



## MGC Information Package Support

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The DBE is now enhanced to support the Media Gateway Controller (MGC) Information Package (mgcinfo) defined in the International Telecommunication Union (ITU) H.248 Standards under Draft New Recommendation H.248.45 “MGC Information Package”. This package enables an MGC to store data on a media gateway (MG) that can be subsequently retrieved to facilitate the MGC recovery action.

### Feature History for MGC Information Package Support

Release	Modification
Release 3.5.1	This feature was introduced on the Cisco XR 12000 Series Router and Cisco CRS-1.
Release 3.6.0	No modification.

## Contents

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## Information About MGC Information Package Support

The standard H.248 audit mechanism enables an MGC to retrieve data from an associated MG in order to re-synchronize the connection data and state between an MGC and MG. The Remote Descriptor associated with the ephemeral termination enables the other end of the bearer connection to be identified, however, not in a format that may be convenient for the MGC to use. Often the Remote Descriptor may not enable the other end to be identified since some MGs use different control and media addresses.

The MGC Information Package feature allows the MGC to store a block of data on an MG, enabling the MGC to identify the other end of the bearer connection. The structure of the stored data is understood only by the MGC and is opaque to the MG. Thus, in the event of an MGC failure, the MGC can now retrieve the previously stored data block. The MGC can now identify the other end of the connection (typically on a separate MG) and thus provide a coordinated clean-up of the related connections on the separate MGs. The MGC is free to define the contents of the string in a proprietary manner that is most convenient for its own usage.

The MGC Information Package requires that supporting MGs store up to 128 bytes of opaque data for each ephemeral termination, which may be returned to an auditing MGC to allow that MGC to recover information following an MGC failure.

Data is stored in `mgcinfo/db=0011223344` format. The audit may be performed either on the Media Descriptor (which contains the LocalControl Descriptor) or on the individual property within the LocalControl Descriptor, for example:

- `Audit{Media}`

or

- `Audit{Media {Stream=1{LocalControl{MGCInfo/db}}}}`

DBE allows a block of opaque data to be added to any ephemeral termination, and an existing data block to be modified or deleted using standard H.248 protocol commands. DBE retains this opaque data in a fault-tolerant manner, and returns it intact when the termination is audited by the MGC.

Once the feature is added, support for the package is always enabled and may not be disabled. The controlling MGC decides whether the package is used. If the MGC sends `mgcinfo/db` with more than 128 octets, then the DBE rejects it with error code 442. This package is supported on both H.238.v2 and H.248.v3 versions.

## How to Configure MGC Information Package Support

A new **enable | disable** command has been added to enable or disable the MGC information package in the Ia and Cisco profiles.

### SUMMARY STEPS

1. **configure**
2. **sbc** *service-name*
3. **dbe**
4. **vdbe**
5. **h248-profile** *profile-name*
6. **package** *package-name* **enable | disable**
7. **commit**
8. **exit**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<b>configure</b>  <b>Example:</b> RP/0/0/CPU0:router# configure	Enables the global configuration mode.
Step 2	<b>sbc service-name</b>  <b>Example:</b> RP/0/0/CPU0:router(config)# sbc mysbc	Enters the mode of an SBC service.  Use the <i>service-name</i> argument to define the name of the SBC.
Step 3	<b>dbe</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc)# dbe	Enters the mode of the data border element (DBE) function of the SBC.
Step 4	<b>vdbe</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe)# vdbe	Enters the mode for configuring virtual DBE (vDBE) parameters.
Step 5	<b>h248-profile profile-name</b>  <b>Example:</b> RP/0/0/CPU0:router(config-sbc-dbe-vdbe)# h248-profile etsi-bgf	Configure the DBE H.248 profile name to interoperate with MGC/SBE.  profile-name—Name of the H.248 profile. Only two profiles are allowed: <ul style="list-style-type: none"> <li>• SBC_GateControl (parameter value: gatecontrol)</li> <li>• ESSI_BGF (parameter value: etsi-bgf). This is an Ia profile.</li> </ul> The <b>no</b> version of this command does not set this configuration command.  After the vDBE is configured to use the H.248 profile name, the profile name is advertised with the Service Change messages.

Command or Action	Purpose
<p><b>Step 6</b></p> <p><code>package package-name enable   disable</code></p> <p><b>Example:</b>  RP/0/0/CPU0:router(config-sbc-dbe-vdbe-h248-profile)#  package mgcinfo enable</p>	<p>Enables or disables the optional packages for vDBE to interoperate with MGC/SBE.</p> <p>The <b>no</b> version of this command does not set this configuration.</p> <ul style="list-style-type: none"> <li>package-name—Specifies the names of the packages that should be enabled or disabled. The values are the following package names: <ul style="list-style-type: none"> <li>aud-cap—Audit Capability package</li> <li>chp—Congestion Handling H248 package</li> <li>dtmfd—DTMF Detection H248 package</li> <li>dtmfg—DTMF Generation H248 package</li> <li>emp—Middlebox (emp) H248 package</li> <li>epstat—End Point Statistics H248 package</li> <li>eroot—Enhanced Root H248 package</li> <li>evpnd—Extended VPN Discrimination H248 package</li> <li>ginfo—GINFO H248 package</li> <li>mgcinfo—MGC Info H248 package</li> <li>ocp—Overlord Control H248 package</li> <li>rtp—RTP H248 package</li> <li>sfr—Session Failure Reaction H248 package</li> <li>tsc—Termination State Control H248 package</li> </ul> </li> </ul> <p>These packages are disabled or enabled based on profile configuration.</p> <p>For the Ia profile the following packages are disabled by default:  epstats, rtp, emp, chp, ocp, sfr, tsc, dtmfd, dtmfg, mgcinfo, evpnd, and eroot packages.</p>
<p><b>Step 7</b></p> <p><code>commit</code></p> <p><b>Example:</b>  RP/0/0/CPU0:router(config-sbc-dbe-vdbe-h248-profile)#  commit</p>	<p>Saves configuration changes. Use the <b>commit</b> command to save the configuration changes to the running configuration file and remain within the configuration session.</p>
<p><b>Step 8</b></p> <p><code>exit</code></p> <p><b>Example:</b>  RP/0/0/CPU0:router(config-sbc-dbe-vdbe-h248-profile)#  exit</p>	<p>Exits the current mode of the configuration.</p>

# Additional References

The following sections provide references related to MGC information package support.

## Related Documents

Related Topic	Document Title
Cisco IOS XR master command reference	Cisco IOS XR Master Commands List
Cisco IOS XR SBC interface configuration commands	<i>Cisco IOS XR Session Border Controller Command Reference</i>
Initial system bootup and configuration information for a router using the Cisco IOS XR Software	<i>Cisco IOS XR Getting Started Guide</i>
Cisco IOS XR command modes	<i>Cisco IOS XR Command Mode Reference</i>

## Standards

Standards	Title
No new or modified standards are supported by this feature, and support from existing standards has not been modified by this feature.	—

## MIBs

MIBs	MIBs Link
—	To locate and download MIBs using Cisco IOS XR software, use the Cisco MIB Locator found at the following URL and choose a platform under the Cisco Access Products menu: <a href="http://cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml">http://cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml</a>

## Technical Assistance

Description	Link
The Cisco Technical Support website contains thousands of pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	<a href="http://www.cisco.com/techsupport">http://www.cisco.com/techsupport</a>

