

About the HP MSR2000/3000/4000

Command References

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About the HP MSR2000/3000/4000 Command References

These command references apply to the following models of the HP MSR2000/3000/4000 routers:

Model	
MSR2000	• MSR2003
MSR3000	• MSR3012 • MSR3024 • MSR3044 • MSR3064
MSR4000	• MSR4060 • MSR4080

The HP MSR2000/3000/4000 command references describe the commands and command syntax options available for the HP MSR2000/3000/4000 Routers.

Command reference	Content
<i>Fundamentals Command Reference</i>	Covers the commands for logging in to and setting up an MSR router. This command reference includes: • CLI • RBAC • Login Management • FTP and TFTP • File System Management • Configuration file management • Software upgrade • Emergency shell • Automatic Configuration • Device Management • Tcl
<i>Interface Command Reference</i>	Covers the interface configuration commands. This command reference includes: • Bulk interface • Ethernet interface • WAN interfaces • POS interface • Loopback, null, and inloopback interface
<i>Layer 2 – LAN Switching Command Reference</i>	Covers the commands for configuring Layer 2 technologies and features in a LAN switched network. This command reference includes: • MAC Address Table • Port Isolation • Spanning Tree

Command reference	Content
	• Loop detection • VLAN • LLDP
<i>Layer 2 – WAN Access Command Reference</i>	Covers WAN access technologies. This command reference includes: • PPP • L2TP • HDLC • ISDN • Modem Management • 3G modem • DDR
<i>Layer 3 – IP Services Command Reference</i>	Covers the commands for configuring and managing IP addressing (including static and dynamic IPv4 and IPv6 address assignment), network performance optimization, ARP, and interoperation between IPv4 and IPv6. This command reference includes: • ARP • IP Addressing • DHCP • DNS • NAT • IP Forwarding Basics • Fast Forwarding • Adjacency table • IP Performance Optimization • UDP Helper • IPv6 Basics • DHCPv6 • IPv6 Fast Forwarding • Tunneling • Flow classification
<i>Layer 3 – IP Routing Command Reference</i>	Covers the commands for configuring routes for IPv4 and IPv6 networks of different sizes, route filtering, route control, and policy based routing. This command reference includes: • IP Routing Basics • Static Routing • RIP • OSPF • IS-IS • BGP • Policy-Based Routing • IPv6 Static Routing • RIPng • OSPFv3 • IPv6 IS-IS • IPv6 BGP • IPv6 Policy-Based Routing

Command reference	Content
	• Routing policy
<i>IP Multicast Command Reference</i>	Covers the commands for Layer 3 IPv4 multicast protocols (IGMP and PIM), and Layer 3 IPv6 multicast protocols (MLD and IPv6 PIM), Layer 2 IPv4 multicast protocols (IGMP snooping). This command reference includes: • IGMP Snooping • Multicast Routing and Forwarding • IGMP • PIM • IPv6 Multicast Routing and Forwarding • MLD • IPv6 PIM • Multicast VPN
<i>MPLS Command Reference</i>	Covers the commands for MPLS and MPLS VPN. This command reference includes: • Basic MPLS • Static LSP • LDP • MPLS TE • Static CRLSP • RSVP • Tunnel policy • MPLS L3VPN • MPLS OAM
<i>ACL and QoS Command Reference</i>	Covers the commands for classifying traffic with ACLs, and allocating network resources and managing congestions with QoS technologies to improve network performance and network use efficiency. This command reference includes: • ACL • MPLS QoS • QoS • Time range
<i>Security Command Reference</i>	Covers security feature commands. Available security features include identity authentication (AAA), access security (802.1X, MAC authentication, and portal), secure management (SSH). This command reference includes: • AAA • 802.1X • MAC Authentication • Password control • PKI • IPsec(IPsec, IKE) • Public Key • SSH • ASPF • APR • Session management

Command reference	Content
	• Connection limit • ARP Attack Protection • Crypto engine • Portal • FIPS
<i>Voice Command Reference</i>	Covers Voice features commands. This command reference includes: • Voice interface • Voice Entity • Dial Program • SIP • Call Services
<i>High Availability Command Reference</i>	Covers high availability commands for managing failure detection. Failure detection technologies focus on fault detection and isolation. This command reference includes: • VRRP • BFD • Track • Process placement
<i>Network Management and Monitoring Command Reference</i>	Covers the commands that help you manage and monitor your network, for example, manage system events, sample packets, assess network performance, and test network connectivity. This command reference includes: • System Maintenance and Debugging • NQA • NTP • SNMP • RMON • NETCONF • Mirroring • Sampler • NetStream • sFlow • Information Center • EAA • Process monitoring and maintenance
<i>Probe Commands</i>	Covers Probe commands. This command reference includes: • Router Probe commands

Support and other resources

Contacting HP

For worldwide technical support information, see the HP support website:

<http://www.hp.com/support>

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:

<http://www.hp.com/go/wwalerts>

After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

Related information

Documents

To find related documents, browse to the Manuals page of the HP Business Support Center website:

<http://www.hp.com/support/manuals>

- For related documentation, navigate to the Networking section, and select a networking category.
- For a complete list of acronyms and their definitions, see *HP FlexNetwork Technology Acronyms*.

Websites

- HP.com <http://www.hp.com>
- HP Networking <http://www.hp.com/go/networking>
- HP manuals <http://www.hp.com/support/manuals>
- HP download drivers and software <http://www.hp.com/support/downloads>
- HP software depot <http://www.software.hp.com>
- HP Education <http://www.hp.com/learn>

Conventions

This section describes the conventions used in this documentation set.

Command conventions

Convention	Description
Boldface	Bold text represents commands and keywords that you enter literally as shown.
<i>Italic</i>	<i>Italic</i> text represents arguments that you replace with actual values.
[]	Square brackets enclose syntax choices (keywords or arguments) that are optional.
{ x y ... }	Braces enclose a set of required syntax choices separated by vertical bars, from which you select one.
[x y ...]	Square brackets enclose a set of optional syntax choices separated by vertical bars, from which you select one or none.
{ x y ... } *	Asterisk-marked braces enclose a set of required syntax choices separated by vertical bars, from which you select at least one.
[x y ...] *	Asterisk-marked square brackets enclose optional syntax choices separated by vertical bars, from which you select one choice, multiple choices, or none.
&<1-n>	The argument or keyword and argument combination before the ampersand (&) sign can be entered 1 to n times.
#	A line that starts with a pound (#) sign is comments.

GUI conventions

Convention	Description
Boldface	Window names, button names, field names, and menu items are in bold text. For example, the New User window appears; click OK .
>	Multi-level menus are separated by angle brackets. For example, File > Create > Folder .

Symbols

Convention	Description
 WARNING	An alert that calls attention to important information that if not understood or followed can result in personal injury.
 CAUTION	An alert that calls attention to important information that if not understood or followed can result in data loss, data corruption, or damage to hardware or software.
 IMPORTANT	An alert that calls attention to essential information.
NOTE	An alert that contains additional or supplementary information.
 TIP	An alert that provides helpful information.

Network topology icons

	Represents a generic network device, such as a router, switch, or firewall.
	Represents a routing-capable device, such as a router or Layer 3 switch.
	Represents a generic switch, such as a Layer 2 or Layer 3 switch, or a router that supports Layer 2 forwarding and other Layer 2 features.
	Represents an access controller, a unified wired-WLAN module, or the switching engine on a unified wired-WLAN switch.
	Represents an access point.
	Represents a security product, such as a firewall, a UTM, or a load-balancing or security card that is installed in a device.
	Represents a security card, such as a firewall card, a load-balancing card, or a NetStream card.

Port numbering in examples

The port numbers in this document are for illustration only and might be unavailable on your device.