

SolutionPack for Brocade FC Switch

Release number 3.5

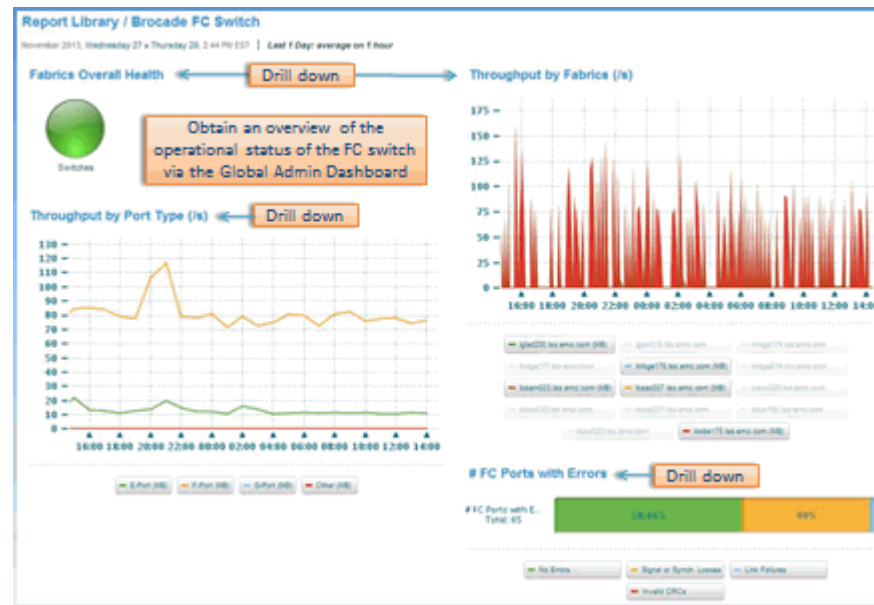
Summary Sheet

June, 2014

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Overview

This article explains how to install and configure the SolutionPack for Brocade FC Switch. The SolutionPack for Brocade FC Switch accesses performance data information that was automatically collected and interpreted (using resource grouping and mathematical calculations) from across multiple fabrics.



Alerts are consolidated from Brocade FC Switches and shown on the **All Alerts Console**.

Technical specifications

SolutionPack version

- ◆ 3.5

Compatible ViPR SRM version

- ◆ 3.5

Compatible Service Assurance Suite version

- ◆ 9.3

Supported systems

- ◆ Fabric OS > V4.x

Data collection methods

- ◆ SNMP to collect fabric information

Main reports

- ◆ FC Switches Summary - Overviews the FC switches, including key indicators such as name, IP addresses, firmware version, and operational status.
- ◆ # FC Ports with Errors - Reports the FC ports with errors, such as invalid CRCs, signal losses, or link failures.

- ◆ Fabrics Overall Health - Reports the current operational status of the switch.
- ◆ Inventory & Performance - Reports Inter-Switch-Link (ISL) trunking resource usage. ISL monitoring helps administrators determine the sources of traffic on ISLs and identify potential points of congestion in the SAN fabric.
- ◆ Throughput by Fabrics (/s) - Reports the Throughput by switches. Typically, this is the sum of throughput for all FC ports belonging to a switch.
- ◆ Throughput by Port Type (/s) - Reports the Throughput by port type. Typically, this is the sum of throughput for all FC ports belonging to switches regarding the port type.
- ◆ Traffic by Domains (/s) - Reports the Throughput by domains. Typically, this is the sum of throughput for all FC ports belonging to switches regarding the domain id.
- ◆ Situation To Watch - Highlights risk situations such as FC ports errors.
- ◆ Virtual Fabrics

Supported Models for SNMP and SMI

SNMP discovers switch details, ports, performance metrics and SMI discovers zoning related information.

Supported models

Discovery of switch partition feature is not supported.

Performance Metrics will not be collected for Brocade AG Devices.

Brocade 300, 4100, 4900, 5000, 5100, 5300, 5410, 5424, 5450, 5460, 5470, 5480, 7500, 7500E, 7600

Brocade 7800 Extension Switch

Brocade 8000 FCoE Switch

Brocade Encryption Switch
Brocade DCX Backbone and Brocade DCX-4S Backbone:
FA4-18 Fibre Channel application blade, FCOE10-24 DCX Blade, FS8-18 Encryption Blade, FC8-16 port blade, FC8-32 port blade, FC8-48 port blade, FC8-64 port blade

Fabric OS MIB Reference: 53-1001768-01, FC10-6 port blade, FR4-18i router blade, FX8-24 DCX Extension Blade

Brocade 48000 director: FA4-18 Fibre Channel application blade, FC4-16 port blade, FC4-16IP, FC4-32 port blade, FC4-48 port blade, FC10-6 port blade, FR4-18i outer blade

Brocade VA-40FC

Collector

XML Collector

SNMP Collector

Prerequisites

All Brocade switches that are running FOSv4.x or higher. SNMP compliant with FC-MGMT MIB.

CPU Utilization and Memory Utilization will not be populated for Brocade switches running at firmware version below FOS 6.3. Fabric Watch license should be installed on the switches to fetch CPU and Memory utilization metrics.

Discovery support is limited to FC ports; discovery of other protocols or routing is not supported.

Providers

- ◆ CMCNE/BNA 11.1.x, 11.2.1, 12.0.x and 12.1.2.
- ◆ CMDCE/DCFM 10.4.x

Limitations on providers

Discovery is limited to FC blades. Discovery supports only the E, F, and G ports on the blades. ViPR SRM does not support Administrative Domains features.

CMCNE can be deployed using the SMI Agent only option (headless). The new installation article on our web server provides additional information on various versions of CMCNE and BNA.

All versions of CMCNE/BNA - ViPR SRM does not support Single Sign On and Launch-in-Context.

Port

The SNMP default port is 161.

Brocade switch configuration

You need to configure Brocade switches and the SMI agents to support switch discovery, data collection and alert consolidation.

- ◆ [Configuring Brocade SMI Agents on page 4](#)
- ◆ [Configuring Brocade switches for alert consolidation on page 5](#)

Configuring Brocade SMI Agents

You have to install and configure the Brocade SMI Agent in order to enable zoning discovery and switch discovery.

Procedure

1. Install CMCNE with one of the following options an option of either an integrated Brocade SMI Agent (SAN with Brocade SMI Agent) or just the Brocade SMI Agent only (headless installation).

Option	Description
integrated Brocade SMI Agent (SAN with Brocade SMI Agent)	The Brocade SMI agent is integrated with CMCNE, BNA, CMDCE, DCFM and gets installed when you install any of these products.
Brocade SMI Agent only (headless installation)	You can use this option if you do not want to install CMCNE, BNA, CMDCE, or DCFM.

The CMCNE or CMDCE and/or Brocade SMI Agent documentation provides details on installation and configuration instructions.

Configuring Brocade switches for alert consolidation

Use this procedure to configure forwarding of alert traps (SNMP v1) from Brocade switches to the suite.

Procedure

1. Log into the Brocade FC switch as the administrator.
2. Type `snmpConfig --set snmpv1`, and press **Enter**.
3. Type the following details, when prompted:

Option	Input
Community	[public]
Trap recipient's IP address	The ViPR SRM trap recipient IP which, in a single vApp installation is the ViPR SRM IP, and in a distributed environment, is the suite's Backend IP.
Trap recipient severity level	(0..5)
Trap recipient port	2041, which is the ViPR SRM trap listening port.

4. If you have multiple Brocade FC switches in your storage environment, repeat this procedure on each switch.

Configuring Brocade switches for SNMP v1/v2 or SNMP v3

Procedure

1. Log into the Brocade switch as the administrator.
2. Type `snmpConfig --set snmpv1/snmpv3` and press **Enter**.
3. Type the required details when prompted.
4. If you have multiple Brocade FC switches in your storage environment, repeat this procedure on each switch.

Installing the SolutionPack

Before you begin

- ◆ To discover the switch topology (switch details and switch port details) and switch performance using SNMP and zoning details through SMIS, you must be aware of SNMP v1/v2 community strings and SNMP ports, or SNMP v3 user details and privacy and authentication details for the v3 username. In addition, the username, password, port number, and SSL enabled/status for the SMI-S provider are required to discover the zoning details
- ◆ To discover the switch topology, switch performance, and zoning details through SMIS, the username, password, port number, and SSL enabled/status for the SMI-S provider are required

Procedure

1. Log in and select **Administration**.
2. Select **Centralized Management** in the Administration tree.
3. Select **SolutionPacks** in the tree.
4. Select **SolutionPack Center**.
5. Select SolutionPack for Brocade FC Switch in the **Browse and Install SolutionPacks** screen.
6. Click **Install**.
The steps below assume a typical four VM deployment.
7. In the **Alert Consolidation** field of the **Select the components to install** window, select the Primary Backend host.
8. In the **Pre-configured alerts** field, select the Primary Backend host.
9. In the **SMI Data Collection** field, select the Collector host.
10. In the **Reports** field, select the Frontend host.
11. In the **SNMP Masks** field, select the Frontend host.
12. Click **Next**.
13. Click **Next**.
14. In the **Recipient for email alerts** field, provide an email address.
15. Select a backend destination for alerting data.
To add a new destination, select **Add a new Alerting on data collection**, and select a backend host.
16. If desired, select **Enable Topology Backend on data collected** and identify the topology service.
 - a. In the **Topology Service hostname or IP address** field, type the Primary Backend host.
 - b. Select a Web-Service Gateway. If you select **Add new gateway**, identify the gateway and enter its access credentials. Type 48443 as the gateway port.
17. In the **SMI Provider IP Address or Host Name** field, type the Brocade SMI-S Provider host.
 - a. Enter its access credentials.
 - b. In the **Port** field, if using a non-default port, include the port number in the address. The default ports are 5988 for non-SSL and 5989 for SSL.
 - c. If desired, select **Enable Secure Connection (SSL)**.
 - d. Enter the port used by the SMI-S Provider.
18. Select a **Passive Host Discovery Specific configuration**. If you select **Add a new Passive Host Discovery Specific Configuration**, check or uncheck **Enable Passive Host Discovery**.
19. Click **Next**.
20. In the **Administration Web-Service Instance** field, select **Default**.
21. Click **Next**.
22. Click **Install**.

The SolutionPack installation begins.

23. Click **Ok** once installation is complete.

Performance data will be displayed in about an hour.

Enabling passive host discovery through Brocade FC SolutionPack

You have to enable passive host discovery when you want to see end to end topology from hosts to array and identify chargeback on SAN enabled hosts, without active host discovery.

You can passively resolve hosts, discovered through the SolutionPack for Brocade FC Switch, from zoning records.

The zone naming patterns supported in ViPR SRM are:

`z_%h%`

`z_%h%_*`

`z_%h%_*_*`

`%h%_*`

If you want to add a new host zone naming pattern, then you have to add the corresponding regular expression to the configuration file `vhf-mds-zone-dns.xml` located in `/opt/APG/Collecting/Variable-Handling-Filter/brocade-fc-switch/conf` directory.

Procedure

1. Click **Administration**.
2. Click **Centralized Management**.
3. Click **SolutionPacks**.
4. Click **Brocade FC Switch** SolutionPack.
5. Click the reconfigure icon to reconfigure the **SMI Data Collection** SolutionPackBlock instance.
6. Select **Enable Passive Host Discovery** checkbox.
7. Click **Reconfigure**.

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