VadaTech

Gigabit Ethernet Managed Switch Setup

February 5, 2010

Version 2.4

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Revision History

Doc Rev	Description of Change	Revision Date
1.0	Document Created	11/11/2008
1.1	Updated for version 1.9	02/16/2009
1.2	Format changes	03/18/2009
2.0	Update to include VT850, UTC003 and AMC216, AMC217, AMC218, and AMC219	05/26/2009
2.1	Update to include UTC002 and ATC114	08/12/2009
2.2	Correct document id	09/17/2009
2.3	Update to include CP218 and AMC228	11/04/2009
2.4	Update to include VT851, VT852, VT853 and ATC809	02/05/2010

Table of Contents

Figures

Tables

1 Overview

The Gigabit Ethernet Managed switch interface is used to control the managed switch features present in the Gigabit Ethernet managed switch.

1.1 Applicable Products

- UTC001
- UTC002
- UTC003
- VT850
- VT851
- VT852
- VT853
- AMC216
- AMC217
- AMC218
- AMC219
- AMC228
- ATC114
- ATC809
- CP218

1.2 Document References

- VadaTech MCH Getting Started Guide

2 Initial Setup

2.1 Logging in the First Time

The switch is configured from the factory to a default IP address of 192.168.40.230.

The web interface of the switch may be accessed through any switch port on the device. The UTC001, UTC002, UTC003, VT850, VT851, VT852 and VT853 have GbE ports as well as a connection to each AMC slot that can be used to connect to the switch network. The AMC216, AMC217, AMC218, AMC219 and AMC228 have backplane connections and front mounted ports that connect to the switch network. The ATC114 has backplane connections, connections to a rear transition module and dual connections to each AMC slot. The ATC809 has backplane connections to both shelf managers and backplane fabric ports. The CP218 has front mounted ports.

The switch can be accessed with a standard web browser at http://192.168.40.230/ with user name '**admin**' and password '**admin**'.

2.2 Initial Setup

Once logged in, the user can start the managed switch configuration and the current status. It is recommended that the default IP address be changed to allow multiple managed switches to be installed on a single network. For example, redundant MCH operation would have two switches on the same network and require them to have unique IP addresses.

To change the IP address of the switch, navigate to the System menu on the left panel, then Status. The right pane will show the system status of the switch. Next, click on the current IP address as shown in **Figure 1**.

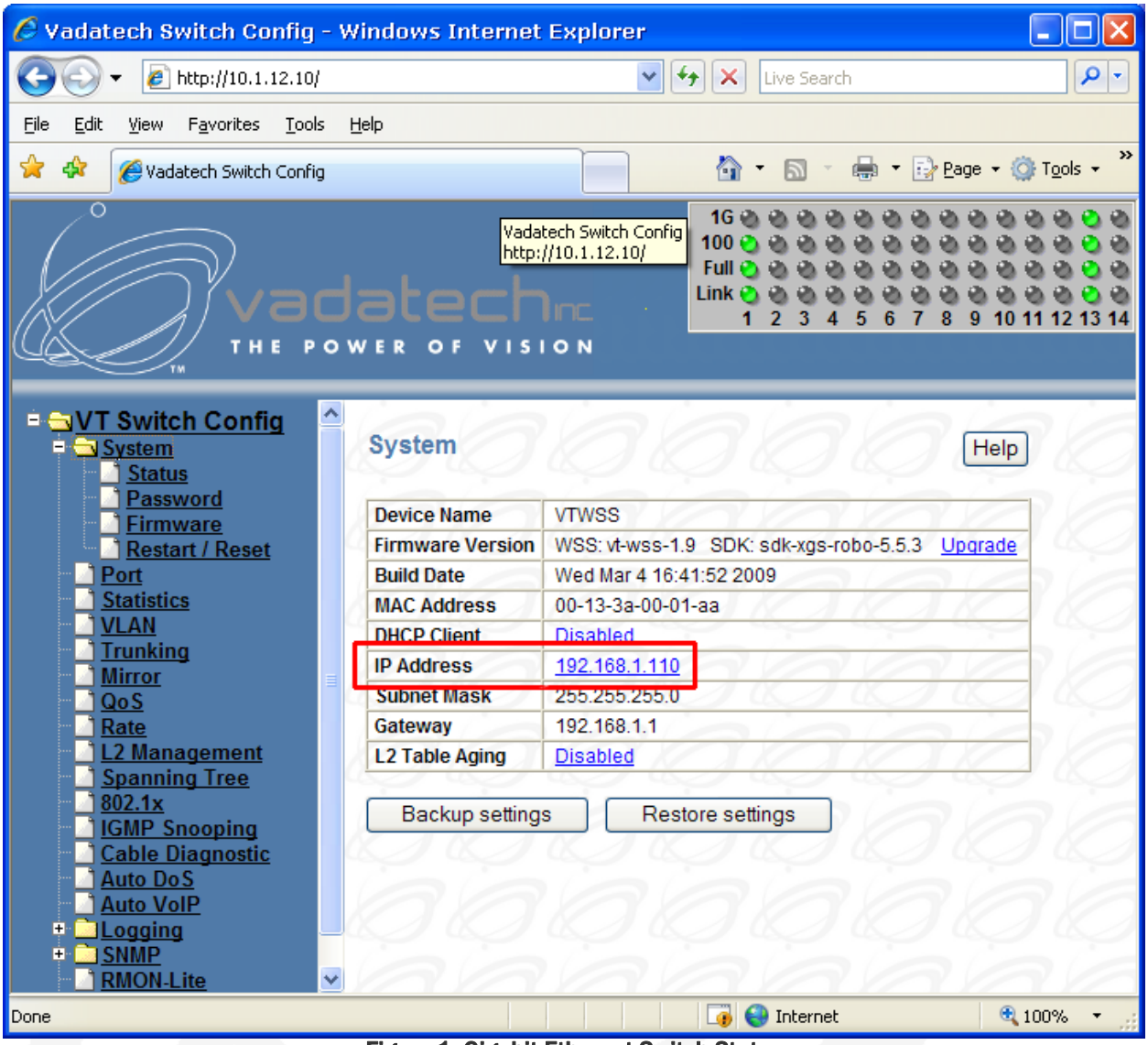

Figure 1: Gigabit Ethernet Switch Status

Enter the new IP address, Network Submask and Gateway address in the following screen and click Apply.

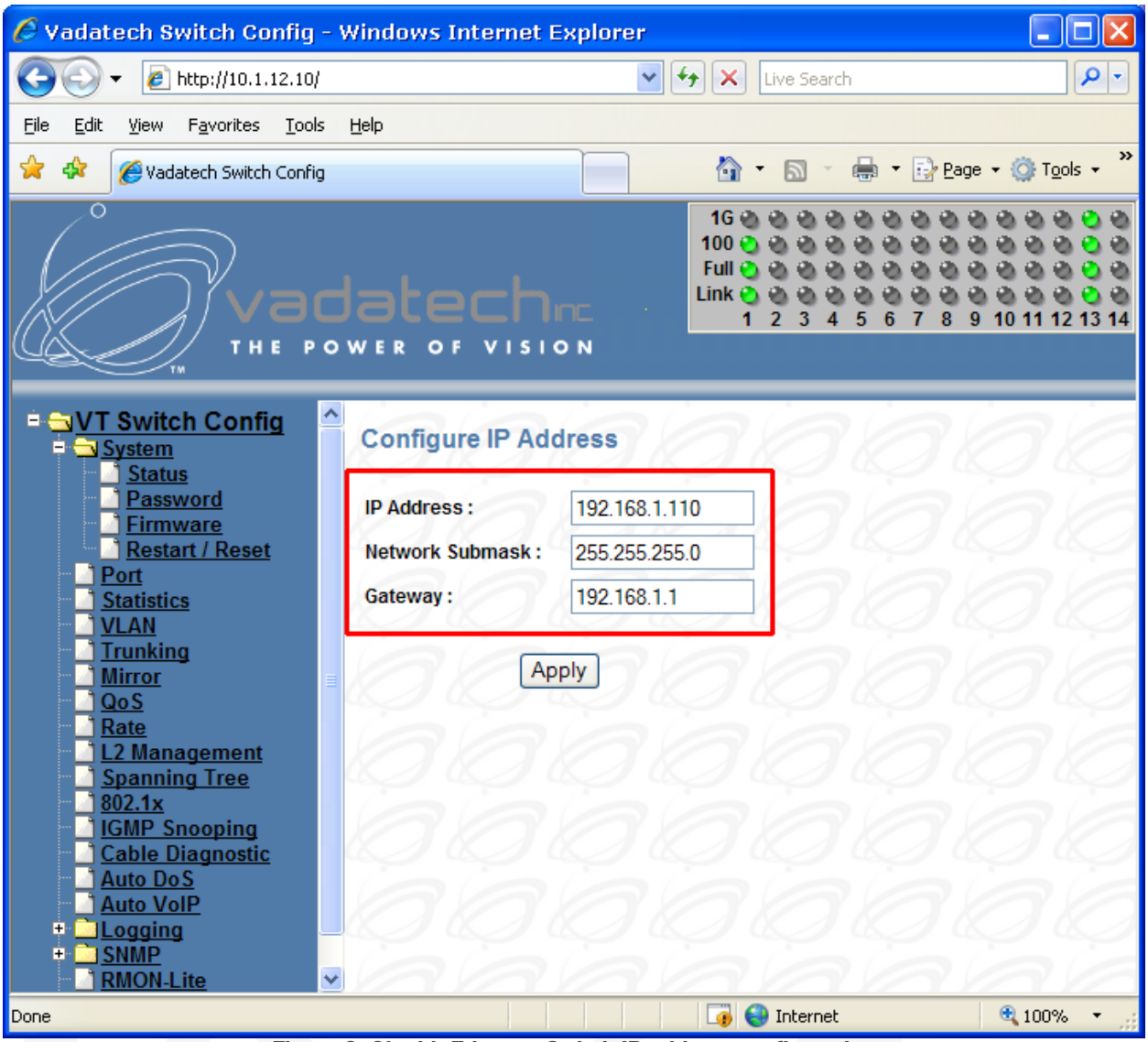

Figure 2: Gigabit Ethernet Switch IP address configuration

3 Troubleshooting

For access to the switch when there is a problem connecting to the web interface, a command line interface can be used to help diagnose the problem.

3.1 Connecting

3.1.1 For UTC001, UTC002, UTC003, VT850 VT851, VT852 and VT853

First connect to the MCH console. See VadaTech MCH Getting Started Guide Section 3 for more information.

To connect to the Gigabit Ethernet switch command interface:

```
# term –b115200 /dev/ttyS1
```

3.1.2 For AMC216 and AMC217

The serial port is on a 6 pin header on the AMC. The TX, RX and Ground pins are labeled on the AMC. The serial protocol is RS-232, 115200 baud, N81.

3.1.3 For AMC218, AMC219 and AMC228

The serial port is a female micro-USB connector on the front panel. To connect this serial port to a standard DB9 connector use part number CBL-DB9MUSB1. The serial protocol is RS-232, 115200 baud, N81.

3.1.4 For ATC114

The serial port is on a 6 pin header on the ATC114. The TX, RX and Ground pins are labeled on the ATC114. The switch block SW6, switch 3 should be in the off position to direct the switch output to the serial port. The serial protocol is RS-232, 115200 baud, N81.

3.1.5 For ATC809

The serial port is on an RJ-45 connector. See the ATC809 User Manual for details on the serial pin out. The serial protocol is RS-232, 15200 baud, N81.

3.1.6 For CP218

The serial port is on an RJ-45 connector. See the CP218 User Manual for details on the serial pin out. The serial protocol is RS-232, 15200 baud, N81.

3.2 PortStat

The PortStat command lists the state of all ports in the Gigabit Ethernet switch. It may be abbreviated as 'ps'.

Port	UTC001	UTC002	UTC003
ge0	Switch management CPU	Switch management CPU	Switch management CPU
ge1	-	MCH GbE0 Front Panel	MCH GbE Front Panel
ge2	-	MCH Management Controller	-
ge3	MCH Daughtercard	MCH Daughtercard 1	MCH Daughtercard
ge4	MCH Management Controller	MCH Daughtercard 2	MCH Management Controller
ge5	MCH GbE Front Panel	MCH GbE1 Front Panel	MCH GbE Front Panel
ge6	MCH Update Channel	MCH Update Channel	MCH Update Channel
ge7	To AMC 12	To AMC 12	To AMC 12
ge8	To AMC 11	To AMC 11	To AMC 11
ge9	To AMC 10	To AMC 10	To AMC 10
ge10	To AMC 9	To AMC 9	To AMC 9
ge11	To AMC 8	To AMC 8	To AMC 8
ge12	To AMC 7	To AMC 7	To AMC 7
ge13	To AMC 6	To AMC 6	To AMC 6
ge14	To AMC 5	To AMC 5	To AMC 5
ge15	To AMC 4	To AMC 4	To AMC 4
ge16	To AMC 3	To AMC 3	To AMC 3
ge17	To AMC 2	To AMC 2	To AMC 2
ge18	To AMC 1	To AMC 1	To AMC 1

Table 1: Gigabit Ethernet Port Descriptions for MCH

Port	AMC216/217	AMC218	AMC219	AMC228
ge0	Switch management CPU	Switch management CPU	Switch management CPU	Switch management CPU
ge1	-	-	-	-
ge2	-	-	-	-
ge3	Front Panel Port 1	Front Panel Port 1	Front Panel Port 1	SFP 1
ge4	Front Panel Port 2	Front Panel Port 2	Front Panel Port 2	SFP 0
ge5	Front Panel Port 3	Front Panel Port 3	Front Panel Port 3	Wireless
ge6	Front Panel Port 4	Front Panel Port 4	Front Panel Port 4	AMC Port 4
ge7	Front Panel Port 5	Front Panel Port 5	Front Panel Port 5	AMC Port 8
ge8	Front Panel Port 6	Front Panel Port 6	Front Panel Port 6	-
ge9	Front Panel Port 7	-	Front Panel Port 7	-
ge10	Front Panel Port 8	-	Front Panel Port 8	-
ge11	-	-	Front Panel Port 9	-
ge12	-	-	Front Panel Port 10	-
ge13	-	-	Front Panel Port 11	-
ge14	-	-	Front Panel Port 12	-
ge15	-	-	-	-
ge16	-	-	-	-
ge17	AMC Port 0	AMC Port 0	AMC Port 0	AMC Port 0
ge18	AMC Port 1	AMC Port 1	AMC Port 1	AMC Port 1

Table 2: Gigabit Ethernet Port Descriptions for AMC

Port	VT850	VT851	VT852/VT853
ge0	Switch management CPU	Switch management CPU	Switch management CPU
ge1	Chassis GbE Front Panel	MCH Management	-
ge2	MCH Management	Chassis GbE Front Panel	-
ge3	AMC 1 Port 0	AMC 1 Port 0	AMC 1 Port 0
ge4	AMC 1 Port 1	AMC 1 Port 1	AMC 1 Port 1
ge5	AMC 2 Port 0	AMC 2 Port 0	AMC 2 Port 0
ge6	AMC 2 Port 1	AMC 2 Port 1	AMC 2 Port 1
ge7	AMC 3 Port 0	AMC 3 Port 0	AMC 3 Port 0
ge8	AMC 3 Port 1	AMC 3 Port 1	AMC 3 Port 1
ge9	AMC 4 Port 0	AMC 4 Port 0	AMC 4 Port 0
ge10	AMC 4 Port 1	AMC 4 Port 1	AMC 4 Port 1
ge11	AMC 5 Port 0	AMC 5 Port 0	AMC 5 Port 0
ge12	AMC 5 Port 1	AMC 5 Port 1	AMC 5 Port 1
ge13	AMC 6 Port 0	AMC 6 Port 0	AMC 6 Port 0
ge14	AMC 6 Port 1	AMC 6 Port 1	AMC 6 Port 1
ge15	AMC 7 Port 0	AMC 7 Port 0	Front Panel 0
ge16	AMC 7 Port 1	AMC 7 Port 1	Front Panel 1
ge17	AMC 8 Port 0	AMC 8 Port 0	MCH Management
ge18	AMC 8 Port 1	AMC 8 Port 1	Daughter Card 0
ge19	AMC 9 Port 0	AMC 9 Port 0	Daughter Card 1
ge20	AMC 9 Port 1	Daughter Card 0	-
ge21	AMC 10 Port 0	AMC 10 Port 0	-
ge22	AMC 10 Port 1	AMC 10 Port 1	-
ge23	AMC 11 Port 0	AMC 11 Port 0	-
ge24	AMC 11 Port 1	Daughter Card 1	-
ge25	AMC 12 Port 0	AMC 12 Port 0	-
ge26	AMC 12 Port 1	AMC 12 Port 1	-

Table 3: Gigabit Ethernet Port Descriptions for MicroTCA Carriers

Port	ATC114	ATC809
ge0	Switch management CPU	Switch management CPU
ge1	-	Base Port 15
ge2	-	Base Port 16
ge3	Base Channel 0	Front Panel Port 1
ge4	Base Channel 1	Front Panel Port 2
ge5	Fabric Channel 0	Front Panel Port 3
ge6	Fabric Channel 1	Front Panel Port 4
ge7	Fabric Channel 2	Front Panel Port 5
ge8	Fabric Channel 3	Front Panel Port 6
ge9	Zone 3-0	Front Panel Port 7
ge10	Zone 3-1	Front Panel Port 8
ge11	Zone 3-2	Shelf Port 0
ge12	Slot A1 Port 0	Shelf Port 1
ge13	Slot A1 Port 1	Update Channel
ge14	Slot B1 Port 0	Base Port 2
ge15	Slot B1 Port 1	Base Port 3
ge16	Slot A2 Port 0	Base Port 4
ge17	Slot A2 Port 1	Base Port 5
ge18	Slot B2 Port 0	Base Port 6
ge19	Slot B2 Port 1	Base Port 7
ge20	Slot A3 Port 0	Base Port 8
ge21	Slot A3 Port 1	Base Port 9
ge22	Slot B3 Port 0	Base Port 10
ge23	Slot B3 Port 1	Base Port 11
ge24	Slot B4 Port 0	Base Port 12
ge25	Slot B4 Port 1	Base Port 13
ge26	-	Base Port 14

Table 4: Gigabit Ethernet Port Descriptions for ATCA Carriers

Port	CP218
ge0	Switch management CPU
ge1	-
ge2	-
ge3	Front Panel Port 1
ge4	Front Panel Port 2
ge5	Front Panel Port 3
ge6	Front Panel Port 4
ge7	Front Panel Port 5
ge8	Front Panel Port 6
ge9	Front Panel Port 7
ge10	Front Panel Port 8
ge11	Front Panel Port 9
ge12	Front Panel Port 10
ge13	Front Panel Port 11
ge14	Front Panel Port 12
ge15	-
ge16	-
ge17	-
ge18	-

Table 5: Gigabit Ethernet Port Descriptions for cPCI

3.2.1 port

The port column gives the name of the port. Refer to Table 1, Table 2, Table 3, Table 5 and Table 5 for the description of which port names correspond to where it is connected.

3.2.2 ena/link

The ena/link column shows which ports are enabled and have Ethernet link.

3.2.3 speed/duplex

The speed/duplex column lists the speed the link is running at and the duplex setting. The possible values are 1G, 100 and 10 for the speed for a link running at 1 gigabit, 100 megabit or 10 megabit, respectively. The duplex can be either FD or HD for full duplex or half duplex, respectively.

3.2.4 link scan

The link scan column shows if the link state is scanned periodically by software or automatically by the hardware.

3.2.5 auto neg?

The 'auto neg?' column shows if the speed of the link is determined by auto negotiation or set statically.

3.2.6 STP state

The STP state column shows if the port is part of a spanning tree network. The possible values listed are Disable, Forward or Block.

- Disabled state is for ports that are either not part of the spanning tree negotiation or are not currently linked with another device.
- Forward state is for ports that are part of a spanning tree and are actively turned on to forward packets to other devices.

- Blocked state is when the port is part of a spanning tree and packets are being discarded from this port to prevent cycles in the network graph.

3.2.7 pause

The pause column shows if the port supports pause frames to allow flow control through the network.

3.3 exit

From the command interface prompt, the exit command may be used to reboot the Gigabit Ethernet switch software.

3.4 shell

The shell command enters the operating system shell where the management IP address can be viewed.

3.4.1 showIfs

The showIfs command in the operating system shell will display the configured IP address.

3.4.2 exit

The exit command will terminate the operating system shell and return to the command interface.