# Monitoring F5 BIG-IP

F5 BIG-IP PowerPack version 104

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# Chapter 1

# Introduction

## Overview

This manual describes how to monitor F5 Networks' BIG-IP Local Traffic Manager (LTM) devices in SL1 using the *F5 BIG-IP* PowerPack.

The following sections provide an overview of BIG-IP LTM devices and the *F5 BIG-IP* PowerPack:

This chapter covers the following topics:



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## What is F5 BIG-IP LTM?

F5 Networks' BIG-IP Local Traffic Manager (LTM) devices manage local system traffic to ensure optimal network and application performance and increase the system's operational efficiency. BIG-IP LTM solutions include BIG-IP appliances, the VIPRION application delivery controller, and software-based BIG-IP Virtual Editions.

# What Does the F5 BIG-IP PowerPack Monitor?

The *F5 BIG-IP* PowerPack enables you to monitor LTM configuration and performance metrics for virtual servers, pools, and member nodes, as well as other chassis and asset information.

The *F5 BIG-IP* PowerPack includes the following features:

- Dynamic Applications that discover and monitor F5 BIG-IP LTM devices
- Device Classes for each of the F5 BIG-IP LTM devices that the *F5 BIG-IP* PowerPack can monitor
- Event Policies and corresponding alerts that are triggered when F5 BIG-IP LTM devices meet certain status criteria

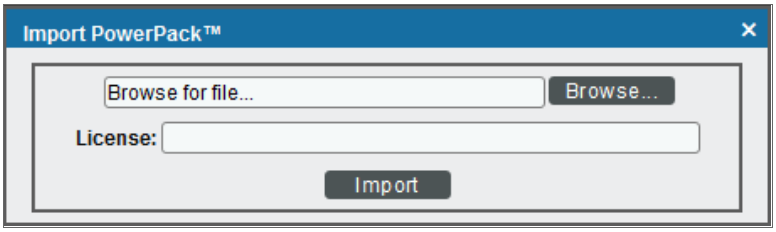
# Installing the F5 BIG-IP PowerPack

Before completing the steps in this manual, you must import and install the latest version of the *F5 BIG-IP* 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 at https://support.sciencelogic.com/s/powerpacks.
2. Go to the **PowerPack Manager** page (System > Manage > PowerPacks).
3. In the **PowerPack Manager** page, click the **[Actions]** button, then select *Import PowerPack*. The **Import PowerPack** dialog box appears:




4. Click the **[Browse]** button and navigate to the PowerPack file.
5. 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

The following sections describe how to configure and discover F5 BIG-IP Local Traffic Manager (LTM) services for monitoring by SL1 using the *F5 BIG-IP* PowerPack:

This chapter covers the following topics:



## Prerequisites for Monitoring F5 BIG-IP

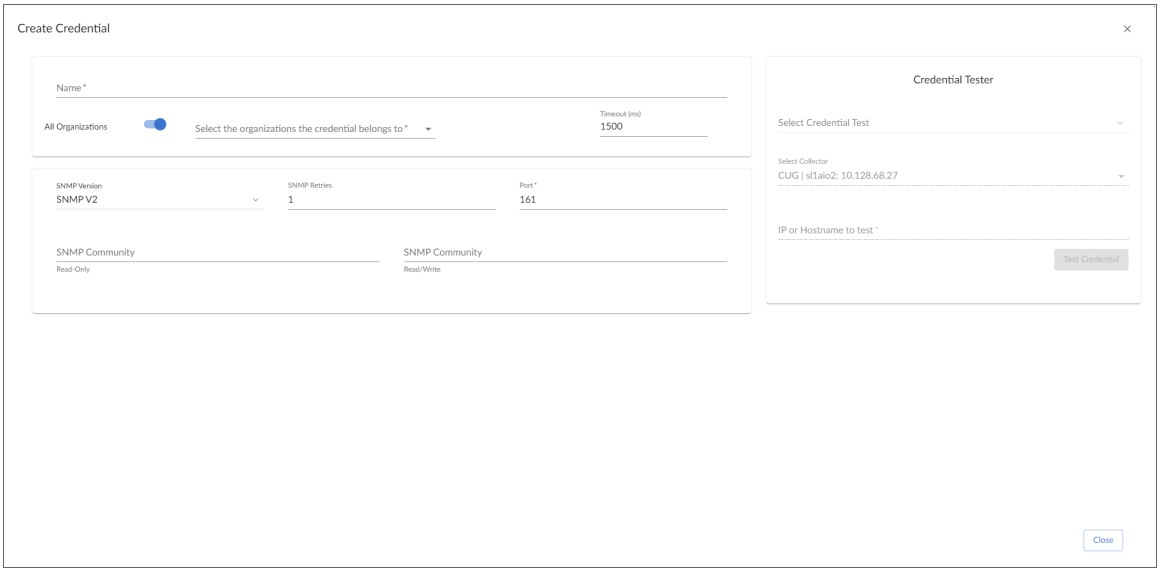
Before you can monitor F5 BIG-IP services using the *F5 BIG-IP* PowerPack, you must ensure that SL1 can communicate with BIG-IP using SNMP and you must know the SNMP community string for the BIG-IP system. SL1 can then use the data collected from BIG-IP to create device records for all components managed by BIG-IP.

# Creating an SNMP Credential for F5 BIG-IP

To use the Dynamic Applications in the *F5 BIG-IP* PowerPack, you must first define an SNMP credential in SL1. This credential allows SL1 to communicate with the BIG-IP system.

To configure an SNMP credential for F5 BIG-IP:

1. Go to the **Credentials** page (Manage > Credentials).
2. Click the **[Create New]** button.
3. In the drop-down list that appears, select *Create SNMP Credential*. The **Credential Editor** page appears:



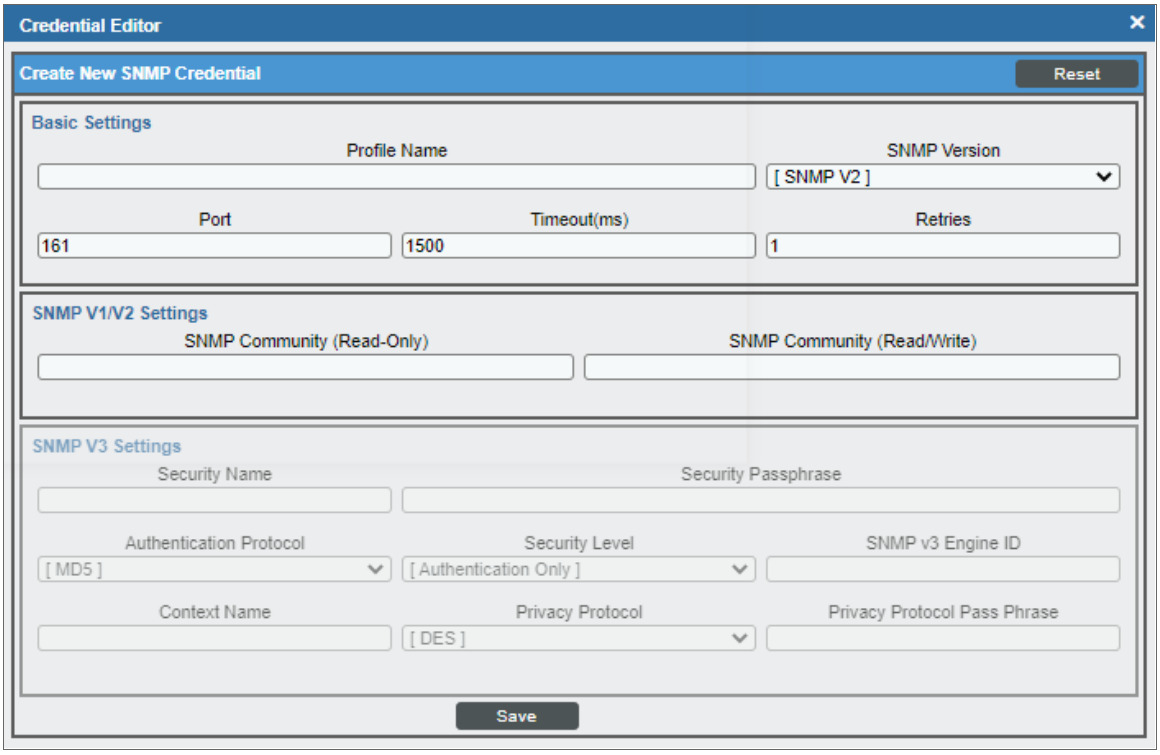

4. In the ***SNMP Version*** field, select *SNMP V2*.
5. In the ***Name*** field, enter a name for the credential.
6. In the ***All Organizations*** drop-down field, select the organizations the credential belongs to.
7. In the ***SNMP Community (Read Only)*** field, enter the community string for the BIG-IP system.
8. Optionally, supply values in the other fields in this page. In most cases, you can use the default values for the other fields.
9. Click the **[Save & Close]** button.

## Creating an SNMP Credential for F5 BIG-IP in the SL1 Classic User Interface

To use the Dynamic Applications in the *F5 BIG-IP* PowerPack, you must first define an SNMP credential in SL1. This credential allows SL1 to communicate with the BIG-IP system.

To configure an SNMP credential for F5 BIG-IP:

1. Go to the **Credential Management** page (System > Manage > Credentials).
2. Click the **[Actions]** button.
3. In the drop-down list that appears, select *Create SNMP Credential*. The **Credential Editor** page appears:



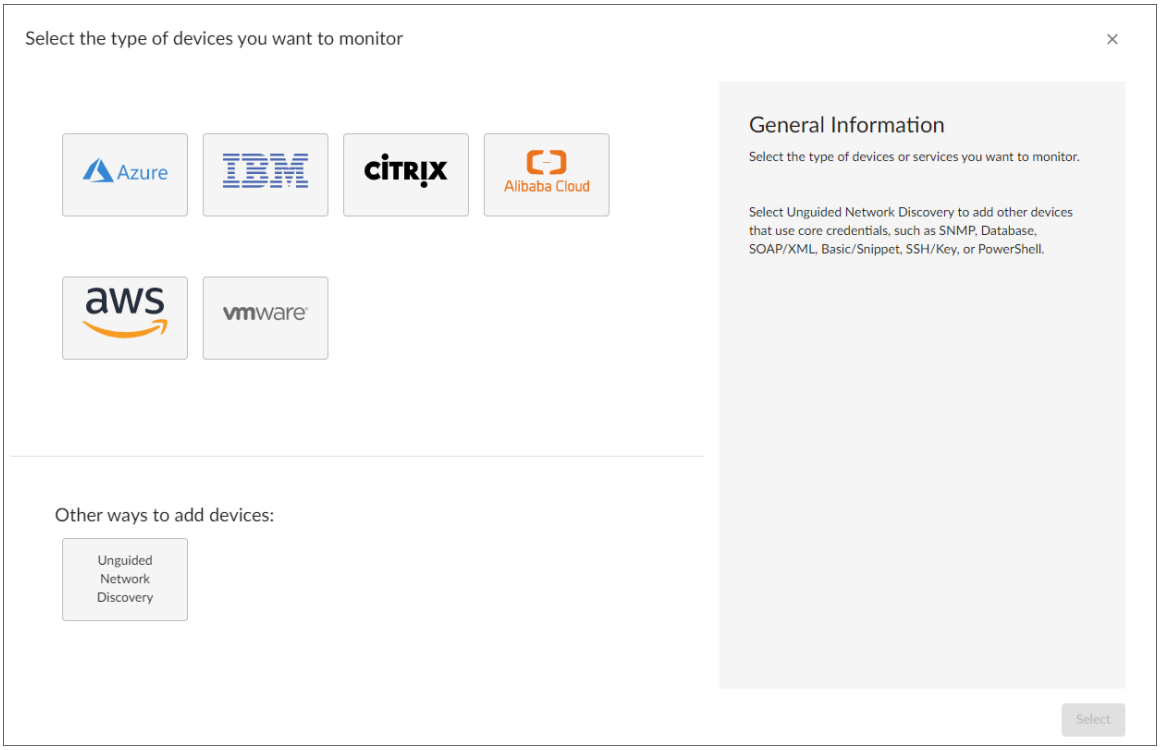

4. In the ***SNMP Version*** field, select *SNMP V2*.
5. In the ***Profile Name*** field, enter a name for the credential.
6. In the ***SNMP Community (Read Only)*** field, enter the community string for the BIG-IP system.
7. Optionally, supply values in the other fields in this page. In most cases, you can use the default values for the other fields.
8. Click the **[Save]** button.

# Discovering an F5 BIG-IP System

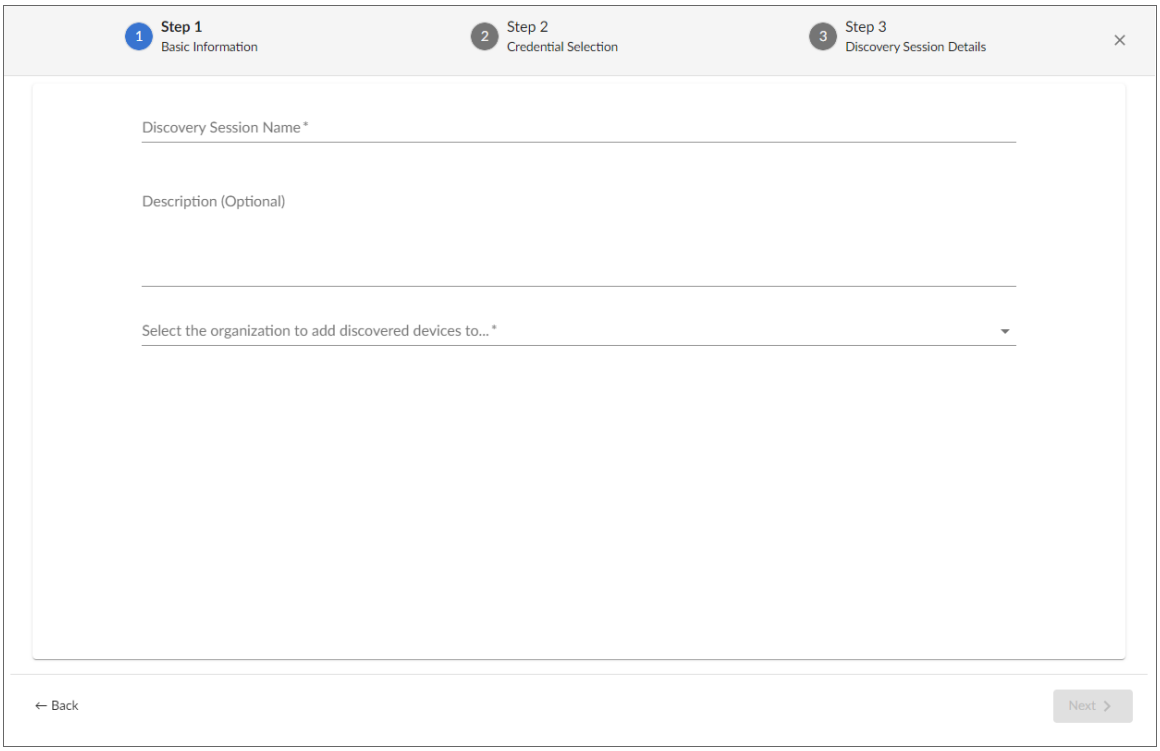
After you have created an SNMP credential for the F5 BIG-IP system that you want to monitor, you can create and run a discovery session that will discover the BIG-IP system and automatically align Dynamic Applications with the BIG-IP system.

To do so, perform the following steps:

1. Go to the **Discovery Session** page (Devices > Discovery Sessions).
2. Click the **[Add Devices]** button to create a new discovery session. You will be redirected to a self-guided service where you can add devices.




3. Select **[Unguided Network Discovery]**, then click the ***Select*** button. You will be redirected to a page where you can create and create a Discovery Session that will discover the BIG-IP system and automatically align Dynamic Applications with the BIG-IP system. This is a 3-step process.
4. Enter a name for your Discovery Session in the **Discovery Session Name** field and select an organization from the **Select the organization to add discovered devices to** drop-down field.



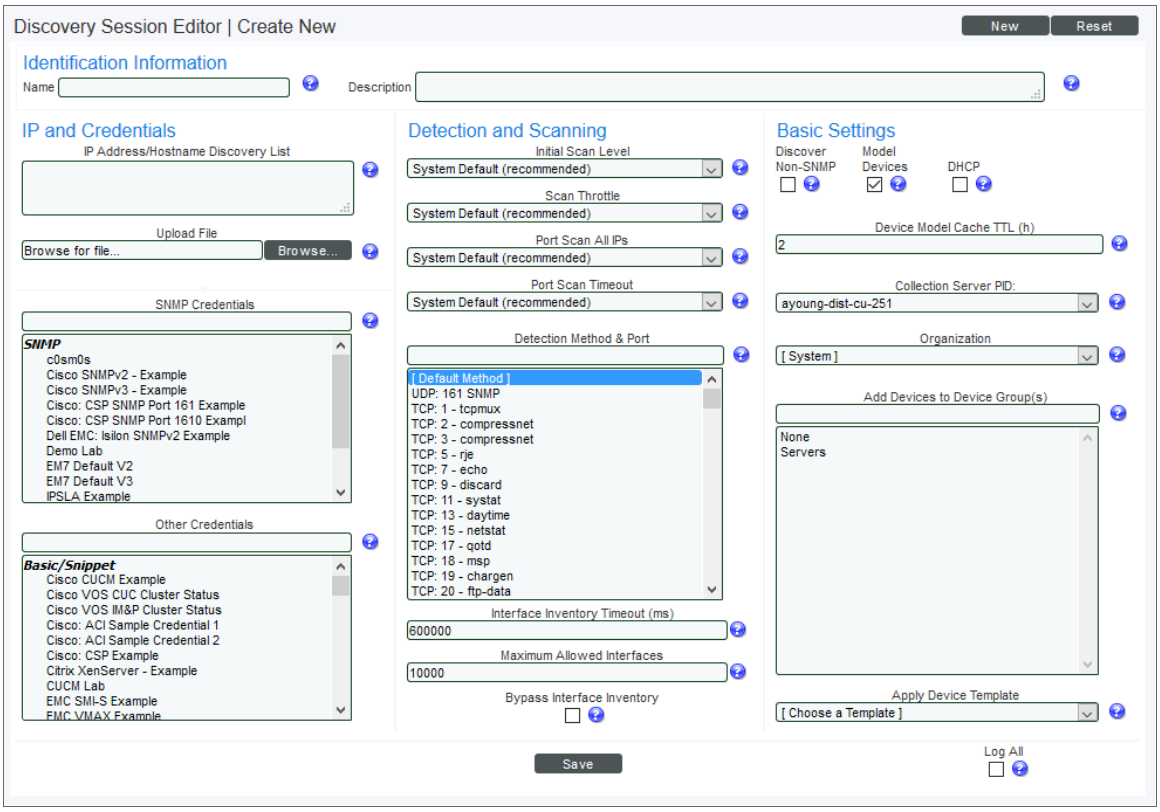

5. Select the SNMP credential(s) that connected your devices, then click the **Next** button.
6. Select an IP or Hostname, then click the **[Save and Run]** button. The **Discovery Logs** window will appear.
7. When the BIG-IP system is discovered, you can click the device name to view the system device's properties.

## Discovering an F5 BIG-IP System in the SL1 Classic User Interface

After you have created an SNMP credential for the F5 BIG-IP system that you want to monitor, you can create and run a discovery session that will discover the BIG-IP system and automatically align Dynamic Applications with the BIG-IP system.

To do so, perform the following steps:

1. Go to the **Discovery Control Panel** page (Devices > Discovery Sessions).
2. Click the **[Add Devices]**button to create a new discovery session. The **Discovery Session Editor** window appears:




3. Enter values in the following fields:
    - ***IP Address Discovery List***. Enter the IP address for the BIG-IP system.
    - ***SNMP Credentials***. Select the SNMP Credential for the BIG-IP system.
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 and then close the **Discovery Session Editor** window.
6. The discovery session you created will appear 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 BIG-IP system is discovered, you can click its device icon ( ) to view the system device's properties.

# Aligning F5 BIG-IP Dynamic Applications

The Dynamic Applications in the *F5 BIG-IP* PowerPack are divided into four types:

- ***Count***. These Dynamic Applications poll BIG-IP to determine the number of component devices monitored by SL1.
- ***Discovery***. These Dynamic Applications poll BIG-IP for new instances of component devices or changes to existing instances of component devices.

- ***Configuration***. These Dynamic Applications retrieve configuration information about each component device and retrieve any changes to that configuration information.
- ***Performance***. These Dynamic Applications poll BIG-IP for performance metrics.

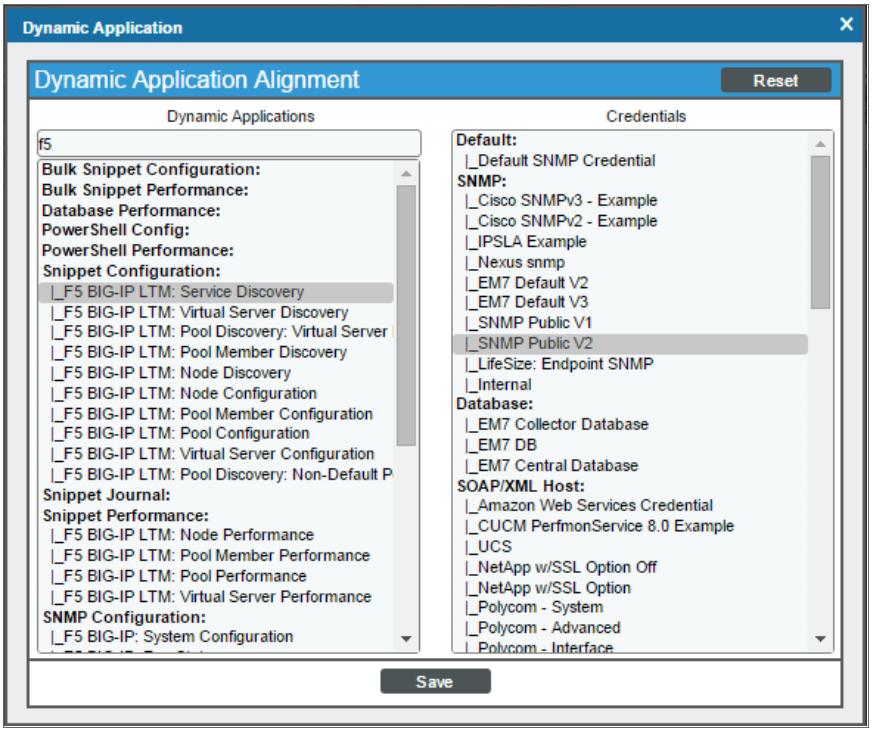
The following Dynamic Applications are aligned automatically to the F5 BIG-IP system when you run discovery:

- F5: Viprion Chassis Slot Status
- F5 BIG-IP: Cluster Status
- F5 BIG-IP: CPU Configuration
- F5 BIG-IP: Disk Array Status
- F5 BIG-IP: Fan Status
- F5 BIG-IP: Interface Usage (64Bit)
- F5 BIG-IP: Performance
- F5 BIG-IP: Power Supply Status
- F5 BIG-IP: System Configuration
- F5 BIG-IP: Temperature
- F5 BIG-IP: vCMP VM Configuration
- F5 BIG-IP LTM: Node Configuration
- F5 BIG-IP LTM: Node Discovery
- F5 BIG-IP LTM: Node Performance
- F5 BIG-IP LTM: Pool Configuration
- F5 BIG-IP LTM: Pool Discovery: Non-Default Pools
- F5 BIG-IP LTM: Pool Discovery: Virtual Server Default Pools
- F5 BIG-IP LTM: Pool Member Configuration
- F5 BIG-IP LTM: Pool Member Discovery
- F5 BIG-IP LTM: Pool Member Performance
- F5 BIG-IP LTM: Pool Performance
- F5 BIG-IP LTM: Virtual Server Configuration
- F5 BIG-IP LTM: Virtual Server Discovery
- F5 BIG-IP LTM: Virtual Server Performance
- Host Resource: Configuration
- Net SNMP: CPU
- Net SNMP: Physical Memory
- Net SNMP: Swap

CAUTION: To discover all of the component devices in the BIG-IP system, you must ***manually align*** the "F5 BIG-IP LTM: Service Discovery" Dynamic Application with the BIG-IP root device. For instructions on how to do this, see the section on *Manually Aligning the Dynamic Application with the BIG-IP Root Device*.

If these Dynamic Applications are not aligned during discovery, perform the following steps to add them manually:

1. Go to the **Device Manager** page (Devices > Device Manager) for the BIG-IP system.
2. Click the **[Collections]** tab. The **Dynamic Application Collections** page appears.
3. Click the **[Actions]** button and then select *Add Dynamic Application*. The **Dynamic Application Alignment** page appears:



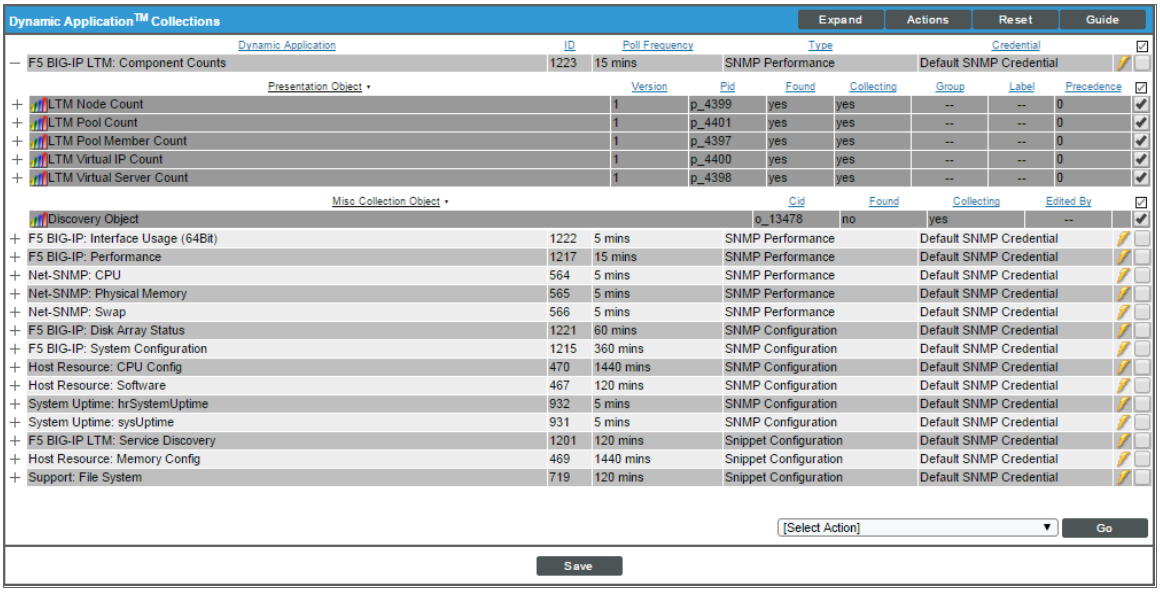

4. In the ***Dynamic Applications*** field, select the Dynamic Application that you want to align to the BIG-IP system.
5. In the ***Credentials*** field, select the SNMP credential for the BIG-IP system.
6. Click the **[Save]** button.

# Manually Aligning the "F5 BIG IP LTM: Service Discovery" Dynamic Application with the BIG-IP Root Device

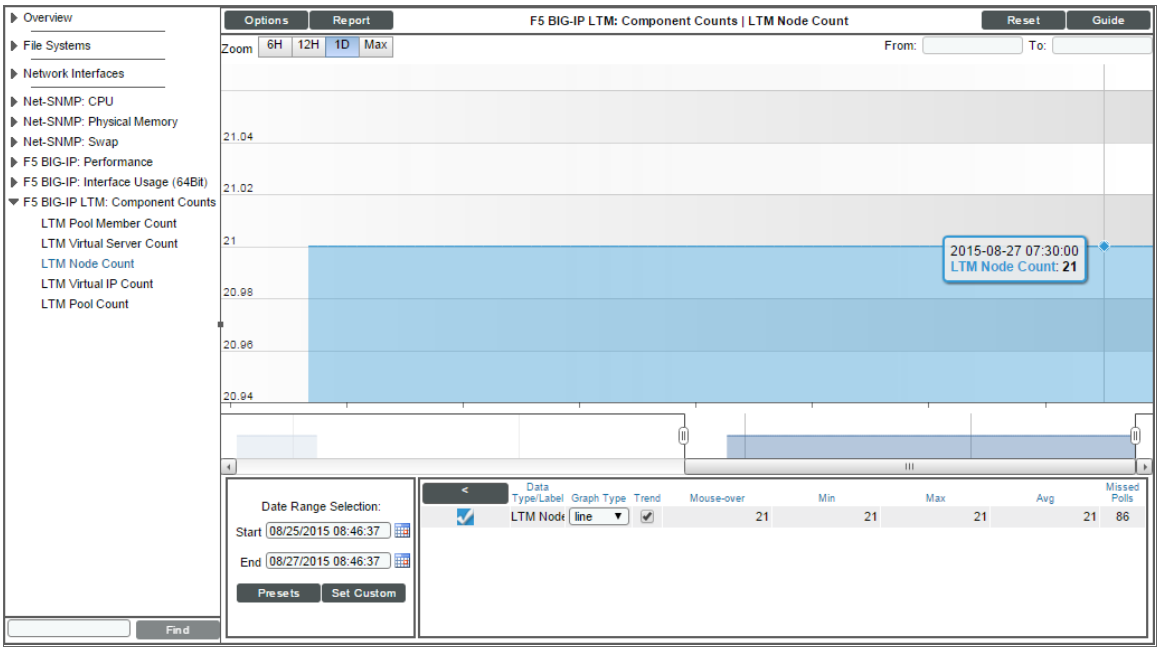
When you run discovery, the "F5 BIG-IP LTM: Component Counts" Dynamic Application is automatically aligned with the F5 BIG-IP system. This Dynamic Application enables you to determine the number of component devices in your BIG-IP system that will be discovered.

To determine the BIG-IP component device count:

1. Go to the **Device Manager** page (Devices > Device Manager).
2. Click the wrench icon ( ) for the BIG-IP system.
3. In the **Device Administration** panel, click the **[Collections]** tab. The **Dynamic Application Collections** page displays.
4. Click the plus icon (+) for the "F5 BIG-IP LTM: Component Counts" Dynamic Application. If collection for the Dynamic Application was successful, the graph icons ( ) for the "F5 BIG-IP LTM: Component Counts" presentation objects are enabled:

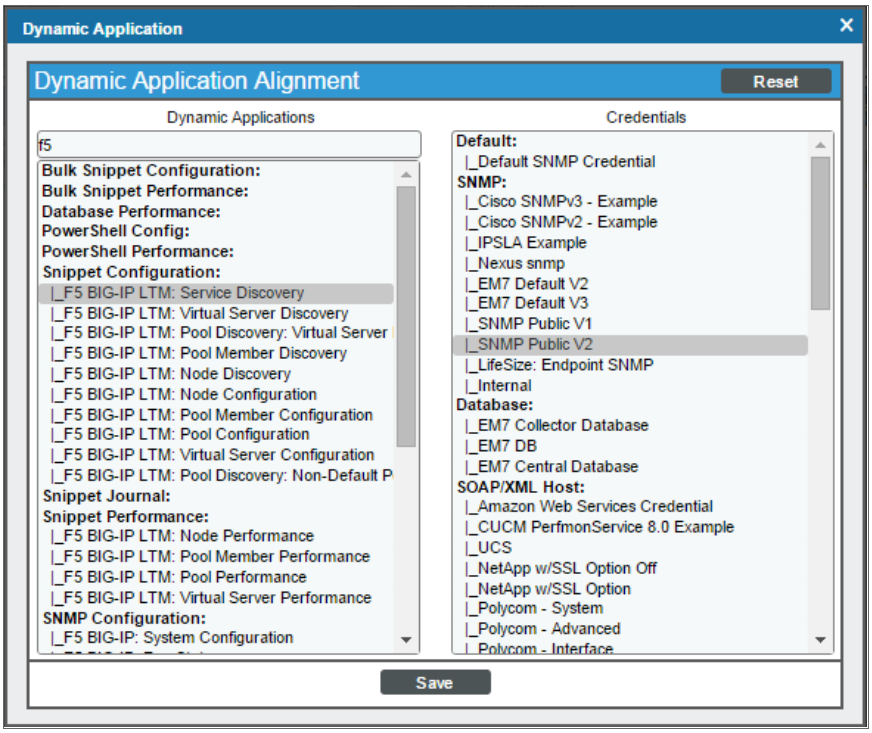



5. Click a graph icon ( ) for any of the "F5 BIG-IP LTM: Component Counts" presentation objects to view the collected data for that presentation object. The **Device Performance** page displays the number of components that are being monitored.




After verifying the number of component devices that will be discovered, perform the following steps to start component device discovery by aligning the "F5 BIG-IP LTM: Service Discovery" Dynamic Application with the BIG-IP root system:

1. Go to the **Device Manager** page (Devices > Device Manager).
2. Click the **[Collections]** tab. The **Dynamic Application Collections** page appears.
3. Click the **[Actions]** button and then select *Add Dynamic Application*. The **Dynamic Application Alignment** page appears:




4. In the ***Dynamic Applications*** field, select *F5 BIG-IP LTM: Service Discovery*.
5. In the ***Credentials*** field, select the SNMP credential for the BIG-IP system.
6. Click the **[Save]** button.

## Aligning F5 BIG-IP Dynamic Applications in the SL1 Classic User Interface

The Dynamic Applications in the *F5 BIG-IP* PowerPack are divided into four types:

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The following Dynamic Applications are aligned automatically to the F5 BIG-IP system when you run discovery:

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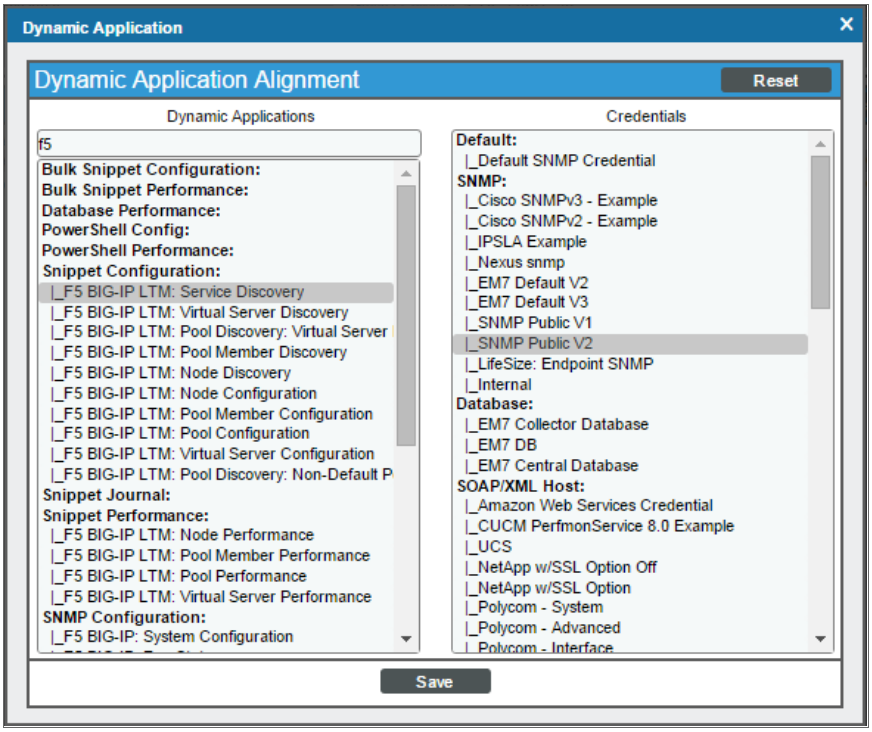
CAUTION: To discover all of the component devices in the BIG-IP system, you must ***manually align*** the "F5 BIG-IP LTM: Service Discovery" Dynamic Application with the BIG-IP root device. For instructions on how to do this, see the section on *Manually Aligning the Dynamic Application with the BIG-IP Root Device*.

If these Dynamic Applications are not aligned during discovery, perform the following steps to add them manually:

1. Go to the **Device Properties** page (Registry > Devices > wrench icon) for the BIG-IP system.
2. Click the **[Collections]** tab. The **Dynamic Application Collections** page appears.

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




4. In the ***Dynamic Applications*** field, select the Dynamic Application that you want to align to the BIG-IP system.
5. In the ***Credentials*** field, select the SNMP credential for the BIG-IP system.
6. Click the **[Save]** button.

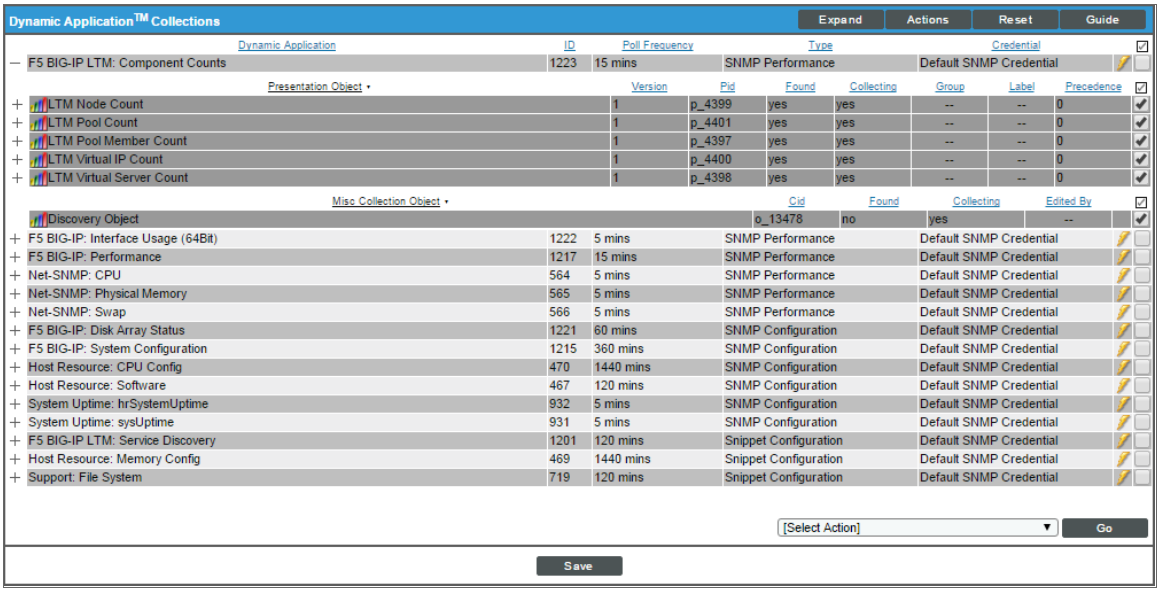
## Manually Aligning the "F5 BIG IP LTM: Service Discovery" Dynamic Application with the BIG-IP Root Device in the SL1 Classic User Interface

When you run discovery, the "F5 BIG-IP LTM: Component Counts" Dynamic Application is automatically aligned with the F5 BIG-IP system. This Dynamic Application enables you to determine the number of component devices in your BIG-IP system that will be discovered.

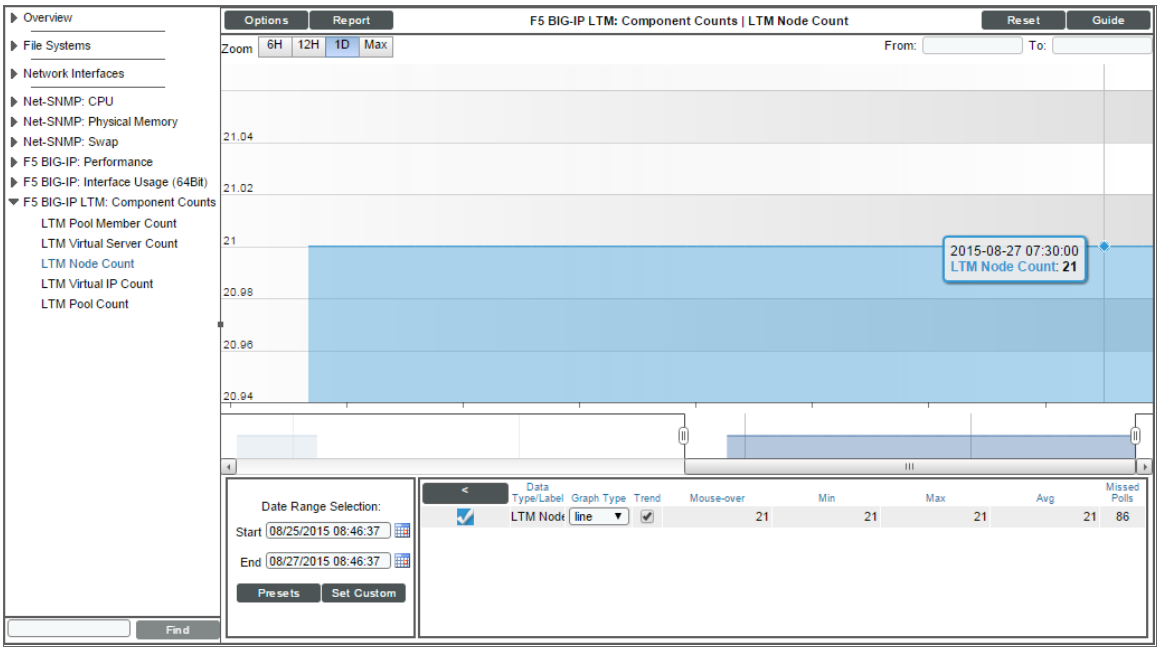
To determine the BIG-IP component device count:

1. Go to the **Device Manager** page (Registry > Devices > Device Manager).
2. Click the wrench icon (  ) for the BIG-IP system.
3. In the **Device Administration** panel, click the **[Collections]** tab. The **Dynamic Application Collections** page displays.

4. Click the plus icon (+) for the "F5 BIG-IP LTM: Component Counts" Dynamic Application. If collection for the Dynamic Application was successful, the graph icons ( ) for the "F5 BIG-IP LTM: Component Counts" presentation objects are enabled:

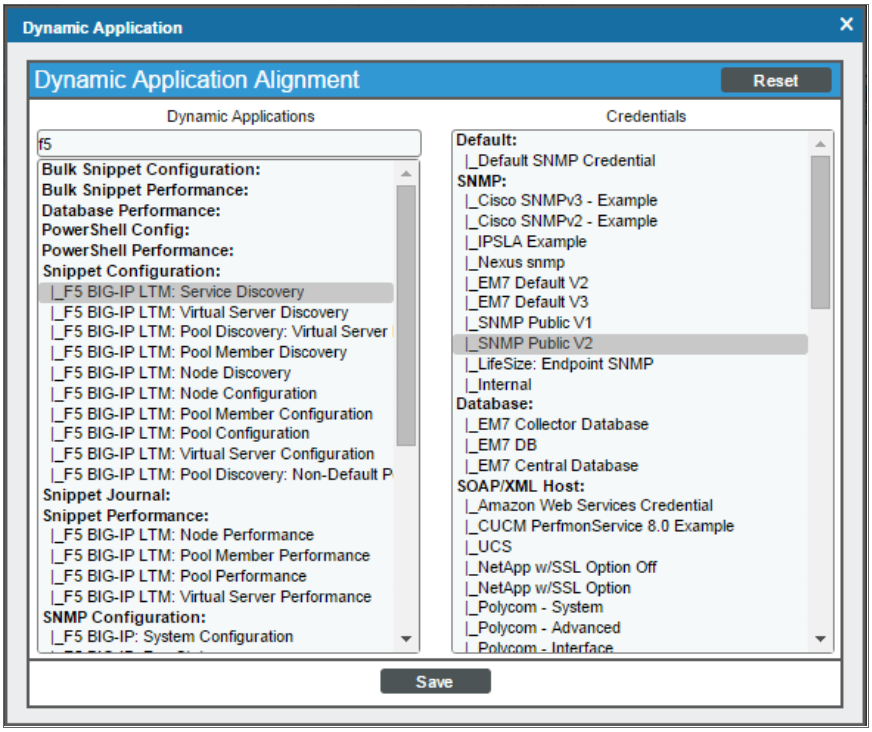



5. Click a graph icon ( ) for any of the "F5 BIG-IP LTM: Component Counts" presentation objects to view the collected data for that presentation object. The **Device Performance** page displays the number of components that are being monitored.



After verifying the number of component devices that will be discovered, perform the following steps to start component device discovery by aligning the "F5 BIG-IP LTM: Service Discovery" Dynamic Application with the BIG-IP root system:

1. Go to the **Device Properties** page (Registry > Devices > wrench icon) for the BIG-IP system.
2. Click the **[Collections]** tab. The **Dynamic Application Collections** page appears.
3. Click the **[Actions]** button and then select *Add Dynamic Application*. The **Dynamic Application Alignment** page appears:



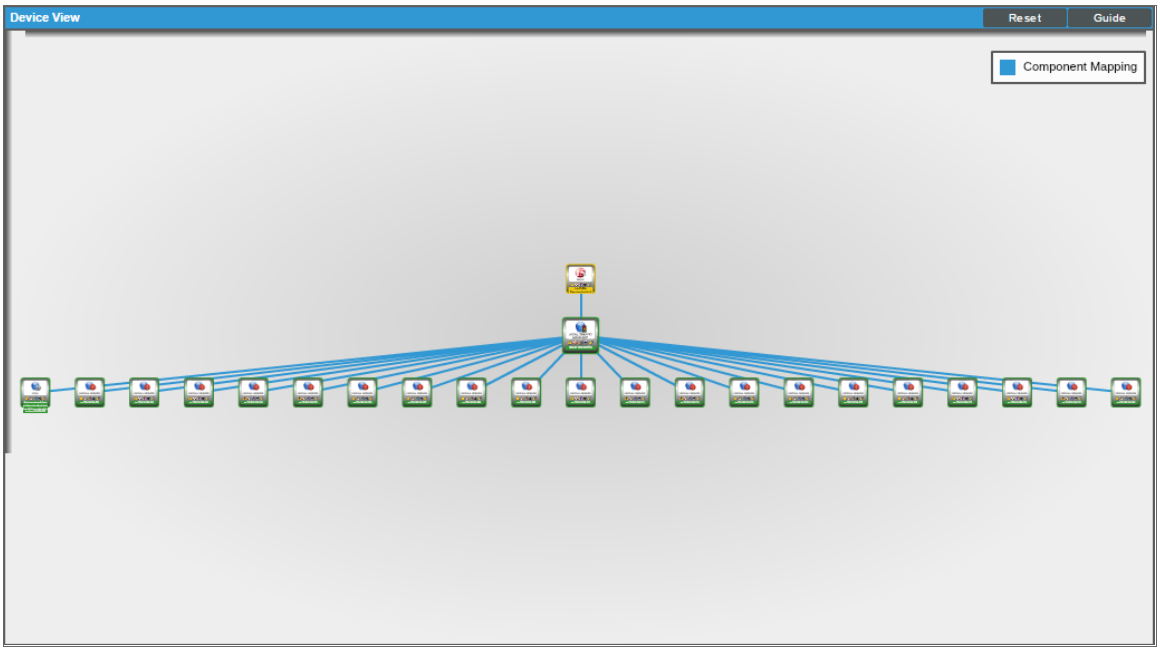

4. In the ***Dynamic Applications*** field, select *F5 BIG-IP LTM: Service Discovery*.
5. In the ***Credentials*** field, select the SNMP credential for the BIG-IP system.
6. Click the **[Save]** button.

# Viewing Component Devices

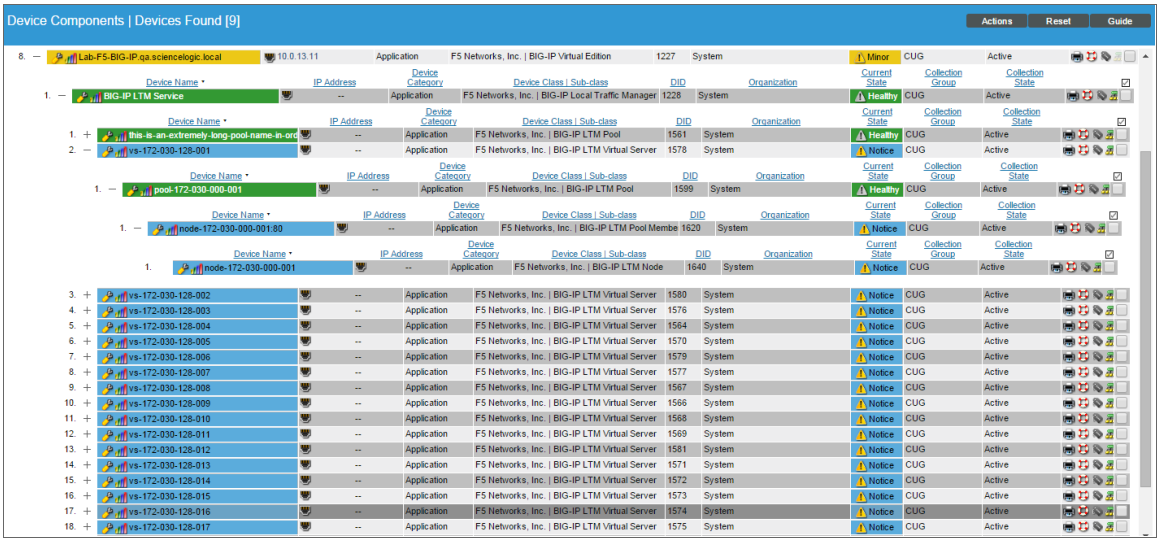
When SL1 performs collection for the F5 BIG-IP system, SL1 will create component devices that represent each device and align other Dynamic Applications to those component devices. Some of the Dynamic Applications aligned to the component devices will also be used to create additional component devices. All component devices appear in the **Device Manager** page just like devices discovered using the ScienceLogic discovery process.

In addition to the **Device Manager** page, you can view the F5 BIG-IP system and all associated component devices in the following places in the user interface:

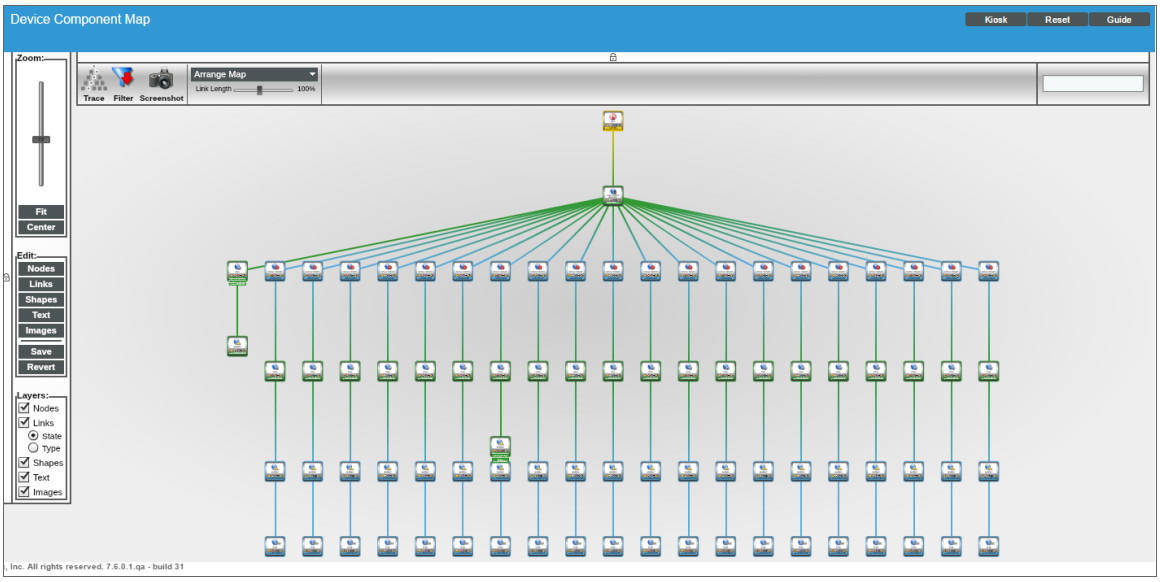
- The **Device Investigator** page (Devices > Map) modal page displays a map of a particular device and all of the devices with which it has parent-child relationships. Double-clicking any of the devices listed reloads the page to make the selected device the primary device:




- 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 an F5 BIG-IP system, find the BIG-IP device and click its plus icon (+):



- The **Component Map** page (Maps > 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 **Device Component Map** as new component devices are discovered. SL1 also updates each map with the latest status and event information. To view the map for an F5 BIG-IP system, go to the **Device Component Map** page and select the map from the list in the left NavBar. To learn more about the **Device Component Map** page, see the ***Views*** manual.

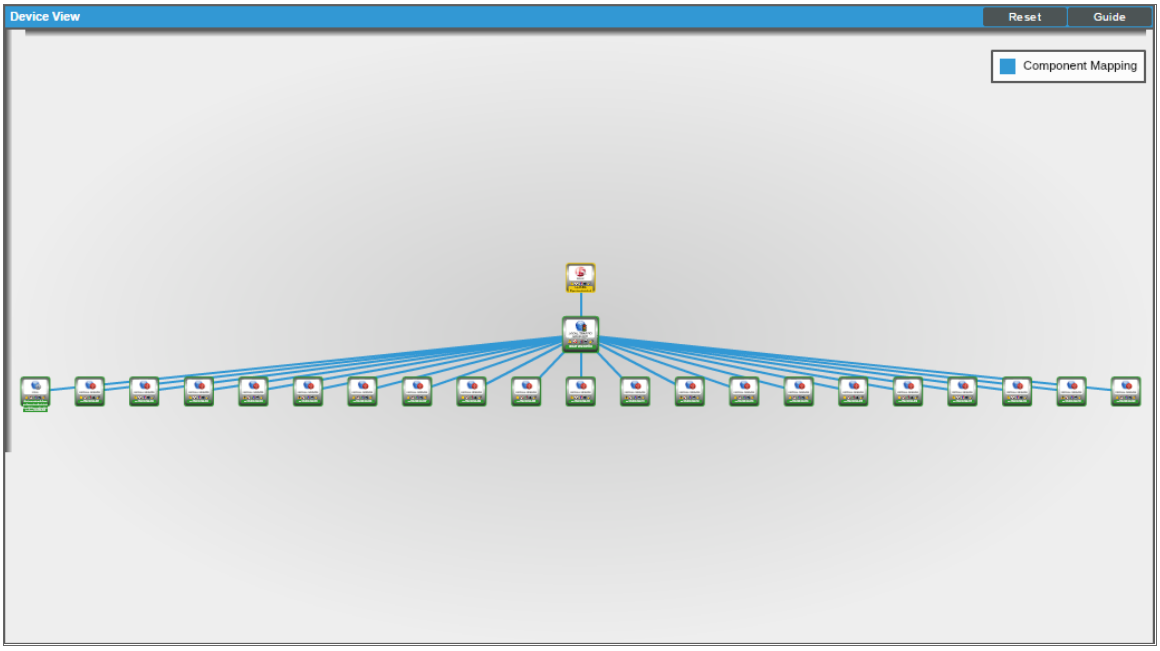



## Viewing Component Devices in the SL1 Classic User Interface

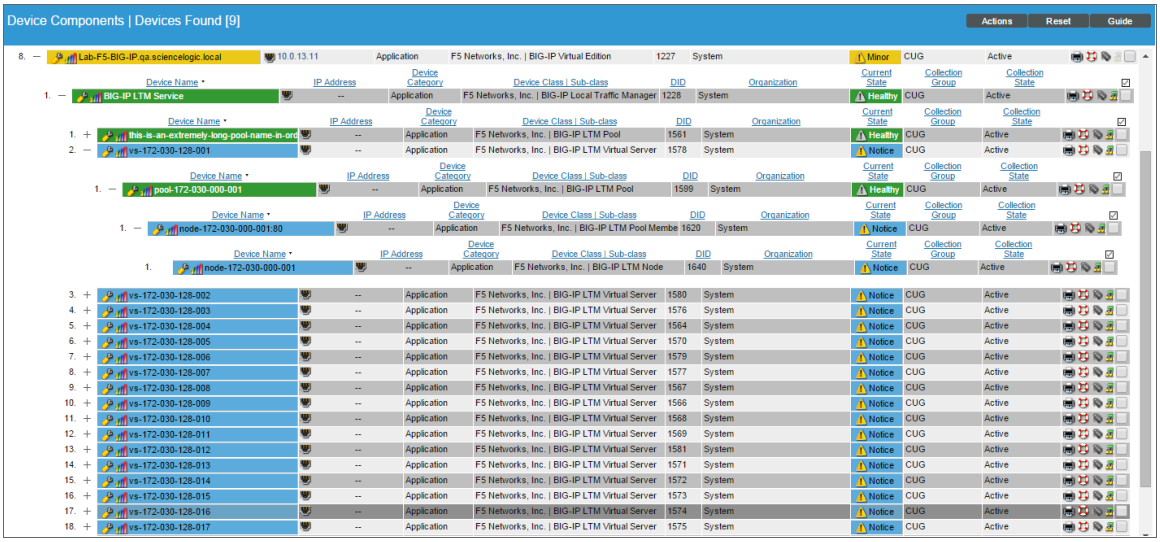
When SL1 performs collection for the F5 BIG-IP system, SL1 will create component devices that represent each device and align other Dynamic Applications to those component devices. Some of the Dynamic Applications aligned to the component devices will also be used to create additional component devices. All component devices appear in the **Device Manager** page just like devices discovered using the ScienceLogic discovery process.

In addition to the **Device Manager** page, you can view the F5 BIG-IP system 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 F5 BIG-IP system, find the BIG-IP device and click its plus icon (+):



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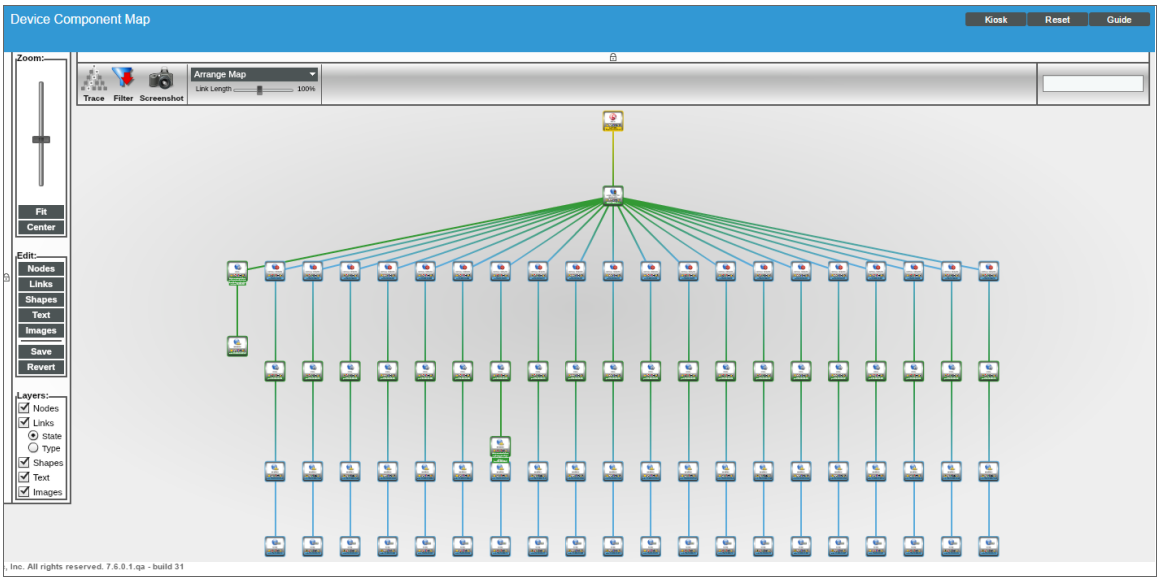


# Chapter 3

# F5 BIG-IP Dashboards

## Overview

The following sections describe the device dashboards that are included in the *F5 BIG-IP* PowerPack:

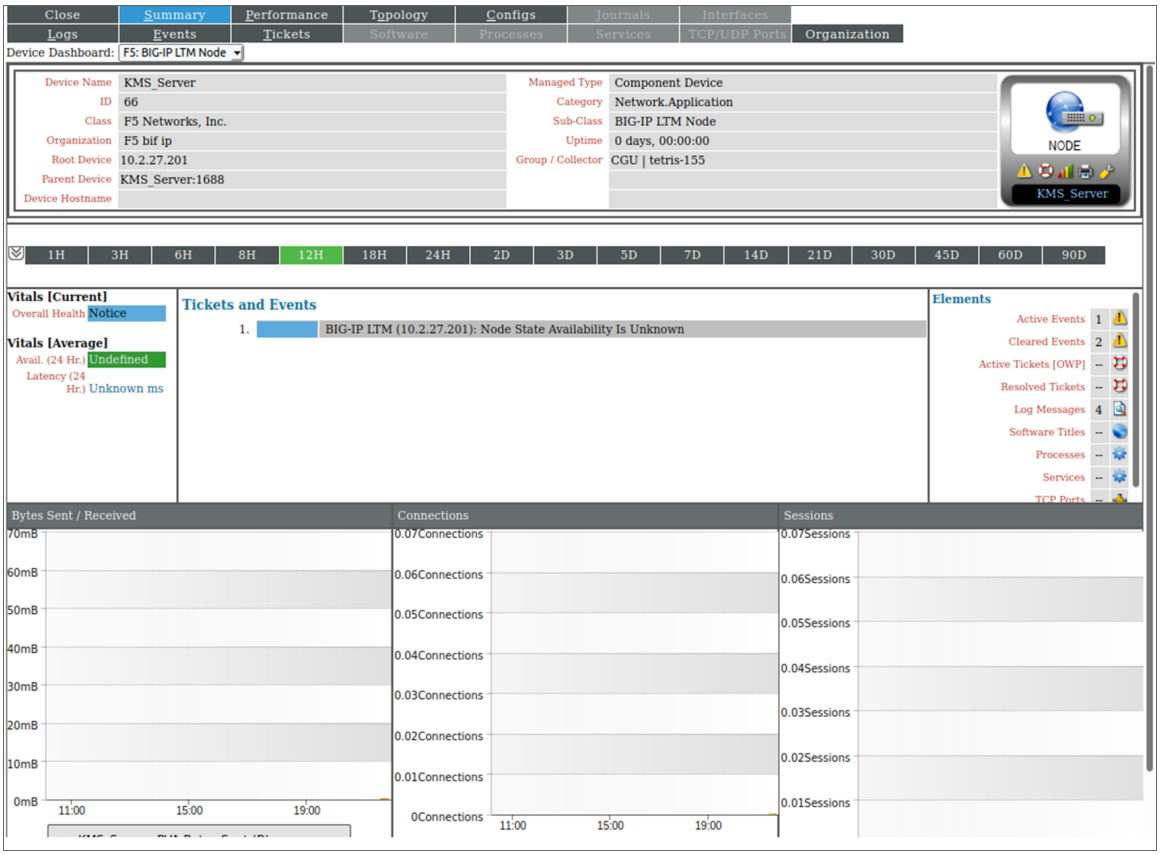
This chapter covers the following topics:



## Device Dashboards

The *F5 BIG-IP* PowerPack includes device dashboards that provide summary information for F5 BIG-IP LTM component devices. Each of the device dashboards in the *F5 BIG-IP* PowerPack are set as the default device dashboard for the equivalent device class.

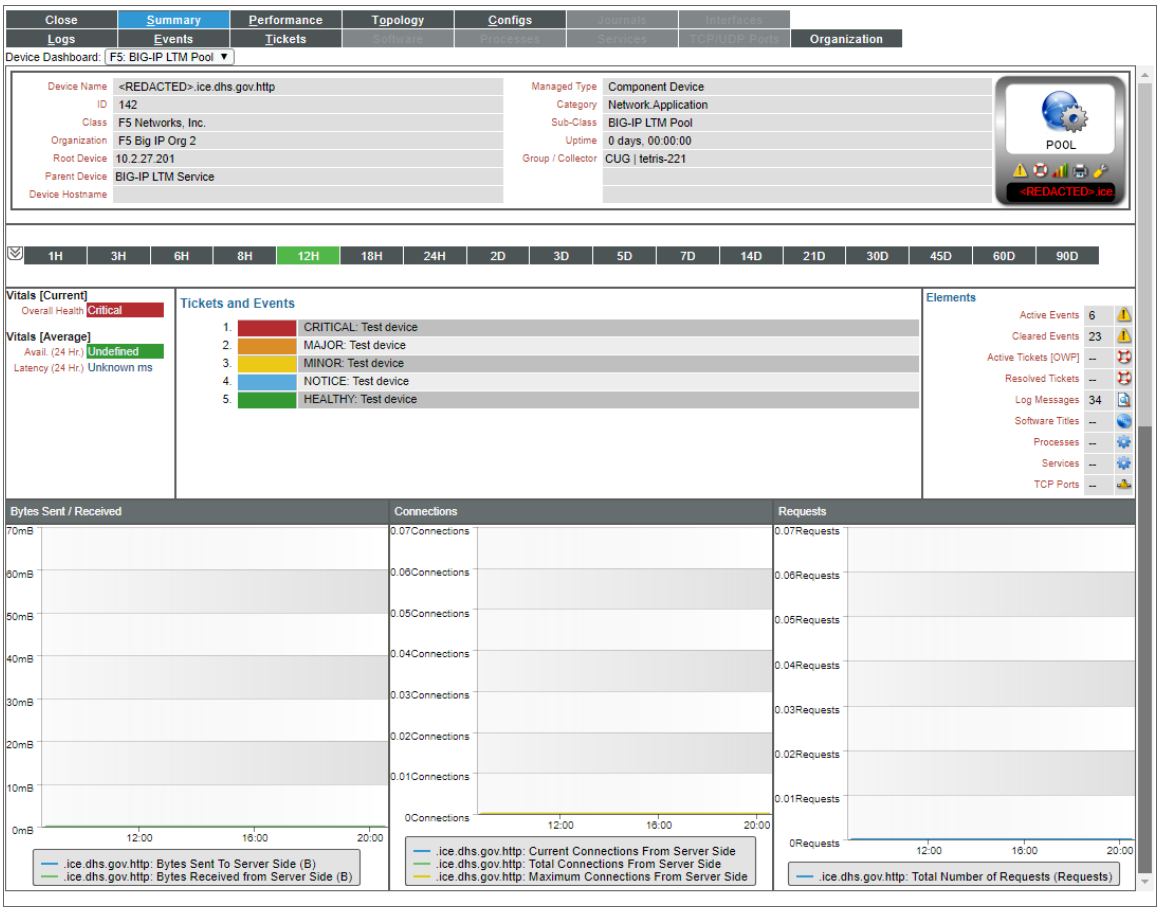
# F5: BIG-IP LTM Node




The F5: BIG-IP LTM Node device dashboard displays the following information:

- Vitals (Current)
- Vitals (Average)
- Tickets and Events
- Bytes Sent/Received
- Connections
- Sessions

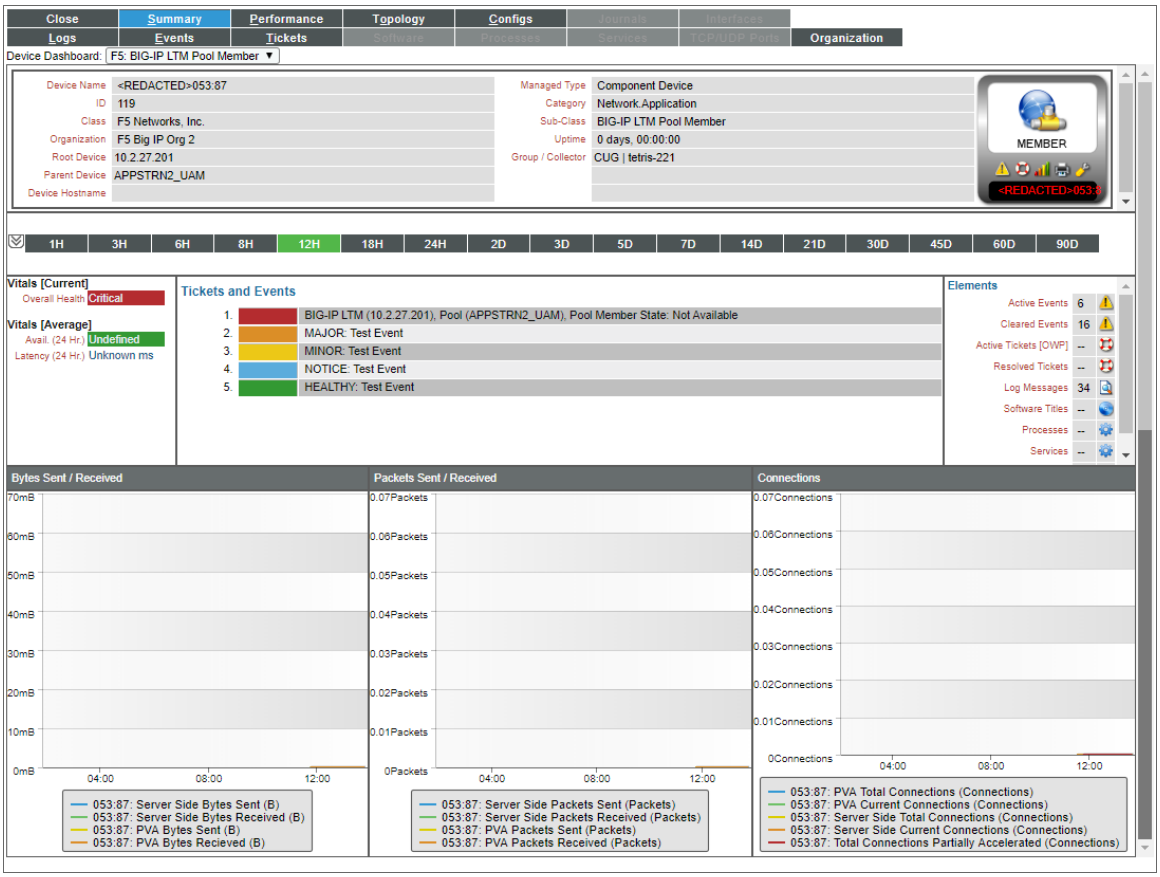
# F5: BIG-IP LTM Pool




The F5: BIG-IP LTM Pool device dashboard displays the following information:

- Vitals (Current)
- Vitals (Average)
- Tickets and Events
- Bytes Sent/Received
- Connections
- Requests

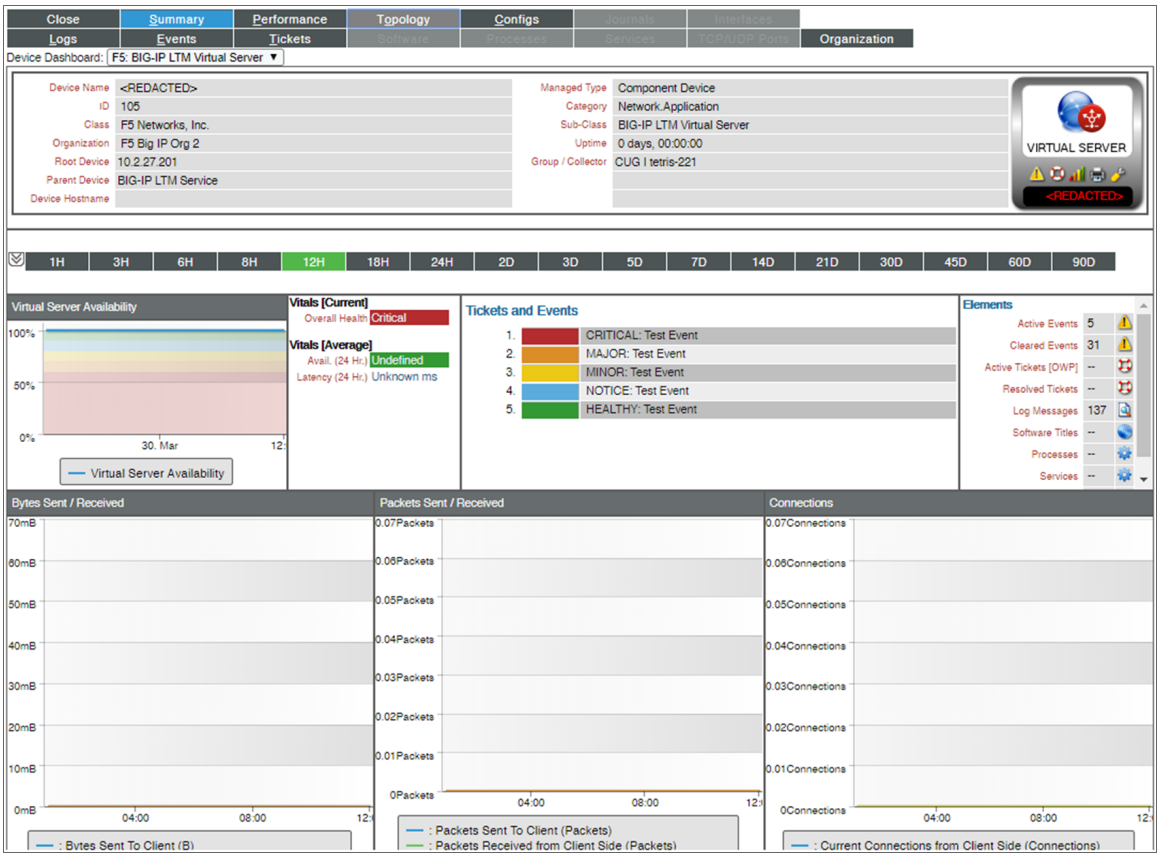
# F5: BIG-IP LTM Pool Member




The F5: BIG-IP LTM Pool Member device dashboard displays the following information:

- Vitals (Current)
- Vitals (Average)
- Tickets and Events
- Bytes Sent/Received
- Packets Sent/Received
- Connections

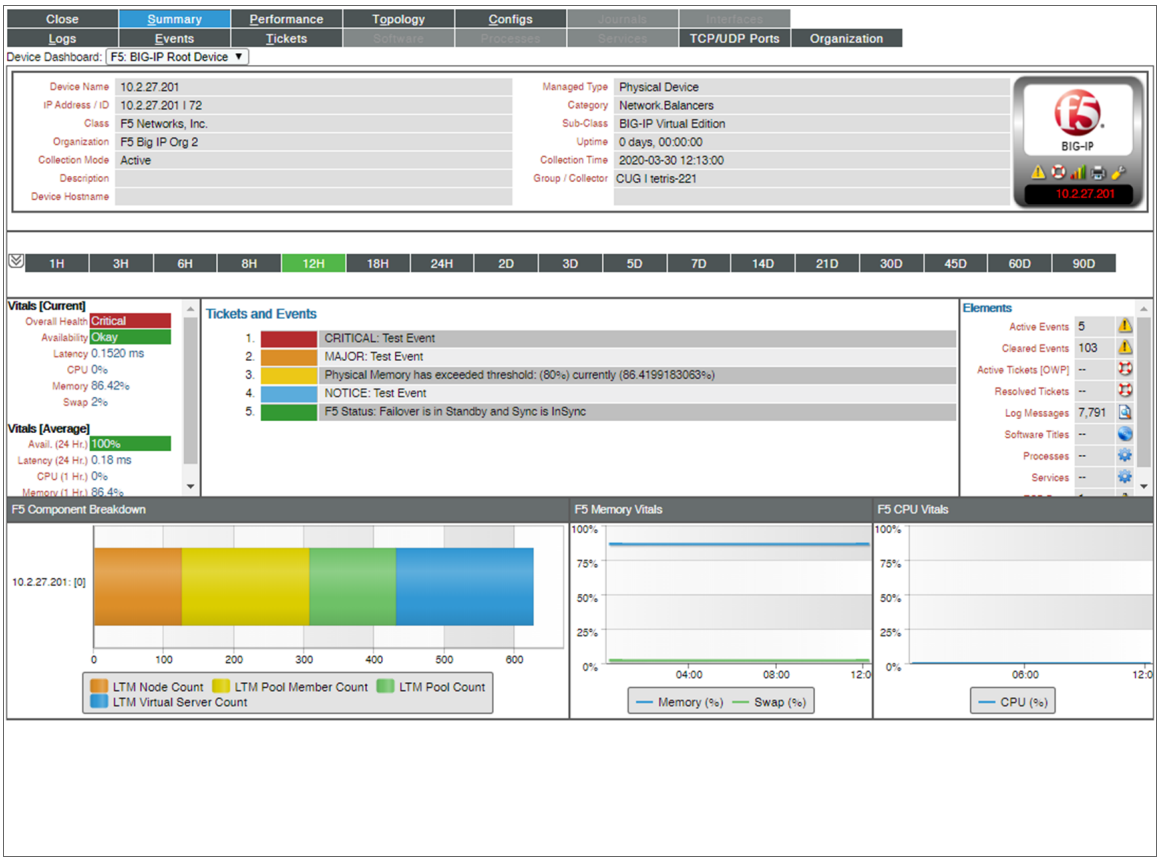
# F5: BIG-IP LTM Virtual Server




The F5: BIG-IP LTM Virtual Server device dashboard displays the following information:

- Virtual Server Availability
- Vitals (Current)
- Vitals (Average)
- Tickets and Events
- Bytes Sent/Received
- Packets Sent/Received
- Connections

# F5: BIG-IP Root Device




The F5: BIG-IP LTM Root Device device dashboard displays the following information:

- Vitals (Current)
- Vitals (Average)
- Tickets and Events
- F5 Component Breakdown
- F5 Memory Vitals
- F5 CPU Vitals

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