Monitoring IBM Tivoli Storage Manager

IBM: Tivoli Storage Manager PowerPack version 101

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Chapter 1

Introduction to Tivoli Storage Manager

Overview

This manual describes how to monitor IBM Tivoli Storage Manager environments, now known as IBM Spectrum Protect, in SL1 using the *IBM: Tivoli Storage Manager* PowerPack.

The following sections provide an overview of IBM Tivoli Storage Manager and the *IBM: Tivoli Storage Manager* PowerPack:

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What is IBM Tivoli Storage Manager?

IBM Tivoli Storage Manager is a data protection platform that gives enterprises a single point of control and administration for backup and recovery, providing centralized, automated data protection that can help reduce the risks that are associated with data loss and help manage compliance with data retention and availability requirements.

What Does the IBM: Tivoli Storage Manager PowerPack Monitor?

To monitor IBM Tivoli Storage Manager environments using SL1, you must install the *IBM: Tivoli Storage Manager* PowerPack. This PowerPack enables you to discover, model, and collect data from IBM Tivoli Storage Manager environments.

SL1 uses SSH to connect to the Tivoli Storage Manager server or proxy server. The administrative utility 'dsmadmc' is then used to query the TSM inventory.

The *IBM: Tivoli Storage Manager* PowerPack includes:

- Two example credentials you can use as templates to create a SOAP/XML credential and an SSH/Key credential to connect to the IBM Tivoli Storage Manager environments you want to monitor
- Dynamic Applications to discover, model, and monitor performance metrics and collect configuration data for IBM Tivoli Storage Manager environments
- Device Classes for the Tivoli Storage Manager devices that SL1 monitors
- Event Policies and corresponding alerts that are triggered when IBM Tivoli Storage Manger devices meet certain status criteria

Installing the IBM: Tivoli Storage Manager PowerPack

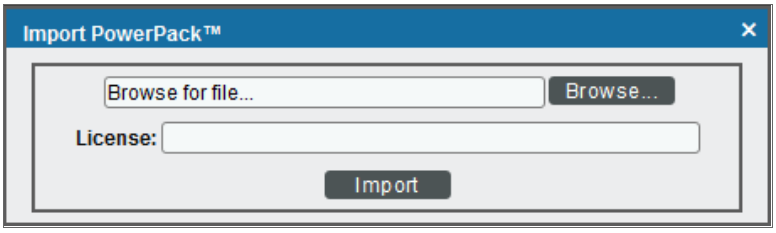
Before completing the steps in this manual, you must import and install the latest version of the *IBM: Tivoli Storage Manager* PowerPack.

TIP: By default, installing a new version of a PowerPack overwrites all content from a previous version of that PowerPack that has already been installed on the target system. You can use the ***Enable Selective PowerPack Field Protection*** setting in the **Behavior Settings** page (System > Settings > Behavior) to prevent new PowerPacks from overwriting local changes for some commonly customized fields. (For more information, see the ***System Administration*** manual.)

To download and install a PowerPack:

1. Download the PowerPack from the ScienceLogic Customer Portal.
2. Go to the **PowerPack Manager** page (System > Manage > PowerPacks).
3. In the **PowerPack Manager** page, click the **[Actions]** button, then select *Import PowerPack*.

4. The **Import PowerPack** dialog box appears:



5. Click the **[Browse]** button and navigate to the PowerPack file.
6. When the **PowerPack Installer** modal page appears, click the **[Install]** button to install the PowerPack.

> NOTE: If you exit the **PowerPack Installer** modal without installing the imported PowerPack, the imported PowerPack will not appear in the **PowerPack Manager** page. However, the imported PowerPack will appear in the **Imported PowerPacks** modal. This page appears when you click the **[Actions]** menu and select *Install PowerPack*.

Chapter 2

Configuration and Discovery

Overview

The following sections describe how to configure and discover IBM Tivoli Storage Manager environments for monitoring by SL1 using the *IBM: Tivoli Storage Manager* PowerPack:

Creating Credentials for IBM Tivoli Storage Manager

If you are connecting to your IBM Tivoli Storage Manager (TSM) environment using SSH with basic authentication, then you will need to create a ***SOAP/XML credential***.

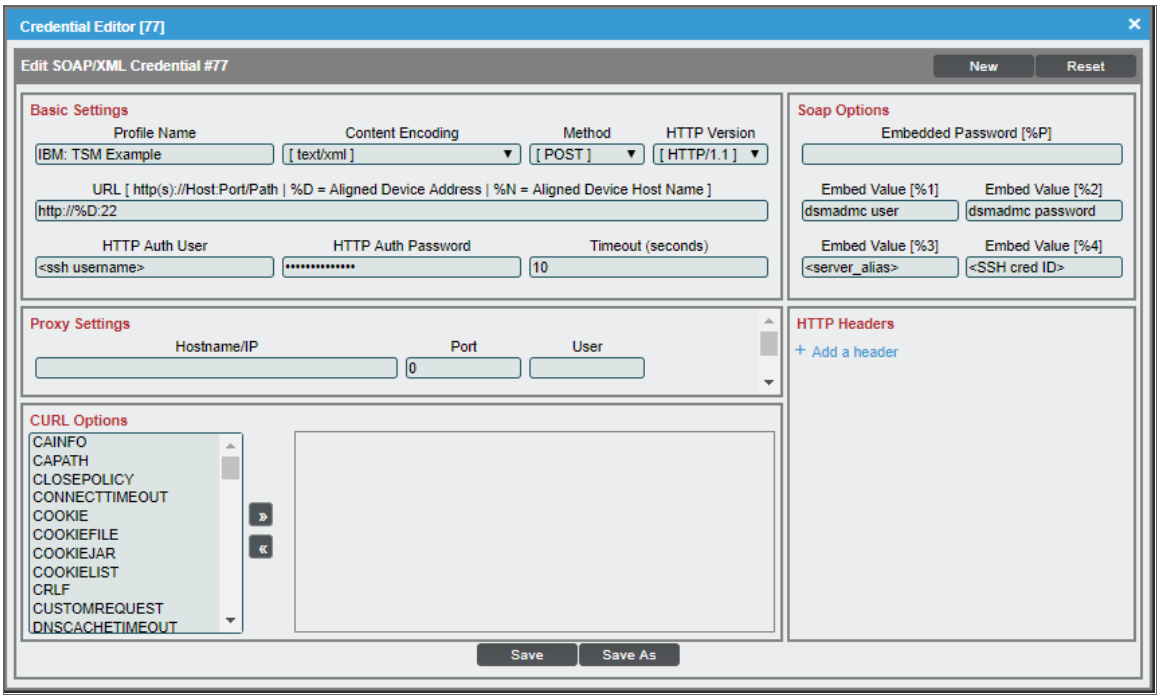
If you connecting to your TSM environment using SSH with public-key authentication, you will need to create an ***SSH/Key credential*** in addition to the SOAP/XML credential.

Creating a SOAP/XML Credential for IBM Tivoli Storage Manager

To use the Dynamic Applications in the *IBM: Tivoli Storage Manager* PowerPack, you must configure a SOAP/XML credential for your Tivoli Storage Manager (TSM) environment. The *IBM: Tivoli Storage Manager* PowerPack includes a template for SOAP/XML credentials that you can edit for use with your TSM environment.

To modify the template, perform the following steps:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Click the wrench icon ( ) for the "IBM: TSM Example". The **Credential Editor** modal page appears:



3. Supply values in the following fields:

   - ***Profile Name***. Enter a new name for the credential.
   - ***HTTP Auth User***. Enter the username for the TSM server, or the proxy server that you are connecting to via SSH.

NOTE: The username you enter in the ***HTTP Auth User*** field must have the necessary permissions to successfully execute dsmadmc commands.

   - ***HTTP Auth Password***. Enter the password for the TSM server, or the proxy server you are connecting to via SSH. This field is required when not using a private RSA key to connect.
   - ***Embed Value [%1]***. Enter the dsmadmc username. The dsmadmc login is configured separately by the TSM administrator, but the default login is admin/passw0rd. This field is required.
   - ***Embed Value [%2]***. Enter the dsmadmc password. This field is required.

- ***Embed Value [%3]***. If you are using a proxy server, enter the TSM server name in this field as defined in your `dsm.sys` file. If this field is left unchanged, it's assumed that you're connecting directly to the TSM server instance.
- ***Embed Value [%4]***. If you are using an *SSH/Key credential for public/private key access*, enter the credential ID of the SSH/Key credential in this field. Otherwise, leave this field blank.

4. Click the **[Save As]** button to save your changes as a new credential.

> CAUTION: Do not click the **[Save]** button, as it will save over the example credential, which you may need for future use.

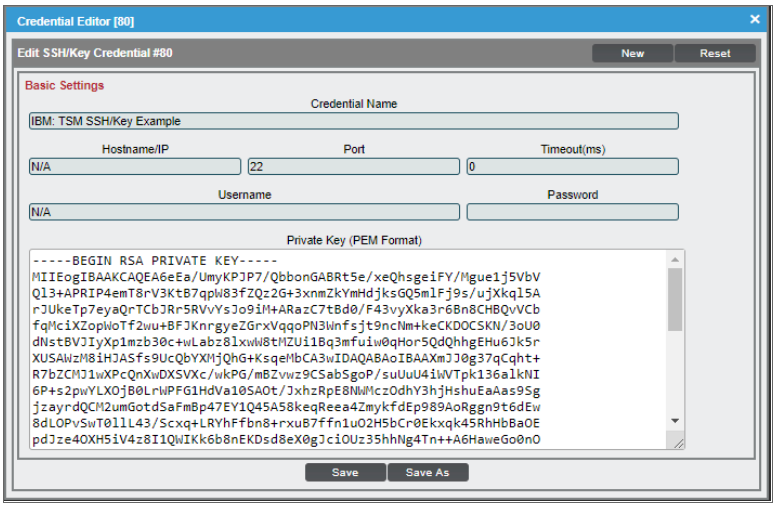
Creating an SSH/Key Credential for IBM Tivoli Storage Manager

When configuring monitoring for IBM Tivoli Storage Manager devices, if you want to use a public/private RSA key pair for the SSH connection rather than a username and password, you must also create an SSH/Key credential. This credential allows the Dynamic Applications in the *IBM: Tivoli Storage Manager* PowerPack to connect with an IBM Tivoli Storage Manager server or proxy client using an RSA key pair. After you create this credential, you must then enter its credential ID number in the *SOAP/XML credential* you created.

The *IBM: Tivoli Storage Manager* PowerPack includes a template for SSH/Key credentials that you can edit for use with your TSM environment, if needed.

To create an SSH/Key credential:

1. Generate an SSH RSA private/public key pair. This is commonly done using the "ssh-keygen" command-line utility.
2. Go to the **Credential Management** page (System > Manage > Credentials).
3. Click the wrench icon ( ) for the "IBM: TSM SSH/Key Example" credential. The **Credential Editor** modal page appears:

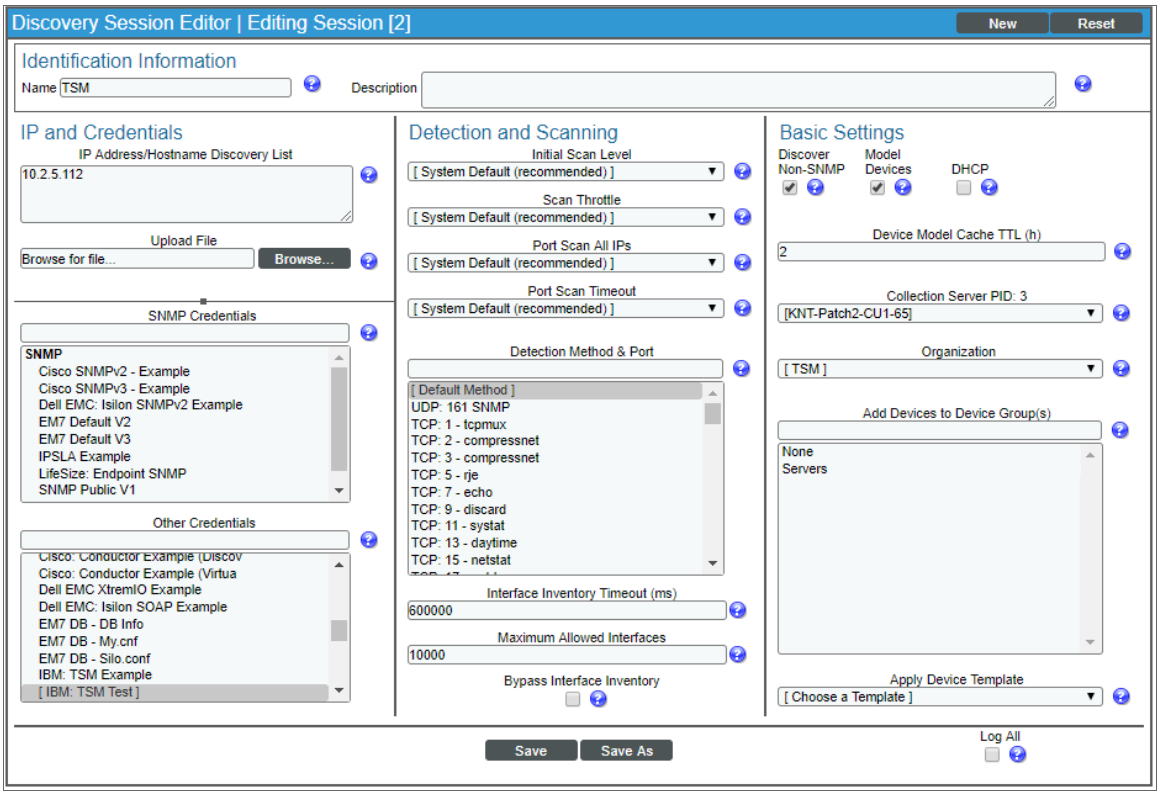


4. Supply values in the following fields:
    - ***Credential Name***. Enter a new name for the credential.
    - ***Username***. Enter N/A. The credential cannot be saved if this field is empty.
    - ***Password***. Enter N/A. The credential cannot be saved if this field is empty.
    - ***Private Key (PEM Format)***. Paste the SSH private key that you copied from your collector into this field, in PEM format.
5. Click **[Save As]**. In the **Credential Management**, note the credential ID of the SSH/Key credential you just created.
6. Save the corresponding public key to the `authorized_keys` file on your SSH target (the TSM server or proxy client). This is typically found at `/root/.ssh/authorized_keys`
7. In the *SOAP/XML credential* you created, enter the credential ID of the SSH/Key credential in the ***Embed Value [%4]*** field.

Discovering IBM Tivoli Storage Manager Component Devices

To discover an IBM Tivoli Storage Manager (TSM) system:

1. Go to the **Discovery Control Panel** page (System > Manage > Discovery).
2. In the **Discovery Control Panel**, click the **[Create]** button. The **Discovery Session Editor** page appears.



3. In the **Discovery Session Editor** page, complete the following fields:

   - ***Name***. Type a name for the discovery session.
   - ***IP Address/Hostname Discovery List***. Type the IP address for the Tivoli Storage Manager server or proxy client.
   - ***Other Credentials***. Select the SOAP/XML credential you created for the Tivoli Storage Manager system.
   - ***Discover Non-SNMP***. Select this checkbox.
   - ***Model Devices***. Select this checkbox.

4. Optionally, you can enter values in the other fields on this page. For more information about the other fields on this page, see the ***Discovery & Credentials*** manual.
5. Click the **[Save]** button to save the discovery session and then close the **Discovery Session Editor** window.
6. The discovery session you created appears at the top of the **Discovery Control Panel** page. Click its lightning-bolt icon ( ) to run the discovery session.
7. The **Discovery Session** window appears. When the cluster root device(s) are discovered, click the device icon ( ) to view the **Device Properties** page for each device.

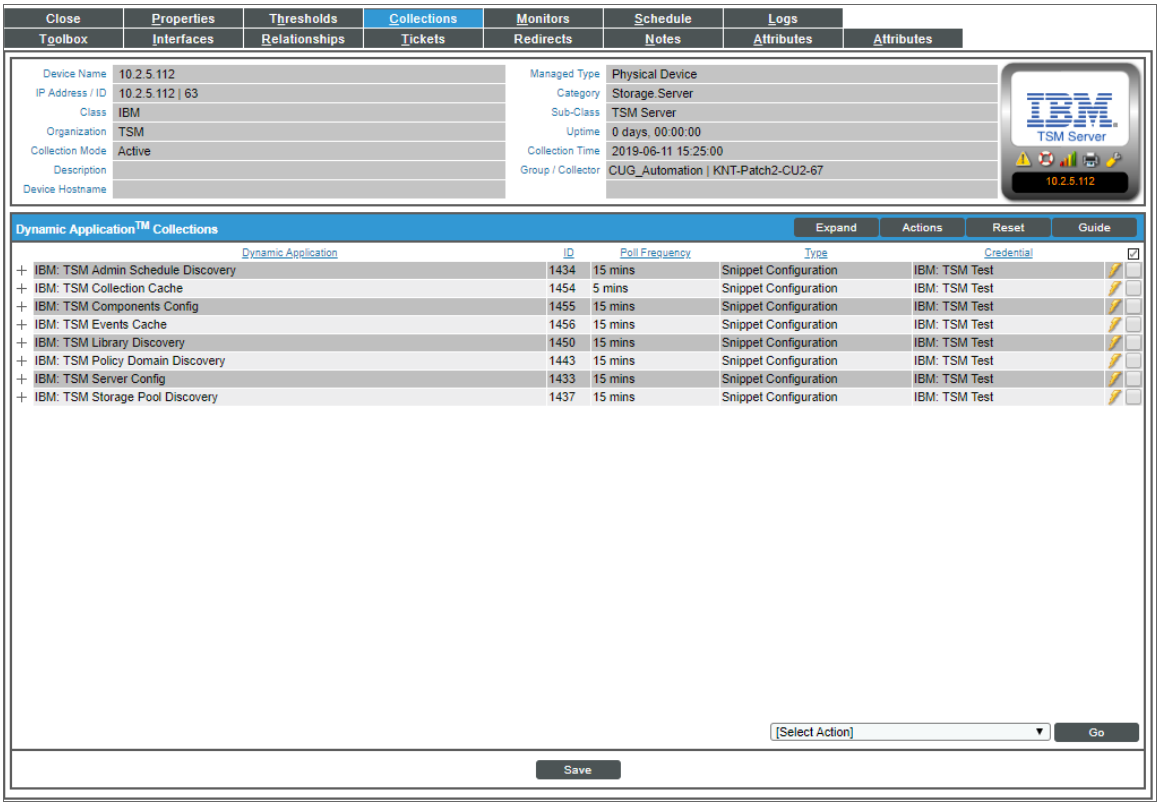
Verifying Discovery and Dynamic Application Alignment

To verify that SL1 has automatically aligned the correct Dynamic Applications during discovery:

1. After discovery has completed, click the device icon for the Tivoli Storage Manager (TSM) device ( ). From the **Device Properties** page for the TSM device, click the **[Collections]** tab. The **Dynamic Application Collections** page appears.
2. All applicable Dynamic Applications are automatically aligned to the root device during discovery.

> **NOTE:** It can take 10 to 15 minutes after the discovery session has completed for Dynamic Applications to appear in the **Dynamic Application Collections** page.

> **NOTE:** As data is collected and cached on the first polling interval and displayed on the second, you might not see any data until the second polling interval is completed. This could take as long as 30 minutes.

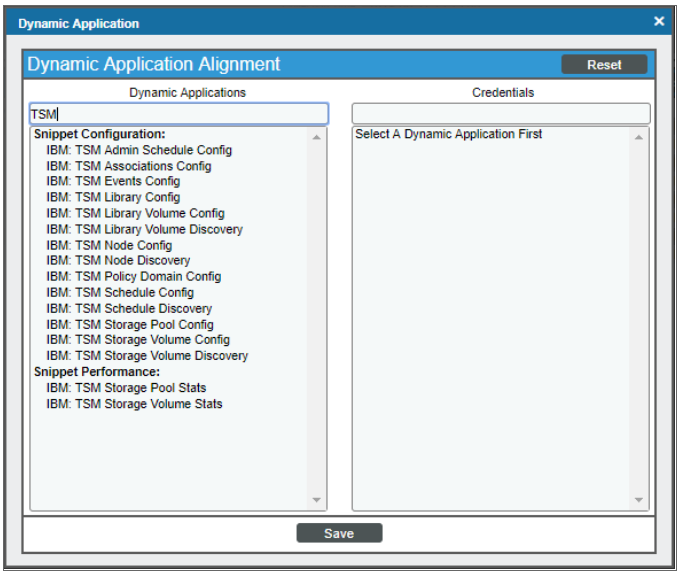


You should see the following Dynamic Applications aligned to the TSM device:

- IBM: TSM Admin Schedule Discovery
- IBM: TSM Collection Cache
- IBM: TSM Components Config
- IBM: TSM Events Cache
- IBM: TSM Library Discovery
- IBM: TSM Policy Domain Discovery
- IBM: TSM Server Config
- IBM: TSM Storage Pool Discovery

If the listed Dynamic Applications have not been automatically aligned during discovery, you can align them manually. To do so, perform the following steps:

1. Click the **[Actions]** button and then select *Add Dynamic Application*. The **Dynamic Application Alignment** page appears:

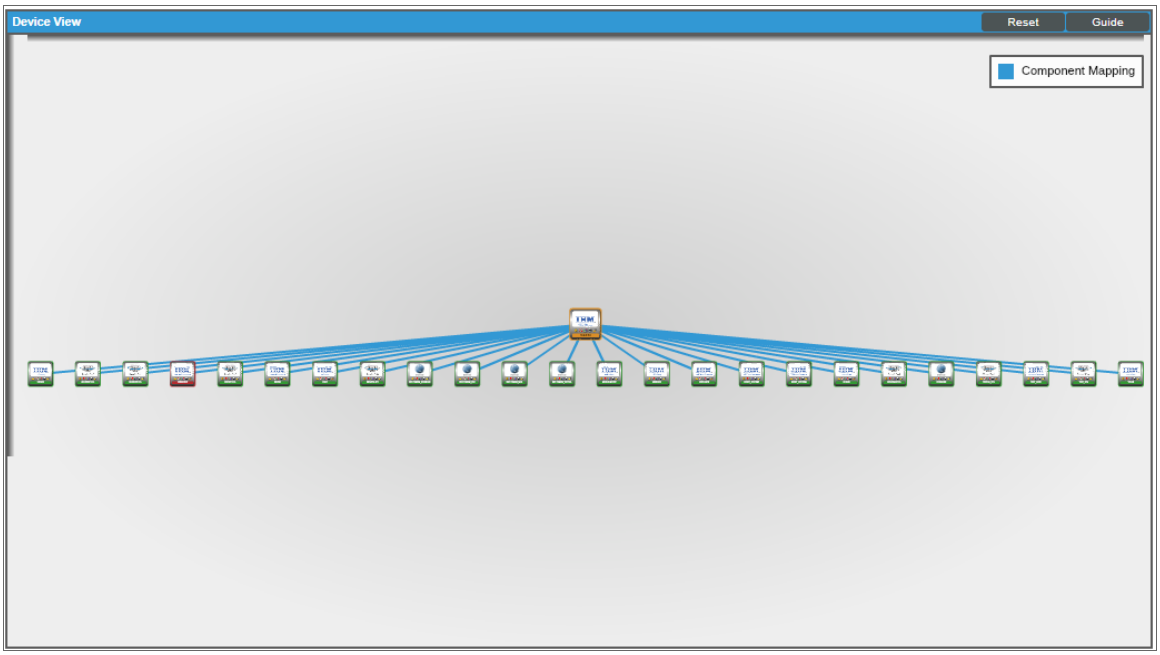


2. In the ***Dynamic Applications*** field, select the Dynamic Application you want to align.
3. In the ***Credentials*** field, select the credential you created.
4. Click the **[Save]** button.
5. Repeat steps 1-4 for the other unaligned Dynamic Applications.

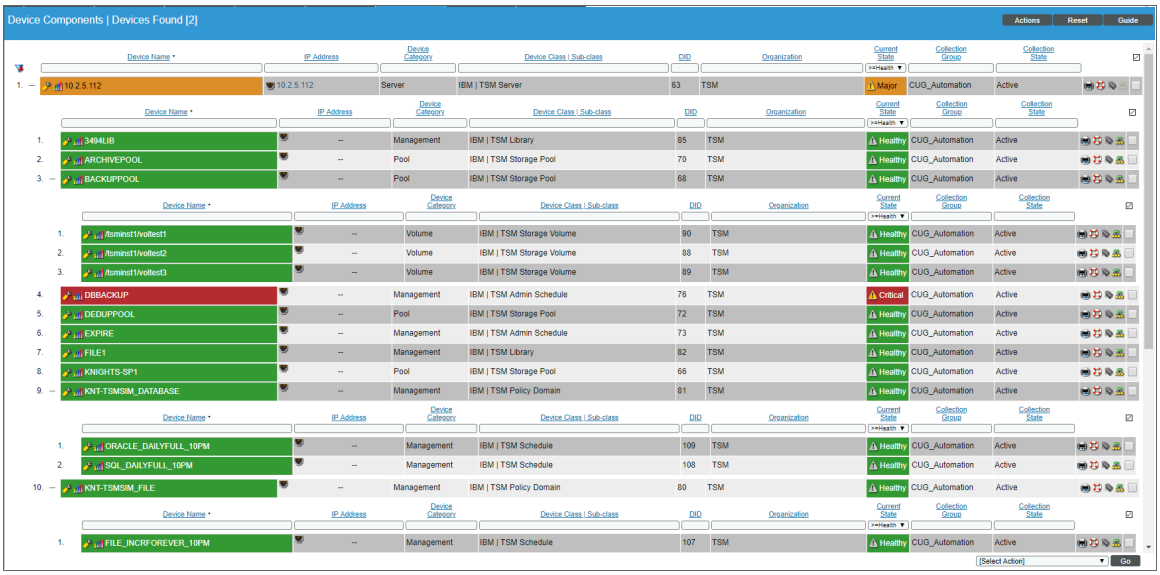
Viewing IBM Tivoli Storage Manager Component Devices

In addition to the **Device Manager** page (Registry > Devices > Device Manager), you can view the IBM Tivoli Storage Manager (TSM) environment and all associated component devices in the following places in the user interface:

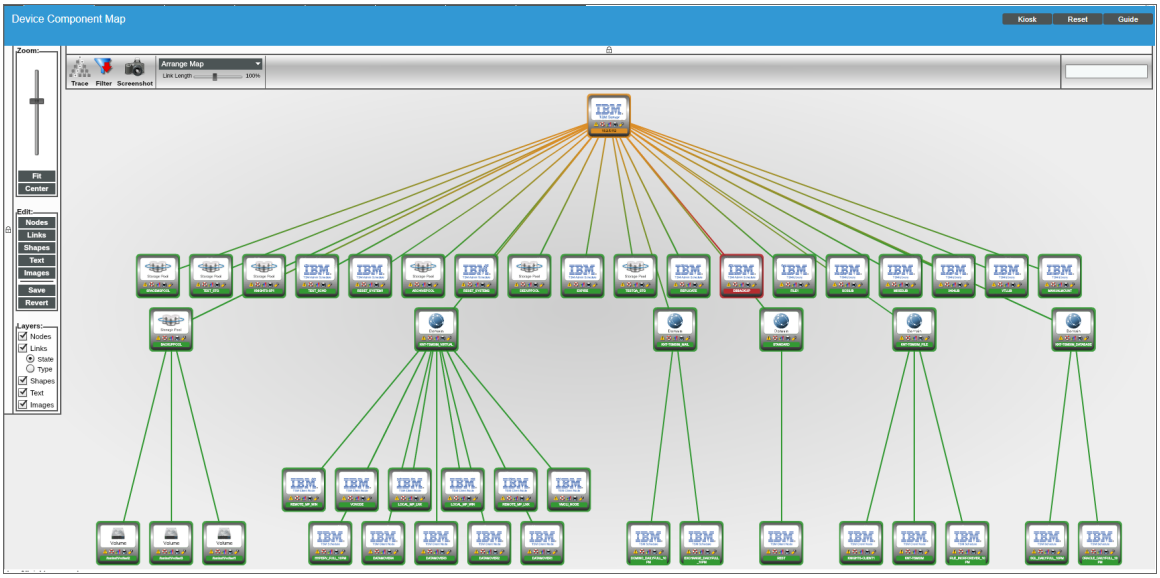
- The **Device View** modal page (click the bar-graph icon [] for a device, then click the **Topology** tab) displays a map of a particular device and all of the devices with which it has parent-child relationships. Double-clicking any of the devices listed reloads the page to make the selected device the primary device:



- The **Device Components** page (Registry > Devices > Device Components) displays a list of all root devices and component devices discovered by SL1 in an indented view, so you can easily view the hierarchy and relationships between child devices, parent devices, and root devices. To view the component devices associated with an IBM Tivoli Storage Manager environment, find the IBM TSM device and click its plus icon (+):



- The **Component Map** page (Views > Device Maps > Components) allows you to view devices by root node and view the relationships between root nodes, parent components, and child components in a map. This makes it easy to visualize and manage root nodes and their components. SL1 automatically updates the **Component Map** as new component devices are discovered. The platform also updates each map with the latest status and event information. To view the map for an IBM TSM environment, go to the **Component Map** page and select the map from the list in the left NavBar. To learn more about the **Component Map** page, see the ***Views*** manual.



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