

DOCUMENTATION

Technopedia Catalog for ServiceNow 3.5.0

Deployment Guide

May 8, 2017

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About this Book

Welcome to the *BDNA Technopedia Catalog for ServiceNow Deployment Guide*. This book provides detailed information about how to install and configure the Technopedia Catalog for integration with ServiceNow. The Technopedia Catalog provides a simple, standard solution for populating and maintaining ServiceNow hardware and software models with Technopedia data. Technopedia ServiceNow uses the Technopedia API in order to fetch the Technopedia Catalog, and populate the Model tables. If you are running an older version, make sure to reach out to support if you have issues upgrading. For reference, see [Knowledge Base](#) for revision history.

This book provides detailed information about performing the following tasks:

- “[Installing Technopedia Catalog](#)” on page 4.
- “[Configuring the Technopedia Catalog](#)” on page 6.
- “[Troubleshooting/FAQ](#)” on page 15.

What’s New

- We have a new and improved ServiceNow Compatibility versions named Istanbul.
- Multiple Catalog sync options are now available to customers (see page 14 under “Catalog Schedule” for more details).
- Please see the [Knowledge Base](#) for Known Issues pertaining to recent updates.
- Under “Properties” the “date of the last data load from Technopedia API...” has been moved under “Technopedia Modules” each module has the “last download date” listed.

Installation and Configuration Requirements

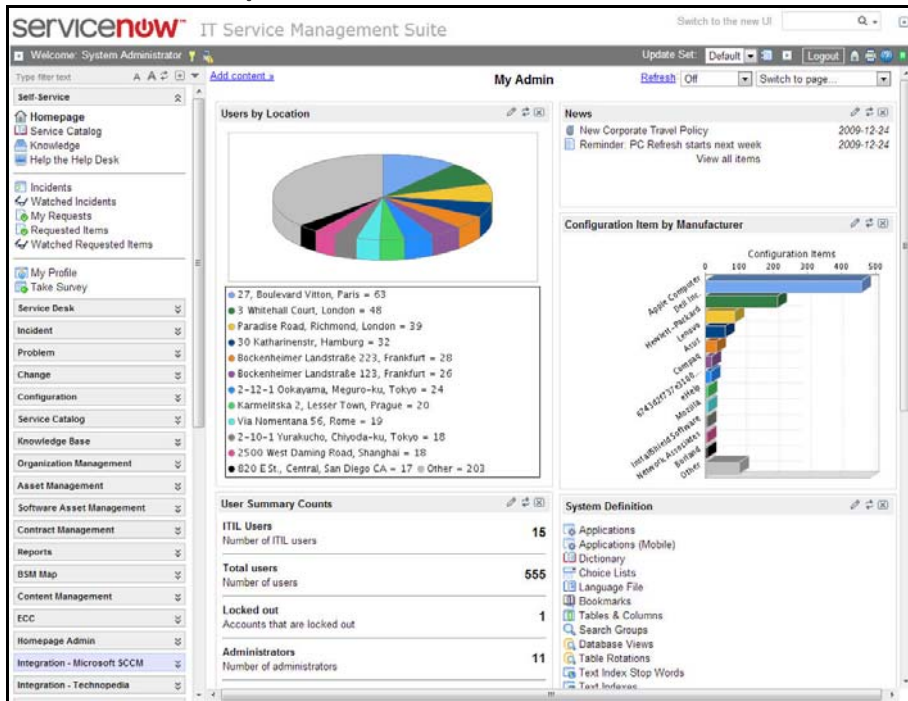
- Access to the “security_admin” role in ServiceNow.
- Sufficient privileges to load, preview, and commit retrieved update sets.
- ServiceNow IT Automation, Helsinki or Istanbul release:
 - You can determine the release you have by entering:
`http://<YourInstanceName>.service-now.com/stats.do`.
Verify the “Build name:” attribute.
 - Technopedia Catalog Version 3.5.0 is certified for the Helsinki or Istanbul releases of ServiceNow.

Installing Technopedia Catalog

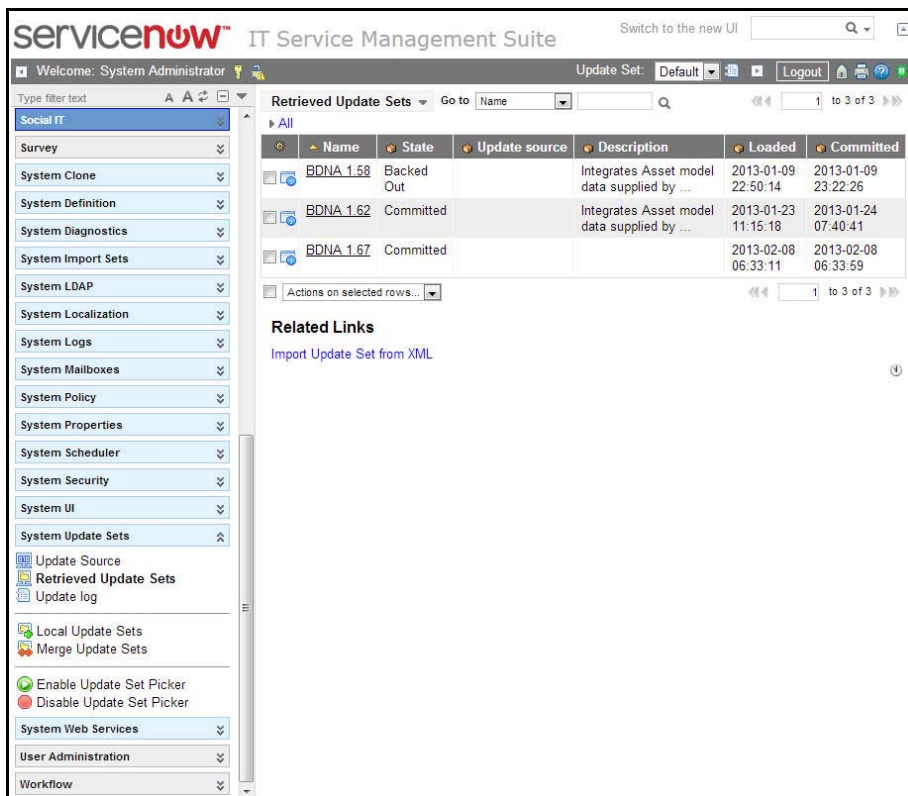
The information contained in this section describes how to upload, preview, and commit the Technopedia Catalog update set. If you have already finished this procedure, skip to “[Configuring the Technopedia Catalog](#)” on page 6.

To upload, preview, and commit the Technopedia update set:

1. Open the ServiceNow IT Service Management Suite.



2. Navigate to “System Update Sets” and click “Retrieved Update Sets.”




3. Under the heading “Related Links,” click the “Import Update Set from XML” link.
4. Click “Choose File” and locate the Technopedia Catalog update set.
5. Upload the update set.
6. In the “Retrieved Update Sets” module, locate and select the Technopedia update set you just loaded.
7. Click “Preview Update Set.”
8. Wait for the Preview process to finish.
9. When the Preview process finishes, click the “View Update Set Preview List” link.
10. Ensure that all “Proposed Actions” are set to “Commit” by applying the following:
 - 10.1. Select one of the Commit records, right-clicking on it, and selecting “Filter Out.”
 - 10.2. If any records remain that have a proposed action **OTHER** than “Commit,” they must be updated to “Commit” status before proceeding.

Note: If some actions report “Error” or “Skip,” refer to “Troubleshooting/FAQ” on page 15.

11. When the Preview finishes successfully, navigate to the “Retrieved Update Sets” module and select the Technopedia Catalog update set.
12. Click “Commit Update Set.”
13. Wait for the Commit process to finish.
14. Click the Refresh icon in the Application Navigator. After refreshing the Application Navigator, the “Integration - Technopedia” Application opens.

Note: Make sure that the “Technopedia Catalog” application appears in the Application Navigator by using one of the following methods:

- Click the Refresh icon 
 - or
 - Type “Technopedia” in the “Type filter text” entry field at the top of the Application Navigator.
-

Configuring the Technopedia Catalog

The Technopedia Catalog includes a simple, step-by-step setup wizard designed to walk you through the configuration of the integration. Due to the nature of the integration, you **MUST** complete every step of the setup wizard in sequence in order to ensure proper configuration of the integration.

Important: If you do not see the “Setup” module as the first module in the Technopedia Catalog application, you must enable the security_admin role, then refresh the left-hand navigation pane. To enable the security_admin role, see “[Activating Elevated Privileges \(security_admin role\)](#).”

Step-by-step instructions are provided for the following procedures:

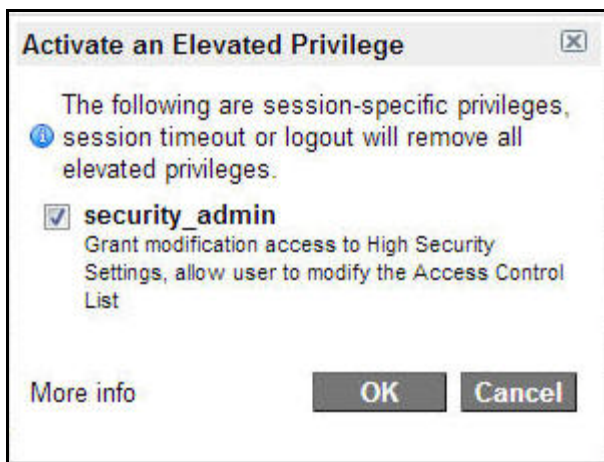
- “[Activating Elevated Privileges \(security_admin role\)](#)”— Enables configuration access.
- “[Technopedia Catalog Configuration Wizard](#)”—Provides settings for authentication and connectivity.

Activating Elevated Privileges (security_admin role)

To access Security Admin Functions, you must first activate elevated privileges.

To activate elevated privileges, use the following procedure:

1. Navigate to the Technopedia Catalog application.
2. Click the Elevated Privileges icon  next to your username at the top of the screen.
3. Check the security_admin option in the “Activate an Elevated Privilege” dialog box.



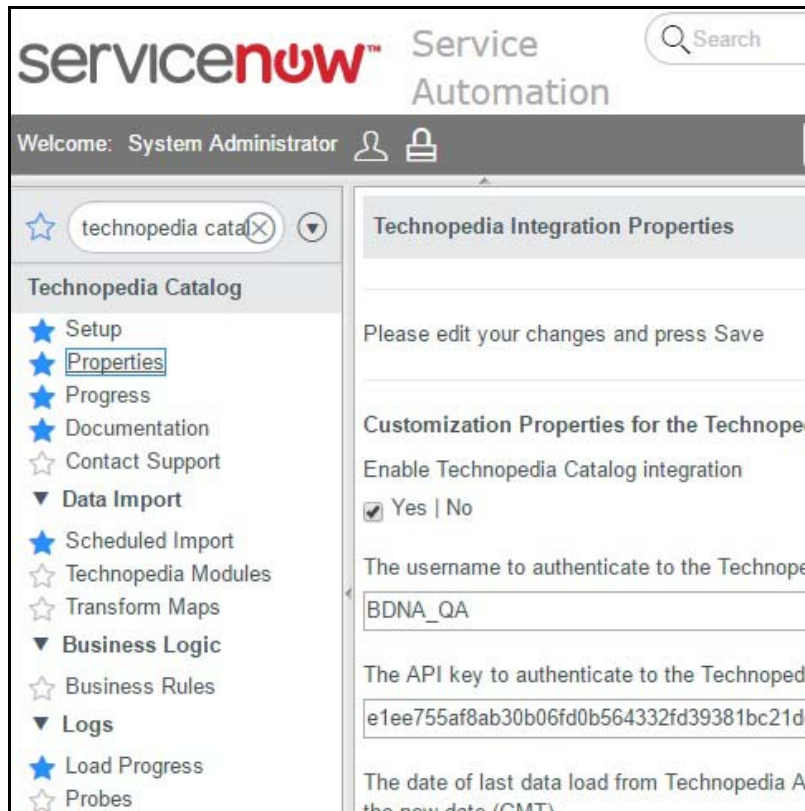
4. You are now ready to configure the Technopedia Catalog.

Technopedia Catalog Configuration Wizard

1. Navigate to the Technopedia Catalog application.
2. Click the “Setup” module of the application.
3. Enter your Technopedia username and Technopedia API key in the provided fields.

Note: You will be loading Hardware Models for most installations. See “[Deciding Whether to Load Hardware Models](#)” on page 9 for more information about loading or not loading Hardware Models.

4. Click the “Update Properties” button to save your configuration settings.



Note: If you want to perform advanced configuration, see “[Integration Properties Reference](#)” on page 9. However, the default configuration works well with most ServiceNow instances.

5. Click the “Run A Test Load” button to test access between your ServiceNow instance and the Technopedia API.
6. You will be automatically redirected to the Progress module within the Technopedia Catalog application, which refreshes every 30 seconds.
7. The test load will load only 120 records for Taxonomy, Manufacturer, Software, and Hardware. The process usually takes less than 3 minutes.

Note: If the test load does not start within a few minutes, refer to “[Troubleshooting/FAQ](#)” on page 15.

8. When the test load finishes, click the “Setup” module and select “Do full import of taxonomy and manufacturer data.”

Note: If the test load does not start within a few minutes, refer to “[Troubleshooting/FAQ](#)” on page 15.

9. Click the “Add Indexes, modify field lengths” button. This step initializes the model tables intended to receive the Catalog data.
10. Select “Properties,” then set “The date of last data load from Technopedia API” to your last catalog sync date.
11. Run the import. You will be redirected to the Progress module. For more information, please see “Running the Technopedia Catalog” on page 11.”

Deciding Whether to Load Hardware Models

The Technopedia Catalog integration provides the option to load or not load Hardware Models. This option is provided because ServiceNow Discovery creates and manages its own Hardware Models. Thus, if you are using ServiceNow Discovery without other discovery tools, and you will not be using BDNA Normalize, you should **NOT** load the Hardware Models from the Technopedia Catalog. To learn more about BDNA Normalize and its integration with ServiceNow, visit <http://www.bdna.com/servicenow>.

Use the following table in order to determine if you should load Hardware Models:

Table 1: Load Hardware Models Decision Matrix

If you are using...			Should you...
ServiceNow Discovery	Additional discovery tools	BDNA Normalize	Load Hardware Models?
Yes	No	No	No
Yes	Yes	No	Yes
Yes	No	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	No	Yes
No	Yes	Yes	Yes
Yes	Yes	No	Yes

Integration Properties Reference

The default integration of the Technopedia Catalog Setup Wizard handles most ServiceNow configurations. Occasionally, changes to the integration may be necessary. The Technopedia Catalog integration has a number of advanced properties you can modify that will alter the behavior of the integration. These properties, shown in [Table 2](#), “Integration Properties,” on page 9, are available from the Properties module.

Table 2: Integration Properties

Property	Description	Comments
Turn on/off integration	Disables automatic updates to Technopedia.	This only affects Scheduled Imports. Disabling the integration will prevent automatic updates.
Username	Technopedia API username.	
API Key	Technopedia API Key.	
Last Modified Date	The last date that data was loaded from Technopedia..	This value is automatically set and updated by the application. It should not be modified manually without first consulting BDNA support services.

Table 2: Integration Properties (Continued)

Property	Description	Comments
Records to Fetch per REST Call	The number of records that get pulled from the Technopedia API with each REST call.	Certain ServiceNow instances cannot process records as quickly as the Technopedia API can deliver them. This value can be set to a lower number (i.e., 250) in order to slow down the fetch process. Prior to making these changes, refer to “ Understanding the Data Load Process .”
Test Load	Enables/disables the test load.	This property is managed by the Setup Wizard. It should not be modified manually without first consulting BDNA support services.
Debug Logging	Enables/disables debug logging.	This is a valuable tool for debugging the load process.

Running the Technopedia Catalog

The Technopedia Catalog loads a large volume of data into the categories, vendor/manufacturers, and hardware and software model tables. While the initial load of categories and vendor/manufacturers data is relatively small (fewer than 20,000 rows), the load of hardware and software models brings more than 500,000 rows of data into ServiceNow.

Note: While the initial data load takes between 2-4 hours, subsequent loads (delta loads) are much smaller and take significantly less time.

Since the configuration of ServiceNow instances vary widely, it is possible that the initial data load can affect ServiceNow instance performance. In order to manage both your ServiceNow instance and network performance, it is essential to understand what happens during the data load process, and to monitor the process as it is underway. These subjects are covered in the following sections:

- [“Understanding the Data Load Process”](#)
- [“Monitoring the Data Load Process”](#)

Understanding the Data Load Process

The load process fetches a number of rows (1000 by default) per API call, inserts them into import set tables, and then transforms the rows into the target tables.

Most ServiceNow instances easily support loading data at the default rates specified. However, some configurations may have slower network access to the Technopedia API, slower insert performance, or slower transformation performance. It is essential to closely monitor the initial data load in order to ensure that both network performance and instance write performance do not degrade.

Monitoring the Data Load Process

Once the full data load is underway, you will be redirected to the Progress module. The Progress module refreshes automatically every 30 seconds. It can also be refreshed on demand by clicking the Progress module link. The Progress module provides both text and graphical information about the data load process. At the top of the Progress module page, there is a “[Performance Charts]” toggle option that shows or hides the performance charts.

With the default settings, the initial data load should be processing between 1800 and 2300 records per minute for each of the four parallel loads. Additionally, within the graphs the blue line indicates the performance of network access to the API, and the green line indicates the insert performance of the instance. While it is not unusual to see occasional spikes in either, both of these graphs should ideally show fairly consistent timings over the loading process.

The primary concern during the initial data load process is an increasing Table Insertion time, represented by the green line in the performance graph. If the Table Insertion time begins to grow and continues growing, it is an indication that the instance is “falling behind” the rate at which the data is being brought into the instance. If this is allowed to continue, it may adversely affect instance performance, or even halt the instance. You can check the **System Diagnostics -> Progress Workers** module to see how the insertion process is progressing. Sort the Created column in descending order and look for Names indicating “Transforming...Technopedia.” There are typically 4 to 8 of these at a time. If the number of progress workers increases beyond that range, you should cancel the data load and reduce its load rate. For additional information, see [“Managing Initial Data Load Performance”](#) on page 13.

The Technopedia Catalog application has a number of checks that scan for degrading instance performance. In certain situations, the application actually halts the loading process if performance continues to degrade. However, it is still necessary to closely watch this process over time. We recommend checking the performance every 15 minutes during the initial data load in order to ensure that Table Insertion is not falling behind. If it does fall behind, cancel the data load and refer to the section entitled “[Managing Initial Data Load Performance](#)” on page 13.

Canceling the Data Load

Once a data load is underway, it can be canceled at any time.

To cancel a data load:

1. Navigate to the Progress module of the Technopedia Catalog application.
2. Click the “Cancel Data Loads” button located at the top of the page.

Any rows that have been loaded, but not yet transformed, will continue to be processed. However, fetching new rows from the Technopedia API will cease immediately. The Data Load status is then set to “Data Load Canceled,” but you may still see progress bars continuing on the Data Transform status for some time afterward. After a few minutes, the load stops entirely, and Data Transform and Import Set Status statuses are set to “Complete.”

Restarting Individual Data Loads

Once a data load has been canceled, you may restart it from its interruption point.

To restart a load from its interruption point:

1. From the Progress module, click the “Data Load Canceled” link for the Data Load status of the data load you want to restart. Alternately, you can open the Load Progress module in the Logs group, and pick the load you want to restart. You are only able to restart loads that have “Canceled” listed as their current state.
2. Click the “Continue load from interruption point” Related Link, and the load will restart.
3. To verify the restart, navigate to the Progress module.

Note: Restarting data loads individually is one way to limit the load placed upon the instance.

Running Delta Load

The Technopedia Catalog is updated every day with the latest information about manufacturers’ hardware and software products. The Technopedia Catalog application keeps track of the last time it executed a data load. When it is run again, it will only load data that was changed in the interim. The process of delta loading is much more efficient, requiring just a few minutes.

To manually run a delta load:

1. From the Progress module, click the “Start Data Load” button.
2. The Technopedia Catalog application automatically loads any changes that have occurred since the previous data load. There are four different catalog sync modules:
 - Sync_Technopedia_Content_Pack (weekly)
 - Sync_Technopedia_Content_Packs (quarterly)

- Sync_Technopedia_Core (weekly)
- Sync_Technopedia_Core (quarterly)

	Name	Active	Class	Updated	Run
<input type="checkbox"/>	Sync Technopedia Content Pack (weekly)	true	Scheduled Script Execution	2017-02-01 14:41:22	Weekly
<input type="checkbox"/>	Sync Technopedia Content Packs (quarterly)	true	Scheduled Script Execution	2017-02-01 15:07:50	Periodically
<input type="checkbox"/>	Sync Technopedia Core (quarterly)	true	Scheduled Script Execution	2017-02-01 15:07:05	Periodically
<input type="checkbox"/>	Sync Technopedia Core (weekly)	true	Scheduled Script Execution	2017-02-01 14:42:12	Weekly

While the Technopedia Catalog application tracks the last load date, it is possible to forcibly load data from an older date.

To force the application to load data from an earlier date (e.g., March 17, 2012):

1. Navigate to the Properties module.
2. Set the “Last Modified Date” property to “2012-03-17”.
3. Save the properties.
4. Navigate to the Progress module and press the “Start Data Load” button.
5. The Technopedia Catalog application loads all changes since March 17, 2012.

Automating Delta Loading

Automated delta loading is scheduled through the Scheduled Import module of the Data Import group.

To set an automated schedule:

1. Click the “Scheduled Import” module in the Data Import group.
2. Choose a Run time, and enter the appropriate attributes required for your scheduled Run time selection (i.e. day of the week, time of day, etc.).
3. Click the “Update” button to save your changes.

Typically, a Weekly schedule is sufficient to ensure your instance has the latest information. However, you can schedule a run as frequently as you require.

Managing Initial Data Load Performance

Occasionally, the ServiceNow instance configuration must be modified in order to ensure all records can be loaded without affecting instance performance. If you encounter performance issues, the table “[Strategies to Slow the Initial Data Load](#)” on page 14 describes a sequence of strategies for slowing the initial data load. These strategies should be implemented in the order they appear within the table below.

Table 3: Strategies to Slow the Initial Data Load

Strategy	When	How
1. Reduce REST chunk size	Prior to initial data load.	<ol style="list-style-type: none"> 1. Click on the Properties module. 2. Set chunk size (“number of records to fetch”) to 500 or 250. 3. Save Properties. 4. Run initial data load.
2. Serialize the data loads	After canceling the initial data load.	<ol style="list-style-type: none"> 1. Click on the Load Progress module. 2. Select the most recent data load number where the State is Canceled and the Import Set Table is cf_technopedia_manufacturer. 3. Click on the Continue Load from Interruption Point Related Link. 4. Click on the Progress module. 5. Wait for the Manufacturer load to complete. 6. Repeat steps 2-5 for cf_technopedia_hardware, then repeat it again for cf_technopedia_software.

These strategies will resolve issues related to data loading performance.

Note: Changes to the REST chunk size will increase the initial load time, but will have little effect on future delta loading.

Catalog Schedule

Customers can perform multiple catalog syncs, specifically for core syncs and content pack syncs. By default, these scheduled imports are set to occur weekly and quarterly. These options exist in order to allow customers to compare changes and updates from various syncs, thus ensuring that they do not miss any potential ServiceNow improvements. It is also important to remember that a core synchronization must occur before a content pack synchronization, because content pack changes are dependent upon core catalog updates.

Application Module Details

The following table describes the modules of the Technopedia Catalog application:

Table 4: Application Modules


Group	Module	Description
[MAIN]	Setup	The Setup Wizard. All steps should be run in order.
[MAIN]	Properties	Advanced property settings.
[MAIN]	Progress	Data loading progress page.
[MAIN]	Documentation	Link to Technopedia Catalog documentation.
[MAIN]	Contact Support	Link to BDNA Support Portal.
Data Import	Scheduled Import	Start and schedule data load.

Table 4: Application Modules

Data Import	Technopedia Modules	Mappings of Technopedia API endpoints to target tables.
Data Import	Transform Maps	Transform maps for the data import.
Business Logic	Business Rules	Business rules created by Technopedia Catalog integration.
Business Logic	Data Cleanup	Scripts to remove loaded data as well as deleting Asset and CI data. Only available to security_admin function. USE WITH EXTREME CAUTION!
Logs	Load Progress	Link to listing of active, completed, and canceled loads.
Logs	Probes	Link to REST output and input probes.
Logs	Logs	Log entries from the Technopedia Catalog integration.

Troubleshooting/FAQ

The Technopedia Application isn't showing up in the left-hand Application pane.

After committing the BDNA Technopedia update set, make sure to click the Refresh icon  in the Application Navigator. This will refresh the applications and modules in the Application Navigator and allow you to see the Technopedia Application. You can also type “Technopedia” in the “Type filter text” entry field at the top of the Application Navigator. If still does not appear, you may need to have the Technopedia or administrative role applied in order to see the Application.

There was an error while previewing the update.

If there was an error previewing the update set, try running the preview again. If there is still an error, consult with the system administrator for the instance.

The update set preview says there were “Collisions.” Is that a problem?

Collisions happen when the code being previewed conflicts with existing code on the instance. Find the collisions in the list of updates and consult with a local system administrator to decide if they should be committed or skipped. If updates are skipped, the Technopedia Integration Application may not function correctly.

Test load does not show any progress.

This is typically caused by a bad username or API key.

To investigate possible causes:

1. Click on the Probes module, and sort by the Created date.
2. Examine the “output” Queue entry for the most recent REST Probe Topic.