



Monitoring F5 BIG-IP

F5 BIG-IP PowerPack version 100

Table of Contents

Introduction	1
Overview	1
What Does the F5 BIG-IP PowerPack Monitor?	1
Configuring F5 BIG-IP Monitoring	2
Prerequisites	2
Creating an SNMP Credential for F5 BIG-IP	3
Discovering an F5 BIG-IP System	4
Aligning F5 BIG-IP Dynamic Applications	5
Manually Aligning the "F5 BIG IP LTM: Service Discovery" Dynamic Application with the BIG-IP Root Device	6
Viewing Component Devices	9

Introduction

Overview

F5 Networks' BIG-IP Local Traffic Manager (LTM) service manages local system traffic to ensure optimal network and application performance and increase the system's operational efficiency.

This manual describes how to monitor a BIG-IP load-balancing system using the ScienceLogic platform.

NOTE: ScienceLogic provides this documentation for the convenience of ScienceLogic customers. Some of the configuration information contained herein pertains to third-party vendor software that is subject to change without notice to ScienceLogic. ScienceLogic makes every attempt to maintain accurate technical information and cannot be held responsible for defects or changes in third-party vendor software. There is no written or implied guarantee that information contained herein will work for all third-party variants. See the End User License Agreement (EULA) for more information.

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.

WARNING: If you have an *F5 BIG-IP PowerPack* installed from a version of the ScienceLogic platform prior to version 7.6.0, you must delete it and install the most recent version instead. When you do so, the existing F5 devices and information will be deleted from the ScienceLogic platform and must be rediscovered.

Configuring F5 BIG-IP Monitoring

Overview

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

<i>Prerequisites</i>	2
<i>Creating an SNMP Credential for F5 BIG-IP</i>	3
<i>Discovering an F5 BIG-IP System</i>	4
<i>Aligning F5 BIG-IP Dynamic Applications</i>	5
<i>Manually Aligning the "F5 BIG IP LTM: Service Discovery" Dynamic Application with the BIG-IP Root Device</i>	6
<i>Viewing Component Devices</i>	9

Prerequisites

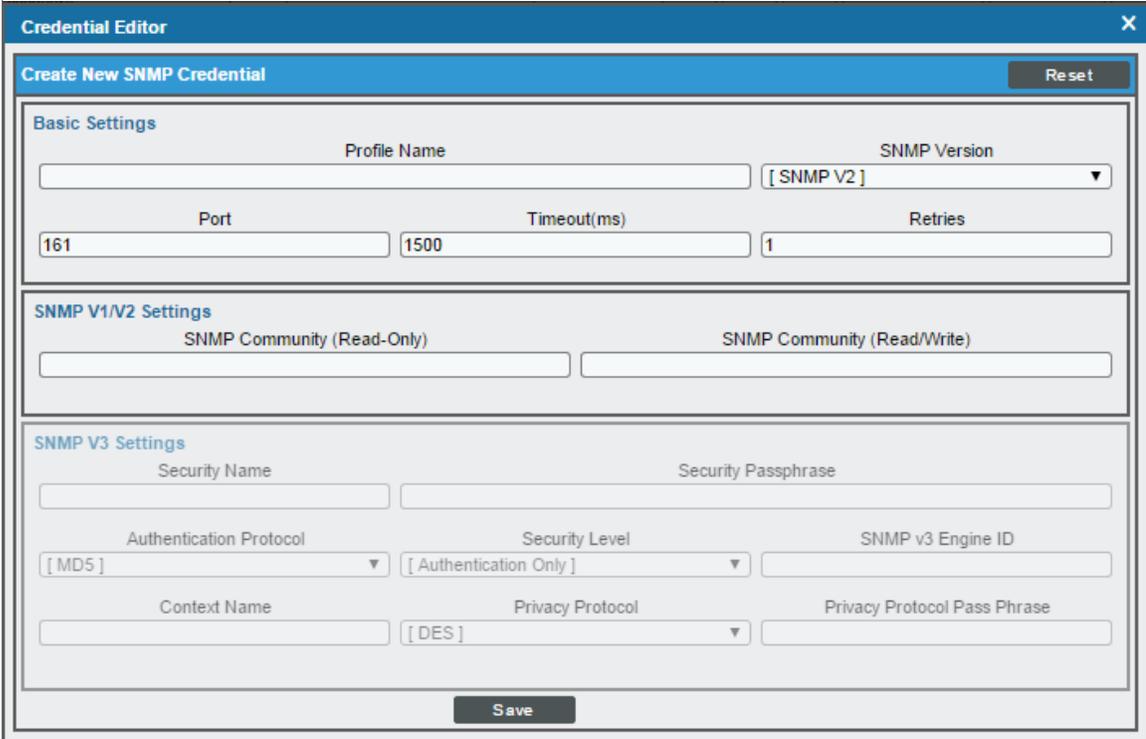
Before you can monitor F5 BIG-IP services using the *F5 BIG-IP PowerPack*, you must ensure that the ScienceLogic platform can communicate with BIG-IP using SNMP and you must know the SNMP community string for the BIG-IP system. The ScienceLogic platform can then use the data collected from BIG-IP to 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 the ScienceLogic platform. This credential allows the platform 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:



The screenshot shows the 'Credential Editor' window with a 'Create New SNMP Credential' header and a 'Reset' button. The form is divided into three sections: 'Basic Settings', 'SNMP V1/V2 Settings', and 'SNMP V3 Settings'. The 'Basic Settings' section includes fields for 'Profile Name', 'SNMP Version' (set to '[SNMP V2]'), 'Port' (161), 'Timeout(ms)' (1500), and 'Retries' (1). The 'SNMP V1/V2 Settings' section has fields for 'SNMP Community (Read-Only)' and 'SNMP Community (Read/Write)'. The 'SNMP V3 Settings' section includes fields for 'Security Name', 'Security Passphrase', 'Authentication Protocol' (set to '[MD5]'), 'Security Level' (set to '[Authentication Only]'), 'SNMP v3 Engine ID', 'Context Name', 'Privacy Protocol' (set to '[DES]'), and 'Privacy Protocol Pass Phrase'. A 'Save' button is located at the bottom of the form.

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 Control Panel** page (System > Manage > Discovery).
2. Click the **[Create]** 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 the ScienceLogic platform.
- **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.

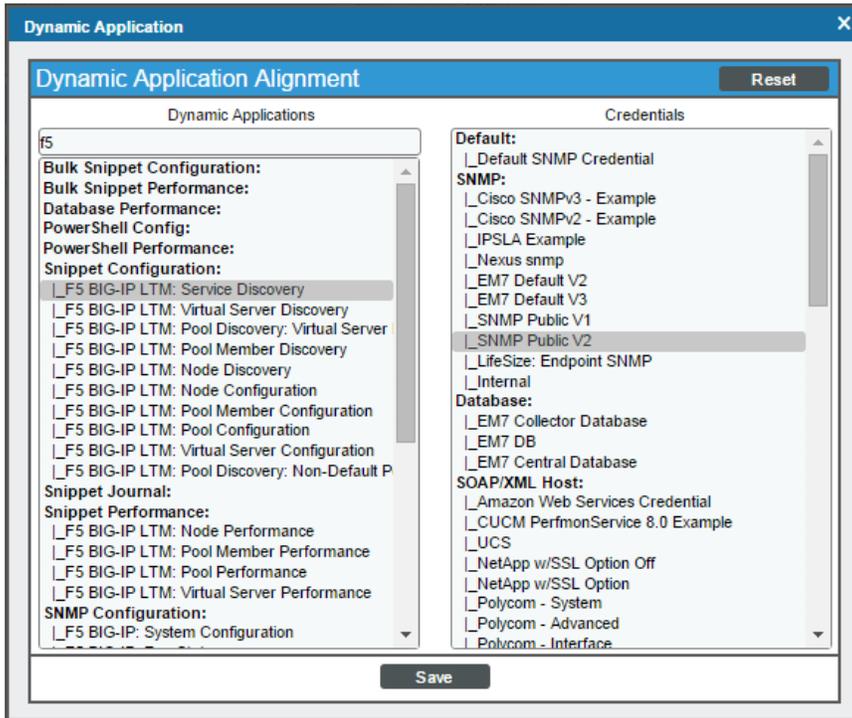
The following Dynamic Applications are aligned automatically to the F5 BIG-IP system when you run discovery:

- F5 BIG-IP LTM: Component Counts
- 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
- 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 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

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:

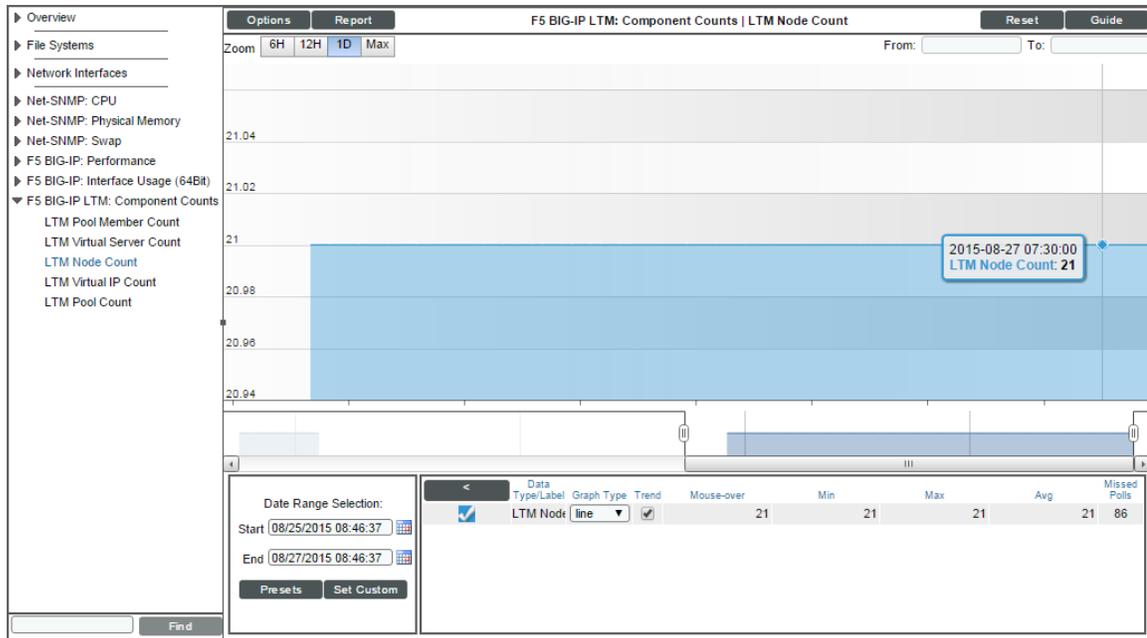
1. Go to the **Device Manager** page (Registry > Devices > Device Manager).

- Click the wrench icon () for the BIG-IP system.
- In the **Device Administration** panel, click the **[Collections]** tab. The **Dynamic Application Collections** page displays.
- 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:

Dynamic Application™ Collections										Expand	Actions	Reset	Guide				
Dynamic Application										ID	Poll Frequency	Type	Credential				
- F5 BIG-IP LTM: Component Counts										1223	15 mins	SNMP Performance	Default SNMP Credential				
Presentation Object •										Version	Pid	Found	Collecting	Group	Label	Precedence	<input checked="" type="checkbox"/>
+ 	LTM Node Count									1	p_4399	yes	yes	--	--	0	<input checked="" type="checkbox"/>
+ 	LTM Pool Count									1	p_4401	yes	yes	--	--	0	<input checked="" type="checkbox"/>
+ 	LTM Pool Member Count									1	p_4397	yes	yes	--	--	0	<input checked="" type="checkbox"/>
+ 	LTM Virtual IP Count									1	p_4400	yes	yes	--	--	0	<input checked="" type="checkbox"/>
+ 	LTM Virtual Server Count									1	p_4398	yes	yes	--	--	0	<input checked="" type="checkbox"/>
Misc Collection Object •										Cid	Found	Collecting	Edited By	<input checked="" type="checkbox"/>			
+ 	Discovery Object									p_13478	no	yes	--	--	0	<input checked="" type="checkbox"/>	
+ 	F5 BIG-IP: Interface Usage (64Bit)									1222	5 mins	SNMP Performance	Default SNMP Credential				
+ 	F5 BIG-IP: Performance									1217	15 mins	SNMP Performance	Default SNMP Credential				
+ 	Net-SNMP: CPU									564	5 mins	SNMP Performance	Default SNMP Credential				
+ 	Net-SNMP: Physical Memory									565	5 mins	SNMP Performance	Default SNMP Credential				
+ 	Net-SNMP: Swap									566	5 mins	SNMP Performance	Default SNMP Credential				
+ 	F5 BIG-IP: Disk Array Status									1221	60 mins	SNMP Configuration	Default SNMP Credential				
+ 	F5 BIG-IP: System Configuration									1215	360 mins	SNMP Configuration	Default SNMP Credential				
+ 	Host Resource: CPU Config									470	1440 mins	SNMP Configuration	Default SNMP Credential				
+ 	Host Resource: Software									467	120 mins	SNMP Configuration	Default SNMP Credential				
+ 	System Uptime: hrSystemUptime									932	5 mins	SNMP Configuration	Default SNMP Credential				
+ 	System Uptime: sysUptime									931	5 mins	SNMP Configuration	Default SNMP Credential				
+ 	F5 BIG-IP LTM: Service Discovery									1201	120 mins	Snippet Configuration	Default SNMP Credential				
+ 	Host Resource: Memory Config									469	1440 mins	Snippet Configuration	Default SNMP Credential				
+ 	Support: File System									719	120 mins	Snippet Configuration	Default SNMP Credential				

[Select Action]

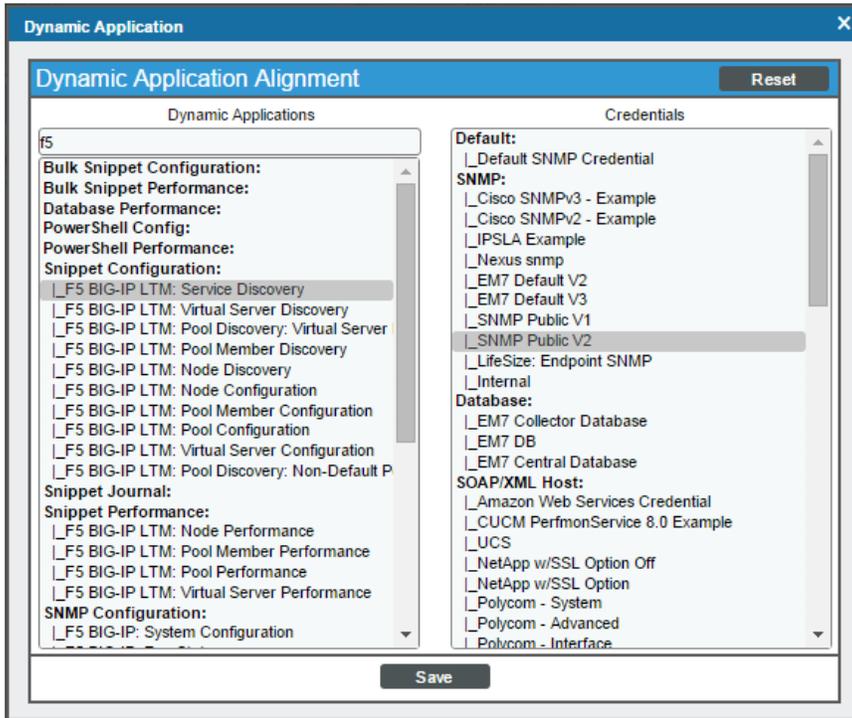
- Click a graph icon (📊) for any of the "F5 BIG-IP LTM: Component Counts" presentation objects to view the collected data for that presentation object. The **Device Performance** page displays the number of components that are being monitored.



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:

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

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



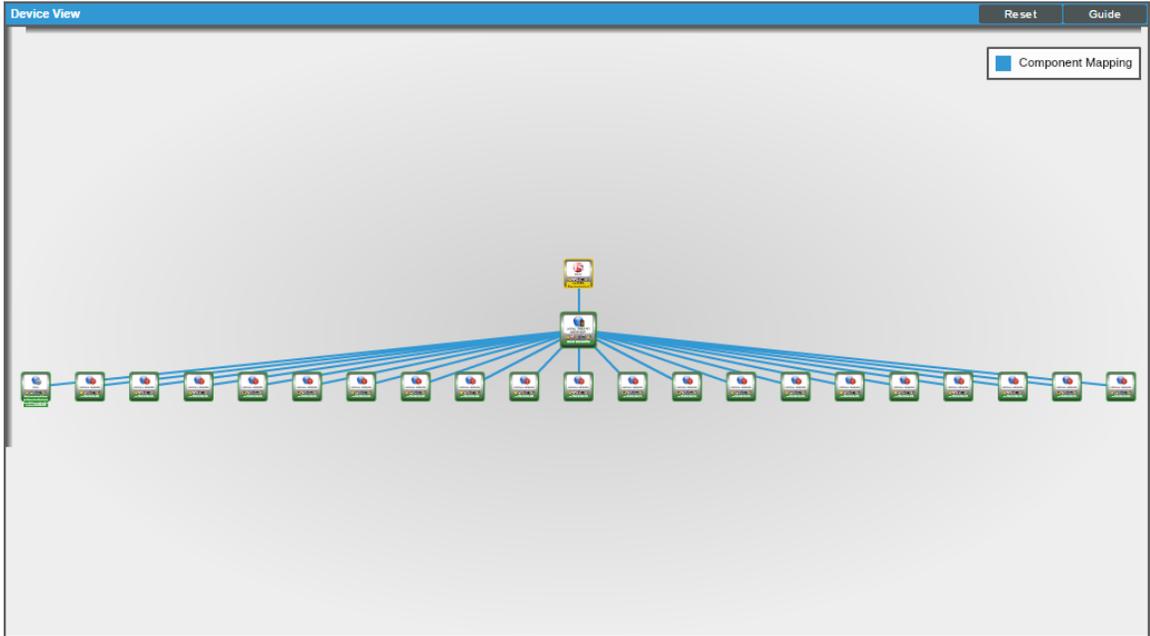
- In the **Dynamic Applications** field, select *F5 BIG-IP LTM: Service Discovery*.
- In the **Credentials** field, select the SNMP credential for the BIG-IP system.
- Click the **[Save]** button.

Viewing Component Devices

When the ScienceLogic platform performs collection for the F5 BIG-IP system, the platform 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 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:

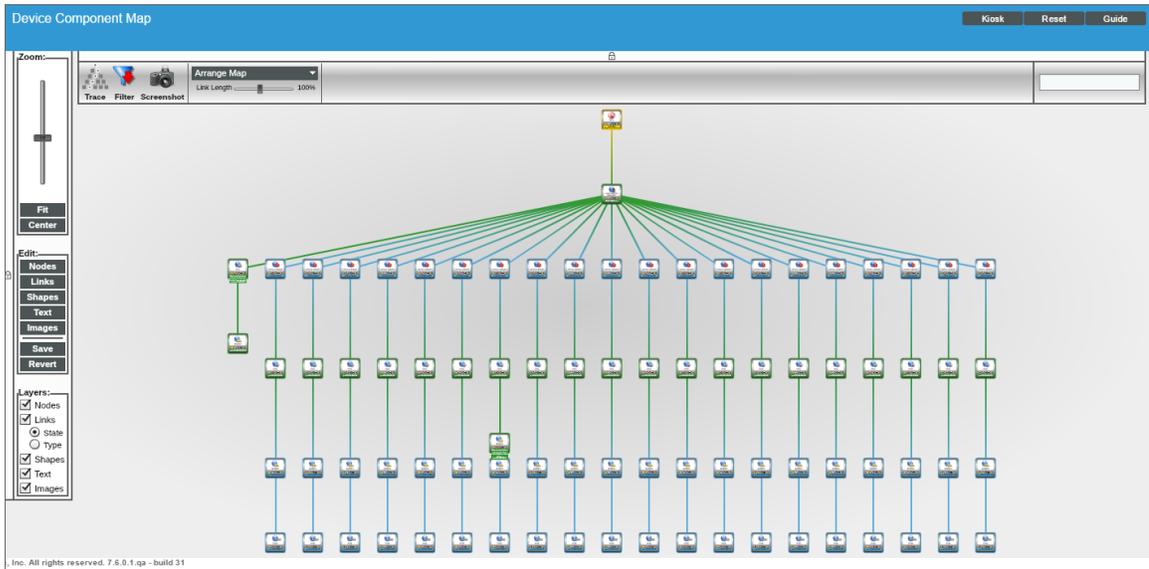


- The **Device Components** page (Registry > Devices > Device Components) displays a list of all root devices and component devices discovered by the ScienceLogic platform in an indented view, so you can easily view the hierarchy and relationships between child devices, parent devices, and root devices. To view the component devices associated with an F5 BIG-IP system, find the BIG-IP device and click its plus icon (+):

The screenshot shows the 'Device Components | Devices Found [9]' page. It displays a hierarchical tree view of devices. The 'BIG-IP LTM Service' is expanded, showing its child devices. The table below lists the devices and their details:

Device Name	IP Address	Device Category	Device Class Sub-class	DID	System	Organization	Current State	Collection Group	Collection State
BIG-IP LTM Service	--	Application	F5 Networks, Inc. BIG-IP Local Traffic Manager	1228	System	Organization	Healthy	CUG	Active
+ This is an extremely long pool name is ord	--	Application	F5 Networks, Inc. BIG-IP LTM Pool	1561	System	Organization	Healthy	CUG	Active
- vs-172-030-128-005	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1578	System	Organization	Notice	CUG	Active
+ pool-172-030-000-001	--	Application	F5 Networks, Inc. BIG-IP LTM Pool	1599	System	Organization	Healthy	CUG	Active
- node-172-030-000-001	--	Application	F5 Networks, Inc. BIG-IP LTM Pool Member	1620	System	Organization	Notice	CUG	Active
+ node-172-030-000-001	--	Application	F5 Networks, Inc. BIG-IP LTM Node	1640	System	Organization	Notice	CUG	Active
+ vs-172-030-128-002	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1590	System	Organization	Notice	CUG	Active
+ vs-172-030-128-003	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1576	System	Organization	Notice	CUG	Active
+ vs-172-030-128-004	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1564	System	Organization	Notice	CUG	Active
+ vs-172-030-128-005	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1570	System	Organization	Notice	CUG	Active
+ vs-172-030-128-006	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1579	System	Organization	Notice	CUG	Active
+ vs-172-030-128-007	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1577	System	Organization	Notice	CUG	Active
+ vs-172-030-128-008	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1567	System	Organization	Notice	CUG	Active
+ vs-172-030-128-009	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1566	System	Organization	Notice	CUG	Active
+ vs-172-030-128-010	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1568	System	Organization	Notice	CUG	Active
+ vs-172-030-128-011	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1569	System	Organization	Notice	CUG	Active
+ vs-172-030-128-012	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1561	System	Organization	Notice	CUG	Active
+ vs-172-030-128-013	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1571	System	Organization	Notice	CUG	Active
+ vs-172-030-128-014	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1572	System	Organization	Notice	CUG	Active
+ vs-172-030-128-015	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1573	System	Organization	Notice	CUG	Active
+ vs-172-030-128-016	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1574	System	Organization	Notice	CUG	Active
+ vs-172-030-128-017	--	Application	F5 Networks, Inc. BIG-IP LTM Virtual Server	1575	System	Organization	Notice	CUG	Active

- The **Device 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. The ScienceLogic platform automatically updates the **Device 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 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.



© 2003 - 2018, ScienceLogic, Inc.

All rights reserved.

LIMITATION OF LIABILITY AND GENERAL DISCLAIMER

ALL INFORMATION AVAILABLE IN THIS GUIDE IS PROVIDED "AS IS," WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED. SCIENCELOGIC™ AND ITS SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.

Although ScienceLogic™ has attempted to provide accurate information on this Site, information on this Site may contain inadvertent technical inaccuracies or typographical errors, and ScienceLogic™ assumes no responsibility for the accuracy of the information. Information may be changed or updated without notice. ScienceLogic™ may also make improvements and / or changes in the products or services described in this Site at any time without notice.

Copyrights and Trademarks

ScienceLogic, the ScienceLogic logo, and EM7 are trademarks of ScienceLogic, Inc. in the United States, other countries, or both.

Below is a list of trademarks and service marks that should be credited to ScienceLogic, Inc. The ® and ™ symbols reflect the trademark registration status in the U.S. Patent and Trademark Office and may not be appropriate for materials to be distributed outside the United States.

- ScienceLogic™
- EM7™ and em7™
- Simplify IT™
- Dynamic Application™
- Relational Infrastructure Management™

The absence of a product or service name, slogan or logo from this list does not constitute a waiver of ScienceLogic's trademark or other intellectual property rights concerning that name, slogan, or logo.

Please note that laws concerning use of trademarks or product names vary by country. Always consult a local attorney for additional guidance.

Other

If any provision of this agreement shall be unlawful, void, or for any reason unenforceable, then that provision shall be deemed severable from this agreement and shall not affect the validity and enforceability of any remaining provisions. This is the entire agreement between the parties relating to the matters contained herein.

In the U.S. and other jurisdictions, trademark owners have a duty to police the use of their marks. Therefore, if you become aware of any improper use of ScienceLogic Trademarks, including infringement or counterfeiting by third parties, report them to Science Logic's legal department immediately. Report as much detail as possible about the misuse, including the name of the party, contact information, and copies or photographs of the potential misuse to: legal@sciencelogic.com



800-SCI-LOGIC (1-800-724-5644)

International: +1-703-354-1010