APPENDIX A

Command Reference

This appendix contains an alphabetical listing of new and revised commands specific to the MWAM configuration. The commands are categorized according to the console from which they are executed.

Note All other commands used with this product (those that already exist and have not been modified) are documented in the Cisco IOS 12.3 command reference publications.

Supervisor Console Commands

The following commands are available at the Supervisor console:

Processor Control Commands

The Processor Control (PC) commands are available when you session into MWAM processor 1 from the Supervisor console. The PC commands provide various functions for the MWAM processors.

To access the PC commands, use the **session slot** command to establish a connection to processor 1. Then log into the PC as *root* user with the password *cisco*.

- **boot-mode**
- **normal-ios**
- **recover-ios**
- **reload**
- **restore ios**
- **show boot-mode**
- **show images**
- **show log**
- **show processor**
- **show tech-support**
- **show version**

MWAM Console Commands

The following commands are available at the MWAM console:

- **memory-size iomem**
- **mwam config-mode**
- **show mwam**
- **show mwam config-mode**

Supervisor Console Commands

The following commands are available at the Supervisor console.

clear logging slot

To clear the following slave log options that are enabled on the MWAM:

- timeouts
- logevents
- sequence errors
- reset count
- KPA_missed counters

Use the **clear logging slot** command in privileged EXEC mode.

clear logging slot *slot_number* **counts**

Syntax Description

slot_number	Specifies the slot that the module is plugged into.

Defaults

There are no default behavior or values.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(14)ZA4	This command was introduced.

Usage Guidelines

Use this command to clear the slave log options that are enabled.

Examples

The following example illustrates the **clear logging slot** command:

```
Router# clear logging slot 6 counts
```

execute-on

To initiate a remote command request on an MWAM processor from the Supervisor console, use the **execute-on** command in privileged EXEC mode.

execute-on {*slot_number* | **all**} {*processor_number* | **all**} *command* [*subcommand*]

Syntax Description

slot_number	Specifies the slot that the module is plugged into.
all	Specifies all the MWAMs in the chassis.[1]
processor_number	Specifies the processor number within the MWAM.
all	Specifies all the processors in the MWAM.[1]
command	Specifies the command to execute on the MWAM processor. The following commands are supported: • **debug** • **dir** • **show** • **systat** • **undebug** • **ping** *ip_addr* • **log** {**show** | **systat** | **dir**} The commands of the PC are also supported (see "Processor Control Commands" section on page A-2).
subcommand	(Optional) Additional parameters to be included with the command and executed by the remote processor. **Note** No Help is available for the *parameter* portion of the command.

1. When using the **all** option, the command is executed on all active processors but is not executed on processors that are inactive. The processor state can be shown using the **show logging** command.

Defaults

There are no default behavior or values.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(14)ZA4	This command was introduced.
12.3(5a)B	Added remote console support for PC commands.

Usage Guidelines

The remote console and logging feature must be configured to use the **execute-on** command (see the "Configuring Remote Console and Logging" section on page 6-16).

When using the **all** options, the designated command is executed on all active processors. Inactive processors are ignored. Use the **show logging** command to determine if the processor is active.

To terminate a remote command that is in progress, the user can activate the escape sequence defined on the Supervisor console. For example, if a user initiates a **log show** command on a remote MWAM processor and the command execution is longer than expected, the user can terminate the command from the Supervisor console by entering **Ctrl-^**. To determine the escape sequence for your console/vty connection, use the **show line** *line_number* command.

Examples The following example executes the **log show running-config** command on processor 2 of the MWAM in slot 5.

```
Sup-7600# execute-on 5 2 log show running-config
```

logging listen mwam

To configure MWAM logging input to the Supervisor from an MWAM in the chassis, use the **logging listen mwam** command in global configuration mode. To remove this configuration, use the **no** form of the command.

logging listen mwam *udp_port*

no logging listen mwam *udp_port*

Syntax Description

udp_port	Specifies the UDP port on the Supervisor module for listening to logs from MWAM(s) in the chassis. This command is required to enable the remote console and logging feature. A UDP port must be defined at both the Supervisor and the MWAM, and the defined ports must match. The port range is 4000-10000. The port must be divisible by 100 (for MWAM processor identification).

Defaults There are no default behavior or values.

Command Modes Global configuration

Command History

Release	Modification
12.2(14)ZA4	This command was introduced.

Usage Guidelines Use this command to specify the Supervisor UDP port for listening to MWAM logging. Use the **logging main-cpu** command from the MWAM console to enable slave log generation to the Supervisor. Ensure that the UDP ports defined at both the Supervisor and MWAM are the same.

When selecting the UDP port for an MWAM processor, you are defining a base UDP port used at the Supervisor. Two additional source ports, based on the selected port, are then automatically defined.

For example, on the Supervisor you have configured the following:

```
logging listen mwam 10000
```

On the MWAM, you have configured processor 2 as follows:

```
logging main-cpu 10000 emergencies 99.99.99.99
```

The Supervisor listens on port 10000 and uses this port as its base UDP port. Ports 10002 and 10012 are automatically defined for traffic streams. On MWAM processor 3, the defined ports would be 10003 and 10013. The port numbering pattern for the additional ports is shown here:

MWAM Processor:	2	3	4	5	6
Base UDP Port:[1]	<40-100>00	<40-100>00	<40-100>00	<40-100>00	<40-100>00
Additional UDP Port:	<40-100>02	<40-100>03	<40-100>04	<40-100>05	<40-100>06
Additional UDP Port:	<40-100>12	<40-100>13	<40-100>14	<40-100>15	<40-100>16

1. Must be in the range 4000-10000 and be a multiple of 100.

The port numbering pattern is important if you are configuring other UDP ports on either the Supervisor or the MWAM processor.

Examples

The following example illustrates the **logging listen mwam** command:

```
Router(config)# logging listen mwam 4100
```

mwam bootflash access

Note The MWAM bootflash access must be enabled if you want to operate in Supervisor mode.

To enable file transfer requests between the Supervisor bootflash and the individual processors on the MWAM, use the **mwam bootflash access** command in configuration mode. To remove this configuration, use the **no** form of the command.

mwam bootflash access

no mwam bootflash access

Syntax Description

mwam bootflash access	Configures bootflash access for MWAM file transfer requests.

Defaults

MWAM bootflash access is enabled by default. To disable access, issue **no mwam bootflash access**.

Command Modes

Supervisor configuration

Command History

Release	Modification
12.2(14)ZA4	This command was introduced.

Usage Guidelines Use the **no** form of this command to disable MWAM access to the Supervisor bootflash.

Examples The following example illustrates the **mwam bootflash access** command:

```
Sup-7606(config)# mwam bootflash access
```

mwam module allowed-vlan

To configure the Ethernet connectivity from the backplane (that is, switch fabric) to the individual processors on the MWAM, use the **mwam module allowed-vlan** command in global configuration mode. To remove this configuration, use the **no** form of the command.

mwam module *slot_number* **port** *port_number* **allowed-vlan** *vlan-list*

no mwam module *slot_number* **port** *port_number* **allowed-vlan** *vlan-list*

Syntax Description

slot_number	Specifies the slot that the module is plugged into.
port *port_number*	Specifies the actual port number (1-3) used to connect to a processor complex within the MWAM (Figure 1-2 on page 1-5 shows the port layout).
allowed-vlan *vlan-list*	Configures the appropriate VLANs for this port.

Defaults There are no default behavior or values.

Command Modes Global configuration

Command History

Release	Modification
12.2(9)ZA	This command was introduced.

Usage Guidelines Each processor is connected to the backplane (that is, switch fabric) through an Ethernet port connection. When both processors within a complex are enabled, they are required to share the Ethernet port connection, thus their port configurations must be in common.

See Figure 1-2 on page 1-5 and Table 1-2 on page 1-5 to determine which port corresponds to each processor.

Examples The following example illustrates the **mwam module allowed-vlan** command:

```
Router(config)# mwam module 4 port 2 allowed-vlan 101
```

mwam module cpu logging

To configure the severity level of MWAM logging information to send to the Supervisor module, use the **mwam module cpu logging** command in global configuration mode. To remove this configuration, use the **no** form of the command.

mwam module {*slot_number* | **all**} **cpu** {*processor_number* | **all**} **logging** *log_level*

no mwam module {*slot_number* | **all**} **cpu** {*processor_number* | **all**} **logging** *log_level*

Syntax Description

slot_number | **all**	Specifies the slot that the module is plugged into or all MWAMs in the chassis
cpu_number | **all**	Specifies the processor on the MWAM or all processors on the MWAM.
log_level	Limits the logging of messages to be sent to the Supervisor to a specified level (for example, if *log_level* is **critical**, then emergencies, alerts, and critical events are sent). You can enter the level number or name. • **emergencies** (severity level 0)—system is unusable • **alerts** (severity level 1)— immediate action required • **critical** (severity level 2)—critical condition • **errors** (severity level 3)—error condition • **warnings** (severity level 4)—warning condition • **notifications** (severity level 5)—normal but significant condition • **informational** (severity level 6)—informational message • **debugging** (severity level 7)—debug messages

Defaults

The default configuration is logging enabled on all MWAM processors for emergencies.

Command Modes

Global configuration

Command History

Release	Modification
12.2(14)ZA4	This command was introduced.

Usage Guidelines

Logging methods may require additional configuration such as the destination IP address for the receiver of the log traffic. To configure the destination IP address, use the **logging main-cpu** command.

Examples

The following example sets the logging level for all MWAM processors in the chassis to the error logging level:

```
Sup-7600(config)# mwam module all cpu all logging error
```

The following example allows the Supervisor console to display debugging log messages received from processor 2 on the MWAM in slot 5:

```
Sup-7600(config)#mwam module 5 cpu 2 logging debug
```

mwam module vlan-based

To assign MWAM traffic to a VLAN QoS policy, use the **mwam module vlan-based** command in global configuration mode. To remove this configuration, use the **no** form of the command.

mwam module *slot_number* **port** *port_number* **vlan-based**

no mwam module *slot_number* **port** *port_number* **vlan-based**

Syntax Description

slot_number	Specifies the slot that the module is plugged into.
port_number	Specifies one of three switch fabric interface ports (1-3) that connect the Supervisor module to the MWAM.

Defaults

There are no default behavior or values.

Command Modes

Global configuration

Command History

Release	Modification
12.2(14)ZA7	This command was introduced.

Usage Guidelines

Use this command to assign MWAM traffic to a VLAN QoS policy.

See Figure 1-2 on page 1-5 and Table 1-2 on page 1-5 to determine which port corresponds to each processor.

Examples

The following example illustrates the **mwam module vlan-based** command:

```
Sup-7606(config)# mwam module 5 port 1 vlan-based
Sup-7606(config)# mwam module 5 port 2 vlan-based
Sup-7606(config)# mwam module 5 port 3 vlan-based
```

session slot

To establish a command session to a processor on an MWAM, use the **session slot** command in privileged EXEC mode.

session slot *slot_number* **processor** *processor_number*

Syntax Description

slot_number	Specifies the slot that the MWAM is plugged into.
processor *processor_number*	Specifies the MWAM processor (1-6) to connect to. **Note** Only MWAM processors 2-6 contain application images; MWAM processor 1 provides control commands for MWAM processors and complexes.

Defaults

There are no default behavior or values.

Command Modes

EXEC mode.

Command History

Release	Modification
12.2(9)ZA	This command was introduced.

Usage Guidelines

When you session into processor 1, you must enter the user name (*root*) and password (*cisco*).

Examples

The following example illustrates the **session slot** command for processor 2 on the MWAM in slot 9:

```
Sup-7606#session slot 9 processor 2
The default escape character is Ctrl-^, then x.
You can also type 'exit' at the remote prompt to end the session
Trying 127.0.0.92 ... Open

proc2-9>


Press RETURN to get started!


proc2-9>
```

The following example illustrates the **session slot** command for processor 1 on the MWAM in slot 9:

```
Sup-7606#session slot 9 processor 1
The default escape character is Ctrl-^, then x.
You can also type 'exit' at the remote prompt to end the session
Trying 127.0.0.91 ... Open


SVCMWAM Image version 2.1(0.1b)
```

```
Tue Oct 14 11:04:43 EDT 2003
Copyright (c) 2002-2003 by cisco Systems, Inc.
All rights reserved.
Kernel 2.4.10.komodo on an i686
login: root
Password:

SVCMWAM Image version 2.1(0.1b)
Tue Oct 14 11:04:43 EDT 2003
Copyright (c) 2002-2003 by cisco Systems, Inc.
All rights reserved.



SVCMWAM Image version 2.1(0.1b)
Tue Oct 14 11:04:43 EDT 2003
Copyright (c) 2002-2003 by cisco Systems, Inc.
All rights reserved.


root@mwam-9#
```

show logging

To display the slave log options that are enabled on the MWAM, use the **show logging** command in privileged EXEC mode.

show logging {**slot** *slot_number* | **summary**}

Syntax Description

slot_number	Specifies the slot that the module is plugged into.
summary	Displays logging information for all MWAMs in the chassis.

Defaults

There are no default behavior or values.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(14)ZA4	This command was introduced.
12.2(14)ZA5	The output of this command was modified to incorporate improvements in the display of information.

Usage Guidelines

Use this command to display the slave log options that are enabled.

Examples

The following example illustrates the **show logging** command:

```
Router# show logging slot 5
  CPU: 05/2      State: ACTIVE         Command Active: No
  ttynum: -1                  Logging Level: debugging
  timeouts:                 1 logevents:             0
  sequence errors:          0 reset count:       16001 KPA_missed: 4294967201
  send seq:                 5 tty recv seq:          0 log recv seq: 0
  Current queue count:      0 IP addr: 172.18.48.94
.
.
.
```

Note Each processor (CPU) on the MWAM in slot 5 is displayed in the output.

Field descriptions for the output of this command are listed below:

Active	Processor is operational and remote console/logging is active.
Online	Processor is operational but remote console/logging is not active. **Note** This state commonly occurs when a processor is not enabled by the application running on the MWAM.
Inactive	Processor is rest or resetting, and remote console/logging is inactive.
Proving	The remote console connection is testing the IP path between the Supervisor and MWAM processor before moving to the ACTIVE state. If there is a configuration problem or VLAN mismatch, the connection may stay in Proving state until the configuration issue is resolved.
ttynum	Line number of the user with an active command on the processor. A value of -1 indicates no user.
Logging Level	Indicates the maximum severity level at which the Supervisor displays logger messages from an MWAM.
timeouts	Number of occurrences of remote command execution time-out.
logevents	Number of logging events.
sequence errors	Protocol sequence errors caused by overrun or time-out.
reset count	Number of times the connection reset because of connection time-out or MWAM processor reload.
KPA_missed	Number of keepalives missed.
send seq	Sequence number of remote commands sent.
tty recv seq	Sequence number of remote command response messages received from the MWAM processor.
log recv seq	Sequence number of remote logging messages received from the MWAM processor.
Current queue count	Number of messages received at the Supervisor and queued to be processed (logged/displayed).
IP addr	IP address of the MWAM processor. **Note** Typically, this is an internal address, but it can be a defined address, such as the one shown in processor 6 (06/6) in the example. Use the **logging main-cpu** command on the MWAM processor to define a different IP address, if required.

show mwam module

To display connectivity information about the individual processors on the MWAM, use the **show mwam module** command in privileged EXEC mode.

show mwam module *slot_number* **port** *port_number* {**state** | **traffic**}

Syntax Description

slot_number	Displays the slot that the module is plugged into.
port *port_number*	Displays the actual port number (1-3) used to connect to a processor complex within an MWAM (see Figure 1-2 on page 1-5).
state	Displays the interface status.
traffic	Displays the interface statistics.

Defaults

There are no default behavior or values.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(9)ZA	This command was introduced.

Examples

The following example illustrates the **show mwam module** command:

```
Sup-7606#sho mwam mod 7 port 1 state
Mwam module 7 data-port 1:
 Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Trunking VLANs Enabled: 1-999
Pruning VLANs Enabled: 2-1001
Vlans allowed on trunk:1-999
Vlans allowed and active in management domain:1,3,11-12,17,60
Vlans in spanning tree forwarding state and not pruned:
   1,3,11-12,17,60
Allowed-vlan : 1-999

Sup-7606#sho mwam mod 7 port 1 traffic
Specified interface is up line protocol is up
  Hardware is C6k 1000Mb 802.3, address is 0010.7b00.0cb0 (bia 0010.7b00.0cb0)
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 1000Mb/s
  Last input never, output never, output hang never
```

```
  Last clearing of "show interface" counters never
  Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 67
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 1000 bits/sec, 3 packets/sec
     0 packets input, 0 bytes, 0 no buffer
     Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 input packets with dribble condition detected
     46504312 packets output, 2501255885 bytes, 0 underruns
     0 output errors, 0 collisions, 10 interface resets
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out

Sup-7606#sho mwam mod 7 port 2 state
Mwam module 7 data-port 2:
 Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Trunking VLANs Enabled: 1-999
Pruning VLANs Enabled: 2-1001
Vlans allowed on trunk:1-999
Vlans allowed and active in management domain:1,3,11-12,17,60
Vlans in spanning tree forwarding state and not pruned:
   1,3,11-12,17,60
Allowed-vlan : 1-999

Sup-7606#sho mwam mod 7 port 2 traffic
Specified interface is up line protocol is up
  Hardware is C6k 1000Mb 802.3, address is 0010.7b00.0cb1 (bia 0010.7b00.0cb1)
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 1000Mb/s
  Last input 00:00:09, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 68
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 1000 bits/sec, 1 packets/sec
  5 minute output rate 1000 bits/sec, 2 packets/sec
     24922473 packets input, 430882532 bytes, 0 no buffer
     Received 93145 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 input packets with dribble condition detected
     26261319 packets output, 4263983434 bytes, 0 underruns
     0 output errors, 0 collisions, 10 interface resets
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out

Sup-7606#sho mwam mod 7 port 3 state
Mwam module 7 data-port 3:
 Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
```

```
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Trunking VLANs Enabled: 1-999
Pruning VLANs Enabled: 2-1001
Vlans allowed on trunk:1-999
Vlans allowed and active in management domain:1,3,11-12,17,60
Vlans in spanning tree forwarding state and not pruned:
   1,3,11-12,17,60
Allowed-vlan : 1-999

Sup-7606#sho mwam mod 7 port 3 traffic
Specified interface is up line protocol is up
  Hardware is C6k 1000Mb 802.3, address is 0010.7b00.0cb2 (bia 0010.7b00.0cb2)
  MTU 1500 bytes, BW 1000000 Kbit, DLY 10 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 1000Mb/s
  Last input 00:00:11, output never, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/2000/0/0 (size/max/drops/flushes); Total output drops: 22
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 1000 bits/sec, 2 packets/sec
     35270 packets input, 5189978 bytes, 0 no buffer
     Received 4444 broadcasts, 0 runts, 0 giants, 0 throttles
     0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
     0 input packets with dribble condition detected
     46510270 packets output, 2501832096 bytes, 0 underruns
     0 output errors, 0 collisions, 10 interface resets
     0 babbles, 0 late collision, 0 deferred
     0 lost carrier, 0 no carrier
     0 output buffer failures, 0 output buffers swapped out
```

Processor Control Commands

The following PC commands are available when you session into the MWAM processor.

boot-mode

To set the MWAM configuration file storage mode when debugging problems, use the **boot-mode** command available at the PC complex (processor 1 on the MWAM).

boot-mode {**local** | **supervisor**} [*complex_number* | **all**]

Syntax Description

boot-mode	Sets the MWAM configuration file storage mode.
local	Stores configuration files locally in NVRAM of the MWAM processor.
supervisor	Stores configuration files in the Supervisor bootflash.
complex_number | **all**	Changes the mode on the processors in complex 0, 1, or 2 or on all the complexes. Use the **show map** command to see the processor-to-complex mapping. Optional. If not entered, all complexes are affected.

Defaults

Default setting is Supervisor mode.

Command Modes

PC command

Command History

Release	Modification
12.3(11)T	This command is introduced.

Usage Guidelines

Use this command when you are experiencing problems with the MWAM configuration download. For example, if there is a problem with loading the configuration in the current mode, you can use this command to interrupt the download and change the mode. To use this command, first enable MWAM access to the Supervisor bootflash with the **mwam bootflash access** command from the Supervisor console.

For normal operation, set the configuration mode with the **show mwam config-mode** command from the MWAM console.

Examples

The following examples illustrate the **boot-mode** command.

This example sets the **boot-mode** for local when the next reboot is performed.

```
root@mwam-9#boot-mode local
Complex(s) 0, 1, 2 in slot 9 must be reloaded for changes to take effect.
If the MWAM in slot 9 is shutdown/reset before the complexes are
reloaded then these changes will be lost.
root@mwam-9#show boot-mode
Complex 0 : Local config mode upon next complex reload
Complex 1 : Local config mode upon next complex reload
Complex 2 : Local config mode upon next complex reload
root@mwam-9#
```

This example sets the **boot-mode** for supervisor when the next reboot is performed.

```
root@mwam-9#boot-mode sup
Complex(s) 0, 1, 2 in slot 9 must be reloaded for changes to take effect.
If the MWAM in slot 9 is shutdown/reset before the complexes are
reloaded then these changes will be lost.
root@mwam-9#show boot-mode
Complex 0 : Supervisor config mode upon next complex reload
Complex 1 : Supervisor config mode upon next complex reload
Complex 2 : Supervisor config mode upon next complex reload
root@mwam-9#
```

normal-ios

To set the configuration register to boot with a normal configuration, use the **normal-ios** command available at the PC complex (processor 1 on the MWAM).

normal-ios

Syntax Description

normal-ios	Sets the configuration register to boot with a normal configuration.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.(9)ZA	This command was introduced.

Usage Guidelines

Use this command to set the configuration register to boot using the normal startup configuration. This command resets the effects of the **recover-ios** command. It is used in the "Recovering from MWAM Processor Lockout" section on page 6-19.

Note You must first establish a session to processor 1 (session slot command).

Examples The following example illustrates the **normal-ios** command:

```
root@mwam-9#normal-ios
Base external MAC: "0003.FEAB.9FB6"
Internet Software Consortium DHCP Server V3.0.1rc6
Copyright 1995-2001 Internet Software Consortium.
All rights reserved.
For info, please visit http://www.isc.org/products/DHCP
Wrote 0 deleted host decls to leases file.
Wrote 0 new dynamic host decls to leases file.
Wrote 0 leases to leases file.
Listening on LPF/eth0/02:00:00:00:0f:00/128.0.1.0/24
Sending on   LPF/eth0/02:00:00:00:0f:00/128.0.1.0/24
Listening on LPF/eth1/02:00:00:00:0f:10/128.0.2.0/24
Sending on   LPF/eth1/02:00:00:00:0f:10/128.0.2.0/24
Sending on   Socket/fallback/fallback-net
root@mwam-9#
```

recover-ios

To set the configuration register to boot with a clean configuration, use the **recover-ios** command available at the PC complex (processor 1 on the MWAM).

recover-ios *complex_number*

Syntax Description

complex_number	Specifies a complex (0, 1, 2, or all) on the MWAM.

Defaults There are no default behavior or values.

Command Modes PC command

Command History

Release	Modification
12.2(9)ZA	This command was introduced.

Usage Guidelines Use this command when you want to recover from a lockout condition on an MWAM processor as described in the "Recovering from MWAM Processor Lockout" section on page 6-19.

Note You must first establish a session to processor 1 (session slot command).

Examples The following example illustrates the **recover-ios** command on processor complex 2 of the MWAM in slot 9:

```
root@mwam-9#recover-ios 2
processing -p
processing -c
```

```
Setting DHCP options for processor complex 2
Setting config-reg value to: 0x40
Base external MAC: "0003.FEAB.9FB6"
Internet Software Consortium DHCP Server V3.0.1rc6
Copyright 1995-2001 Internet Software Consortium.
All rights reserved.
For info, please visit http://www.isc.org/products/DHCP
Wrote 0 deleted host decls to leases file.
Wrote 0 new dynamic host decls to leases file.
Wrote 0 leases to leases file.
Listening on LPF/eth0/02:00:00:00:0f:00/128.0.1.0/24
Sending on   LPF/eth0/02:00:00:00:0f:00/128.0.1.0/24
Listening on LPF/eth1/02:00:00:00:0f:10/128.0.2.0/24
Sending on   LPF/eth1/02:00:00:00:0f:10/128.0.2.0/24
Sending on   Socket/fallback/fallback-net
```

reload

To reload processors on an MWAM, use the **reload** command available at the PC complex (processor 1 on the MWAM).

reload {**processor** *processor_number* | **complex** *complex_number* | **all**}

Syntax Description

processor *processor_number*	Specifies a processor (2-6) on the MWAM. **Note** Even though only one processor is specified, both processors on the complex will reload.
complex *complex_number*	Specifies a complex (0, 1, 2, or all) on the MWAM.
all	Specifies all processors on the MWAM.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.3(3)B1	This command was introduced.

Usage Guidelines

Use this command when you want to reload MWAM processors or complexes. When you reload a single processor, the other processor on the complex will also reload. See Table 1-2 on page 1-5 for processor-to-complex mapping.

Note You must first establish a session to processor 1 (session slot command).

Examples

The following examples illustrate the **reload** command.

This example reloads processors 4 and 5 on complex 2 of the MWAM in slot 9:

```
root@mwam-9#reload complex 2
```

This example also reloads processors 4 and 5 on complex 2 of the MWAM in slot 9:

```
root@mwam-9#reload processor 4
```

This example reloads processors 2-6 of the MWAM in slot 9:

```
root@mwam-9#reload all
```

restore ios

To restore the previously loaded IOS image and ROM-Monitor image, use the **restore** command available at the PC complex (processor 1 on the MWAM).

restore ios

Syntax Description

This command has no arguments or keywords.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.3(5a)B	This command was introduced.

Usage Guidelines

Use this command to restore the previously loaded IOS image on the MWAM. You must then reload the MWAM or the individual processors to activate the image. You can revert to the previous image only if you have not rebooted/recycled the MWAM.

Note You must first establish a session to processor 1 (session slot command).

Examples

The following example illustrates the **restore** command:

```
root@mwam-9#restore ios
Restoring image
Restoring configuration files
Operation completed successfully
root@mwam-9#
```

show boot-mode

To show the processor complexes that will be configured in either local or Supervisor mode stored on the MWAM, use the **show boot-mode** command available at the PC complex (processor 1 on the MWAM).

show boot-mode

Syntax Description

This command has no arguments or keywords.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.3(11)T	This command is introduced.

Usage Guidelines

Use this command to show the processor complexes that will be configured in either Local or Supervisor mode when the next complex is reloaded on the MWAM.

Note You must first establish a session to processor 1 (session slot command).

Examples

The following examples illustrate the **show boot-mode** command:

This example shows the **boot-mode** for local when the next reboot is performed.

```
root@mwam-9#boot-mode local
Complex(s) 0, 1, 2 in slot 9 must be reloaded for changes to take effect.
If the MWAM in slot 9 is shutdown/reset before the complexes are
reloaded then these changes will be lost.
root@mwam-9#show boot-mode
Complex 0 : Local config mode upon next complex reload
Complex 1 : Local config mode upon next complex reload
Complex 2 : Local config mode upon next complex reload
root@mwam-9#
```

This example shows the **boot-mode** for Supervisor when the next reboot is performed.

```
root@mwam-9#boot-mode sup
Complex(s) 0, 1, 2 in slot 9 must be reloaded for changes to take effect.
If the MWAM in slot 9 is shutdown/reset before the complexes are
reloaded then these changes will be lost.
root@mwam-9#show boot-mode
Complex 0 : Supervisor config mode upon next complex reload
Complex 1 : Supervisor config mode upon next complex reload
Complex 2 : Supervisor config mode upon next complex reload
root@mwam-9#
```

show images

To list the images stored on the MWAM, use the **show images** command available at the PC complex (processor 1 on the MWAM).

show images

Syntax Description

This command has no arguments or keywords.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.(9)ZA	This command was introduced.

Usage Guidelines

Use this command to list the image names on the MWAM.

Note You must first establish a session to processor 1 (session slot command).

Examples

The following example illustrates the **show images** command:

```
root@mwam-9#show images
Device name          Partition#         Image name
-----------          ----------         ----------
Compact flash(cf)    6                  SIMPSON_RAM.bin
Version Information:
Compiled Tue 19-Aug-03 13:35 by dchih
Compact flash(cf)    6                  svcmwam-js-mz.geo_t_040121
Version Information:
Compiled Wed 21-Jan-04 02:34 by $

AP software is c6svcmwam-js-mz.geo_t_040121.2-1-0-3b.6cpu.bin
root@mwam-9#
```

show log

To show the upgrade or restart logs, use the **show log** command available at the PC complex (processor 1 on the MWAM).

show log {**upgrade** | **restart**}

Syntax Description

upgrade	Shows the upgrade log.
restart	Shows the MWAM and process restart log.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.3(3)B1	This command was introduced.

Usage Guidelines

Use this command when you want to display the contents of the upgrade log.

Note You must first establish a session to processor 1 (session slot command).

Examples

The following examples illustrate the **show log** command:

```
root@mwam-4#show log upgrade
Log 'upgrade' is not available.
root@mwam-4

root@mwam-4# show log restart

MWAM started on Fri Jan  1 00:02:20 UTC 1988

Restarting rcal on Fri Jan  1 00:02:24 UTC 1988

MWAM started on Fri Jan  1 00:02:20 UTC 1988
MWAM shutdown on Mon Jun 14 15:29:47 UTC 2004

MWAM started on Fri Jan  1 00:02:22 UTC 1988
root@mwam-4#
```

show processor

To show status information about an MWAM processor, use the **show processor** command available at the PC complex (processor 1 on the MWAM).

show processor {*processor_number* | **all**}

Syntax Description

show processor	Shows status information for the MWAM processor.
processor_number	Specifies the MWAM processor number (2-6).
all	Specifies all processors on the MWAM.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.3(3)B1	This command was introduced.

Usage Guidelines

Use this command when you want to show the status of one or more MWAM processors.

Note You must first establish a session to processor 1 (session slot command).

The output of this command provides the following counter information:

Counter	Description
User Resets	Number of times the user manually reloaded the processor
IOS Reloads	Number of times the user issued the **reload** command on the processor itself
Unknown Resets	Number of times the processor reset without a known cause (for example, IOS crash)
Timeouts	Number of times the processor complex stopped responding to heartbeats

Examples

The following example illustrates the **show processor** command for processor 2 in slot 9:

```
root@mwam-9#show processor 2

Processor 2, Complex 1, Core 0
  Complex Status is Online
  Information
  Health Monitoring
    0 User Resets, 0 IOS Reloads, 0 Unknown Resets
    0 Timeouts
```

```
    0 Consecutive heartbeats missed
    244528/244528 Heartbeats acked since last reset
    0% CPU Utilization
  Messages
    4115/4115 VRTC Update(s) acked by PC
    244528/244528 Heartbeats(s) acked from IOS
    1/1 ROMMON Config Msg(s) acked from ROMMON
    0/0 Supervisor Switchover Msg(s) acked from IOS
    0/0 Prepare Reload Msg(s) acked from IOS
root@mwam-9#
```

show tech-support

To display general information about the MWAM and its processors when it reports a problem, use the **show tech-support** command available at the PC complex (processor 1 on the MWAM).

show tech-support

Syntax Description

This command has no arguments or keywords.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.(9)ZA	This command was introduced.

Usage Guidelines

The **show tech-support** command from the PC displays the output of a number of show commands. The **show tech-support** command is useful for collecting a lot of information for troubleshooting purposes. The output of this command can be provided to technical support representatives when reporting a problem.

Note You must first establish a session to processor 1 (session slot command).

Examples

The following example illustrates the **show tech-support** command:

```
root@mwam-4# show tech-support
-------------------------- show version --------------------------

SVCMWAM Image version 2.1(1.0)
Mon Feb 23 01:29:45 EST 2004
Copyright (c) 2002-2003, 2004 by cisco Systems, Inc.
All rights reserved.

~snipped~
```

show version

To display information about the currently loaded software version along with hardware and device information, use the **show version** command available at the PC complex (processor 1 on the MWAM).

show version

Syntax Description

This command has no arguments or keywords.

Defaults

There are no default behavior or values.

Command Modes

PC command

Command History

Release	Modification
12.(9)ZA	This command was introduced.

Usage Guidelines

The **show version** command from the PC displays information about the software version currently running on the MWAM.

Note You must first establish a session to processor 1 (session slot command).

Examples

The following example illustrates the **show version** command:

```
root@mwam-4# show version

SVCMWAM Image version 2.1(1.0)
Mon Feb 23 01:29:45 EST 2004
Copyright (c) 2002-2003, 2004 by cisco Systems, Inc.
All rights reserved.

AP software is c6svc-5mwam-g4js-bf21_10.123-7.T1
AP software is based upon Maintenance image version: 3.1(0.2)
IOS Software is svcmwam-g4js-mz.123-7.T1
5 Processor Configuration

Line Card Number :WS-SVC-MWAM-1
Number of Pentium-class Processors :       1
BIOS Vendor: Phoenix Technologies Ltd.
BIOS Version: 4.0-Rel 6.0.4
Total available memory: 500 MB
Size of compact flash: 122 MB

root@mwam-4#
```

MWAM Console Commands

The following commands are available at the MWAM console.

memory-size iomem

By default, 32 MB is allocated for the IO memory on each processor of a Cisco MWAM router. However, the **memory-size iomem** command can be used to reallocate the IO memory from the total available DRAM space. The **no** form of the **iomem** command is used to revert to the default memory allocation.

The **iomem** configuration command is available on processors 2, 4, or 6, and when configured, it will be applied to the respective partner processors 3, 5, or 7. When 1 or 2 GB of total DRAM is available per MWAM processor complex, the permitted values for the IO memory are 32 MB, 64 MB, and 128 MB. When 512 MB of total DRAM is available per MWAM processor complex, only the default 32 MB IO memory option is available. After the IO memory is specified in the command line, the remaining DRAM memory will be used for processor memory. After configuration, it must be saved and reloaded for the reallocation to occur.

memory-size iomem [32 64 128]

Syntax Description

32, 64, or 128	Specifies the size of the DRAM allocated to the I/O memory. When an MWAM processor complex has 1 or 2 GB of DRAM memory, the values permitted are 32 MB, 64 MB, and 128 MB. When an MWAM processor complex has 512 MB of DRAM memory, the value permitted is 32 MB.

Defaults

Default value is 32 MB for I/O memory on each processor.

Command Modes

Global configuration.

Command History

Release	Modification
12.4(12)	This command was introduced.

Usage Guidelines

When you specify the amount of IO memory in the command line, the processor memory automatically acquires the remaining DRAM memory.

Examples

The following example allocates 64 MB of DRAM memory to the I/O memory and the remaining memory to the processor memory:

```
Supervisor# session slot 7 processor 2
The default escape character i is Ctrl-^, then x. You can also type exit at the remote
prompt to end the session.
Typing 127.0.0.72 . . . open
mwmam-sibyte2>
Press Enter to get started.
```

```
mwmam-sibyte2> enable
mwmam-sibyte2# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# memory-size iomem 64
Router(config)# exit
Router# copy system:running-config nvram:startup-config
Building configuration...
[OK]
Router# reload
```

logging main-cpu

To configure MWAM log redirection to the Supervisor for all events up to a maximum specified log level, use the **logging main-cpu** command in global configuration mode. To remove this configuration, use the **no** form of the command.

logging main-cpu *udp_port* [*log_level*] [*ip_addr*]

no logging main-cpu *udp_port* [*log_level*] [*ip_addr*]

Syntax Description

udp_port	Specifies the UDP port on the MWAM for sending logs to the Supervisor. A UDP port must be defined at both the Supervisor and the MWAM, and the ports must match. The port range is 4000-10000. The port must be divisible by 100.
log_level	(Optional) Limits the logging of messages displayed on the console terminal to a specified level (for example, if *log_level* is **critical**, then emergencies, alerts, and critical events are sent). You can enter the level number or name. • **emergencies** (severity level 0)—system is unusable • **alerts** (severity level 1)— immediate action required • **critical** (severity level 2)—critical condition • **errors** (severity level 3)—error condition • **warnings** (severity level 4)—warning condition • **notifications** (severity level 5)—normal but significant condition • **informational** (severity level 6)—informational message • **debugging** (severity level 7)—debug messages
ip_addr	(Optional) Specifies an IP address for traffic flow through the switching fabric instead of the EOBC. You can use this option to direct traffic on a dedicated management VLAN.

Defaults

Default value for the log level is **errors** (3).

Command Modes

Global configuration

Command History

Release	Modification
12.3(1a)BW	This command was introduced.

Usage Guidelines

Use this command to specify the MWAM UDP port for sending MWAM logs to the Supervisor. Use the **logging listen mwam** command from the Supervisor console to enable MWAM log input to the Supervisor. Ensure that the UDP ports defined at both the Supervisor and MWAM are the same.

When selecting the UDP port for an MWAM processor, you are defining a base UDP port used at the Supervisor. Two additional source ports, based on the selected port, are then automatically defined.

For example, on the Supervisor you have configured the following:

```
logging listen mwam 10000
```

On the MWAM, you have configured processor 2 as follows:

```
logging main-cpu 10000 emergencies 99.99.99.99
```

The Supervisor listens on port 10000 and uses this port as its base UDP port. Ports 10002 and 10012 are automatically defined for traffic streams. On MWAM processor 3, the defined ports would be 10003 and 10013. The port numbering pattern for the additional ports is shown here:

MWAM Processor:	2	3	4	5	6
Base UDP Port:[1]	<40-100>00	<40-100>00	<40-100>00	<40-100>00	<40-100>00
Additional UDP Port:	<40-100>02	<40-100>03	<40-100>04	<40-100>05	<40-100>06
Additional UDP Port:	<40-100>12	<40-100>13	<40-100>14	<40-100>15	<40-100>16

1. Must be in the range 4000-10000 and be a multiple of 100.

The port numbering pattern is important if you are configuring other UDP ports on either the Supervisor or the MWAM processor.

Examples

The following example enables the remote console and logging feature for an MWAM processor and specifies UDP port 10000 to match the port designated on the Supervisor. There is no logging default value; therefore, this command only enables the console portion of the feature.

```
mwam-6-4(config)#logging main-cpu 10000
```

The following example enables logging messages up to level 7 (debug) to be sent to the Supervisor module. Specifying the logging level is required to direct the logging messages to the Supervisor.

```
mwam-6-4(config)#logging main-cpu 10000 debug
```

The following example includes the IP address to direct logging and console messages to the Catalyst switching fabric. This can be used by service providers that define a management VLAN between the Supervisor and each MWAM processor.

```
mwam-6-4(config)#logging main-cpu 10000 debug 172.18.48.84
```

mwam config-mode

To set the MWAM configuration file storage mode, use the **mwam config-mode** command in privileged EXEC mode from the MWAM console.

mwam config-mode {**supervisor**} **nowrite**

Syntax Description

mwam config-mode	Sets the MWAM configuration file storage mode.
supervisor	Stores configuration files in the NVRAM of the MWAM processor and the Supervisor bootflash at the same time.
nowrite	Changes the mode without changing the contents of the configuration on the Supervisor or NVRAM.

Defaults

Default setting is Supervisor mode.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(1a)BW	This command was introduced.
12.3(13)T	The **nowrite** option is added.

Usage Guidelines

Use this command when you want to set the MWAM configuration file storage mode. You must first enable MWAM access to the Supervisor bootflash with the **mwam bootflash access** command from the Supervisor console.

Caution If you are operating in the Supervisor mode in a chassis that does not have redundant Supervisor modules, back up both the *startup-config* file of the Supervisor module and all *SLOT*PC*.cfg* files on the bootflash device. Failure to take this precaution could result in the loss of all MWAM configurations, along with the Supervisor configuration.

Examples

The following examples illustrate the **mwam config-mode** command:

```
mwam-6-4# mwam config-mode local
Successfully changed mode: mwam config-mode local

Building configuration...

Jul 27 12:02:51.723: %C6K_MWAM_CENTRALIZED_CONFIG-6-MODE_CHANGED: mwam config-mode changed
to mwam config-mode local[OK]
 Successfully wrote configuration to nvram.

mwam-6-4# mwam config-mode supervisor
Successfully changed mode: mwam config-mode supervisor

Writing bootflash:SLOT6PC4.cfg
Writing slavebootflash:SLOT6PC4.cfg
Building configuration...

Jul 27 12:05:12.239: %C6K_MWAM_CENTRALIZED_CONFIG-6-MODE_CHANGED: mwam config-mode changed
to mwam config-mode supervisor
Jul 27 12:05:12.319: %C6K_MWAM_CENTRALIZED_CONFIG-6-UPLD_SUCCESS: Success: config uploaded
to supervisor bootflash:
Jul 27 12:05:12.319: %C6K_MWAM_CENTRALIZED_CONFIG-6-UPLD_SUCCESS: Success: config uploaded
to supervisor slavebootflash:[OK]
 Successfully wrote configuration to supervisor(s).

mwam-6-4#mwam config-mode local nowrite
 Successfully changed mode: mwam config-mode local

mwam-6-4#
Jul 27 12:09:41.739: %C6K_MWAM_CENTRALIZED_CONFIG-6-MODE_CHANGED: mwam config-mode changed
to mwam config-mode local
mwam-6-4#
```

show mwam

To show MWAM Translation Look-aside Buffers (TLBs) and cache errors, use the **show mwam** command in privileged EXEC mode.

show mwam

Syntax Description

show mwam	Displays MWAM TLBs and cache errors.

Defaults

There are no default behavior or values.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(5a)B	This command was introduced.

Usage Guidelines

This command can be used to provide information about TLBs and cache errors.

Examples

The following examples illustrate the **show mwam** command:

```
mwam-7-2#show mwam
Slot Number: 7, Complex Number: 1, Global Session Number: 2
  2 active cpu(s) in complex

Gi0/0 IDB: 0x235D978C, MAC address: 0005.9a38.3820
Gi0/1 IDB: 0x235F0BF8, MAC address: 0200.0000.0110, IP address: 128.0.1.2
Gi0/2 IDB: 0x23606778, MAC address: 0200.0000.0120

Network IO Interrupt Throttling:
 throttle count=0, timer count=0
 active=0, configured=0
 netint usec=4000, netint mask usec=200


 512k of L2 cache shared between CPU 0 and 1


TLB entries (49/64 used):
Virt Address range      Phy Address range         Attributes
0x10000000:0x101FFFFF   0x020000000:0x0201FFFFF   CacheMode=2, RW, Valid
0x10200000:0x103FFFFF   0x020200000:0x0203FFFFF   CacheMode=2, RW, Valid
0x20200000:0x203FFFFF   0x000200000:0x0003FFFFF   CacheMode=5, RO, Valid
0x20400000:0x205FFFFF   0x000400000:0x0005FFFFF   CacheMode=5, RO, Valid
0x20600000:0x207FFFFF   0x000600000:0x0007FFFFF   CacheMode=5, RO, Valid
0x20800000:0x20FFFFFF   0x000800000:0x000FFFFFF   CacheMode=5, RO, Valid
0x21000000:0x211FFFFF   0x001000000:0x0011FFFFF   CacheMode=5, RO, Valid
0x21200000:0x213FFFFF   0x001200000:0x0013FFFFF   CacheMode=5, RO, Valid
0x21400000:0x2147FFFF   0x001400000:0x00147FFFF   CacheMode=5, RO, Valid
```

```
0x21480000:0x214FFFFF   0x001480000:0x0014FFFFF   CacheMode=5, RO, Valid
0x21500000:0x2151FFFF   0x001500000:0x00151FFFF   CacheMode=5, RO, Valid
0x21520000:0x21527FFF   0x001520000:0x001527FFF   CacheMode=5, RO, Valid
0x21528000:0x2152FFFF   0x001528000:0x00152FFFF   CacheMode=5, RW, Valid
0x21530000:0x21537FFF   0x001530000:0x001537FFF   CacheMode=5, RW, Valid
0x21538000:0x2153FFFF   0x001538000:0x00153FFFF   CacheMode=5, RW, Valid
0x21540000:0x2155FFFF   0x001540000:0x00155FFFF   CacheMode=5, RW, Valid
0x21560000:0x2157FFFF   0x001560000:0x00157FFFF   CacheMode=5, RW, Valid
0x21580000:0x215FFFFF   0x001580000:0x0015FFFFF   CacheMode=5, RW, Valid
0x21600000:0x217FFFFF   0x001600000:0x0017FFFFF   CacheMode=5, RW, Valid
0x21800000:0x21FFFFFF   0x001800000:0x001FFFFFF   CacheMode=5, RW, Valid
0x22000000:0x221FFFFF   0x002000000:0x0021FFFFF   CacheMode=5, RW, Valid
0x22200000:0x2227FFFF   0x002200000:0x00227FFFF   CacheMode=5, RW, Valid
0x22280000:0x2229FFFF   0x002280000:0x00229FFFF   CacheMode=5, RW, Valid
0x222A0000:0x222BFFFF   0x0022A0000:0x0022BFFFF   CacheMode=5, RW, Valid
0x222C0000:0x222DFFFF   0x0022C0000:0x0022DFFFF   CacheMode=5, RW, Valid
0x222E0000:0x222FFFFF   0x0022E0000:0x0022FFFFF   CacheMode=5, RW, Valid
0x22300000:0x2237FFFF   0x002300000:0x00237FFFF   CacheMode=5, RW, Valid
0x22380000:0x223FFFFF   0x002380000:0x0023FFFFF   CacheMode=5, RW, Valid
0x22400000:0x225FFFFF   0x002400000:0x0025FFFFF   CacheMode=5, RW, Valid
0x22600000:0x227FFFFF   0x002600000:0x0027FFFFF   CacheMode=5, RW, Valid
0x22800000:0x22FFFFFF   0x002800000:0x002FFFFFF   CacheMode=5, RW, Valid
0x23000000:0x237FFFFF   0x003000000:0x0037FFFFF   CacheMode=5, RW, Valid
0x23800000:0x23FFFFFF   0x003800000:0x003FFFFFF   CacheMode=5, RW, Valid
0x24000000:0x25FFFFFF   0x080000000:0x081FFFFFF   CacheMode=5, RW, Valid
0x26000000:0x27FFFFFF   0x082000000:0x083FFFFFF   CacheMode=5, RW, Valid
0x28000000:0x29FFFFFF   0x084000000:0x085FFFFFF   CacheMode=5, RW, Valid
0x2A000000:0x2BFFFFFF   0x086000000:0x087FFFFFF   CacheMode=5, RW, Valid
0x2C000000:0x2DFFFFFF   0x090000000:0x091FFFFFF   CacheMode=5, RW, Valid
0x2E000000:0x2FFFFFFF   0x092000000:0x093FFFFFF   CacheMode=5, RW, Valid
0x30000000:0x31FFFFFF   0x094000000:0x095FFFFFF   CacheMode=5, RW, Valid
0x32000000:0x33FFFFFF   0x096000000:0x097FFFFFF   CacheMode=5, RW, Valid
0x34000000:0x35FFFFFF   0x0C0000000:0x0C1FFFFFF   CacheMode=5, RW, Valid
0x36000000:0x37FFFFFF   0x0C2000000:0x0C3FFFFFF   CacheMode=5, RW, Valid
0x38000000:0x39FFFFFF   0x0C4000000:0x0C5FFFFFF   CacheMode=5, RW, Valid
0x3A000000:0x3BFFFFFF   0x0C6000000:0x0C7FFFFFF   CacheMode=5, RW, Valid
0x3C000000:0x3C7FFFFF   0x008000000:0x0087FFFFF   CacheMode=5, RW, Valid
0x3C800000:0x3CFFFFFF   0x008800000:0x008FFFFFF   CacheMode=5, RW, Valid
0x1A000000:0x1BFFFFFF   0x00A000000:0x00BFFFFFF   CacheMode=5, RW, Valid
0x1E000000:0x1FFFFFFF   0x00E000000:0x00FFFFFFF   CacheMode=5, RW, Valid

0 spurious cache errors detected.
0 correctable ECC errors have occurred, A_BUS_L2_ERRORS: 0x0, A_BUS_MEMIO_ERRORS: 0x0
```

show mwam config-mode

To show the MWAM configuration file storage mode, use the **show mwam config-mode** command in privileged EXEC mode.

show mwam config-mode

Syntax Description

show mwam config-mode	Displays the MWAM configuration file storage mode.

Defaults

There are no default behavior or values.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.3(1a)BW	This command was introduced.

Usage Guidelines

Use this command when you want to display the current file storage mode for MWAM configuration files.

Examples

The following examples illustrate the **show mwam config-mode** command:

```
mwam-6-4# show mwam config-mode
mwam config-mode local
```

```
mwam-6-6# show mwam config-mode
mwam config-mode supervisor
```