QUICK START GUIDE

Ruckus ICX Switch Quick Start Guide

Supporting the Ruckus ICX 7150, ICX 7250, and ICX 7450 families of Ethernet switches

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53-1004910-02

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About Brocade

Brocade® (NASDAQ: BRCD) networking solutions help the world's leading organizations transition smoothly to a world where applications and information reside anywhere. This vision is designed to deliver key business benefits such as unmatched simplicity, non-stop networking, application optimization, and investment protection.

Innovative Ethernet and storage networking solutions for data center, campus, and service provider networks help reduce complexity and cost while enabling virtualization and cloud computing to increase business agility.

To help ensure a complete solution, Brocade partners with world-class IT companies and provides comprehensive education, support, and professional services offerings (www.brocade.com).

Overview

Direct management of Brocade switches can be performed either via a command-line interface (CLI) or via a web GUI. By default, only the CLI is enabled. This guide explains how to access the CLI, enable the web GUI, and secure all configuration access methods.

The web GUI allows full configuration and monitoring of Layer 2 functions, QoS, ACL, authentication, PoE, performing software updates, and much more.

Connecting to the Console

There are two ways to connect to the configuration console of a new Ruckus ICX switch: either via a Telnet session over an IP network or directly via the serial interface.

Telnet

If a Ruckus ICX switch is connected to a network, it will automatically issue DHCP requests for an IP configuration, which will be provided by a DHCP server. Identifying the IP address that has been assigned to the switch can be done by viewing the address assignment list on the DHCP server or by the switch serial interface (command: **show ip**).

Once the IP address of the switch is known, a Telnet session can be established using a terminal emulation program. See Accessing the CLI on page 5.

Serial

Ruckus ICX 7150

The Ruckus ICX 7150 presents a USB Type-C connection, which can be connected directly to the USB port on a PC using a standard USB cable. Any standard USB Type-C–to–Type-A cable can be used; if you wish to purchase the cable from Brocade, the part number is CC-USBC-USBA.

The Ruckus ICX 7150 also presents a standard serial interface via an RJ45 connector. If required, an RJ45-to-DB9F cable can be ordered from Brocade using part number CC-RJ45-DB9, which is comprised of the following two parts:

- RJ45 to RJ45: Part number 50-1000117-01
- RJ45 to DB9F: Part number 50-0000112-01

Details of the pin allocations of the serial cable are available in the Ruckus ICX 7150 Switch Hardware Installation Guide.

Ruckus ICX 7250 and Ruckus ICX 7450

The Ruckus ICX 7250 and ICX 7450 switches present their serial interface via a mini-USB type connector, and every switch is shipped with a serial cable that terminates on both RJ45 and DB9 connections. The two parts shipped with every switch are:

- Mini-USB to RJ45: Part number 50-1000122-01
- RJ45 to DB9F: Part number 50-0000112-01

If required, these two parts can be ordered using part number CC-miniusb-RJ45.

To connect a PC to the serial interface, a DB9M-to-USB adaptor is required; this adaptor can be obtained from any online electronics supplier.

FIGURE 1 DB9M-to-USB Adaptor

Once a serial connection to the switch has been made, a terminal emulation program can be used to access the CLI. See Accessing the CLI on page 5.

Introduction to the CLI

Accessing the CLI

Once a network or physical connection has been made to the switch, a command-line interface (CLI) session can be initiated via a terminal emulation program such as PuTTY (www.putty.org). When PuTTY is started, use the following settings depending on whether you are connecting via Telnet or a serial interface:
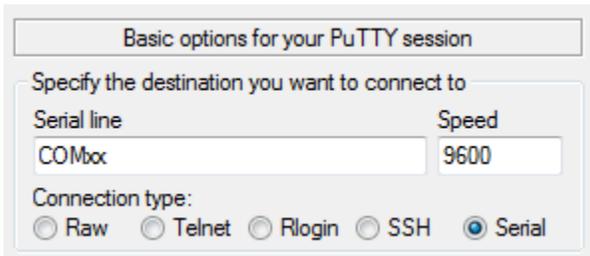
FIGURE 2 PuTTY Telnet Settings

FIGURE 3 PuTTY Serial Settings (xx is the number of the COM port, e.g. COM5)

Once connected to the switch, the interface will present a console prompt. There are three privilege levels that are used to configure and manage a switch: user EXEC mode, privileged EXEC mode, and global configuration mode.

User EXEC Mode

The user is able to perform basic commands to display the status and configuration of the device.

```
device>
```

Privileged EXEC Mode

At this level, the user can perform tasks such as saving the configuration, updating firmware, and performing other administrative tasks.

```
device>
device> enable
device#
```

Note that the **enable** command can be shortened to **ena**.

Global Configuration Mode

This is the highest level and allows the user to make configuration changes.

```
device>
device> enable
device# configure terminal
device(config)#
```

Note that the **configure terminal** command can be shortened to **conf t**.

From any prompt, the available commands can be listed by entering a question mark (**?**). Prompts can be auto-completed using the **Tab** key. The options available at any level can be listed by entering **?** or pressing **Tab**. For example:

```
device> sh<tab>
device> show <?>
…
device> show ver<tab>
device> show version <?>
<CR>
device> show version <CR>
…
```

The **exit** command is used to drop back to the next lowest command level.

Saving the Configuration

Any configuration changes made using the CLI should be saved using the **write memory** command, which can be shortened to **wr mem**.

```
device> ena
device# wr mem
```

```
Write startup-config done.
Copy Done.
device#
```

Securing the Web, Serial, and Telnet Interfaces

The following commands enable web access and secure the web GUI, serial, and Telnet interfaces with a default username and password of your choice.

```
device> ena
device# conf t
device(config)# crypto-ssl certificate generate
device(config)# username <username> password <password>
device(config)# aaa authentication login default local
device(config)# aaa authentication web-server default local
device(config # enable telnet authentication
device(config # enable aaa console
device(config)# web-management https
device(config)# password-change any
device(config)# wr mem
device(config)# exit
device#
```

Make sure that the username and password are secure and easy to remember. Once set, access to the CLI and web interface will be possible only when the password has been correctly entered.

> **IMPORTANT**
> For reasons of security, Ruckus ICX switches *do not* provide any remote back-door access or reset mechanisms for the CLI or web passwords. For details on resetting a lost password, refer to the hardware installation guide.

The password can be changed by repeating the **username <username> password <password>** command or via the web interface under **Configure** > **System** > **Management** > **User Account**.

Cut and paste the following command set at the user EXEC prompt to apply the complete configuration outlined above and set a default username of *brocade* with a password of *brocade*.

```
enable
configure terminal
crypto-ssl certificate generate
username brocade password brocade
aaa authentication login default local
aaa authentication web-server default local
enable telnet authentication
enable aaa console
web-management https
password-change any
write memory
exit
```

> **TIP**
> In PuTTY, use the right button on the mouse to paste text at the console prompt.

Access to the web interface is now possible, and all access methods are protected by a username and password.

> **IMPORTANT**
> To ensure that your switches are secure from unauthorized access, always set a secure password. Never leave a switch with the default brocade/brocade settings provided above.

Adding a Static IP Address via the CLI

If you wish to add a static IP address to the switch before using the GUI, you can do so easily from the CLI using the following commands.

```
device> ena
device# conf t
device(config)# ip address <IP address> <subnet mask>
device(config)# ip default-gateway <IP address>
device(config)# wr mem
device(config)# exit
device#
```

> **NOTE**
> When setting the IP address, the syntax `<IP address>/mask>` is also permitted; for example, `192.168.1.10/24`.

> **NOTE**
> The commands listed above are applicable to Ruckus ICX switches running Layer 2 switch code that is the factory default for the Ruckus ICX 7150, Ruckus ICX 7250, and Ruckus ICX 7450.

Accessing the Web GUI

You can now access the web interface of the switch. Enter the IP address of the switch into the address bar using either HTTP or HTTPS; for example, `https://192.168.2.79/`.

Creating Additional Web Interface Users

The first task should be to create usernames and passwords to secure access to the switch. This is done via the **User Account** page, which can be found under **Configure** > **System** > **Management** > **User Account**.

Users can be created with one of three permission levels:

0 Read-Write	Full read-write access for all system parameters.
4 Port-Config	Read-write access for specific ports, but not for global system parameters.
5 Read-Only	Read-only access for configuration and system parameters.

Deleting the Default Username and Password

If the brocade/brocade default username and password were used for the initial configuration, these must be deleted to protect the system. Once you have created a new Read-Write user, simply delete the brocade/brocade user and save the configuration.

User Account

Username	Password	Encrypt	Privilege	
Admin	$1$4CkeC7TI$wyHh7qeLBJg8pvD3sccUA1	Enabled	0 (Read-Write)	Delete
brocade	1WensxNT7$S28SU7ddHqDb2abHH4hTo1	Enabled	0 (Read-Write)	Delete
Username	Password	Encrypt	Privilege	

Saving Configuration Changes

Changes made to the configuration are not automatically saved during a session. An option to save changes is provided when logging out of the web interface.

To save the configuration manually, use the **Save to Flash** option under the **Command** menu.

```
Command
    Clear
    Disable Frame
    Logout
    Reload
    Save to Flash
    Switch-over-active-controller
    Telnet
    Trace Route
```

Documentation

All documentation for Brocade/Ruckus campus switches can be found in the document page for each product: http://www.brocade.com/en/products-services/switches/campus–network–switches.html.

Web Interface User Guide

The *Brocade FastIron Web Management Interface User Guide* is available at http://www.brocade.com/content/html/en/fastiron-os/08-0-60/fastiron–08060-webguide/index.html.

CLI Command Reference

The *Brocade FastIron Command Reference Guide* documents all of the available commands:

www.brocade.com/content/html/en/fastiron-os/08-0-60/fastiron–08060-commandref/

Additional Information

Accessing MyBrocade

MyBrocade provides access to all product documentation, software updates, technical assistance resources, and Brocade communities. To register for MyBrocade, go to https://my.brocade.com/.

To access the full range of services, register your products by going to your profile and clicking **Get Support Access**. Alternatively, use the Warranty Product Registration form to register your products: http://www.brocade.com/en/forms/warranty-registration.html.

Obtaining Software Updates

Access to software updates is available via MyBrocade. To access switch software, register your products by going to your profile and clicking **Get Support Access**.

Lifetime Warranty Hardware Replacement

All Ruckus ICX switches include a lifetime hardware replacement warranty. Full details are available at http://www.brocade.com/en/support/warranties-and-returns.html.