Third-Party Integrations 1.2

ServiceNow Calm Plug-In Administrator Guide

April 15, 2020

Contents

NUTANIX CALM PLUG-IN FOR SERVICENOW

Nutanix Calm plug-in for ServiceNow enables you to launch Calm blueprints or MPIs in ServiceNow platform as service catalog items. The Calm plug-in helps to automate the application provisioning and life-cycle management of Calm product. The plug-in allows you to control the resources by using IT services management (ITSM) and IT operations management (ITOM) processes that are defined by the customers in ServiceNow to reduce the time in Nutanix Marketplace.

> **Note:** To configure and use Calm plug-in, you must be familiar with the basic concepts of Nutanix Calm and ServiceNow platform.

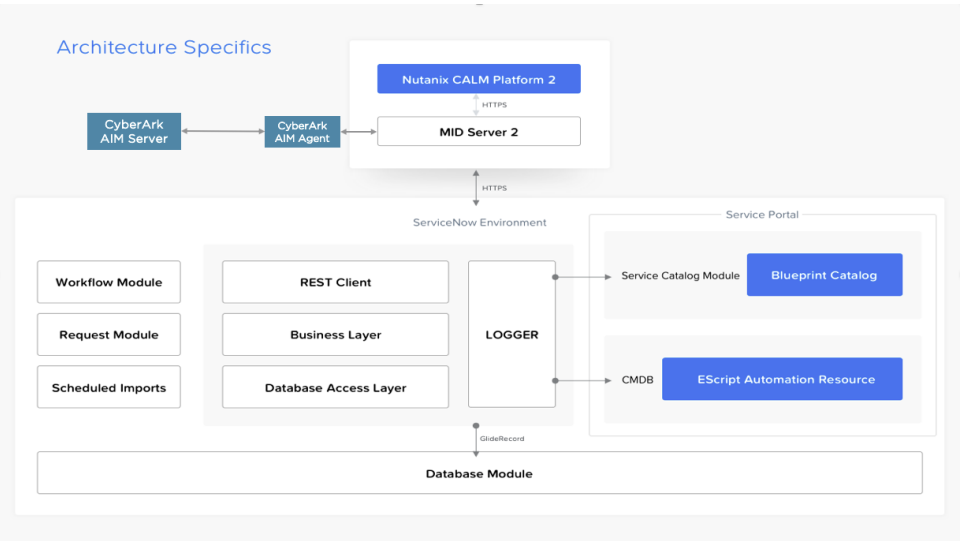

Figure 1: Architecture

Supported Versions

The following table shows the supported versions in this release.

Entity	Supported versions
ServiceNow	Madrid, and New York
Nutanix Calm	2.4.0, 2.5.0, 2.6.0, 2.7.0, 2.7.1, 2.9.1, and 2.9.7
Web-browser	Latest versions of Chrome and Firefox

> **Note:** If you are upgrading the Calm plug-in from v1.1 to v1.2, click the **Save Properties** button in **Application Properties** page. The page automatically displays the calm version.

Roles and Responsibilities

You must have access privileges to perform certain actions. The following table describes the various roles and their respective responsibilities.

Table 1: Roles and Responsibilities

Role	Responsibility
System administrator	• Assigns Calm administrator role to one of the LDAP imported users.
x_nuta2_nutanix_ca.calm_admin	• Plug-in configuration • Runtime configuration • Importing Calm resources in ServiceNow platform • Creating catalog items • Entitling users or groups
catalog	• Accesses and launches catalog items on ServiceNow Native UI.
x_nuta2_nutanix_ca.user	• Launch catalog items • Perform actions on applications • Check logs **Note:** When the Calm administrator creates a catalog item in the ServiceNow application, the x_nuta2_nutanix_ca.user role is automatically allocated to either LDAP imported users or groups and local group if the **Use Local Groups** option is enabled on the **Application property** page.
mid_server	• Connects Calm environment by using CyberArk integrations with ServiceNow actioj designer. **Note:** When the Calm administrator creates a catalog item by using CyberArk setup in the ServiceNow application, the mid_server role is automatically allocated to either LDAP imported users or groups and local group if the **Use Local Groups** option is enabled on the **Application property** page.
approval_admin	• Approves or rejects approval requests.

Prerequisites for Nutanix Calm ServiceNow Plug-in

Before starting using the Nutanix Calm ServiceNow plug-in, ensure that the following prerequisites are completed.

- Nutanix Calm and ServiceNow both must be configured with the same AD or LDAP instance.
- ITSM license that includes incident management module. The license is used to create incidents to report blueprint and other events launch failures.

> **Note:** Without ITSM license, installation of application from the store does not work as this dependency is bundled with the application.

- If you use connect to Calm option by using the ServiceNow credential store object with CyberArk as the external storage, the following components should be enabled.
  - External credential store plug-in
  - Discovery plug-ins
  - ServiceNow IntegrationHub Standard pack Installer if you are using New York version
  - ServiceNow IntegrationHub Installer if you are using Madrid version
- ServiceNow MID server must be installed and configured. For information on how to install and configure MID server, refer to the *MID Server* section in the *ServiceNow Documentation*. To refer to a video about setting up a MID server, click here.
- Ensure that the MID server is running in your environment. Calm is reachable from the machine or environment where MID server is installed.
- The MID server user has administrator privileges.
- The MID server is up and validated.
- To activate the Calm plug-in on ServiceNow platform, contact your instance ServiceNow administrator.
- You must have administrator privileges to activate and configure the plug-in.
- When application is installed, the Calm administrator role and user roles get installed in the ServiceNow instance. System administrator needs to manually assign the Calm administrator role to one of the LDAP imported users.
- Nutanix Calm administrator user must have the following roles assigned.
  - mid_server: To access MID server
  - catalog
  - x_nuta2_nutanix_ca.calm_admin
  - x_nuta2_nutanix_ca.user
- All applications and operations must have access and permissions of the tables. ServiceNow plug-in provides default permissions to few tables. For more information about the table permissions, see Default Table Permissions on page v. If any of the table does not have the access permission, assign the access to the table. For more information about assigning access to table, see Assigning Access to Tables on page vi.
- Set glide.sc.guide.tab.validate System Property to true. For more information about assigning system property, see Assigning System Property on page vii.

  > **Note:** If you have log on by using the administrator credentials, then you need to be in the Global application scope. For information on how to select Global application scope, see *ServiceNow Documentation*. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.
- To send and receive email notifications, email server must be enabled.

Default Table Permissions

The following table displays the table permissions for the applications and operations.

Note: By default, ServiceNow plug-in provides read, create, update, and delete permissions to few tables. If any of the following tables do not have the access permission, assign the access to the table. For more information about assigning access to table, see Assigning Access to Tables on page vi.

Table 2: Default Table Permission for ServiceNow Applications and Operations

Table name	Label	Permission			
		Read	Create	Update	Delete
sys_user_has_role	User Role	Yes	Yes	Yes	No
sys_user_grmember	Group Member	Yes	Yes	Yes	No
sys_group_has_role	Group Role	Yes	Yes	Yes	No
item_option_new	Variable	Yes	Yes	Yes	No
sys_user_group	Group	Yes	Yes	Yes	No
sc_category	Category	Yes	Yes	Yes	No
sc_catalog	Catalog	Yes	Yes	Yes	No
catalog_ui_policy	Catalog UI Policy	Yes	Yes	Yes	No
catalog_script_client	Catalog Client Scripts	Yes	Yes	Yes	No
user_criteria	User Criteria	Yes	Yes	Yes	No
question	Question	Yes	Yes	Yes	No
question_choice	Question Choice	Yes	Yes	Yes	No
sysapproval_approver	Approvals	Yes	Yes	Yes	No

Note:

- If the table permission is mentioned as *Yes*, you have to assign the permission for the table. For more information, see Assigning Access to Tables on page vi.
- If the table permission is mentioned as *No*, you do not require any permission to perform the operation.

Assigning Access to Tables

The system administrator needs to assign access of different tables to the applications.

About this task

Note: If you have log on by using the administrator credentials, then you need to be in the Global application scope. For information on how to select Global application scope, see *ServiceNow Documentation*. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.

2. Select **Global** as the application scope.
3. Click **System Definition** > **Tables**.
4. Enter the table name in the **Search** field.
5. Click **To edit this record click here**.
6. Under the **Application Access** tab, assign permissions for the required tables. If any of the table do not have the access permission, assign the access to the table. For more information about assigning access to table, see Assigning Access to Tables on page vi.
7. Click **Update**.

   Similarly, you need to assign required permissions for the following tables.

   - item_option_new
   - user_criteria
   - sc_category
   - catalog_ui_policy
   - sc_catalog
   - catalog_script_client
   - sys_user_has_role
   - sys_group_has_role
   - sys_user_group
   - sys_user_grmember
   - question
   - question_choice
   - sysapproval_approver

   For more information about table permissions, see Default Table Permissions on page v.

Assigning System Property

The system administrator needs to assign system property to work with Calm-ServiceNow plug-in. Perform the following procedure to assign system property.

Procedure

1. In the left navigation pane, type `sys_properties.LIST` and press **Enter**.
2. Under the **Name** column, in the **Search** field, type `glide.sc.guide.tab.validate` and press **Enter**.
3. Set the value to `true`.

Enabling the Email Server

To send and receive email notifications, you must enable the email server.

Procedure

1. Log on to the ServiceNow as administrator.
2. Click **System Properties** > **Email Properties** to configure the email notifications.

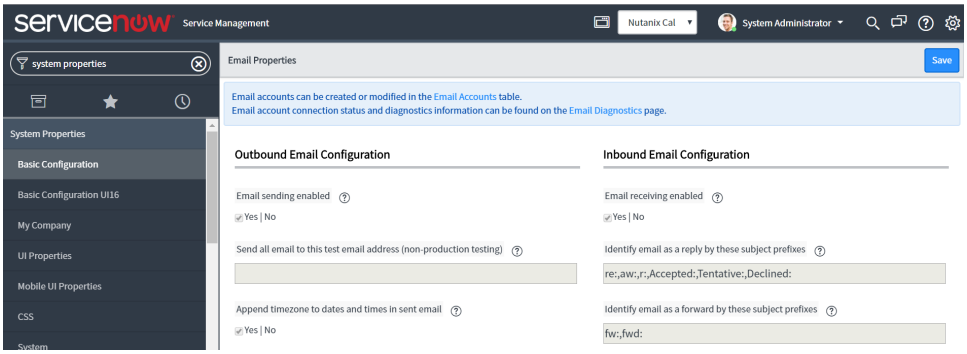

Figure 2: Email Properties Window

3. In the **Outbound Email Configuration** panel, select **Yes** check-box against the **Email sending enable** to enable sending email.
4. In the **Inbound Email Configuration** panel, select **Yes** check-box against the **Email receiving enabled** to enable receiving email.
5. Click **Save** to save the email notification settings.
   The email server is configured to send and receive email notifications.
6. ServiceNow application sends an email to the user when the following actions are performed in the application.
   a. Blueprint launch request is approved by the approval mechanism set on the configuration page, an email is sent to the user who launched the blueprint.
   b. Blueprint launch request is completed, an email is sent to the user who launched the blueprint.
7. If you do not want to send out the notification email, then click **System Notifications** > **Notifications**.
8. Set **Request Approved** and **Request Completed** to active false.
   For more details on email setup, you can refer to the ServiceNow Documentation.

Configuring LDAP in ServiceNow

A system administrator can enable LDAP integration to allow single sign-on of users from their company LDAP directory. Imported users from AD to ServiceNow can be assigned with either Calm administrator or user role.

About this task

> **Note:** If you have log on by using the administrator credentials, then you need to be in the Global application scope. For information on how to select Global application scope, see ServiceNow Documentation. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

- If you already have an existing LDAP configured on your ServiceNow instance, then ensure that your configuration is inline with the OU definition mentioned in the step 5 of the following procedure. Also, perform Scheduled Load so that all groups are immediately synced and there is no difference between users of ServiceNow and your AD.

- If you do not have an existing LDAP configuration on your ServiceNow instance, then perform the following procedure.
- To create an AD, see Adding users to AD.

Procedure

1. Log on to the ServiceNow.
2. Click **System LDAP** > **Create New Server**.
   In the New LDAP server window, Active Directory option is selected by default.
3. Scroll down the window and click **Submit**.
4. In the LDAP server window, enter the name of the server in the **Name** field.
5. Select **Active** check box, if the server is active.
   The check-box is enabled by default.
6. Enter the distinguished name (DN) of the user authenticating the LDAP connection in the **Login distinguished name** field.
7. Enter the server password in the **Login password** field.
8. Enter the relative distinguished name (RDN) of the default search directory in the **Starting search directory** field.
9. Under LDAP server URLs, click **+** to add an LDAP server URL.
   Enter the URLs of the primary and back up LDAP servers. Servers are first ordered by operational status, with servers that are Up listed first, then ordered by the order value that you specify. The first server listed is the primary LDAP server. The others are redundant servers.
10. Under **Advance Options** panel, enter connection timeout value in the **Connection timeout** field.
    Specify the maximum number of seconds that the instance has to establish an LDAP connection. If no connection is made by this time, the connection is terminated.
11. Specify the number of seconds the integration has to read LDAP data in the **Read timeout** field.
    The integration stops reading LDAP data after the connection exceeds the read timeout.
12. Select **Listener** check-box to enable the integration to periodically poll Microsoft Active Directory servers or LDAP servers that support persistent search request control.
13. Enter the listener timeout value in minutes in the **Listen interval** field.
    Specify the listener timeout value in the number of minutes that the integration listens for LDAP data with every connection. The integration stops listening for LDAP data after the connection exceeds the listen interval.
14. Select **Paging** check-box to have the LDAP server split up LDAP attribute data into multiple result sets rather than submit multiple queries.
15. Under **Related Links**, click **Test Connection** to test the connection configuration.
16. Under **LDAP OU Definitions**, click **New** to define an organization unit (OU) definition for importing.
17. In the LDAP OU Definition New record, enter the name the integration uses when referencing this OU in the **Name** field.
    The name you enter here becomes an LDAP target in the data source record.

18. Enter the relative distinguished name of the subdirectory you want to search in the **RDN** field.

    This RDN is combined with the start-searching directory from the LDAP server definition to identify the subdirectory containing information for this organizational unit.

19. Enter the name of the attribute within the LDAP server to query for records in the **Query field**.

    The query field must be unique in both single and multiple domain instances.

20. Select **Active** check-box to activate the OU definition and to allow administrators to test importing data. However, the integration can only bring data into the system from active OU definitions.

21. Select server by clicking the search icon and select from the available list of servers.

22. Specify the table that receives the mapped data from your LDAP server.

23. Enter an LDAP filter string in the **Filter** field to select specific records to import from the OU.

24. Click **Submit**.

25. Under **Related Links**, click **Test Connection** to test the connection.

26. Click **System LDAP** > **Schedule Loads** to execute the users import schedule job.

27. From the listed LDAPs, click the LDAP you have imported.

28. In the Scheduled data Import window, click **Execute Now** .

    For more information about how to configure LDAP, you can refer to the ServiceNow documentation.

Configuring CyberArk in ServiceNow

If you want to use CyberArk application for authentication, you must configure cyberArk in ServiceNow.

Before you begin

If you use connect to Calm option by using the ServiceNow credential store object with CyberArk as the external storage, the following components should be enabled.

- External credential store plug-in
- Discovery plug-ins
- ServiceNow IntegrationHub Standard pack Installer if you are using New York version
- ServiceNow IntegrationHub Installer if you are using Madrid version

Procedure

CyberArk configuration procedures include both CyberArk and ServiceNow configuration tasks. For more information, see ServiceNow documentation.

Viewing the MID Server Status

The ServiceNow MID server works as a communication bridge between the ServiceNow platform and Nutanix Calm plug-in.

About this task

Note: If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see ServiceNow documentation. If you

have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **MID Server** > **Dashboard**.
   The MID server dashboard displays the basic information about the configured MID server.

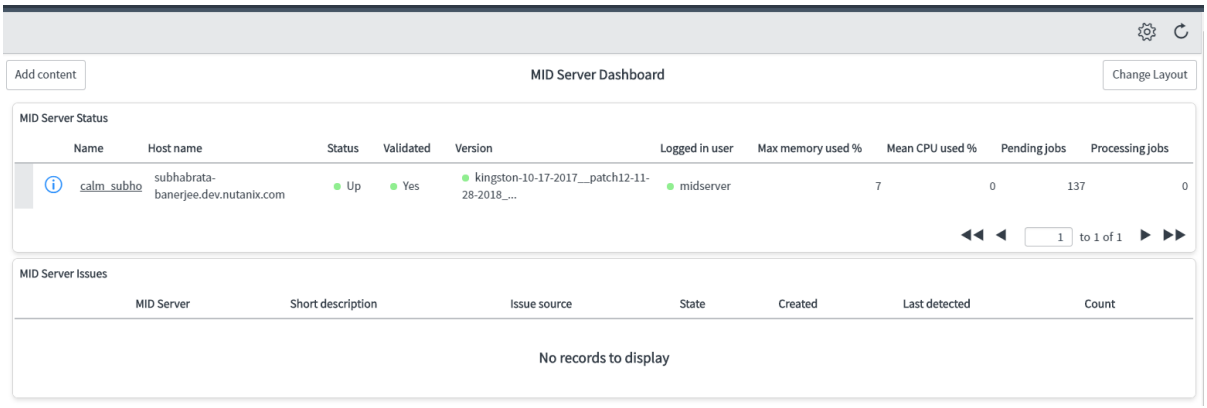

Figure 3: MID Server Dashboard

3. Check the **Status** column to view the status of the MID server.

> **Note:** To perform any operations on the Calm plug-in, the MID server status must be **Up** and the validation must be **Yes**.

What to do next

For detailed information about the MID server, see MID Server Documentation.

Installing Nutanix Calm Plug-in from ServiceNow Store

You can install the plug-in directly from the ServiceNow store.

About this task

You can download the Nutanix Calm plug-in from the ServiceNow store. To refer to a video about downloading the plug-in, click here.

Before you begin

- You need ITSM licenses as the plug-in uses incident management.
- You need system administrator privileges to install the Calm plug-in.
- If you use connect to Calm option by using the ServiceNow credential store object with CyberArk as the external storage, the following components should be enabled.
  - External credential store plug-in
  - Discovery plug-ins
  - ServiceNow IntegrationHub Standard pack Installer if you are using New York version

- ServiceNow IntegrationHub Installer if you are using Madrid version

- Enable user criteria scoped API plug-in (ID: com.glideapp.user_criteria.scoped.api). This plug-in is used to create, modify, or delete user criteria records by using scripts.

Procedure

1. Download the application from the ServiceNow store.

   The platform auto-manages the installation and there is no need for fixing any errors or committing.

2. You can track the installation from **System Applications** > **Applications page**.

What to do next

After installation, platform displays the detail of the application such as version number and state.

Configuring the Application Properties

Using the application properties, you can view and update the Calm plug-in properties and the following attributes.

About this task

> **Note:** If you have logged on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For more information about selecting a scope, see *ServiceNow Documentation*. If you have not used the administrator credentials to log on, then the selection of the scope is automatically taken care by the platform.

- Calm Instance URL: Calm plug-in uses the mentioned URL to import all the Calm resources.
- Approval Workflow: The system uses the approval workflow for approvals, when you create any request blueprint launch operation.
- Support URL: User can use the support URL to contact Nutanix Calm support.
- Logs: Administrator can set the logs that are displayed to the user.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Configuration** > **Application Properties** to view the Nutanix Calm application properties.

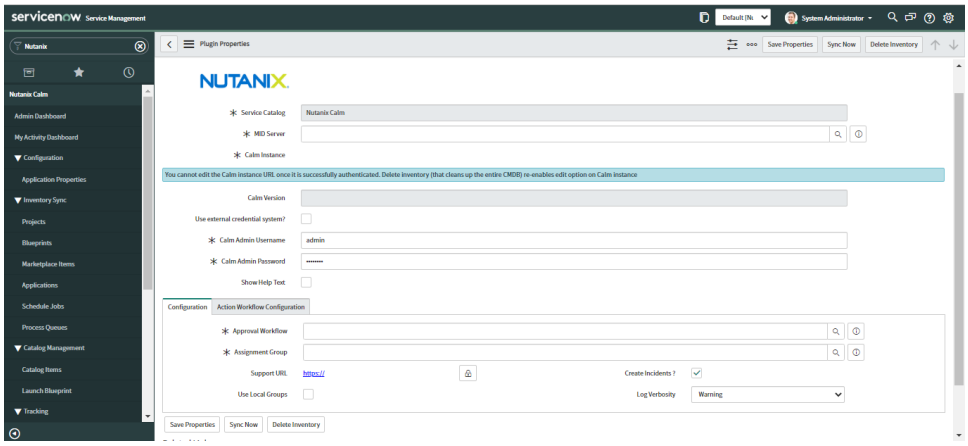

Figure 4: Application Properties

3. **Service Catalog** field displays the name of the service catalog item. Default value is Nutanix Calm. Catalog name groups all the catalog items that are created in the ServiceNow application.

4. Do the following in the **MID Server** field.

   a. Click the tooltip icon to view the MID server details.

   b. Click the search icon to view the status of the MID server.
   In the MID servers window, check the status column to determine whether the server is up or down.

5. Do the following in the **Calm Instance** field.

   a. Click the lock icon to edit the field.

   b. Enter the URL to create failure instances.

   c. Click the unlock icon to lock the field.

6. Enter the administrator username in the **Calm Admin Username** field.

7. Enter the administrator password in the **Calm Admin Password** field.

8. Optionally, if you want to connect to Calm by using the ServiceNow credential store object with CyberArk as the external storage, click the **Use external credential system?** field.
   Enabling this option hides the **Calm Admin Username**, **Calm Admin Password**, **MID Server** fields and the **Credential**, and **MID Application** fields are available. Do the following in the **Credential**, and **MID Application** fields.

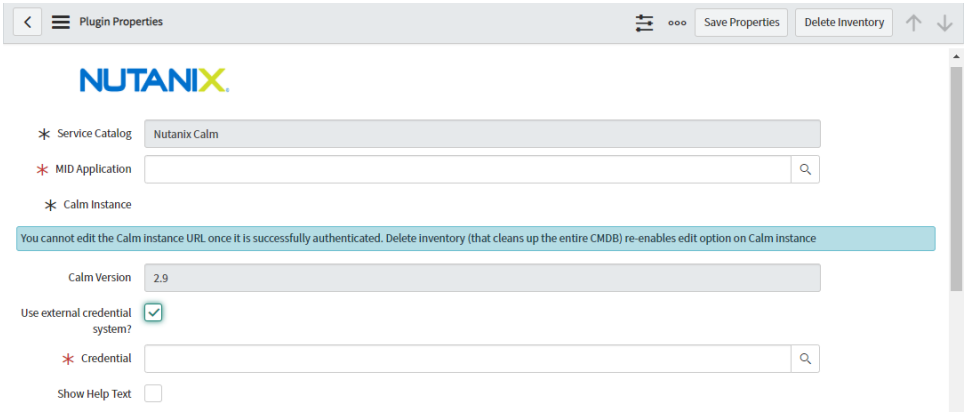

Figure 5: Plug-in Properties

Do the following in the **Credential** field.

a. Click the search icon to view the available credentials in the store.

b. From the list of the available credentials, select the credential you want to use.

Do the following in the **MID Application** field.

a. Click the search icon to view the available MID applications in the ServiceNow instance.

b. From the list of the available MID applications, select the MID application you want to use.

9. Under the **Configuration** tab, do the following in the **Approval Workflow** field to select an approval workflow.

   a. Click the search icon and select the required workflow.

   b. Click the tooltip icon to view the details of the selected workflow.

10. From the **Assignment Group** drop-down menu, select an assignment group to whom the incident needs to be triggered for resolution.

11. Do the following in the **Support URL** field.

    a. Click the lock icon to unlock the field.

    b. Enter the support URL to direct the users in failure instances.
    The mentioned support URL is displayed in the support page.

    c. Click the unlock icon to lock the field.

12. Select **Create Incidents** check-box to automatically create incidents in failure instances.
    If the check-box is not selected, then application only logs a message under logs and does not create an incident.

13. Select the applicable log to show the users from the **Log Verbosity** drop-down menu.

14. To assign the catalog item to the local ServiceNow group, click the **Use Local Groups** field.

> **Note:** If the Calm administrator uses the local group support, you can order any catalog item that has local groups or LDAP user or group configured. Same logic is also applicable to all the actions and applications visible to the current logged on user. However, the local order and incidents are created under the logged on user. All applications in such cases are launched in Calm with administrator as the owner.

15. Optionally, to manage the workflow of application actions in ServiceNow, click the **Enable/Disable workflow for action** check box and do the following.

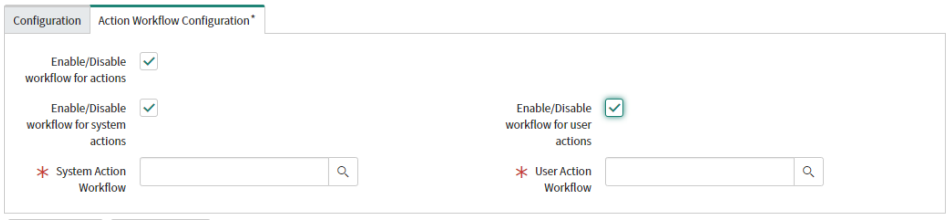

Figure 6: Action Workflow Configuration

The **Enable/Disable workflow for system actions** and the **Enable/Disable workflow for user actions** fields are available for selection.

a. Click the **Enable/Disable workflow for system actions** field to trigger this workflow on any system action triggered by the user.

b. Click the **Enable/Disable workflow for user actions** field to trigger this workflow on any user action triggered by the user.

> **Note:** Calm plug-in provides two default workflows as **Nutanix - User Actions Auto Approval** and **Nutanix - System Actions Auto Approval**. If you want to create a custom workflow for user or system action, you can create it on **Application Action Request** table after setting the value of approval_status as either approved or rejected.

16. Click **Save Properties** to save the application properties.
After the authentication is successful, **Sync Now** and **Delete Inventory** buttons are displayed and the **Calm Version** field is automatically filled.

17. Click **Sync Now** to sync the Calm resources.

- The **Sync Now** option is not displayed, when Calm is not authenticated or a sync or deletion of inventories is in progress.
- The **Save Properties** option is not displayed, when sync or deletion of inventories is in progress.

Sync now imports Calm resources such as projects, blueprints, profiles, marketplace items, applications, and actions. Calm administrator can now create catalog items based on the imported data.

18. Click **Delete Inventory**.

When you have successfully synced the inventory, the **Delete Inventory** button appears that allows the Calm administrator to delete the whole synced data. Calm instance cannot be changed until delete inventory action is performed.

Inventory Sync

Inventory sync menu option is used to sync the ServiceNow application with the Nutanix Calm database. By using Inventory sync, you can do the following:

- View the draft and published blueprints. Only the active blueprints and published MPIs are synced.
- Run and view the jobs that are scheduled to run at a predefined time interval.

Inventory sync updates the following objects in Configuration Management Database (CMDB):

Table 3: Inventory Sync

Entity	Objects
Projects	• Environments • Providers • Credentials
Blueprints	• Published blueprints • Unpublished blueprints
Applications	• Actions • Run logs • Recovery points

For detailed information about CMDB, see Configuration Management Database Documentation.

Inventory Negative Sync

Calm ServiceNow plug-in runs a scheduled or on-demand job to synchronize the Calm entities, for example, blueprints (unpublished), marketplace items (published blueprints), projects, and applications with ServiceNow Configuration Management Database (CMDB). Negative sync refers to the updating of ServiceNow CMDB after the corresponding entities in Calm are removed or the state changed.

Inventory negative sync does not allow you to launch or edit blueprints or marketplace items in ServiceNow. Negative sync of blueprints, profile associated with blueprints, marketplace items, and projects associated with marketplace items happens automatically in the following scenarios.

The following sections describe various scenarios of catalog item impact in ServiceNow.

Negative Sync for Blueprints

If a blueprint goes into a non-active state (draft or deleted state in Calm), then the catalog items created from the blueprint cannot be launched or edited in ServiceNow.

An onLoad script runs on the **Catalog Launch** page that checks the state of a blueprint in Calm. In next sync up job, the non-active blueprints in Calm are marked as inactive in ServiceNow and are not available for launch or edit. Only delete action is available.

> **Note:** If you change a variable in a blueprint that is already synced in ServiceNow, user with admin or x_nuta2_nutanix_ca.calm_admin role can delete blueprint from serviceNow by clicking the **Delete** button till the next sync operation is performed. It deletes the blueprint record from CMDB, and removes all its references on the plug-in side and the catalog item related to that blueprint is marked as inactive.

Negative Sync for Profiles Associated with Blueprints

If the profiles associated with a blueprint are deleted in Calm, then the catalog items created from the blueprint and the profile combinations cannot be launched or edited in ServiceNow.

An onLoad script runs on the **Catalog Launch** page that checks for the Calm profiles in a blueprint. In the next sync up job, the deleted profiles of the catalog items are marked as inactive in ServiceNow and are not available for launch or edit. Only delete action is available.

Negative Sync for Marketplace Items

If you delete a project from Calm, then the associated project in marketplace item is also deleted. In that case, the catalog item created by that marketplace item cannot be launched or edited from ServiceNow.

An onLoad script runs on the **Catalog Launch** page that checks the state of marketplace items in Calm. In the next sync up job, the unpublished marketplace items are marked as inactive in ServiceNow and are not available for launch or edit. Only delete action is available. After you publish the marketplace item in Calm and run the sync job, the inactive state of the marketplace item becomes active.

> **Note:** The catalog items created from a marketplace item that is marked as draft are not affected by the negative sync.

Negative Sync for Projects Associated with Marketplace Item

If you do not add any project to a marketplace item and publish the marketplace item in Calm, then the catalog items created from the marketplace item cannot be launched or edited in ServiceNow.

An onLoad script runs on the **Catalog Launch** page that checks the state of marketplace items in Calm. In the next sync up job, the unpublished marketplace items are marked as inactive in ServiceNow and are not available for launch or edit. Only delete action is available. After you add a project to the marketplace item in Calm and run the sync job, the inactive state of the marketplace item becomes active.

Negative Sync for Projects

If a project is deleted from Calm, then the catalog items created from that project cannot be launched or edited in ServiceNow. In next sync, the state of project changed to inactive and the catalog item is also marked as inactive.

An onLoad script runs on the **Catalog Launch** page that checks the state of a project in Calm. In the next sync up job, the non-active project in Calm are marked as inactive in ServiceNow and are not available for catalog item creation.

Negative Sync for Variable

After a blueprint is synced into ServiceNow CMDB, the blueprint can undergo a lot of changes in Calm, for example, renaming a variable in a blueprint. On the next sync, the updated variable is reflected in the blueprint in CMDB.

Executing a Schedule Job

Scheduled Jobs are automated pieces of work that can be performed at either a particular time, or on a recurring schedule. Calm administrator can view the jobs that are scheduled to run at a predefined time. The scheduled jobs enable you to sync the Calm plug-in with Nutanix Calm and update the ServiceNow database as per the job script. You can also use the **Sync Now** button to sync the ServiceNow Calm plug-in with Nutanix Calm.

About this task

> **Note:** If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see ServiceNow documentation. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Inventory Sync** > **Schedule Jobs** to view the scheduled jobs.
3. Click the scheduled job to view the job details.
4. Click **Execute Now** to run the job.

After the data is imported in the Calm ServiceNow plug-in, you can browse to blueprint and marketplace to view the imported data and assign these catalog items to the users as a runtime variable.

Viewing Nutanix Projects

The Nutanix Projects window displays the list of available projects in the Nutanix Calm plug-in. You can also view the blueprints associated with a project.

About this task

> **Note:** If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see ServiceNow documentation. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Inventory Sync** > **Nutanix Projects** to view the projects.
3. Click the project name to view the project details.

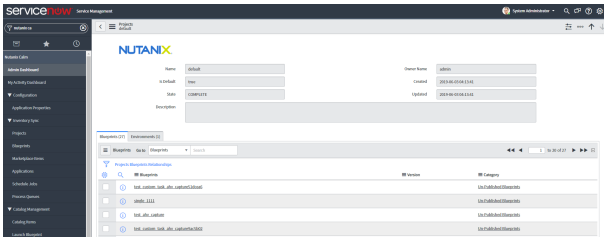

Figure 7: Nutanix Calm Projects

The list of associated blueprints is displayed at the bottom.

Viewing Nutanix Blueprints

The Nutanix Blueprints window displays the list of unpublished blueprints available in the Nutanix Calm plug-in. From this window, you can also view the list of available variable and application profiles associated with a blueprint.

About this task

> **Note:** If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see ServiceNow Documentation. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Inventory Sync** > **Blueprints** to view the blueprints.
   The list of active blueprints is displayed.

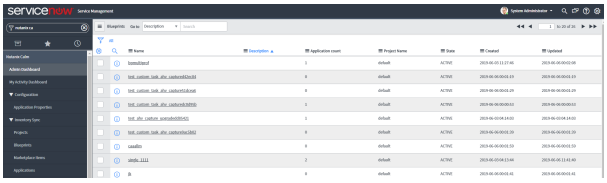

Figure 8: Nutanix Blueprints

3. Click the blueprint name to view the blueprint details.

   The list of available variables and application profiles is displayed at the bottom.

Nutanix Marketplace Items

The Nutanix Marketplace Items window displays the list of published MPIs available in the Nutanix Calm plug-in. From this window, you can also view the list of available variable and associated application profiles available in a blueprint.

About this task

> **Note:** If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see ServiceNow Documentation. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Inventory Sync** > **Marketplace Items** to view the blueprints.

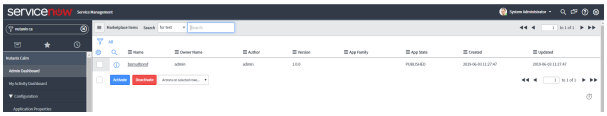

Figure 9: Nutanix Marketplace Items

3. Click the MPI name to view the MPI details.

   The list of available variables and application profiles is displayed at the bottom.

Viewing Nutanix Applications

The applications window displays the list of applications available in the Nutanix Calm plug-in.

About this task

> **Note:** If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see ServiceNow Documentation. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Inventory Sync** > **Applications** to view the deployed applications.

3. Click the application name to view the application details.
   You can view the list of available actions, recovery points, and audit logs.

   Note:

   - Recovery Points tab is only available for single VM applications running on Nutanix and VMware cluster for Calm v2.9.7.
   - AMIs tab is only available for single VM applications running on AWS cluster for Calm v2.9.7.

Catalog Items Creation

Calm administrator can use the catalog items creation feature to mark the attributes while creating the catalog item so that those attributes can be modified at the time of launching the application blueprint. Calm administrator has access to runtime configuration flow to create a catalog item and performs user entitlement. From this window, administrator can also assign a catalog item to the users.

Note: If a catalog item is broken due to Calm-ServiceNow plug-in v1.0 issue (For example, Catalog Item is not correctly created in v1.0), then the catalog item remains broken on the Calm-ServiceNow plug-in v1.1 and v1.2. The administrator needs to delete and create new catalog item..

Assigning a Blueprint or MPI to a User

You must assign a blueprint to a user by performing the following procedure.

About this task

Note: If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see *ServiceNow Documentation*. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Catalog Management** > **Catalog Items**.
3. Click **New**.
   The **New** button is not displayed when a sync or deletion of inventories is in progress.
4. From the **Project** drop-down menu, select a project.
5. In the **Select Type of Blueprint to Configure** field, select one of the following.
   - Unpublished blueprints: To assign an active blueprint to user, an administrator can view the list of active blueprints in the Blueprints option under the Inventory Sync menu.
   - Published blueprints: To assign a published MPI to user, an administrator can view the list of published MPI in the Marketplace Items option under the Inventory Sync menu.
6. From the **Blueprint** drop-down list, select a blueprint or MPI.
7. From the **Application Profile** drop-down list, select an application profile for blueprint or MPI.
8. Click **Choose Options**.

on the **Choose Options** window, the available fields in the **Variables**, **Service configuration**, **Credentials**, and **General Settings** tabs are dynamic. That means the available fields for the tabs might be different for each blueprint.

> **Note:** Advance variable support is available for Calm v2.7 or above.

9. Under the **General Configuration** tab, do the following.
   a. In the **Item Name** field, enter the item name.
   b. Optionally, in the **Description** field, update the description for the catalog in markdown format.
   c. In the **Assign User** field, click the lock icon to unlock the **Assign User** field.
   d. In the **Assign Group** field, click the lock icon to unlock **Assign User** field.
   e. Click the lock icon to unlock the **Support URL** field.
10. In the **Choose Options** window, enter the values for all the mandatory fields.
11. Click **Checkout**.
    The catalog item is assigned to a user or group.

Available Actions on a Catalog Item

The following actions are available on a catalog item.

- **Launch**: Launches the catalog item.
- **Edit**: Edits the catalog item.
- **Delete**: Deletes the catalog item.

  > **Note:** Delete action is an irreversible action, that means the deleted catalog items cannot be retrieved. However, you can view the deleted catalog items by clicking the **Show Deleted Catalogs** button.

- **Move to Draft**: Moves the catalog item to draft stage and the item is not available to the entitled users. After moving the catalog item to draft, the item appears as **Active catalog item**.
- **Active Catalog Item**: Reactivates the draft catalog item. This action appears when the catalog item is in draft stage.

Viewing Application Action Request Details

Perform this procedure to track the approval state of an action performed on an application. If any action is performed by user, it go for the approval flow. We can check our action approval state here.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Tracking** > **Application Action Requests** > .

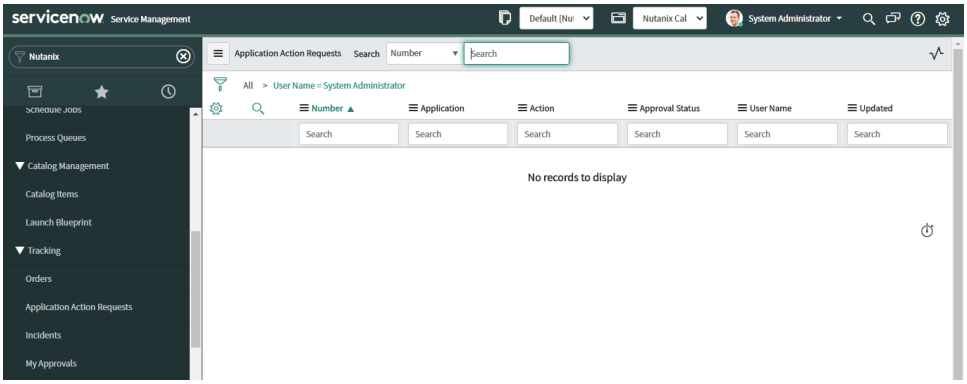

Figure 10: Application Action Request

The **Application Action Requests** page displays the list of actions performed by users.

Viewing Support Details

Calm administrator and end-user can access the Nutanix Calm support contact details.

About this task

> **Note:** If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see ServiceNow Documentation. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Support** > **Contact Support**.
   The contact support detail is displayed.

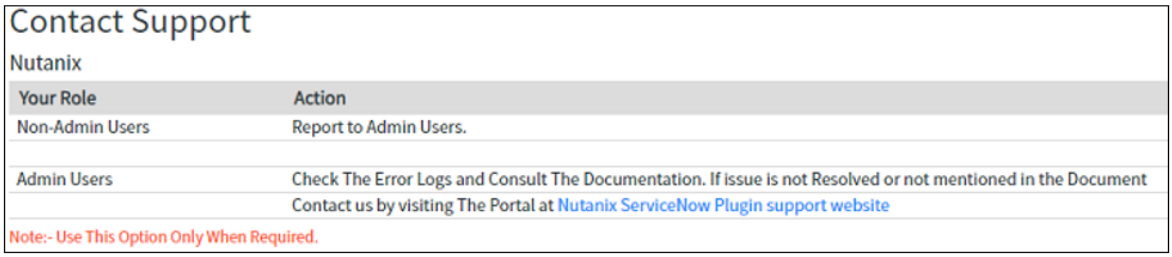

Figure 11: Support Details

Viewing Logs

Logs module is visible to both Calm administrator and end user. From the Logs menu, user can access the following options:

About this task

- Emails: To view the various notifications sent or received.

- User Logs: To view the error details.

> **Note:** If you have log on by using the administrator credentials, then you need to be in the Nutanix Calm application scope. For information on how to select Nutanix Calm application scope, see ServiceNow Documentation. If you have not used the administrator credentials to log on, then the selection of scope is automatically taken care by the platform.

Procedure

1. Log on to the ServiceNow.
2. Click **Nutanix Calm** > **Logs** > **Emails or User Logs**.
   The logs detail is displayed.

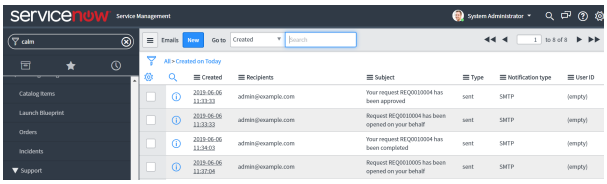

Figure 12: Email Logs

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Conventions

Convention	Description
`variable_value`	The action depends on a value that is unique to your environment.
`ncli> command`	The commands are executed in the Nutanix nCLI.
`user@host$ command`	The commands are executed as a non-privileged user (such as nutanix) in the system shell.
`root@host# command`	The commands are executed as the root user in the vSphere or Acropolis host shell.
`> command`	The commands are executed in the Hyper-V host shell.
`output`	The information is displayed as output from a command or in a log file.

Version

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