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MGCP show Commands


The **show** commands are useful for displaying the current status of the configuration as well as verifying that the changes that you made took effect. The following commands are described:

- [show ccm-manager](#)
- [show mgcp](#)
- [show mgcp endpoint](#)
- [show mgcp connection](#)
- [show voice port mod num/slot num/port num](#)
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Details about these commands can be found in the [Cisco IOS Voice Command Reference](#).

show ccm-manager

If your MGCP network includes Cisco CallManager, use this command to verify the active and redundant configured Cisco CallManager servers. This command also indicates if the gateway is currently registered with Cisco CallManager.

 **Note:** The following **show ccm-manager** command output was captured in a separated environment.

```
Router# show ccm-manager
MGCP Domain Name: Router
Total number of host: 2
Priority Status Host
=====
Primary Registered 10.89.129.210
First backup Backup ready 10.89.129.211
Second backup Undefined
Current active Call Manager: 10.89.129.210
Current backup Call Manager: 10.89.129.211
Redundant link port: 2428
Failover Interval: 30 seconds
Keepalive Interval: 15 seconds
Last keepalive sent: 1d00h (elapsed time: 00:00:03)
Last MGCP traffic time: 1d00h (elapsed time: 00:00:03)
Last switchover time: 04:49:39 from (10.89.129.211)
Switchback mode: Graceful
```

show mgcp

Use this command to verify the status of the router's MGCP parameters. You should see the IP address of the server that you are using (172.16.1.252 in this case.) All of the other parameters were left at their default behavior in this configuration.

```
VG200A# show mgcp
MGCP Admin State ACTIVE, Oper State ACTIVE - Cause Code NONE
MGCP call-agent: 172.16.1.252 Initial protocol service is MGCP
MGCP block-newcalls DISABLED
MGCP dtmf-relay codec all mode out-of-band
MGCP modem passthrough: CA
MGCP request timeout 500, MGCP request retries 3
MGCP gateway port: 2427, MGCP maximum waiting delay 3000
MGCP restart delay 0, MGCP vad DISABLED
MGCP simple-sdp ENABLED
MGCP codec type g711ulaw, MGCP packetization period 20
MGCP JB threshold lwm 30, MGCP JB threshold hwm 150
MGCP LAT threshold lwm 150, MGCP LAT threshold hwm 300
MGCP PL threshold lwm 1000, MGCP PL threshold hwm 10000
MGCP playout mode is adaptive 60, 4, 200 in msec
MGCP IP ToS low delay disabled, MGCP IP ToS high throughput disabled
MGCP IP ToS high reliability disabled, MGCP IP ToS low cost disabled
MGCP IP precedence 5, MGCP default package: line-package
MGCP supported packages: gm-package dtmf-package trunk-package line-package
hs-package
VG200A#
```

Table: Explanation of Fields in the show mgcp Command

Field Output	Description
MGCP Admin State ...	The administrative and operational state of the MGCP daemon. The administrative state controls starting and stopping the application using the mgcp and mgcp block-newcalls commands. The operational state controls normal MGCP operations.
MGCP call-agent	The address of the call agent specified in the mgcp command.
MGCP block-newcalls enabled	The state of the mgcp block-newcalls command.
	The setting for the mgcp request timeout command.

MGCP request timeout	
MGCP request retries	The setting for the mgcp request retries command.
MGCP gateway port	The UDP port specification.
MGCP maximum waiting delay	The setting for the mgcp max-waiting-delay command.
MGCP restart delay	The setting for the mgcp restart-delay command.
MGCP VAD	The setting for the mgcp vad command.
MGCP codec type	The setting for the mgcp codec command.
MGCP packetization period	The packetization period parameter setting for the mgcp codec command.
MGCP JB threshold low water mark	The jitter buffer minimum threshold parameter setting for the mgcp quality-threshold command.
JB threshold high water mark	The jitter buffer maximum threshold parameter setting for the mgcp quality-threshold command.
MGCP LAT threshold low water mark	The latency minimum threshold parameter setting for the mgcp quality-threshold command.
LAT threshold high water mark	The latency maximum threshold parameter setting for the mgcp quality-threshold command.
MGCP PL threshold low water mark	The packet loss minimum threshold parameter setting for the mgcp quality-threshold command.
PL threshold high water mark	The packet loss minimum threshold parameter setting for the mgcp quality-threshold command.
MGCP IP ToS low delay	The low-delay parameter setting for the mgcp ip-tos command.
MGCP IP ToS high throughput	The high-throughput parameter setting for the mgcp ip-tos command.
MGCP IP ToS high reliability	The high-reliability parameter setting for the mgcp ip-tos command.
MGCP IP ToS low cost	The low-cost parameter setting for the mgcp ip-tos command.
MGCP IP precedence	The precedence parameter setting for the mgcp ip-tos command.
MGCP default package type	The default-package parameter setting for the mgcp default-package command.
Supported MGCP packages	The packages supported in this session.

show mgcp endpoint

Use this command to show the voice ports (endpoints) that are under MGCP control in the router. This command verifies which voice ports have been bound to the MGCP application. This is related to the **application mgcp** command and the **port** commands that were entered when configuring the POTS dial peer.

```
VG200A#show mgcp endpoint
voice-port 1/0/0
voice-port 1/0/1
voice-port 1/1/0
voice-port 1/1/1
VG200A#
```

show mgcp connection

Use this command to display any active MGCP connections. The endpoint in this example is Slot1/Module 1/Port 0. This corresponds to the MGCP Member Configuration identifier in Cisco CallManager. This tells you which port on the router is the endpoint in the call.

In the screen output below there is one active call.

```
VG200A#show mgcp connection
Endpoint          Call_ID(C)          Conn_ID(I) (P)ort      (M)ode (S)tate (C)odec EC
(R)esult[EA]
1. aaln/S1/SU1/0 C=A000000001000008,23,24 I=0xD      P=16390,0 M=4      S=4,4 CO=1
EC=1 R=0,0
Total number of active calls 1
VG200A#
```

Table: Explanation of Fields in the show mgcp connection Command

Field Output	Description
Endpoint	The endpoint for each call shown in the digital endpoint naming convention of slot number (S0) and digital line (DS1-0) number (1).
Call_ID(C)	The MGCP call ID send by the call agent, the internal Call Control Application Programming Interface (CCAPI) call ID for this endpoint, and the peer call legs CCAPI call ID. (CCAPI is an API to provide call control facilities to applications.)
Conn_ID(I)	The connection ID generated by the gateway and sent in the ACK message.
(P)ort	The ports used for this connection. The first port is the local UDP port. The second port is the remote UDP port.
(M)ode	The call mode, where: 0-Indicates an invalid value for mode. 1-Indicates the gateway should only send packets. 2-Indicates the gateway should only receive packets. 3-Indicates the gateway can send and receive packets. 4-Indicates the gateway should neither send nor receive packets. 5-Indicates the gateway should place the circuit in loopback mode. 6-Indicates the gateway should place the circuit in test mode.

	7-Indicates the gateway should use the circuit for network access for data.
	8-Indicates the gateway should place the connection in network loopback mode.
	9-Indicates the gateway should place the connection in network continuity test mode.
	10-Indicates the gateway should place the connection in conference mode.
	All other values are used for internal debugging.
(S)tate	The call state. The values are used for internal debugging purposes.
(C)odec	The codec identifier. The values are used for internal debugging purposes.
(E)vent [SIFL]	Used for internal debugging.
(R)esult [EA]	Used for internal debugging.

show voice port mod_num/slot_num/port_num

Use this command to verify the current status and configuration of the voice ports on the router.

The following is sample output from the **show voice port** command for a foreign exchange office (FXO) voice port:

```
VG200A#show voice port 1/0/0
Foreign Exchange Office 1/0/0 Slot is 1, Sub-unit is 0, Port is 0
Type of VoicePort is FXO
Operation State is DORMANT
Administrative State is UP
No Interface Down Failure
Description is not set
Noise Regeneration is enabled
Non Linear Processing is enabled
Music On Hold Threshold is Set to -38 dBm
In Gain is Set to 0 dB
Out Attenuation is Set to 0 dB
Echo Cancellation is enabled
Echo Cancel Coverage is set to 8 ms
Playout-delay Mode is set to default
Playout-delay Nominal is set to 60 ms
Playout-delay Maximum is set to 200 ms
Connection Mode is normal
Connection Number is not set
Initial Time Out is set to 10 s
Interdigit Time Out is set to 10 s
Ringing Time Out is set to 180 s
Companding Type is u-law
Region Tone is set for US
Analog Info Follows:
Currently processing none
Maintenance Mode Set to None (not in mtc mode)
Number of signaling protocol errors are 0
Impedance is set to 600r Ohm
Wait Release Time Out is 30 s
Station name None, Station number None
Voice card specific Info Follows:
```

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```
Signal Type is loopStart
Number Of Rings is set to 1
Supervisory Disconnect active
Hook Status is On Hook
Ring Detect Status is inactive
Ring Ground Status is inactive
Tip Ground Status is inactive
Dial Type is dtmf
Digit Duration Timing is set to 100 ms
InterDigit Duration Timing is set to 100 ms
Pulse Rate Timing is set to 10 pulses/second
InterDigit Pulse Duration Timing is set to 750 ms
Percent Break of Pulse is 60 percent
GuardOut timer is 2000 ms
VG200A#
```

The following is sample output from the **show voice port** command for a foreign exchange station (FXS) voice port:

```
VG200A#show voice port 1/1/0
Foreign Exchange Station 1/1/0 Slot is 1, Sub-unit is 1, Port is 0
Type of VoicePort is FXS
Operation State is DORMANT
Administrative State is UP
No Interface Down Failure
Description is not set
Noise Regeneration is enabled
Non Linear Processing is enabled
Music On Hold Threshold is Set to -38 dBm
In Gain is Set to 0 dB
Out Attenuation is Set to 0 dB
Echo Cancellation is enabled
Echo Cancel Coverage is set to 8 ms
Playout-delay Mode is set to default
Playout-delay Nominal is set to 60 ms
Playout-delay Maximum is set to 200 ms
Connection Mode is normal
Connection Number is not set
Initial Time Out is set to 10 s
Interdigit Time Out is set to 10 s
Ringing Time Out is set to 180 s
Companding Type is u-law
Region Tone is set for US
Analog Info Follows:
Currently processing none
Maintenance Mode Set to None (not in mtc mode)
Number of signaling protocol errors are 0
Impedance is set to 600r Ohm
Wait Release Time Out is 30 s
Station name None, Station number None
Voice card specific Info Follows:
Signal Type is loopStart
Ring Frequency is 25 Hz
Hook Status is On Hook
Ring Active Status is inactive
Ring Ground Status is inactive
Tip Ground Status is inactive
Digit Duration Timing is set to 100 ms
InterDigit Duration Timing is set to 100 ms
Ring Cadence is defined by CPTone Selection
Ring Cadence are [20 40] * 100 msec
VG200A#
```

show voice port mod_num/slot_num/port_num

Table: Explanation of Fields in the show voice port Command

Field Output	Description
Administrative State	Administrative state of the voice port.
Alias	User-supplied alias for this voice port.
Clear Wait Duration Timing	Time of inactive seizure signal to declare call cleared.
Connection Mode	Connection mode of the interface
Connection Number	Full E.164 telephone number used to establish a connection with the trunk or PLAR mode.
Currently Processing	Type of call currently being processed: none, voice, or fax.
Delay Duration Timing	Maximum delay signal duration for delay dial signaling.
Delay Start Timing	Timing of generation of delayed start signal from detection of incoming seizure.
Dial Type	Out-dialing type of the voice port.
Digit Duration Timing	DTMF Digit duration in milliseconds.
E&M Type	Type of E&M interface.
Echo Cancel Coverage	Echo Cancel Coverage for this port.
Echo Cancellation	Whether or not echo cancellation is enabled for this port.
Hook Flash Duration Timing	Maximum length of hook flash signal.
Hook Status	Hook status of the FXO/FXS interface.
Impedance	Configured terminating impedance for the E&M interface.
In Gain	Amount of gain inserted at the receiver side of the interface.
In Seizure	Incoming seizure state of the E&M interface.
Initial Time Out	Amount of time the system waits for an initial input digit from the caller.
InterDigit Duration Timing	DTMF interdigit duration in milliseconds.
InterDigit Pulse Duration Timing	Pulse dialing interdigit timing in milliseconds.
Interdigit Time Out	Amount of time the system waits for a subsequent input digit from the caller.
Maintenance Mode	Maintenance mode of the voice-port.
Music On Hold Threshold	Configured Music-On-Hold Threshold value for this interface.
Noise Regeneration	Whether or not background noise should be played to fill silent gaps if VAD is activated.
Number of signaling protocol errors	Number of signaling protocol errors.
Non-Linear Processing	Whether or not Non-Linear Processing is enabled for this port.
Operations State	Operation state of the port.
Operation Type	Operation of the E&M signal: 2-wire or 4-wire.
Out Attenuation	Amount of attenuation inserted at the transmit side of the interface.
Out Seizure	Outgoing seizure state of the E&M interface.
Port	Port number for this interface associated with the voice interface card.
Pulse Rate Timing	Pulse dialing rate in pulses per second (pps).
Regional Tone	Configured regional tone for this interface.
Ring Active Status	Ring active indication.
Ring Frequency	Configured ring frequency for this interface.
Ring Ground Status	Ring ground indication

Table: Explanation of Fields in the show voice port Command

Signal Type	Type of signaling for a voice port: loop-start, ground-start, wink-start, immediate, and delay-dial.
Slot	Slot used in the voice interface card for this port.
Sub-unit	Sub-unit used in the voice interface card for this port.
Tip Ground Status	Tip ground indication.
Type of VoicePort	Type of voice port: FXO, FXS, and E&M.
The Interface Down Failure Cause	Text string describing why the interface is down.
Wink Duration Timing	Maximum wink duration for wink start signaling.
Wink Wait Duration Timing	Maximum wink wait duration for wink start signaling.

show mgcp statistics

Use this command to show statistical information related to MGCP activity on the router.

The following is sample output from a 28xx router with IOS 12.4(22)T

```
2851#sh mgcp statistics
UDP pkts rx 28349, tx 28576
Unrecognized rx pkts 0, MGCP message parsing errors 0
Duplicate MGCP ack tx 1, Invalid versions count 0
CreateConn rx 353, successful 353, failed 0
DeleteConn rx 353, successful 353, failed 0
ModifyConn rx 629, successful 629, failed 0
DeleteConn tx 0, successful 0, failed 0
NotifyRequest rx 217, successful 217, failed 0
AuditConnection rx 0, successful 0, failed 0
AuditEndpoint rx 263, successful 233, failed 30
RestartInProgress tx 27, successful 27, failed 0
Notify tx 26530, successful 26530, failed 0
ACK tx 1785, NACK tx 30
ACK rx 26533, NACK rx 0
Collisions: Passive 0, Active 0

IP address based Call Agents statistics:
IP address 10.10.14.36, Total msg rx 28349,
                    successful 28318, failed 30
System resource check is DISABLED. No available statistic

DS0 Resource Statistics
-----
Utilization: 3.33 percent          <-- E1 utilization
Total channels: 60                 <-- two E1 whereas one port shutdown
Addressable channels: 30           <-- just on E1 operational
Inuse channels: 1                  <-- currently used channels
Disabled channels: 30              <-- second E1 not operational
Free channels: 29                  <-- available channels
```

The following is sample output from Voice Gateway VG200:

```
VG200A#show mgcp statistics
UDP pkts rx 3791, tx 3830
Unrecognized rx pkts 0, MGCP message parsing errors 0
Duplicate MGCP ack tx 0, Invalid versions count 0
CreateConn rx 12, successful 12, failed 0
DeleteConn rx 12, successful 12, failed 0
ModifyConn rx 42, successful 42, failed 0
```


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```

DeleteConn tx 0, successful 0, failed 0
NotifyRequest rx 8, successful 8, failed 0
AuditConnection rx 0, successful 0, failed 0
AuditEndpoint rx 20, successful 20, failed 0
RestartInProgress tx 6, successful 6, failed 0
Notify tx 3704, successful 3704, failed 0
ACK tx 68, NACK tx 0
ACK rx 3703, NACK rx 0
IP address based Call Agents statistics:
IP address 172.16.1.252, Total msg rx 3791,
                        successful 3791, failed 0
VG200A#
    
```

Table: Explanation of Fields in the show mgcp statistics Command

Field Output	Description
UDP pkts	The number of UDP packets received (rx) and transmitted (tx).
Unrecognized rx pkts	The number of packets received that are of unknown type.
MGCP message parsing errors	The number of MGCP message parsing errors.
Duplicate MGCP ack tx	The number of duplicate MGCP ACK transmission messages.
Invalid versions count	The number of invalid versions.
CreateConn rx ...	The number of Create Connection messages received from the call agent by the media gateway. Messages received are classified as being successful or failed.
DeleteConn rx ...	The number of Delete Connection messages received from the call agent by the media gateway. Messages received are classified as being successful or failed.
ModifyConn rx ...	The number of Modify Connection messages received from the call agent by the media gateway. Messages received are classified as being successful or failed.
DeleteConn tx ...	The number of Delete Connection messages sent by the call agent. Messages received are classified as being successful or failed.
NotifyRequest rx ...	The number of Notify messages received by the call agent from the media gateway. Messages received are classified as being successful or failed.
AuditConnection rx ...	The number of Audit Connection messages received from the call agent by the media gateway. Messages received are classified as being successful or failed.
AuditEndpoint rx ...	The number of Audit Endpoint messages received from the call agent by the media gateway. Messages received are classified as being successful or failed.
RestartInProgress tx ...	The number of Restart In Progress (RSIP) messages transmitted by the call agent. Messages received are classified as being successful or failed.
Notify tx ...	The number of Notify messages transmitted by the call agent. Messages received are classified as being successful or failed.
ACK tx ...	The number of acknowledgement messages transmitted by the call agent.
NACK tx ...	The number of negative acknowledgement messages transmitted by the call agent.
ACK rx ...	The number of acknowledgement messages received by the gateway.
NACK rx ...	The number of negative acknowledgement messages received by the gateway.
IP address	The IP address of the call agent.

Total msg rx ...	The total number of messages received by the gateway. Messages received are classified as being successful or failed.
------------------	---

Other debug mgcp Commands

Use **debug mgcp {all | error | events | packets | parser}** when you are experiencing problems that you believe are not related to configuration errors or hardware problems. It is recommended that you keep an example of each **debug** command from a working configuration to use as a baseline for comparison when you are experiencing problems.