrain parameters to note before updating script

1. NetBrain URL
2. Username
3. Password
4. Tenant ID

   To find the tenant ID
   a) Login to the admin page at http(s)://<netbrain server>/admin.html
   b) Navigate to the desired tenant management page like following
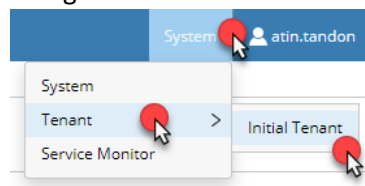
c) Note the tenantID from the URL

🔒 https://integrationlabv71.netbraintech.com/admin.html#/tenantAdmin/a39cf019-9663-1437-5d12-746cb85e5ea0

Tip: This info can be retrieved from REST APIs as well.
https://github.com/NetBrainAPI/North-Bound-
API/blob/master/REST%20APIs%20Documentation/Authentication%20and%20Authorization/Get%20All%20Accessible%20Tenants%20API.md
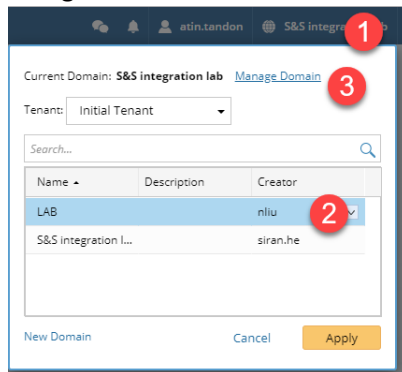
5. Domain ID

To find the domain ID
a) Login to the desktop page at http(s)://<netbrain server>/desktop.html
b) Navigate to the desired domain management page like following

c) Note the domainID from the URL

https://integrationlabv71.netbraintech.com/domainAdmin.html#/domainAdmin/5afeceaf-5c71-4e7d-813e-3a98ee5436f9

Tip: This info can be retrieved from REST APIs as well.
https://github.com/NetBrainAPI/North-Bound-
API/blob/master/REST%20APIs%20Documentation/Authentication%20and%20Authorization/Get%20All%20Accessible%20Domains%20API.md

Enable External Authentication in NetBrain

1. Log into Domain Management page
2. In the Domain Management page, click **Operations** > **Domain Maintenance > Change Management Settings** from the quick access toolbar.
3. On the **Change Management Settings** tab, enable the approval method you want to use.
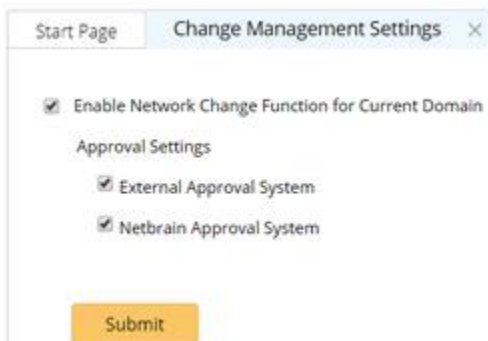
4. Click **Submit**.

Business rules' functionality

The following major steps describe a general flow:

1. **Add business rule to bind NetBrain Runbook**

   This business rule handles step 1 in the workflow:
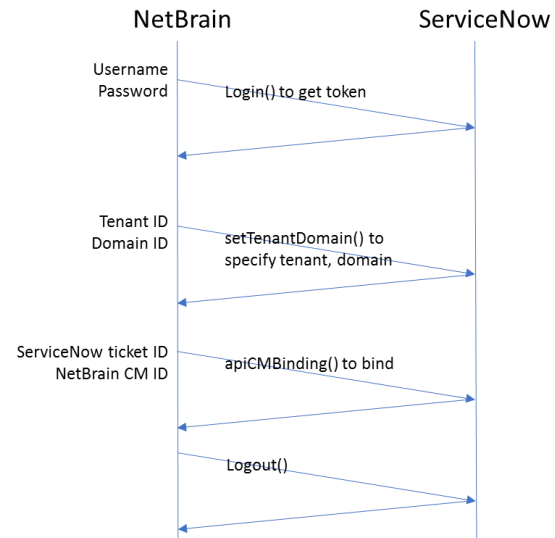   Step 1: Requester binds the NetBrain Change Management ID with the ServiceNow Change Request

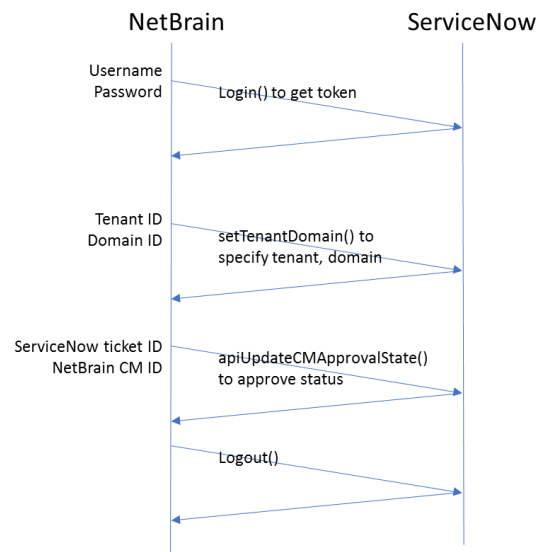   The following 4 API calls are called in the business rule.

NetBrain	ServiceNow
Username Password	Login() to get token
Tenant ID Domain ID	setTenantDomain() to specify tenant, domain
ServiceNow ticket ID NetBrain CM ID	apiCMBinding() to bind
	Logout()

2. **Add business rule to approve the process**
   This business rule handles step 1 in the workflow:
   Step 2: Requester changes ServiceNow's Change Request status from "Non requested" to "Requested"
   Step 3: Approver changes ServiceNow's Change Request status to "Approved"

   The following 4 API calls are called in the business rule.

NetBrain	ServiceNow
Username Password	Login() to get token
Tenant ID Domain ID	setTenantDomain() to specify tenant, domain
ServiceNow ticket ID NetBrain CM ID	apiUpdateCMApprovalState() to approve status
	Logout()

API specific documentation can be found here:

1. Login
   https://github.com/NetBrainAPI/North-Bound-API/blob/master/REST%20APIs%20Documentation/Authentication%20and%20Authorization/Login%20API.md

2. Logout
https://github.com/NetBrainAPI/North-Bound-API/blob/master/REST%20APIs%20Documentation/Authentication%20and%20Authorization/Logout%20API.md

3. Specify tenant and domain
https://github.com/NetBrainAPI/North-Bound-API/blob/master/REST%20APIs%20Documentation/Authentication%20and%20Authorization/Specify%20A%20Working%20Domain%20API.md

4. Bind CM runbook
https://github.com/NetBrainAPI/North-Bound-API/blob/master/REST%20APIs%20Documentation/Change%20Management/_Change%20Management%20Approval%20Process%20API%20Design%20--%20Binding%20Runbook.md

5. Change CM runbook state
https://github.com/NetBrainAPI/North-Bound-API/blob/master/REST%20APIs%20Documentation/Change%20Management/_Change%20Management%20Approval%20Process%20API%20Design%20--%20Change%20state.md

Business Rules configuration

1. Business Rule 1: Binding NetBrain Runbook
Following are the configuration of the business rule:

Update the attached script (01Change Management - Binding) with following parameters:
- NetBrain server (line 7)
- Username and password (line 15 and 16)
- Tenant and domain ID (line 18)

2. Business Rule 2: Approval of process
   Following are the configuration of the business rule:

Update the attached script (02Change Management - Approval) with following parameters:
- NetBrain server (line 7)
- Username and password (line 15 and 16)
- Tenant and domain ID (line 18)