

53-1003889-01  
17 August 2015

# Brocade SDN Controller

---

## Quick Start Guide

Supporting Brocade SDN Controller version 2.0.1

**BROCADE** 

**© 2015, Brocade Communications Systems, Inc. All Rights Reserved.**

ADX, Brocade, Brocade Assurance, the B-wing symbol, DCX, Fabric OS, HyperEdge, ICX, MLX, MyBrocade, OpenScript, The Effortless Network, VCS, VDX, Vplane, and Vyatta are registered trademarks, and Fabric Vision and vADX are trademarks of Brocade Communications Systems, Inc., in the United States and/or in other countries. Other brands, products, or service names mentioned may be trademarks of others.

Notice: This document is for informational purposes only and does not set forth any warranty, expressed or implied, concerning any equipment, equipment feature, or service offered or to be offered by Brocade. Brocade reserves the right to make changes to this document at any time, without notice, and assumes no responsibility for its use. This informational document describes features that may not be currently available. Contact a Brocade sales office for information on feature and product availability. Export of technical data contained in this document may require an export license from the United States government.

The authors and Brocade Communications Systems, Inc. assume no liability or responsibility to any person or entity with respect to the accuracy of this document or any loss, cost, liability, or damages arising from the information contained herein or the computer programs that accompany it.

The product described by this document may contain open source software covered by the GNU General Public License or other open source license agreements. To find out which open source software is included in Brocade products, view the licensing terms applicable to the open source software, and obtain a copy of the programming source code, please visit <http://www.brocade.com/support/oscd>.

# Contents

---

- Installing and Verifying Brocade SDN Controller and User Interface..... 4**
  - About the controller..... 4
  - Before installing the controller..... 4
  - Installing the controller and user interface..... 5
  - Verifying the installation of the controller..... 6
    - Connecting to RESTCONF..... 6
    - Accessing the API Doc Explorer..... 6
  - Verifying the installation of the user interface..... 6
  - Starting and shutting down the controller and user interface..... 7
  
- Contacting Brocade .....8**

# Installing and Verifying Brocade SDN Controller and User Interface

---

- About the controller..... 4
- Before installing the controller..... 4
- Installing the controller and user interface..... 5
- Verifying the installation of the controller..... 6
- Verifying the installation of the user interface..... 6
- Starting and shutting down the controller and user interface..... 7

## About the controller

Brocade SDN Controller is a software-defined networking (SDN) controller that is based on the OpenDaylight project.

The controller consists of packages that form a platform on which you can install or build apps. Packages that provide a common functionality and are essential for running the controller are part of the base controller. Packages that are optional are extensions that can be installed to enable additional functionality. The controller is built on a modular design that allows apps and extensions to be updated while maintaining a stable platform, which helps to improve the delivery time of apps and extensions and reduce risk to users.

Unless mentioned otherwise in this guide, the controller refers to Brocade SDN Controller.

## Before installing the controller

Brocade SDN Controller requires that specific hardware and software be configured before you can install the controller.

Check the following hardware prerequisites before you run the installation script.

**TABLE 1** Hardware Prerequisites

Hardware Component	Minimum	Recommended
RAM	6 GB	16 GB
Network	1 GE	10 GE
CPU	4 Cores	8 Cores
Storage	32 GB	64 GB

Check the following software prerequisites before you run the installation script.

- *Operating system*—Ubuntu operating system version, 14.04, or the Red Hat Enterprise Linux operating system, version 7.1
- *Software*—Latest stable version for OpenJDK, OpenSSH, Pyscopg, and PSmisc (for Red Hat Enterprise Linux only), Zip, Unzip, and Node.js

Install OpenJDK, OpenSSH, Pyscopg, and PSmisc (for Red Hat Enterprise Linux only) software before you install the controller. If you do not install these software before you run the installation script, the script prompts you to install the missing prerequisite and then rerun the installation script. The controller installation script installs Zip, Unzip, and Node.js as part of the installation procedure.

The commands to install the prerequisite software, which are not part of the installation script, are as follows:

- *OpenJDK*
  - For Red Hat Enterprise Linux, run this command: `sudo yum install java-1.7.0-openjdk-devel`
  - For Ubuntu, run this command: `sudo apt-get install openjdk-7-jdk`
- *OpenSSH*
  - For Red Hat Enterprise Linux, run this command: `sudo yum install openssh-server`
  - For Ubuntu, run this command: `sudo apt-get install openssh-server`
- *Pyscopg*
  - For Red Hat Enterprise Linux, run this command: `sudo yum install python-psycopg2`
  - For Ubuntu, run this command: `sudo apt-get install python-psycopg2`
- *PSmisc* (for Red Hat Enterprise Linux only)—Run this command: `sudo yum install psmisc`

Before installing the controller and the user interface, you must first download the installation files, create a directory, and then run the installation command.

If you have other controllers installed on the system, ensure that you stop all running instances of them to avoid port-conflict issues. If you have a previous version of the controller installed, the installation process stops the controller as part of the process.

## Installing the controller and user interface

You must run the installation script as `sudo`. The script fails if you run it as `root`.

To install the controller and user interface, perform the following steps:

1. Download the installation files for the controller from the My Brocade website.
2. Go to the folder to which you downloaded the installation files and enter this command to unzip the tar.gz file: `tar -zxvf SDN-Controller-version-Software.tar.gz`
3. List the current contents of the folder by using the `ls` command to check that the `SDN-Controller-version-Software` folder is created.
4. Navigate to the `SDN-Controller-version-Software` folder by entering this command: `cd SDN-Controller-version-Software`
5. Enter this command to run the installation script: `./installbsc`

Follow the prompts to install the controller and user interface. A message similar to the following is displayed:

```
Brocade SDN Controller Installation
Starting @ : 2015-08-04 04:35:40.460742
Performing prerequisite check ...
JDK Check ..... [ OK ]
CPU Count Check: ..... [ OK ]
Memory Size Check: ..... [ OK ]
```

```
Controller stopped already .....  
Running pre-install scripts ...  
...  
...  
Install completed @ : 2015-08-04 04:37:31.316032
```

For information about installing the apps, refer to *Brocade SDN Controller Software Installation Guide*.

## Verifying the installation of the controller

This section provides two methods for verifying whether the controller was correctly installed. One method is connecting to RESTCONF and the other is accessing the API Doc Explorer application.

### Connecting to RESTCONF

You can verify the installation of the controller by connecting to RESTCONF.

To connect to RESTCONF, perform the following steps:

1. After you install the controller, open a browser, and go to the following web location: `http://controller-ip:8181/restconf/modules`

The *controller-ip* variable is the IP address of the host on which you install the controller.

2. Log in with these default credentials: `admin/admin`.

The target web page displays a list of the YANG modules that are defined in the controller.

### Accessing the API Doc Explorer

You can verify the installation of the controller by accessing the API Doc Explorer application.

To access the API Doc Explorer, perform the following steps:

After you install the controller, open a browser and go to the following web location: `http://controller-ip:8181/apidoc/explorer/index.html`

The *controller-ip* variable is the IP address of the host on which you install the controller.

The OpenDaylight RESTCONF API documentation page displays the following information:

- List of APIs supported by the controller
- Mount points for any API that you select

## Verifying the installation of the user interface

You can verify installation of the user interface by using the default credentials to log in.

To verify installation of the user interface, perform the following steps:

1. Go to the following web location: `http://controller-ip:9001`

The variable *controller-ip* is the IP address of the host on which you install the controller.

2. Log in with these default credentials: `admin/admin`.

The user interface of the controller with the Topology Manager app is displayed.

## Starting and shutting down the controller and user interface

The controller is automatically started after it is installed. The instructions to start and shut down the controller are useful for troubleshooting.

1. Enter this command to start the controller and user interface: `/opt/bvc/bin/start`
2. Enter this command to stop the controller and user interface: `/opt/bvc/bin/stop`

# Contacting Brocade

---

To provide document feedback use the online feedback form in the HTML documents posted on [www.brocade.com](http://www.brocade.com) or contact [documentation@brocade.com](mailto:documentation@brocade.com).

For product support information and the latest information on contacting the Technical Assistance Center, go to <http://www.brocade.com/services-support/index.html>.

If you have purchased Brocade product support directly from Brocade, use one of the following methods to contact the Brocade Technical Assistance Center 24x7. Brocade OEM customers contact their OEM/Solutions provider.

Online	Telephone	E-mail
Preferred method of contact for non-urgent issues:	Required for Sev 1-Critical and Sev 2-High issues:	<a href="mailto:support@brocade.com">support@brocade.com</a>
<ul style="list-style-type: none"> <li>• <a href="#">My Cases</a> through MyBrocade</li> <li>• <a href="#">Software downloads</a> and licensing tools</li> <li>• <a href="#">Knowledge Base</a></li> </ul>	<ul style="list-style-type: none"> <li>• Continental US: 1-800-752-8061</li> <li>• Europe, Middle East, Africa, and Asia Pacific: +800-AT FIBREE (+800 28 34 27 33)</li> <li>• For areas unable to access toll free number: +1-408-333-6061</li> <li>• <a href="#">Toll-free numbers</a> are available in many countries.</li> </ul>	Please include: <ul style="list-style-type: none"> <li>• Problem summary</li> <li>• Serial number</li> <li>• Installation details</li> <li>• Environment description</li> </ul>