Monitoring Dynatrace

Dynatrace PowerPack version 103

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Chapter 1

Introduction

Overview

This manual describes how to monitor Dynatrace environments in SL1 using the *Dynatrace* PowerPack.

Use the following menu options to navigate the SL1 user interface:

- To view a pop-out list of menu options, click the menu icon ( ).
- To view a page containing all the menu options, click the Advanced menu icon ( ).

The following sections provide an overview of Dynatrace environments and the *Dynatrace* PowerPack:

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What is Dynatrace?

Dynatrace is an application performance management and monitoring platform for programs running on-premises (Dynatrace Managed) and in the cloud (Dynatrace SaaS). Dynatrace enables you to monitor various component types within your environment, such as applications, hosts, and services, and analyze the data collected through tools such as dashboards and reports.

What Does the Dynatrace PowerPack Monitor?

To monitor Dynatrace Managed environments using SL1, you must install the *Dynatrace* PowerPack. This PowerPack enables you to discover, model, and collect data about Dynatrace components.

The *Dynatrace* PowerPack includes:

- Dynamic Applications to discover and monitor Dynatrace component devices, including:
  - Applications
  - Hosts
  - Services
- Device Classes for each of the Dynatrace components that the *Dynatrace* PowerPack can monitor
- Event Policies that are triggered when Dynatrace component devices meet certain status criteria
- A sample SOAP/XML Credential that you can use to create your own Dynatrace Credential
- A Device Template that aligns Dynamic Applications to the Dynatrace Environment virtual device and enables you to discover component devices for that environment
- Device Dashboards that display information about Dynatrace component devices

NOTE: The *Dynatrace* PowerPack does not monitor Dynatrace SaaS environments.

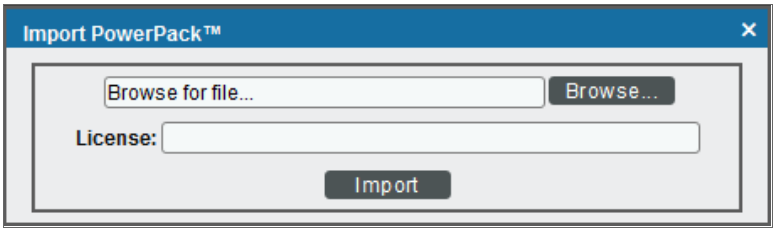
Installing the Dynatrace PowerPack

Before completing the steps in this manual, you must import and install the latest version of the *Dynatrace* 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 Support Site.
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 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

Use the following menu options to navigate the SL1 user interface:

- To view a pop-out list of menu options, click the menu icon ( ).
- To view a page containing all the menu options, click the Advanced menu icon ( ).

The following sections describe how to configure and discover Dynatrace resources for monitoring by SL1 using the *Dynatrace* PowerPack:

Generating a Dynatrace API Token

To configure the SL1 system to monitor Dynatrace resources using the *Dynatrace*PowerPack, you must first generate a Dynatrace API token.

To do so:

1. Log in to your Dynatrace portal. On the left menu, click **Settings > Integration > Dynatrace API**. The **Dynatrace API** page appears.
2. Click the **[Generate Token]** button.
3. In the blank box that appears, type a token name, and then activate (at a minimum) the "Access problem and event feed, metrics, topology, and RUM JavaScript tag management" permission.
4. Click **[Generate]** to generate the API token.

TIP: You can click the **[Copy]** button next to the generated token to copy the token to your computer's clipboard.

5. The newly generated API token appears in your list of API tokens. Ensure that the ***Disable/enable*** switch is activated.
6. Optionally, if you want to verify the token, you can use an API tool like Postman or cURL to send a GET request for your Dynatrace environment, and then attach the token to the Api-Token realm for the Authorization HTTP header. For example:

```
curl --request GET \
  --url https://<Hostname>/e/<Environment-ID>.live.dynatrace.com/api/v1/time \
  --header 'Authorization: Api-Token <generated API token>' \
```

Configuring Dynatrace Credentials

To configure SL1 to monitor Dynatrace devices, you must first create a SOAP/XML credential. This credential allows the Dynamic Applications in the *Dynatrace* PowerPack to use your Dynatrace user account to retrieve information from the *Dynatrace* environment and component devices.

The PowerPack includes an example SOAP/XML credential (**Dynatrace Credential Example**) that you can edit for your own use.

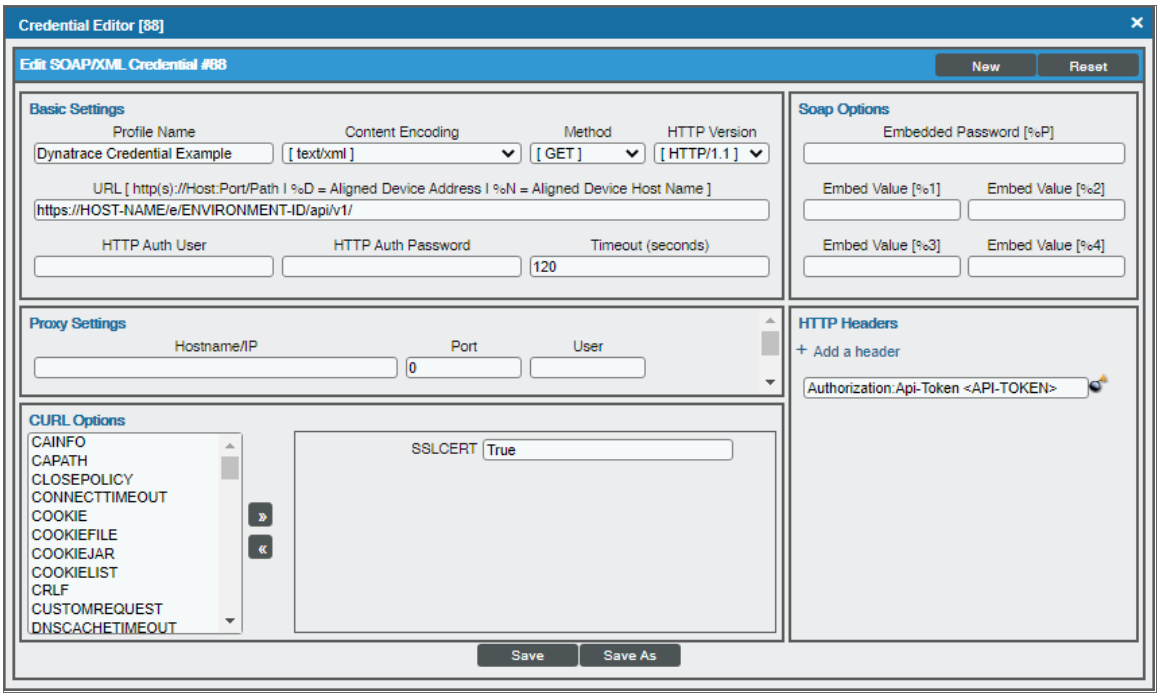
To configure SL1 to monitor Dynatrace devices, you must first create a SOAP/XML credential. This credential allows the Dynamic Applications in the *Dynatrace* PowerPack to use your Dynatrace user account to retrieve information from the *Dynatrace* environment and component devices.

The PowerPack includes example SOAP/XML credentials that you can edit for your own use:

- ***Dynatrace Credential Example***. The standard credential for monitoring Dynatrace.
- ***Dynatrace Cred MZFilter Example***. Use this credential for filtering hosts and services by Management Zone.
- ***Dynatrace Cred TagFilter Example***. Use this credential for filtering hosts and services by Tag Key.

To configure a SOAP/XML credential to access Dynatrace:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Locate the **Dynatrace Credential Example** credential, and then click its wrench icon (). The **Edit SOAP/XML Credential** modal page appears:



3. Complete the following fields:

Basic Settings

- ***Profile Name***. Type a new name for the Dynatrace credential.
- ***URL***. Type your URL in the following format, replacing <Hostname> with your Dynatrace hostname and <Environment-ID> with your Dynatrace environment ID:

  https://<Hostname>/e/<Environment-ID>/api/v1/

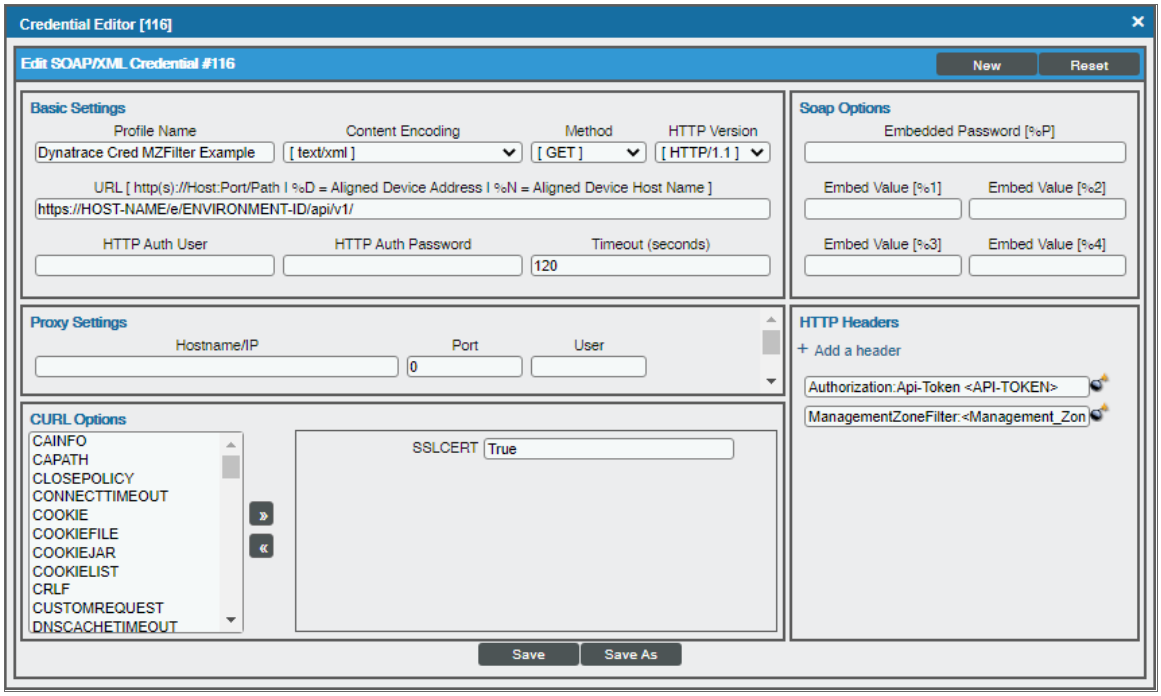
- ***HTTP Auth User***. This field must be blank.
- ***HTTP Auth Password***. This field must be blank.

HTTP Headers

- Type your authorization API token in the following format, replacing <API-Token> with your actual API token:

  Authorization: Api-Token <API-Token>

- If you want to filter hosts and services by Management Zone or Tag Key, the HTTP headers for these filters will appear in the " Dynatrace Cred MZFilter Example" and "Dynatrace Cred TagFilter Example" credentials.



Update the headers in the following format:

ManagementZoneFilter: <Management_Zone_ID>

TagFilter: <TagName>

NOTE: You can filter only one Management Zone or Tag Key at a time.

CURL Options

- ***SSLCERT***. Keep the default value of "True".

4. For the remaining fields, use the default values.
5. Click the **[Save As]** button.

Discovering Dynatrace Devices

To discover and monitor your Dynatrace environment, you must do the following:

- Create a virtual device representing the environment
- Configure the Dynatrace device template that is included in the *Dynatrace* PowerPack
- Align the device template to the Dynatrace virtual device

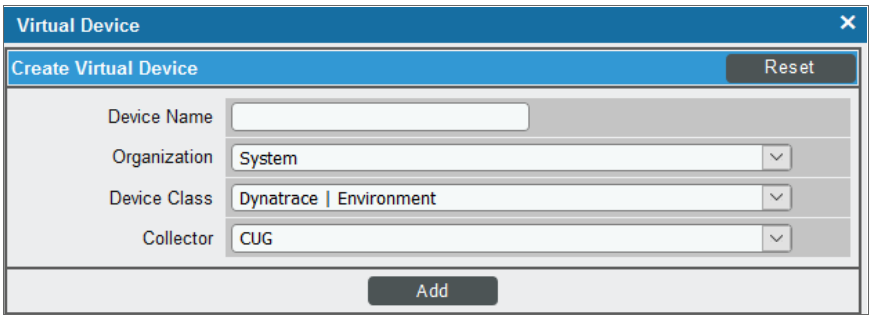
Each of these steps is documented in the following sections.

Creating a Dynatrace Virtual Device

Because the Dynatrace environment does not have a static IP address, you cannot discover a Dynatrace device by running a discovery session. Instead, you must create a ***virtual device*** that represents the Dynatrace environment. A virtual device is a user-defined container that represents a device or service that cannot be discovered by SL1. You can use the virtual device to store information gathered by policies or Dynamic Applications.

To create a virtual device that represents your Dynatrace environment:

1. Go to the **Device Manager** page (Devices > Device Manager or Registry > Devices > Device Manager in the SL1 classic user interface).
2. Click the **[Actions]** button and select *Create Virtual Device* from the menu. The **Virtual Device** modal page appears:



3. Complete the following fields:
   - ***Device Name***. Type a name for the device.
   - ***Organization***. Select the organization for this device. The organization you associate with the device limits the users that will be able to view and edit the device. Typically, only members of the organization will be able to view and edit the device.
   - ***Device Class***. Select *Dynatrace | Environment*.
   - ***Collector***. Select the collector group that will monitor the device.
4. Click **[Add]** to create the virtual device.

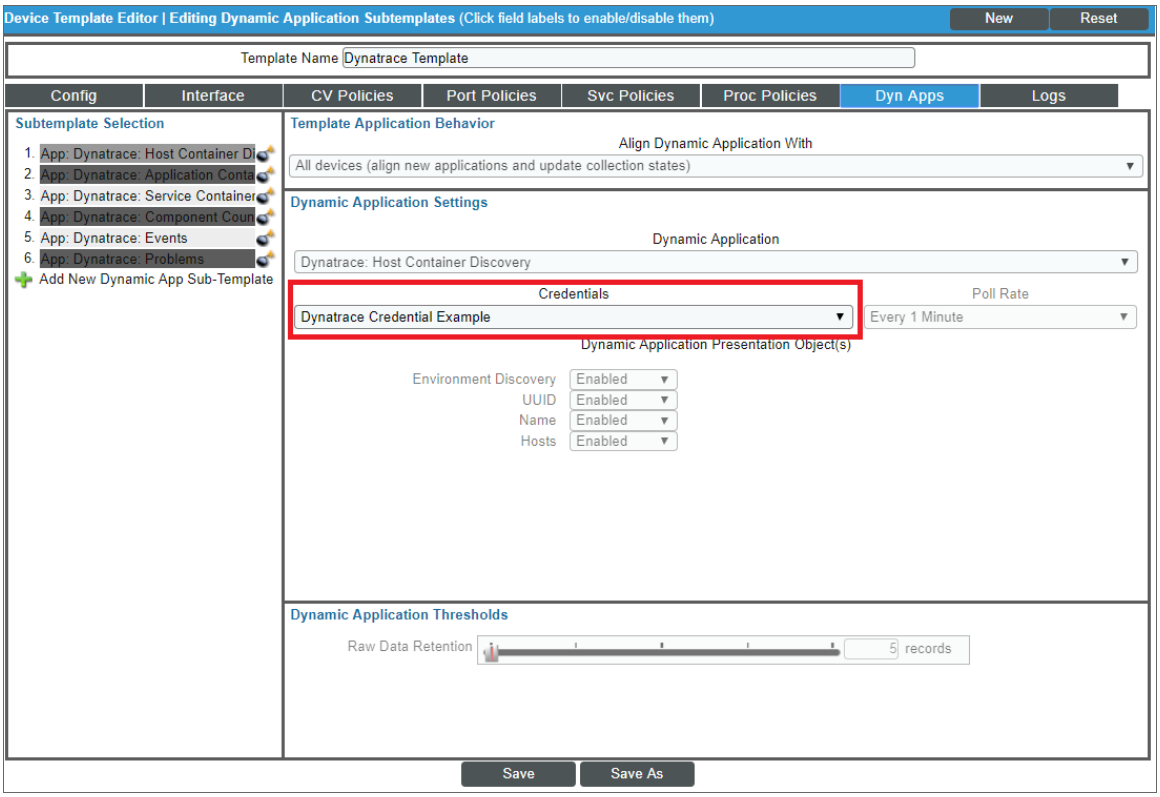
Configuring the Dynatrace Device Template

A ***device template*** allows you to save a device configuration and apply it to multiple devices. The *Dynatrace* PowerPack includes the "Dynatrace Template," which enables SL1 to align all of the necessary Dynamic Applications to the environment root component device.

Before you can use the "Dynatrace Template", you must configure the template so that each Dynamic Application in the template aligns with the *credential you created earlier*.

To configure the Dynatrace device template:

1. Go to the **Configuration Templates** page (Devices > Templates or Registry > Devices > Templates in the SL1 classic user interface).
2. Locate the "Dynatrace Template" and click its wrench icon ( ). The **Device Template Editor** modal page appears.
3. Click the **[Dyn Apps]** tab. The **Editing Dynamic Application Subtemplates** page appears:



4. In the ***Credentials*** drop-down list, select the credential that you created for Dynatrace.
5. Click the next Dynamic Application listed in the **Subtemplate Selection** section on the left side of the page and then select the credential you created in the ***Credentials*** field.
6. Repeat step 5 until you have selected your Dynatrace credential in the ***Credentials*** field for all of the Dynamic

Applications listed in the **Subtemplate Selection** section.

7. Click **[Save]**.

NOTE: To maintain a "clean" version of the template, type a new name in the ***Template Name*** field and then click **[Save As]** instead of **[Save]**.

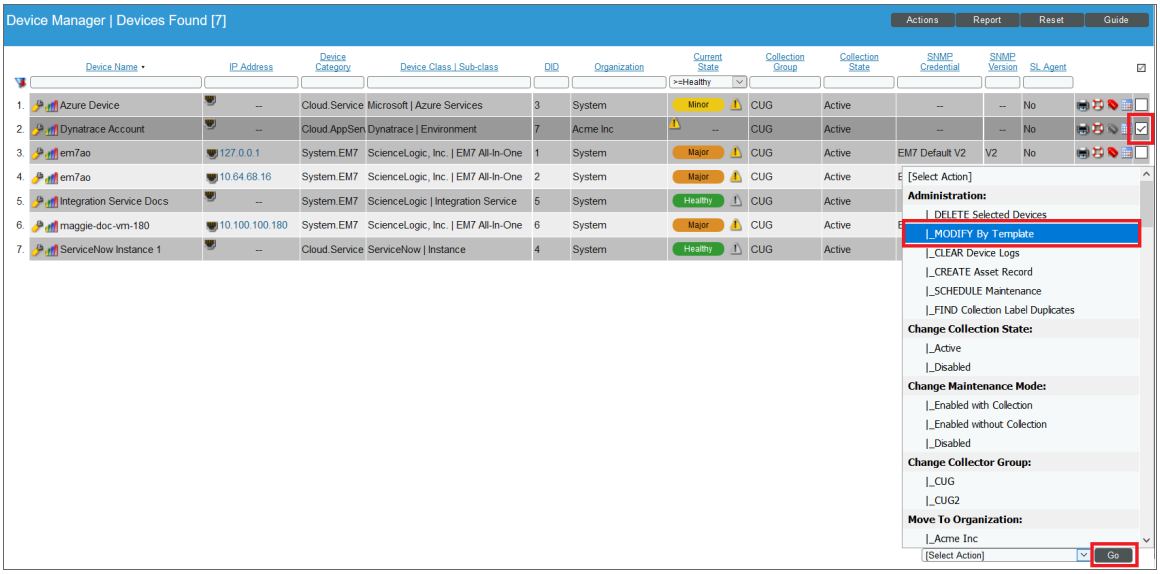
NOTE: The "Dynatrace: Events" Dynamic Application is disabled by default in the *Dynatrace* PowerPack. To collect Dynatrace events, you must enable it. To do so, go to the **Dynamic Applications Manager** page (System > Manage > Applications), locate the "Dynatrace: Events" Dynamic Application and click its wrench icon ( ), change the ***Operational State*** setting to *Enabled*, and then click **[Save]**.

Aligning the Device Template to Your Dynatrace Virtual Device

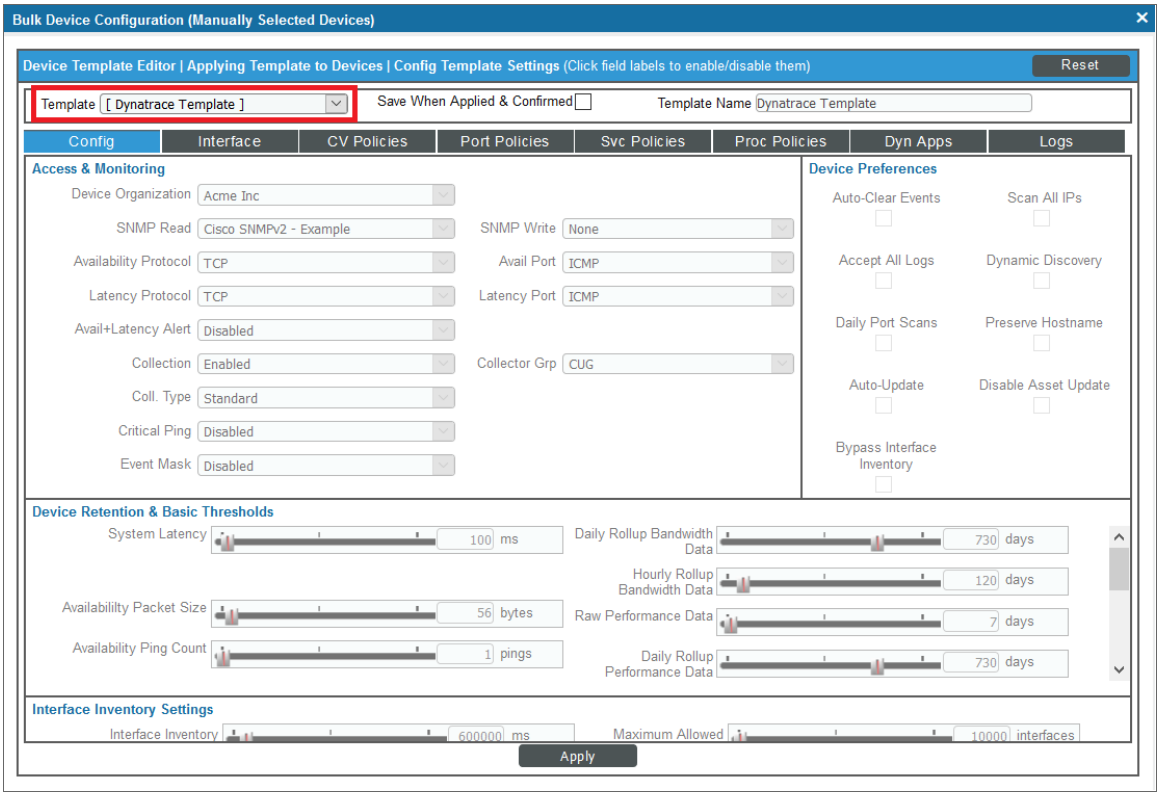
After you have configured the Dynatrace device template so that each Dynamic Application in the template aligns with your Dynatrace credential, you can use that template to align the Dynamic Applications to the virtual device that you created to act as the root device for your Dynatrace environment. When you do so, SL1 discovers and models all of the components in your Dynatrace environment.

To align the Dynatrace device template to the Dynatrace virtual device:

1. Go to the **Device Manager** page (Devices > Device Manager or Registry > Devices > Device Manager in the SL1 classic user interface).
2. On the **Device Manager** page, select the checkbox for the Dynatrace virtual device.
3. In the ***Select Actions*** field, in the lower right corner of the page, select the option *MODIFY by Template* and then click the **[Go]** button. The **Device Template Editor** page appears.



4. In the ***Template*** drop-down list, select your Dynatrace device template.

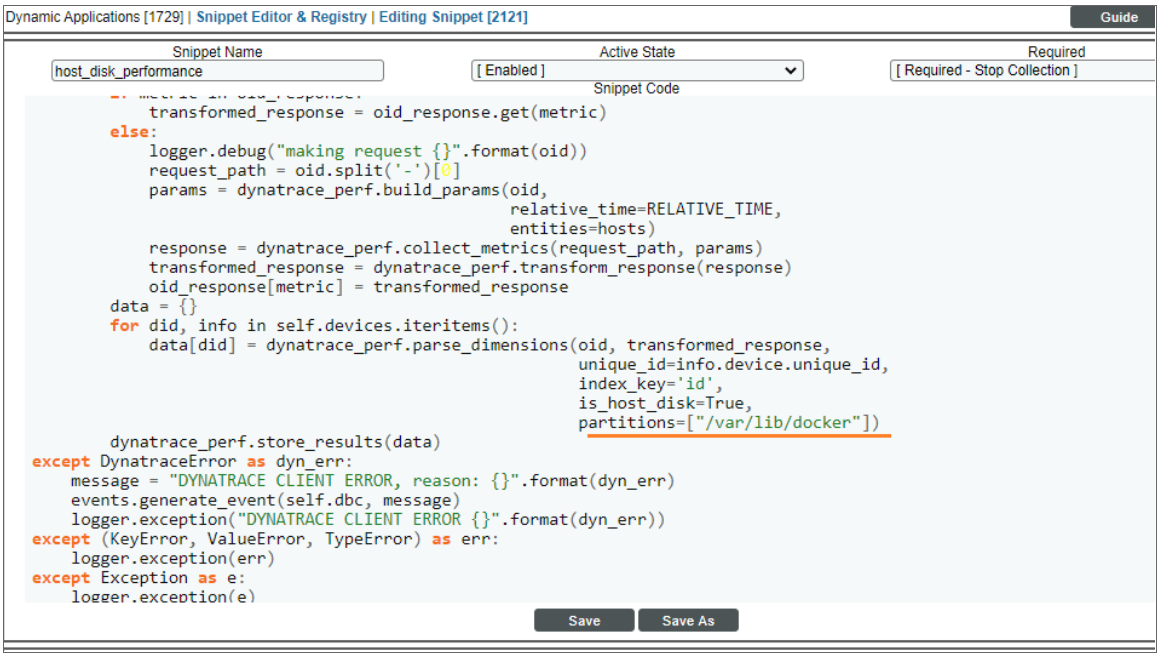


5. Click the **[Apply]** button, and then click **[Confirm]** to align the Dynamic Applications to the root component device.

Filtering Partitions from Host Components

You can filter out partitions from host components in the "Dynatrace: Host Disk Performance" Dynamic Application. To do this, perform the following steps:

1. Go to the **Dynamic Applications Manager** page (System > Manage > Applications).
2. Locate the "Dynatrace: Host Disk Performance" Dynamic Application and click its wrench icon ( ).
3. Click on the **[Snippets]** tab.
4. In the **Snippet Editor & Registry** page, click the wrench icon ( ) for the "host_disk_performance" snippet.
5. Edit the `partitions=["/var/lib/docker"])` line to specify the partition(s) you want to filter out. You can specify more than one partition by separating them with commas and enclosing the partitions in quotation marks. Remove the partition if you want to collect data for it.



NOTE: The snippet will revert to default values each time the PowerPack is updated. You will need to update the snippet again each time you update the PowerPack.

Viewing Dynatrace Component Devices

In addition to the Device Manager page (Devices > Device Manager or Registry > Devices > Device Manager in the SL1 classic user interface), you can view Dynatrace environments and all associated component devices in the following places in the user interface:

- *Viewing Dynatrace Component Devices in SL1*
- *Viewing Dynatrace Component Devices in the SL1 Classic User Interface*

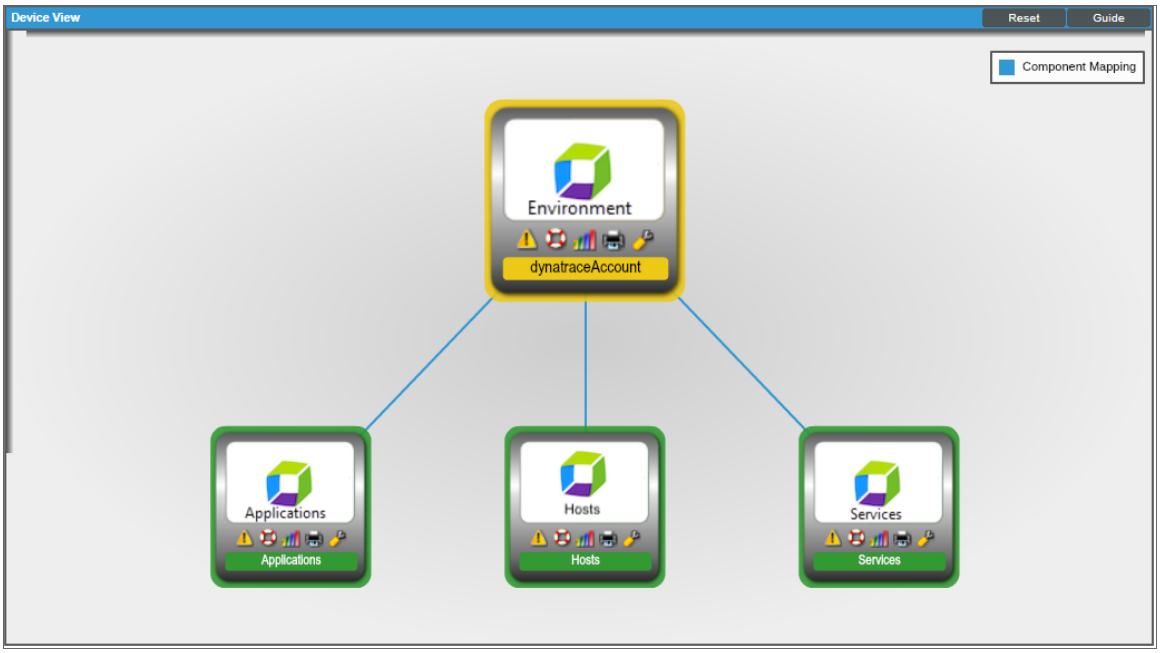
Viewing Dynatrace Component Devices in SL1

- The **Device Investigator** Map page (click **Map** in the **Device Investigator** page) 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 (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 Dynatrace, find the Dynatrace root device and click its plus icon (+):

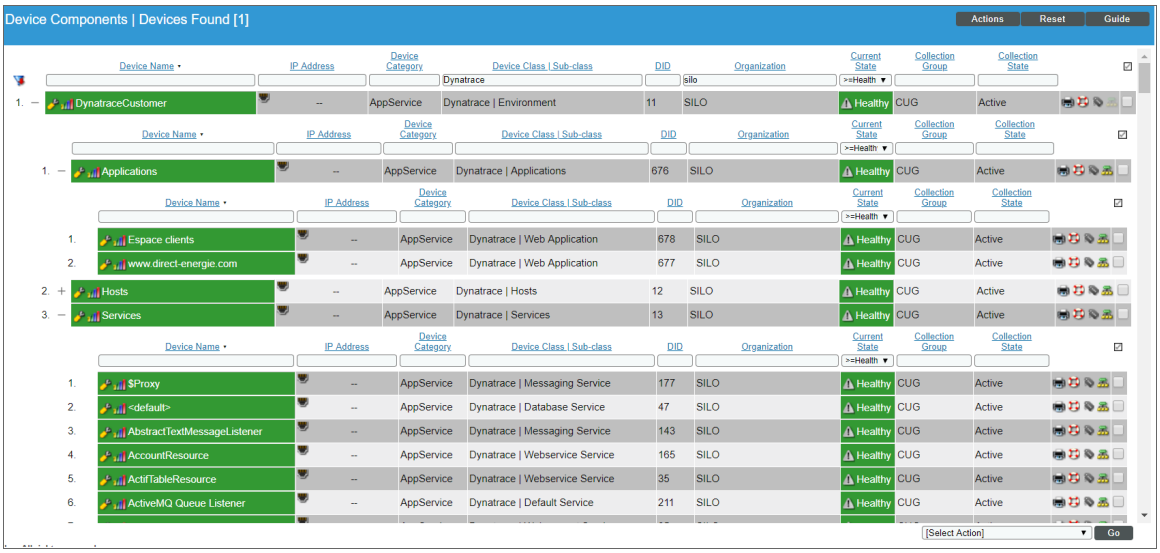
- The **Device Component Map** page (Classic Maps > Device Maps > Components) allows you to view devices by root node and view the relationships between root nodes, parent components, and child components in a map. This makes it easy to visualize and manage root nodes and their components. SL1 automatically 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 Dynatrace devices, 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.

Viewing Dynatrace Component Devices in the SL1 Classic User Interface

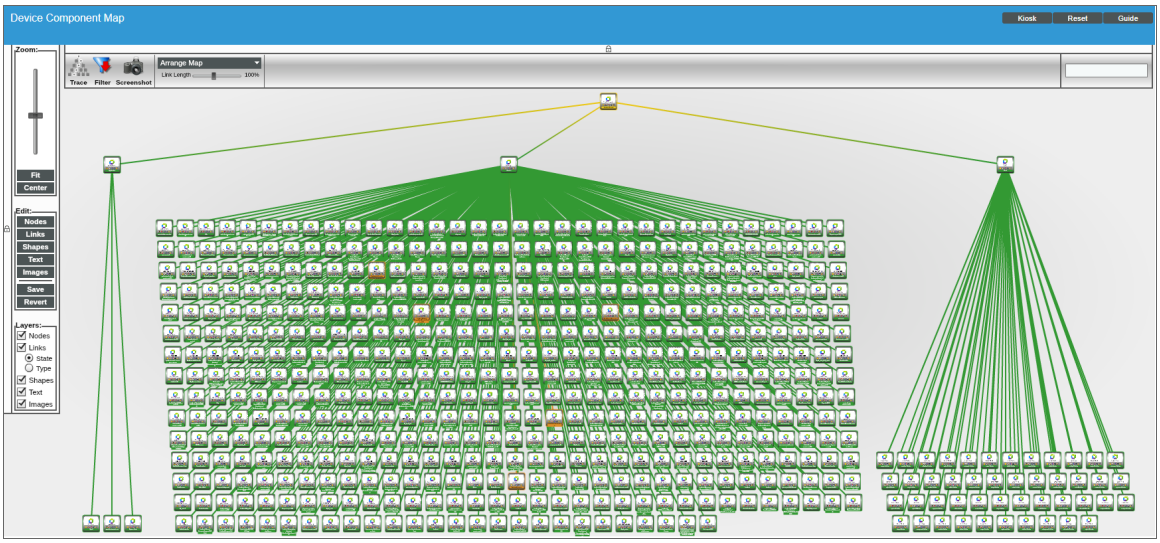
- The **Device View** modal page (click the bar-graph icon [] for a device, then click the **Topology** tab) displays a map of a particular device and all of the devices with which it has parent-child relationships. Double-clicking any of the devices listed reloads the page to make the selected device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



- The **Device Component Map** page (Classic Maps > 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 Dynatrace devices, 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.



Relationships Between Component Devices

In addition to parent/child relationships between component devices, SL1 also creates relationships between the following Dynatrace component devices:

- Hosts and Services
- Services and Applications

Additionally, the platform can automatically build relationships between Dynatrace component devices and other associated devices:

- If you discover Azure devices using the Dynamic Applications in the *Microsoft: Azure* PowerPack version 108 or later, SL1 will automatically create relationships between the following device types:
    - Dynatrace Hosts and Azure Virtual Machines
    - Dynatrace Hosts and Azure Virtual Machine Scale Sets
- If you discover Linux devices using the Dynamic Applications in the *Linux Base Pack* PowerPack version 102 or later, SL1 will automatically create relationships between Dynatrace Hosts and Linux Servers.
- If you discover VMware devices using the Dynamic Applications in the *VMware: vSphere Base Pack* PowerPack version 210 or later, SL1 will automatically create relationships between Dynatrace Hosts and VMware Virtual Machines.
- If you discover Windows devices using the Dynamic Applications in the *Microsoft: Windows Server* PowerPack version 107 or later or the *Microsoft Base Pack* PowerPack version 106 or later, SL1 will automatically create relationships between Dynatrace Hosts and Windows Servers.

Chapter 3

Dashboards

Overview

Use the following menu options to navigate the SL1 user interface:

- To view a pop-out list of menu options, click the menu icon ( ).
- To view a page containing all the menu options, click the Advanced menu icon ( ).

The following sections describe the device dashboards that are included in the *Dynatrace* PowerPack:

Device Dashboards

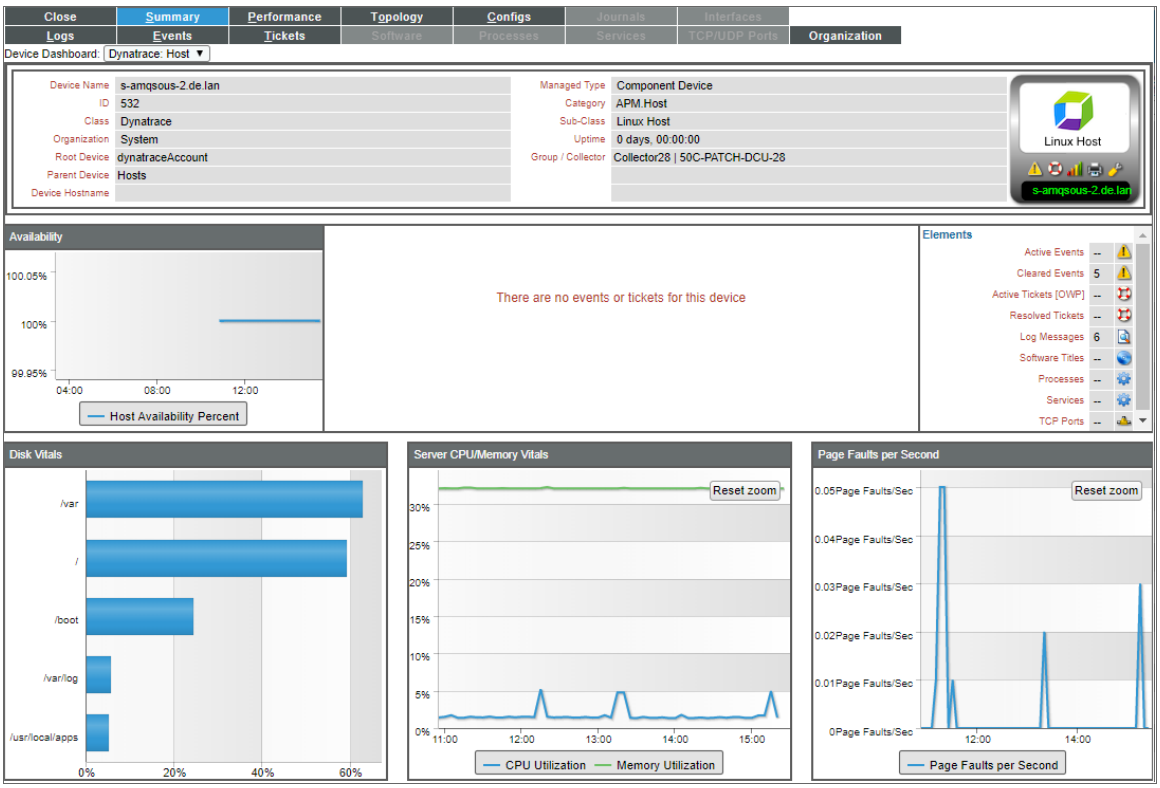
The *Dynatrace* PowerPack includes device dashboards that provide summary information for Dynatrace component devices. Each of the device dashboards in the *Dynatrace* PowerPack is set as the default device dashboard for the equivalent device class.

Dynatrace: Custom Application

The **Dynatrace: Custom Application** dashboard displays the following information:

- The basic information about the device
- A list of active events and open tickets associated with the device
- A count of, and links to, the elements associated with the device
- Four instances of the Multi-series Performance Widget that display the following metrics trended over the last 12 hours:
    - Apdex rating
    - User actions
    - Web requests
    - Error rates

Dynatrace: Host



The **Dynatrace: Host** dashboard displays the following information:

- The basic information about the device
- A list of active events and open tickets associated with the device
- A count of, and links to, the elements associated with the device
- Four instances of the Multi-series Performance Widget that display the following metrics trended over the last 12 hours:

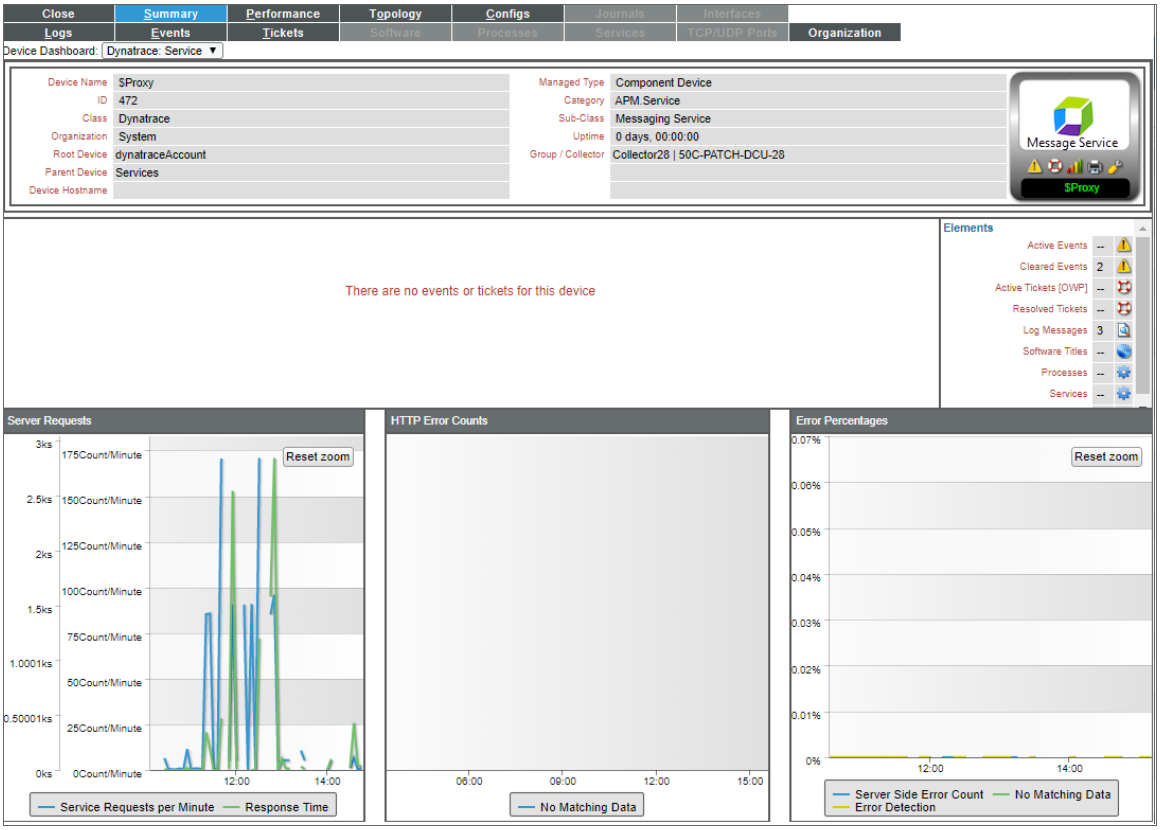
    - Availability
    - Disk utilization
    - Server CPU and memory utilization
    - Page faults per second

Dynatrace: Mobile Application

The **Dynatrace: Mobile Application** dashboard displays the following information:

- The basic information about the device
- A list of active events and open tickets associated with the device
- A count of, and links to, the elements associated with the device
- Four instances of the Multi-series Performance Widget that display the following metrics trended over the last 12 hours:
    - Apdex rating
    - User actions
    - Web requests
    - Error rates

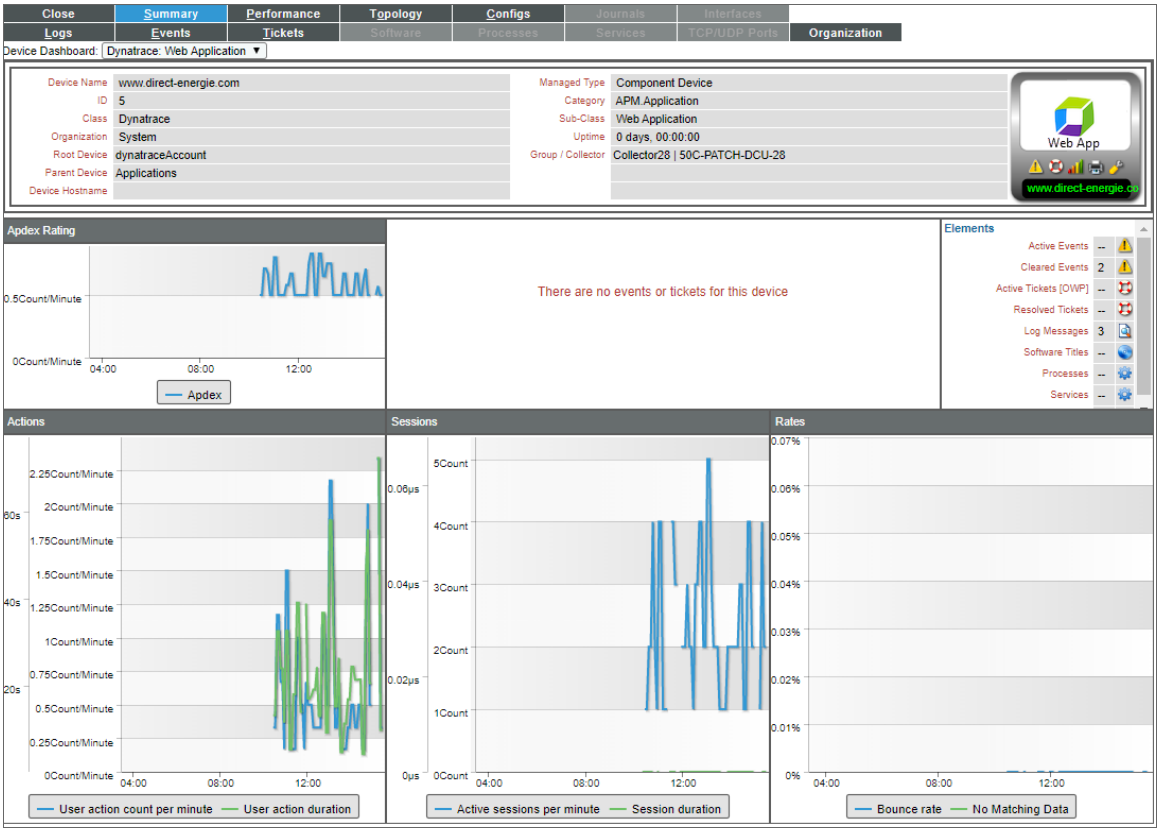
Dynatrace: Service



The **Dynatrace: Service** dashboard displays the following information:

- The basic information about the device
- A list of active events and open tickets associated with the device
- A count of, and links to, the elements associated with the device
- Three instances of the Multi-series Performance Widget that display the following metrics trended over the last 12 hours:
    - Service requests
    - HTTP error counts
    - Error percentages

Dynatrace: Web Application



The **Dynatrace: Web Application** dashboard displays the following information:

- The basic information about the device
- A list of active events and open tickets associated with the device
- A count of, and links to, the elements associated with the device
- Four instances of the Multi-series Performance Widget that display the following metrics trended over the last 12 hours:
    - Apdex rating
    - User actions
    - Web requests
    - Error rates

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