

## Configuring the Huawei S7700 series of switches for Livewire®

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### Introduction

Please note that this document applies **only** to the Huawei S7700 series of switches. Using these commands to program other switches not in this series could yield unintended results.

#### \*\* IMPORTANT NOTE \*\*

A number of Axia products have ethernet switches built in. The QOR based consoles (iQ, Radius, RAQ and DESQ) as well as the PowerStation have built in ethernet switches. In addition Axia makes a standalone xSwitch. All of these products are tested compatible with this switch. It may be possible to use Cisco switches in conjunction with this switch. Please review the advanced topics document on this subject which gives configuration example and lists all known issues.

This document is not intended to be an all-inclusive or even a step-by-step manual on how to configure this switch but is provided as a guide and makes some basic assumptions regarding the skill level of person doing the programming. If you are not comfortable hooking up serial cables, assigning IP addresses, typing in a command line interfaces, etc, you should contact your IT department for assistance.

For the initial configuration of the switch, you can use PuTTY, which is a free program that allows you to connect to the switch either via a Telnet session, or through a serial port. If this is the first time the switch has been configured, you will have to connect to the switch via a console cable and serial connection to enter into setup. During the initial setup, you will assign the switch an IP address, which will then allow you to connect to the switch via a Telnet session at a later time. PuTTY can be downloaded here... <http://www.putty.org/>

### Configuration

As of the date of this writing this switch has been tested and the configuration based on software version V200R008C00SPC500. Once you are logged in to the switch, you can use the `display current` command from the user view to show the software version.

There are two “views” in this switch; the user view and the system view. The user view is indicated by < and > symbols around the system name. For example <HUAWEI> would be the default. The system view is indicated by [ and ] around the system name. For example [HUAWEI] would be the default system view. All configuration is done in the system view.

## Programming

Once connected with the serial cable (default settings are 9600 baud) you should be able to see messages on the screen as the switch boots. This will confirm that you serial cable is working correctly. Once booted you will be presented with a prompt saying **Press ENTER to get started.**

Once you press the enter key, you will be presented with the following;

**An initial password is required for the first login via the console.  
Continue to set it? [Y/N]:**

If you chose not to set a password for this serial connection, answer N. If you choose to set a password, answer Y.

We suggest using a password of 'Livewire' or some other password that is easy to remember or setting NO password for the serial cable connection.

## SET THE SYSTEM NAME

We suggest setting the system name of each switch to something descriptive. To change the system name from the default of HUAWEI, type the following from the user prompt;

```
<HUAWEI>system-view  
[HUAWEI]sysname AXIA01  
[AXIA01]quit  
<AXIA01>save
```

## SET THE IP ADDRESS ON VLAN 1

By default Livewire uses Vlan 1. It may be possible to use other Vlans however, support for that is outside of the scope of this document. Please contact your Huawei dealer or Huawei for support on using other Vlans.

### A word about IP Addressing

By default the IGMP Querier will be the lowest IP address switch in the subnet. For this reason, it is important to set your core switch lower than any other switch. Note, that this includes any Power Station, QOR or xSwitich as well.

To set the IP address, type the following from the user prompt (replace the IP address shown with one that is appropriate to your configuration);

```
<AXIA01>system-view  
[AXIA01] interface Vlanif 1  
[AXIA01-Vlanif1]ip address 192.168.2.2 255.255.255.0  
[AXIA01-Vlanif1]quit
```

**\*\*\* NOTE - Following command is only needed if a default gateway is needed however the 'quit' and 'save' commands following this are still required.**

```
[AXIA01]ip route-static 0.0.0.0 0.0.0.0 192.168.2.1
```

```
[AXIA01]quit
<AXIA01>save
```

Answer “Y” to any questions regarding saving settings.

## CONFIGURE IGMP

To configure IGMP, type the following from the user prompt;

**\*\* Note that these commands should be typed in the order shown here to prevent errors.**

```
<AXIA01>system-view
[AXIA01]igmp-snooping enable
[AXIA01]multicast routing-enable
[AXIA01]interface vlan 1
[AXIA01-Vlanif1]igmp enable
[AXIA01-Vlanif1]quit
[AXIA01]vlan 1
[AXIA01-vlan1]igmp-snooping enable
[AXIA01-vlan1]multicast drop-unknown
[AXIA01-vlan1]igmp-snooping query-interval 60
[AXIA01-vlan1]igmp prompt-leave
[AXIA01-vlan1]quit
[AXIA01]quit
<AXIA01>save
```

Answer “Y” to any questions regarding saving settings.

## CONFIGURING QoS

To configure Priority Queuing (pq) type the following commands for any ports where Livewire is used. Replace the port numbers (2/4/0/48 etc.) with the ports appropriate for your configuration.

```
<AXIA01>system-view
[AXIA01]interface range GigabitEthernet 2/4/0/0 to GigabitEthernet 2/4/0/48
[AXIA01-port-group]qos pq
[AXIA01-port-group]quit
[AXIA01]quit
<AXIA01>save
```

## CONFIGURING TRUNK PORTS

Trunk ports are used for connecting other switches or Axia devices with switches built in (like a PowerStation Main or QOR or xSwitch). Please note that when connecting to a PowerStation Main, only the GIG ports can be used and they must be properly configured for Trunk operation in the Ethernet Switch configuration of the Element Control Center. QOR based devices and xSwitch should only be connected to the GIG Ports.

By default, trunk ports will allow only vlan 1 to pass. The command `port trunk allow-pass vlan 2 to 4094` can be eliminated from the commands below if no other Vlan's are required to pass. Replace the port numbers (2/4/0/48 etc.) with the ports appropriate for your configuration.

To configure a single trunk port, type the following from the user prompt;

```
<AXIA01>system-view
[AXIA01]interface GigabitEthernet 2/4/0/48
[AXIA01-GigabitEthernet2/4/0/48]port link-type trunk
[AXIA01-GigabitEthernet2/4/0/48]port trunk allow-pass vlan 2 to 4094
[AXIA01-GigabitEthernet2/4/0/48]quit
[AXIA01]quit
<AXIA01>save
```

Answer "Y" to any questions regarding saving settings.

To configure multiple trunk ports at once, type the following from the user prompt;

```
<AXIA01>system-view
[AXIA01]telnet server enable
[AXIA01]interface range GigabitEthernet 2/4/0/40 to GigabitEthernet 2/4/0/48
[AXIA01-port-group]port link-type trunk
[AXIA01-port-group]port trunk allow-pass vlan 2 to 4094
[AXIA01-port-group]quit
[AXIA01]quit
<AXIA01>save
```

Answer "Y" to any questions regarding saving settings.

## CONFIGURING TELNET ACCESS

To configure telnet access, type the following from the user prompt;

```
<AXIA01>system-view
[AXIA01]telnet server enable
[AXIA01]user-interface vty 0 4
```

```
[AXIA01-ui-vty0-4]protocol inbound telnet  
[AXIA01-ui-vty0-4]authentication-mode password  
[AXIA01-ui-vty0-4]set authentication password cipher <password>  
[AXIA01-ui-vty0-4]user privilege level 15  
[AXIA01-ui-vty0-4]quit  
[AXIA01]quit  
<AXIA01>save
```

Answer “Y” to any questions regarding saving settings.

### **CHECK YOUR CONFIGURATION**

To check your switch configuration, type the following from the user prompt;

```
<AXIA01>display current-configuration
```