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IronWare Software Release R04.1.00d for Brocade TurboIron 24X Series Switches

Release Notes v1.0

January 26, 2010

Document History

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IronWare Software Release R04.1.00d for Brocade TurboIron 24X Series Switches Release Notes v1.0	Initial release	January 26, 2010

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Supported Devices for IronWare R04.1.00d

This software release applies to the TurboIron 24X compact switch.

Summary of Enhancements in IronWare R04.1.00d

This section describes feature enhancements in the TurboIron 24X R04.1.00d software release. This release also contains software fixes. See "Closed Defects in IronWare R04.1.00d" on page 15.

This release supports the Layer 2 software image only.

Feature	Description
Enhancements to **flow-control**	The **flow-control** command is enhanced to support control of PAUSE frame generation and honoring independently. By default, the port is configured only to honor any incoming PAUSE frame. • To toggle to generating PAUSE frame mode, enter the following command at the Interface or Global level of the CLI. **flow-control generate-only** • To enable both generation and honoring of PAUSE frames, enter the following command. **flow-control both** • To disable both generation and honoring of PAUSE frames, enter the following command. **no flow-control**

Feature Support

This section describes the feature highlights in this release. Features or options not listed in this section or documented in the *FastIron and TurboIron 24X Configuration Guide* are not supported.

Supported Management Features

This release supports the following management features.

Supported Management Features Category, Description, and Configuration Notes	Supported on TIX
802.1X accounting	No
AAA support for console commands	Yes
Access Control Lists (ACLs) for controlling management access	Yes
Alias Command	Yes
Combined DSCP and internal marking in one ACL rule	Yes
Configuring an interface as the source for all TFTP, Syslog, and SNTP packets	No
DHCP Client-Based Auto-Configuration	No

Supported Management Features Category, Description, and Configuration Notes	Supported on TIX
Disabling TFTP Access	Yes
IronView Network Manager (optional standalone and HP OpenView GUI)	No
P-Bridge and Q-Bridge MIBs	Yes
Remote monitoring (RMON)	Yes
Retaining Syslog messages after a soft reboot	No
sFlow • For inbound traffic only • 802.1X username export support for encrypted and non-encrypted EAP types	Yes
sFlow support for IPv6 packets	No
Serial and Telnet access to industry-standard Command Line Interface (CLI)	Yes
Show log on all terminals	Yes
SNMP v1, v2, v3	Yes
SNMP V3 traps	Yes
Specifying the maximum number of entries allowed in the RMON Control Table	Yes
Specifying which IP address will be included in a DHCP/BOOTP reply packet	No
Traffic counters for outbound traffic	Yes
Web-based GUI	No
Web-based management HTTPS/SSL	No

Supported Security Features

This release supports the following security features.

Supported Security Features Category, Description, and Configuration Notes	Supported on TIX
802.1X port security	No
802.1X authentication RADIUS timeout action	No
802.1X dynamic assignment for ACL, MAC filter, and VLAN	No
Access Control Lists (ACLs) for filtering transit traffic • Support for inbound ACLs only. These devices do not support outbound ACLs.	Yes
Address locking (for MAC addresses)	No
AES Encryption for SNMP v3	No
AES Encryption for SSH v2	Yes
Authentication, Authorization and Accounting (AAA)	Yes

Supported Security Features Category, Description, and Configuration Notes	Supported on TIX
• RADIUS, TACACS/TACACS+	
Denial of Service (DoS) protection • TCP SYN Attacks and ICMP Attacks	No
DHCP Snooping	No
Dynamic ARP Inspection	No
EAP Pass-through Support	No
Enhancements to username and password	Yes
HTTPS	No
IP Source Guard	No
Local passwords	Yes
MAC filtering • Filtering on source and destination MAC addresses	Yes
MAC filter override of 802.1X	No
Ability to disable MAC Learning	Yes
MAC port security	No
Multi-device port authentication	No
Multi-device port Authentication with dynamic ACLs	No
Multi-device port authentication with dynamic VLAN assignment	No
Multi-device port authentication password override	No
Multi-device port authentication RADIUS timeout action	No
Secure Copy (SCP)	Yes
Secure Shell (SSH) v2 Server	Yes
Packet filtering on TCP Flags	No
DHCP Relay Agent information (DHCP Option 82) for DHCP snooping	No
Web Authentication	No

Supported System-Level Features

This release supports the following system-level features.

Supported System –Level Features Category, Description, and Configuration Notes	Supported on TIX
10/100/1000 port speed	Yes
1 Gbps and 10 Gbps configurable port speed on fiber ports	Yes

Supported System –Level Features **Category, Description, and Configuration Notes**	**Supported on TIX**
32,000 MAC addresses per switch	Yes
ACL-Based Mirroring	Yes
ACL-Based Rate Limiting • ACL-based fixed and adaptive rate limiting on inbound ports	Yes
ACL filtering based on VLAN membership or VE port membership	Yes
ACL logging of denied packets • ACL logging is supported for denied packets, which are sent to the CPU for logging • ACL logging is not supported for permitted packets • Packets that are denied by ACL filters are logged in the Syslog based on a sample time-period.	Yes
ACL statistics	Yes
Asymmetric flow control • Responds to flow control packets, but does not generate them	Yes
Auto MDI/MDIX	Yes
Auto-negotiation	Yes
Automatic removal of Dynamic VLAN for 802.1X ports	No
Automatic removal of Dynamic VLAN for MAC authenticated ports	No
Broadcast, multicast, and unknown-unicast rate limiting	Yes
Boot and reload after 5 minutes at or above shutdown temperature	Yes
Cut-through switching	Yes
DiffServ support	Yes
Digital Optical Monitoring	Yes
Displaying interface names in Syslog	Yes
Displaying TCP/UDP port numbers in Syslog messages	Yes
DSCP Mapping for values 1 through 8	Yes
Dynamic buffer allocation	No
Egress buffer thresholds	Yes
Fixed rate limiting • Port-based rate limiting on inbound ports • Fixed rate limiting is not supported on 10-Gigabit Ethernet ports • Fixed rate limiting is not supported on tagged ports in the full Layer 3 router image	Yes
Foundry Discovery Protocol (FDP) / Cisco Discovery Protocol (CDP)	Yes

Supported System –Level Features Category, Description, and Configuration Notes	Supported on TIX
Generic buffer profile	No
High Availability • Layer 2 hitless switchover • Layer 2 hitless Operating System (OS) upgrade	No
LLDP	Yes
LLDP-MED	No
MAC filter-based mirroring	Yes
Multi-port static MAC address	Yes
Multiple Syslog server logging • Up to six Syslog servers	Yes
Negative temperature setting	Yes
Outbound rate limiting	No
Outbound rate shaping	Yes
Path MTU Discovery support	No
Port flap dampening	Yes
Port mirroring and monitoring • Mirroring of both inbound and outbound traffic on individual ports is supported.	Yes
Power over Ethernet	No
Priority mapping using ACLs	Yes
Protected link groups	No
Specifying a Simple Network Time Protocol (SNTP) Server	Yes
Specifying the minimum number of ports in a trunk group	Yes
Static MAC entries with option to set traffic priority	Yes
Virtual Cable Testing (VCT) technology • Uses Time Domain Reflectometry (TDR) technology to detect and report cable statistics such as; local and remote link pair, cable length, and link status.	No

Supported Layer 2 Features

This release supports the following Layer 2 features.

Supported Layer 2 Features Category, Description, and Configuration Notes	Supported on TIX
802.1D Spanning Tree Support	Yes

Supported Layer 2 Features **Category, Description, and Configuration Notes**	**Supported on TIX**
• Enhanced IronSpan support includes and Single-instance Span • TurboIron switches support up to 510 spanning tree instances for VLANs.	
802.1p Quality of Service (QoS) • Strict Priority (SP) • Weighted Round Robin (WRR) • Combined SP and WRR • 8 priority queues	Yes
802.1s Multiple Spanning Tree	Yes
802.1W Rapid Spanning Tree (RSTP) • 802.1W RSTP support allows for sub-second convergence (both final standard and draft 3 supported)	Yes
802.3ad link aggregation (dynamic trunk groups) • Brocade ports enabled for link aggregation follow the same rules as ports configured for trunk groups.	Yes
ACL-based rate limiting QoS	Yes
BPDU Guard	Yes
Dynamic Host Configuration Protocol (DHCP) Assist	Yes
IGMP v1/v2 Snooping Global	Yes
IGMP v3 Snooping Global	Yes (*,G and S,G)
IGMP v1/v2/v3 Snooping per VLAN	Yes
IGMP v2/v3 Fast Leave (membership tracking)	Yes
IGMP Filters	Yes
Interpacket Gap (IPG) adjustment	Yes
Jumbo frames • 1-Gigabit and 10-Gigabit Ethernet ports • Up to 9216 bytes	Yes
Jumbo frames 10/100 support • Up to 10240 bytes	Yes
LACP • LACP trunk group ports follow the same configuration rules as for statically configured trunk group ports. • Support for single link LACP	Yes
Link Fault Signaling (LFS) for 10-Gigabit Ethernet ports	Yes

Supported Layer 2 Features **Category, Description, and Configuration Notes**	**Supported on TIX**
MAC-Based VLANs • Dynamic MAC-Based VLAN Activation	No
Metro Ring Protocol 1 (MRP 1)	No
Metro Ring Protocol 2 (MRP 2)	No
MLD Snooping V1/V2 • MLD V1/V2 snooping (global and local) • MLD fast leave for V1 • MLD tracking and fast leave for V2 • Static MLD and IGMP groups with support for proxy	No
Multicast static group traffic filtering (for snooping scenarios)	No
PIM-SM V2 Snooping	Yes
PVST/PVST+ compatibility	Yes
PVRST+ compatibility	Yes
Remote Fault Notification (RFN) for 10-Gigabit Ethernet ports	No
Root Guard	Yes
Super Aggregated VLANs	No
Trunk groups • Trunk threshold for static trunk groups • Flexible trunk group membership	Yes
Topology groups	No
Uni-directional Link Detection (UDLD) (Link keepalive)	Yes
Uplink Ports Within a Port-Based VLAN	No
VLAN Support on TurboIron Devices: • 4096 maximum VLANs • Dual-mode VLANs • 802.1Q tagging • Port-based VLANs	Yes
VLAN Q-in-Q Tagging (tag-type 8100 over 8100 encapsulation)	No
VLAN-based mirroring	No
VoIP Auto-configuration and CDP	No
Virtual Switch Redundancy Protocol (VSRP)	No
VSRP-Aware security features	Yes
VSRP and MRP signaling	No

Supported Layer 2 Features Category, Description, and Configuration Notes	Supported on TIX
VSRP Fast Start	No
VSRP timer scaling	No

Image Files for IronWare R04.1.00d

The following Software Image Files are available for IronWare R04.1.00d.

Device	Boot Image	Flash Image
TurboIron 24X Series	GRZ04100.bin	TIS04100d.bin (Layer 2)

Factory Pre-loaded Software

This table lists the software that is factory-loaded into the primary and secondary flash areas on the device. All images are included on the CD-ROM shipped with the device.

Model	Software Images	
	Primary Flash	Secondary Flash
TurboIron 24X Series	Layer 2	Layer 2

Upgrading software images

Upgrading the Boot Code

1. Place the new boot code on a TFTP server to which the Brocade device has access.
2. Enter the following command at the Privileged EXEC level of the CLI (example: FastIron Switch#) to copy the boot code from the TFTP server into flash memory:

   copy tftp flash <ip-addr> <image-file-name> **bootrom**
3. Use the **copy tftp flash** command to copy the boot code to the Brocade device only during a maintenance window. Attempting to do so during normal networking operations can cause disruption to the network.
4. Verify that the code has been successfully copied by entering the following command at any level of the CLI:

   show flash
5. The output will display the compressed boot ROM code size and the boot code version.
6. Upgrade the flash code as instructed in the following section.

Upgrading the Flash Code

1. Place the new flash code on a TFTP server to which the Brocade device has access.
2. Enter the following command at the Privileged EXEC level of the CLI (example: `FastIron#`) to copy the flash code from the TFTP server into the flash memory:

   copy tftp flash <ip-addr> <image-file-name> primary | secondary
3. Verify that the flash code has been successfully copied by entering the following command at any level of the CLI:

   show flash
4. If the flash code version is correct, go to Reload the software by entering the following command:

Otherwise, return to Place the new flash code on a TFTP server to which the Brocade.

5. Reload the software by entering the following command:

   reload

   The **reload** command boots from the default boot source, which is the primary flash area by default)

Technical Support

Contact your switch supplier for hardware, firmware, and software support, including product repairs and part ordering. To expedite your call, have the following information immediately available:

1. **General Information**

- Technical Support contract number, if applicable
- Switch model
- Switch operating system version
- Error numbers and messages received
- Detailed description of the problem, including the switch or network behavior immediately following the problem, and specific questions
- Description of any troubleshooting steps already performed and the results

2. **Switch Serial Number**

Additional Resources

Below are some additional publications you can reference to find more information on the products supported in this software release.

Title	Contents
FastIron and TurboIron 24X Configuration Guide	Provides configuration procedures for system-level features, enterprise routing protocols, and security features.
Brocade TurboIron 24X Series Hardware Installation	Provides the following information: • Product Overview • Installation instructions • Hardware Specifications
IronWare MIB Reference	Simple Network Management Protocol (SNMP) Management Information Base (MIB) objects.

Defects

This section lists closed and opened defects in Multi-Service IronWare R04.1.00 releases for the TurboIron 24X.

Closed Defects in IronWare R04.1.00d

This section lists defects closed in Multi-Service IronWare R04.1.00d.

Defect ID	Technical Severity	Description
110865	Low	**Summary:** The sflow threshold lower limit should be 256 and not 1 **Symptom:** In the CLI, sflow threshold takes a value 1 for the lower threshold **Probability:** High **Feature:** sFlow **Function:** CLI
110800	Low	**Summary:** Legitimate Packet Drops are showing as InDiscards **Symptom:** InDiscards counters gets incremented incorrectly **Probability:** High **Feature:** System **Function:** System Counters
110864	High	**Summary:** Switch crashes when there is lots of packets coming into the management port **Symptom:** Switch reboots on its own when lots of packets are sent to the management port **Probability:** Medium **Feature:** System **Function:** Management Port
109796	Low	**Summary:** SNMPwalk reports management port as “software loopback” instead of “ethernet-csmacd" **Symptom:** MIB get returns software loopback for management port **Probability:** High **Feature:** Network Management **Function:** SNMP MIBs

Closed Defects in IronWare R04.1.00c

This section lists defects closed in Multi-Service IronWare R04.1.00c.

Defect ID	Technical Severity	Description
109267	Medium	**Summary:** Temperature range for fan speed Level 2 (Medium) should be 35C to 65C instead of 25C to 40C **Symptom:** Default temperature threshold for fan speed runs the fan at full speed at room temperature. **Probability**: High **Feature:** System **Function:** System Fans

Closed Defects in IronWare R04.1.00a

This section lists defects closed in Multi-Service IronWare R04.1.00a.

Defect ID	Technical Severity	Description
107999	Low	**Summary:** Software image banner changed from “Not For Production” to “Production” **Symptom:** On boot, the system displays a message that the software image is “Not For Production” even though it is for Production use. **Probability**: High **Feature:** System **Function:** Banner Message