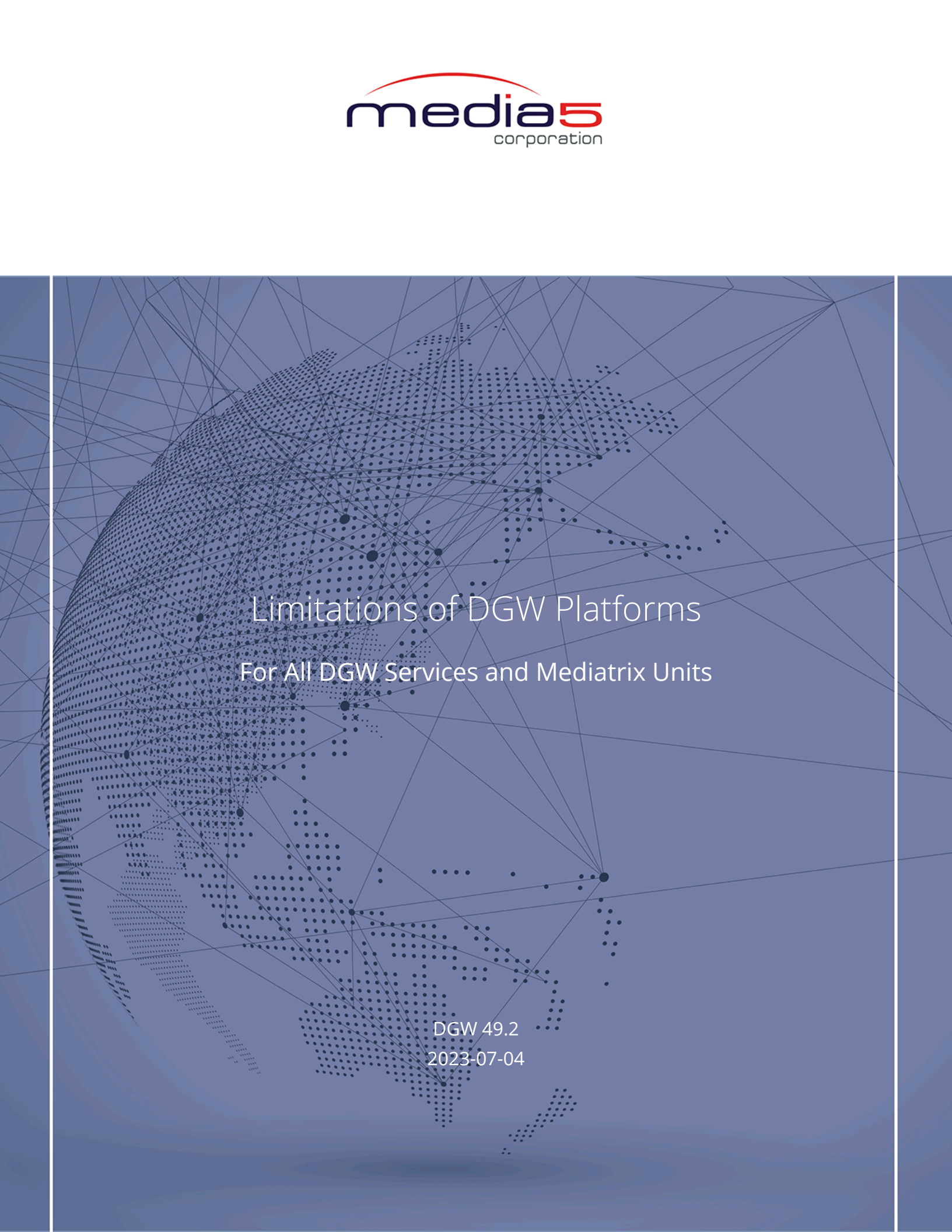


The background of the slide is a dark blue gradient. It features a complex, abstract graphic of a globe or sphere on the left side, composed of a dense grid of small dots. A network of thin, light blue lines connects various points across the globe and extends into the background, creating a sense of global connectivity and data flow.

Limitations of DGW Platforms

For All DGW Services and Mediatrix Units

DGW 49.2
2023-07-04

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Configuration Details

When defining your DGW configuration, you must take into consideration the following information to make sure your deployment scenario will work as expected.

Call Routing

- A call coming from a SIP interface cannot be routed to another SIP interface. In this case, the call automatically fails. To route a call from SIP to SIP, the Sbc service must be used.
- Simultaneous ring group destinations are limited to FXS interfaces only.
- A call automatically fails if it is redirected to a route or hunt more than 10 times.
- The Call Rerouting feature is not available in the NI2 and QSIG signalling protocols.
- The T.38 priority is hard coded to 10.

File Upload Limits

The file upload limit is determined by the amount of space allocated to uploads.

Mediatrix Unit	Maximum File Size
Sentinel 400	(Flash Memory divided by 2) - 1 GB for a maximum of 32 GB
Sentinel 100	(Flash Memory divided by 2) - 1 GB for a maximum of 32 GB
S7	1 MB
G7	1 MB
C7	256 KB
4102	0 KB - you cannot upload files

Command Size Limits

The maximum size of a configuration command depends on the method used to transfer it to the unit.

Transfer Method	Maximum Configuration Command Size
CLI	8 KB
Within a configuration script file	64 KB
Through Inline Script Execution on the web page	64 KB
Through snmpEx	4 KB
Through cwmpEx	8 KB

Protocols

The AOC features are not available in the NI2 and QSIG signalling protocols.

Time Clock

Except for the Sentinel models which have a Real-Time-Clock (RTC), all Mediatrix units need to be connected with a NTP server in order to update and synchronise the local clock at start time. Since some services require accurate time to work properly, you should configure the SNTP settings to point to an available time server.

Redundant Ethernet Ports

The **Eth.RedundantPorts** parameter enable redundant Ethernet ports. This feature is not available on the Mediatrix 4102, and the Mediatrix C7 series.

Troubleshooting

PCM capture does not support sending streams with a ptime of 10 ms.

Visual Message Waiting Indicator

The **Pots.FxsDefaultVisualMessageWaitingIndicatorType** parameter configures the type of VMWI to trigger on a FXS phone line. The *FskAndVoltage* type is not supported on the Mediatrix 4102.

FXO Ports

The Caller ID detection for FXO ports supports only the Bell 202 FSK type.

Internal Fans and Temperature Monitoring

The **Dcm.HardwareFanInfo** and **Dcm.HardwareTemperatureInfo** tables are supported only on the Sentinel 400 and Sentinel RS series, and for units produced in 2019 or newer.

Overall Performance

The overall performance of a Mediatrix unit can be affected by several factors. Depending on your deployment scenario, one or several of the following aspects should be considered.

Call Routing

- Enabling the IP routing service and adding rules has an impact on the Mediatrix unit's overall performance as IP routing requires additional processing. The more rules are enabled, the more overall performance is affected.
- Expiration delays will set the session refresh messages periodicity, using longer delays reduces the network usage, but it will take more time to detect dead calls.

Debugging

- Enabling all traces could significantly slow down the performance of the Mediatrix unit.
- Significant CPU resources are required when notifications are sent frequently to the local log. This can have an impact on the unit's performance.
- Enabling pcap capture could significantly slow down the performance of the Mediatrix unit if it is already managing several calls on most of its ports.

Firewalls

- Enabling the local firewall or the network firewall and adding rules has an impact on the Mediatrix unit's overall performance as the firewall requires additional processing. The more rules are enabled, the more overall performance is affected.

Fax

- The quality of T.38 fax transmissions depends on several factors such as the system configuration and the model of fax machine used. Should some of these conditions be unsatisfactory, performance of T.38 fax transmissions may vary and be reduced below expectations.

Codecs

- The number of calls Mediatrix units can handle simultaneously can be less than expected depending on the type of codec enabled. There is a way not to impact the number of simultaneous calls by enabling only G.711 codecs and disabling every other voice or data codecs, even T.38.
- Enabling Secure RTP (SRTP) will have a direct impact on the Mediatrix unit overall performance, as SRTP requires CPU power. The more lines use SRTP, the more overall performance is affected. This could mean that a user picking up a telephone on these models may not have a dial tone due to a lack of resources.
- Theptime has a direct impact on the number of concurrent calls that a unit can handle. For more details, refer to [Packetisation Time \(ptime\)](#) (p.8).

- There is no maximum number of concurrent calls enforced, but issues may occur when more than 10 channels are used per DSP.

Web

- Navigating on the DGW Web Interface may impact the overall performance.

IPv6 Availability

DGW 2.0 supports IPv6 except for:

- CPE WAN Management Protocol (CWMP)/TR-069
- DHCP embedded sever
- IP Routing
- Local Firewall (LFW)
- Network Firewall (NFW)
- Network Address Translation (NAT)
- Online Certificate Status Protocol (OSCP)
- Remote Authentication Dial In User Services (RADIUS)
- Session Border Controller (SBC)
- Simple Network Management Protocol (SNMP)
- PPPoE
- traceroute Cli command (traceroute6 is only available on the Mediatrix Sentinel 400)

Packetisation Time (ptime)

The packetisation time, also called ptime, is the duration, in milliseconds (ms), of a voice packet.

The ptime has a direct impact on the number of concurrent calls that a unit can handle. As a general rule, the higher the ptime, the higher the number of concurrent calls can be achieved. Using a ptime of more than 30 ms, even if a ptime of 100 can be used on some models, it will not make a huge difference in the processing capacity. However, using a ptime of 10 or 20 ms will significantly reduce the number of concurrent calls the unit can handle.

Media5 recommends:

- A 30 ms packetization time when the Local or Network firewall is enabled (instead of a 20 ms ptime, for instance) to simultaneously use all the channels available on the unit.
- A 30 ms packetization time when IP routing is enabled (instead of 20 for instance) to simultaneously use all the channels available on the unit.
- A 30 ms packetization time when the NAT is enabled (instead of 20 for instance) to simultaneously use all the channels available on the unit.

Processing Capacity

The processing capacity is the number of concurrent calls a unit can handle successfully.

The processing capacity of the Mediatrix units depends on:

- the Mediatrix unit model or cards used
- the codec
- if media is encrypted (SRTP)
- the [Packetisation Time \(ptime\)](#) (p.8)
- if fax transmission is used at the same time
- if several functionalities using substantial amounts of CPU are running simultaneously (such as maintenance, configuration on Web pages, or SNMP requests)
- if 3-way conference calls are ongoing

The number of possible 3-way conferences also depends on:

- the number of channels in use
- the type of codec
- if media is encrypted

However, in order to make a 3-way conference, sufficient channels must be available. For example, if all channels are in use, 3-way conference will not be possible.

Channel Limitations per Model

Model	DSP	RTP and Uncompressed Codec	RTP and Compressed Codec	SRTP and Uncompressed Codec	SRTP and Compressed Codec	Max 3-way Calls
4102	1	4	4	4	4	2

Note: 3-way conference channels are included in the other max channel limitations.

Note: For ease of reading, the "compressed codec" columns also include T.38 Fax Relay.

Model	DSP	RTP and Uncompressed Codec	RTP and Compressed Codec	SRTP and Uncompressed Codec	SRTP and Compressed Codec	Max 3-way Calls
C710	1	6	6	6	6	2
C711	1	10	10	10	10	2
C720	1	4	4	4	4	0
C720h	1	2	2	2	2	0
C721	1	10	10	10	10	2
C725	1	8	8	8	8	2
C730	1	4	4	4	4	0
C731	1	10	10	10	10	2
C733	1	8	8	8	8	0
C735	1	8	8	8	8	2
C740	1	8	8	8	8	0
C741	1	14	14	14	14	2
C745	1	12	12	12	12	2
C770	1	2	2	2	2	0
C771	1	8	8	8	8	2
C775	1	6	6	6	6	2

Note: 3-way conference channels are included in the other max channel limitations.

Note: For ease of reading, the "compressed codec" columns also include T.38 Fax Relay.

Model	DSP	RTP and Uncompressed Codec	RTP and Compressed Codec	SRTP and Uncompressed Codec	SRTP and Compressed Codec	Max 3-way Calls
G7 - 4 BRI	1	8	8	8	8	0
G7 - 8 BRI	1	16	16	16	15	0
G7 - 16 BRI	2	32	32	32	30	0
G7 - 1 PRI	2	30	30	30	30	0
G7 - 1 PRI 4 FXS	2	34	32	32	30	4
G7 - 1 PRI 4 FXS*	3	38	38	38	38	4
G7 - 1 PRI 4 FXS 4 FXO	3	42	42	42	42	4
G7 - 1 PRI 8 FXS	3	44	44	44	44	6
G7 - 1 PRI 8 FXS 4 FXO	3	48	48	48	45	6
G7 - 1 PRI 8 FXS 8 FXO	3	51	48	48	45	6
G7 - 1 PRI 8 FXS 8 FXO*	4	54	54	54	54	8
G7 - 1 PRI 12 FXS	3	48	48	48	45	6
G7 - 2 PRI	4	60	60	60	60	0
G7 - 2 PRI 4 FXS	4	68	64	64	60	4
G7 - 2 PRI 8 FXS 8 FXO	5	84	80	80	75	8
G7 - 4 PRI	8	120	120	120	120	0
G7 - 4 PRI 4 FXS	8	128	128	128	120	4
G7 - 8 FXS 8 FXO	1	17	16	16	15	2
G7 - 16 FXO	1	16	16	16	15	0
G7 - 24 FXO	2	24	24	24	24	0

*Model with more channel processing capabilities.

Note: 3-way conference channels are included in the other max channel limitations.

Note: For ease of reading, the "compressed codec" columns also include T.38 Fax Relay.

Model	DSP	RTP and Uncompressed Codec	RTP and Compressed Codec	SRTP and Uncompressed Codec	SRTP and Compressed Codec	Max 3-way Calls
S702	1	4	4	4	4	2
S702 LP	1	4	4	4	4	2
S704	1	6	6	6	6	2
S704 LP	1	6	6	6	6	2
S706	1	8	8	8	8	2
S706 LP	1	8	8	8	8	2
S708	1	10	10	10	10	2
S708 LP	1	10	10	10	10	2
S710	1	12	12	12	12	2
S710 LP	1	12	12	12	12	2
S712	1	14	14	14	14	2
S712 LP	1	14	14	14	14	2
S714	1	16	16	16	15	2
S714 LP	1	16	16	16	15	2
S716	1	17	16	16	15	2
S716 LP	1	17	16	16	15	2
S718	1	17	16	16	15	2
S718 LP	1	17	16	16	15	2
S720	1	17	16	16	15	2
S720 LP	1	17	16	16	15	2
S722	1	17	16	16	15	2
S722 LP	1	17	16	16	15	2
S724	1	17	16	16	15	2
S724*	2	28	28	28	28	4
S724 LP	1	17	16	16	15	2

*Model with more channel processing capabilities.

Note: 3-way conference channels are included in the other max channel limitations.

Note: For ease of reading, the "compressed codec" columns also include T.38 Fax Relay.

Model	DSP	RTP and Uncompressed Codec	RTP and Compressed Codec	SRTP and Uncompressed Codec	SRTP and Compressed Codec	Max 3-way Calls
Sentinel 100 base unit	0	0	0	0	0	0
Sentinel 100 - 4 BRI	1	8	8	8	8	0
Sentinel 100 - 8 BRI	1	16	16	16	15	0
Sentinel 100 - 16 BRI	2	32	32	32	30	0
Sentinel 100 - 1 PRI	2	30	30	30	30	0
Sentinel 100 - 1 PRI 4 FXS	2	34	32	32	30	4
Sentinel 100 - 1 PRI 4 FXS*	3	38	38	38	38	4
Sentinel 100 - 1 PRI 4 FXS 4 FXO	3	42	42	42	42	4
Sentinel 100 - 1 PRI 8 FXS	3	44	44	44	44	6
Sentinel 100 - 1 PRI 8 FXS 4 FXO	3	48	48	48	45	6
Sentinel 100 - 1 PRI 8 FXS 8 FXO	3	51	48	48	45	6
Sentinel 100 - 1 PRI 8 FXS 8 FXO*	4	54	54	54	54	8
Sentinel 100 - 1 PRI 12 FXS	3	48	48	48	45	6
Sentinel 100 - 2 PRI	4	60	60	60	60	0
Sentinel 100 - 2 PRI 4 FXS	4	68	64	64	60	4
Sentinel 100 - 2 PRI 8 FXS 8 FXO	5	84	80	80	75	8

Model	DSP	RTP and Uncompressed Codec	RTP and Compressed Codec	SRTP and Uncompressed Codec	SRTP and Compressed Codec	Max 3-way Calls
Sentinel 100 - 4 PRI	8	120	120	120	120	0
Sentinel 100 - 4 PRI 4 FXS	8	128	128	128	120	4
Sentinel 100 - 4 FXS	1	6	6	6	6	2
Sentinel 100 - 4 FXS 4 FXO	1	10	10	10	10	2
Sentinel 100 - 8 FXS	1	10	10	10	10	2
Sentinel 100 - 16 FXS	1	17	16	16	15	2
Sentinel 100 - 24 FXS	2	28	28	28	28	4
Sentinel 100 - 4 FXO	1	4	4	4	4	0
Sentinel 100 - 8 FXO	1	8	8	8	8	0

*Model with more channel processing capabilities.

Note: 3-way conference channels are included in the other max channel limitations.

Note: For ease of reading, the "compressed codec" columns also include T.38 Fax Relay.

The Sentinel 400 does not come with predefined slotted cards. Customer is free to use any extension cards in its unit as long as it follows the guidelines stated in the hardware installation guide. The entries in the table below are given as examples to show several configurations for the Sentinel 400.

Model	DSP	RTP and Uncompressed Codec	RTP and Compressed Codec	SRTP and Uncompressed Codec	SRTP and Compressed Codec	Max 3-way Calls
Sentinel 400 base unit	0	0	0	0	0	0
Sentinel 400 with 1 DSP card 1 BRI card	2	8	8	8	8	0
Sentinel 400 with 1 DSP card 7 BRI cards	2	34	32	32	30	0
Sentinel 400 with 2 DSP card 6 BRI cards	4	48	48	48	48	0
Sentinel 400 with 1 PRI card	2	30	30	30	30	0
Sentinel 400 with 1 DSP card 7 FXS cards	2	32	32	32	30	4
Sentinel 400 with 1 DSP card 7 FXO cards	2	28	28	28	28	0

Note: 3-way conference channels are included in the other max channel limitations.

Note: For ease of reading, the "compressed codec" columns also include T.38 Fax Relay.

The Sentinel RS does not come with predefined slotted cards. Customer is free to use any extension cards in its unit as long as it follows the guidelines stated in the hardware installation guide. The entries in the table below are given as examples to show several configurations for the Sentinel RS.

Model	DSP	RTP and Uncompressed Codec	RTP and Compressed Codec	SRTP and Uncompressed Codec	SRTP and Compressed Codec	Max 3-way Calls
Sentinel RS base unit	0	0	0	0	0	0

Note: 3-way conference channels are included in the other max channel limitations.

Note: For ease of reading, the "compressed codec" columns also include T.38 Fax Relay.

Platform-Specific Service Notifications

Notifications Not Available on the Mediatrix Sentinel 400 and Sentinel RS

All Service Notifications are available on the Mediatrix Sentinel 400 and Sentinel RS.

Notifications Not Available on the Mediatrix Sentinel 100

Service	NumKey	Message
VM	ALL	

Notifications Not Available on the Mediatrix G7

Service	NumKey	Message
Sbc	ALL	
VM	ALL	

Notifications Not Available on the Mediatrix S7

Service	NumKey	Message
Sbc	ALL	
VM	ALL	

Notifications Not Available on the Mediatrix C7

Service	NumKey	Message
Dcm	30	The Power Supply Unit #%1\$d is in fault state.
	40	The Power Supply Unit #%1\$d recovered from the previous fault state.
	70	Warning, disk wear level is at %1\$d percent.
Eam	ALL	
Isdn	ALL	
R2	ALL	
Sbc	ALL	
SipEp	610	The gateway %1\$s is configured for SBC binding but not its signaling interface.
	620	The gateway %1\$s cannot have multiple media interfaces because it is bound to the SBC.
	630	The gateway %1\$s servers configuration does not allow correct SBC binding.
VM	ALL	

Notifications Not Available on the Mediatix 4102

Service	NumKey	Message
Dcm	30	The Power Supply Unit #%%1\$d is in fault state.
	40	The Power Supply Unit #%%1\$d recovered from the previous fault state.
	70	Warning, disk wear level is at %%1\$d percent.
Eam	ALL	
File	10	File %%1\$s has been deleted.
	20	Not enough space to store file.
	30	Download failed, a download is currently in progress.
	35	Upload failed, an upload is currently in progress.
	110	File %%1\$s successfully downloaded.
	120	File %%1\$s successfully stored.
	130	File %%1\$s failed to store.
	140	File %%1\$s cannot be opened.
	150	Maximum number of files reached, cannot store file %%1\$s.
	160	No write permission on the destination folder %%1\$s.
	170	No Erase permission on the destination folder %%1\$s.
	180	No Read permission on the destination folder %%1\$s.
	190	Unable to download the file %%1\$s, file not found.
	200	Unable to upload the file %%1\$s, file not found.
	210	File %%1\$s cannot be read.
	220	File %%1\$s successfully uploaded.
Fpu	1000	Executing on recovery firmware.
	4000	Rollback operation is starting.
	4100	Rollback already in progress.
	4200	Rollback operation could not complete successfully.
	4300	Rollback operation could not complete successfully, retrying.
	4400	Rollback to previously installed MFP succeeded.

Service	NumKey	Message
	4500	The system is now restarting to complete the firmware rollback.
Isdn	ALL	
R2	ALL	
Sbc	ALL	
SipEp	610	The gateway %1\$s is configured for SBC binding but not its signaling interface.
	620	The gateway %1\$s cannot have multiple media interfaces because it is bound to the SBC.
	630	The gateway %1\$s servers configuration does not allow correct SBC binding.
VM	ALL	
Web	60	Cancelling file upload because of timeout.

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