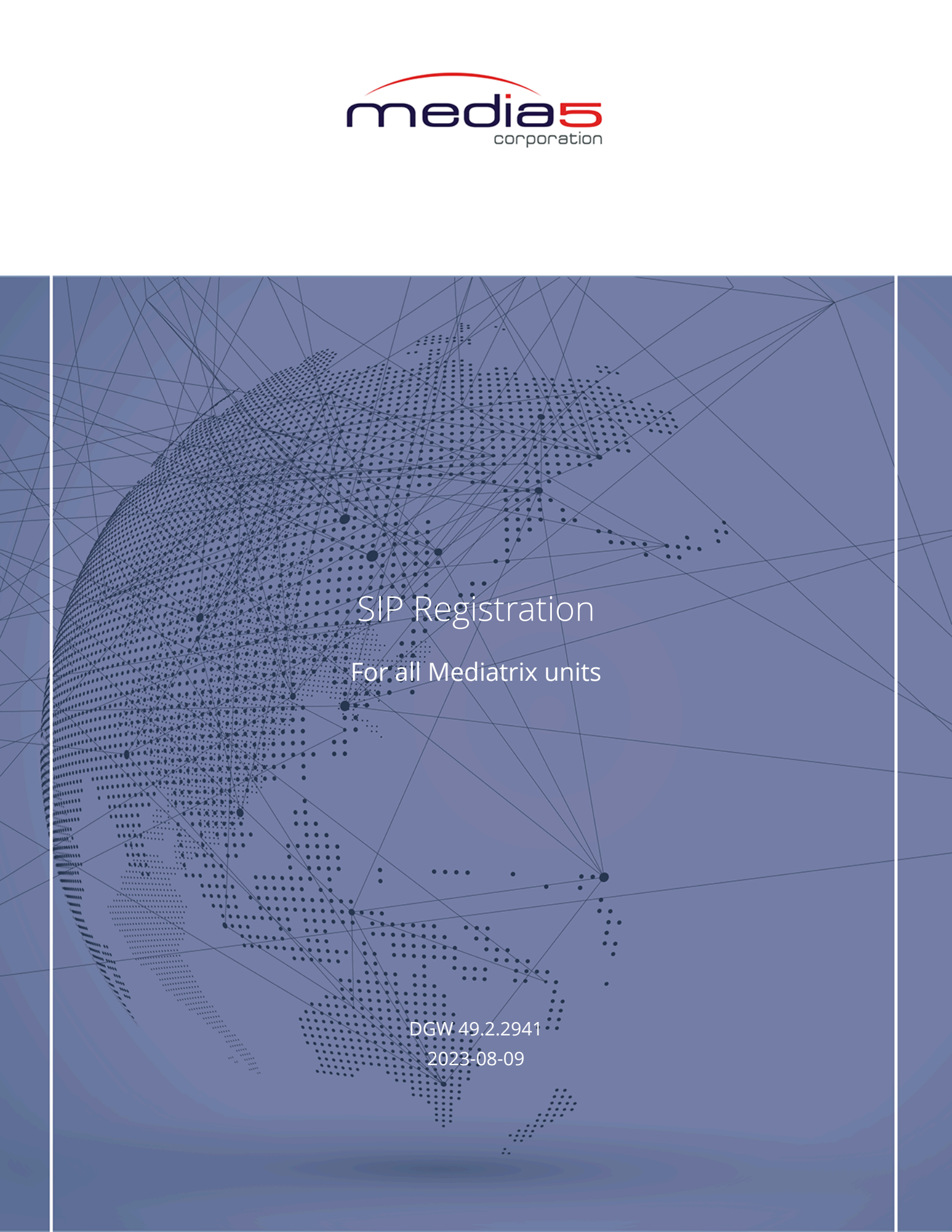


The background of the page is a dark blue gradient with a complex, abstract graphic. It consists of a dense network of thin, light blue lines connecting numerous small, dark blue dots. These dots are arranged in a way that suggests a global map, with higher concentrations of dots in the Americas and Europe. The overall effect is a sense of global connectivity and technology.

SIP Registration

For all Mediatrix units

DGW 49.2.2941

2023-08-09

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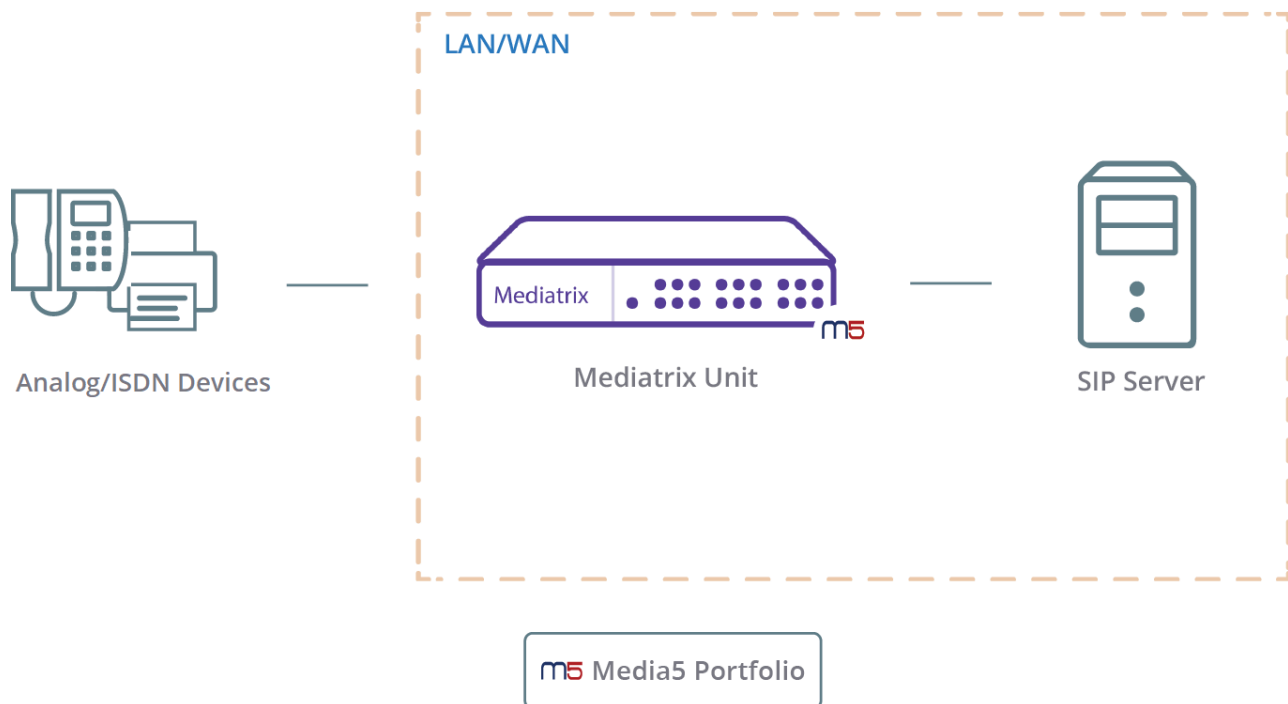
Basic Concepts

Registration

The DGW firmware handles multiple registration modes, either per endpoint, per gateway, or for the whole unit. Simultaneous registrations are supported for each endpoint or to multiple SIP gateways (a maximum of 5 is supported).

Each endpoint may have its own registration information. You can set information for each endpoint such as its telephone number and friendly name.

Unit registration is used to register a contact not directly related to endpoints. This is generally used to indicate to a registrar the IP location of the Mediatrix unit when it is used as a gateway. In SIP, a registration is valid for a period of time defined by the registrar. Once a unit is registered, the SIP protocol requires the User Agent to refresh this registration before the registration expires. Typically, this re-registration must be completed before the ongoing registration expires, so that the User Agent's registration state does not change (i.e., remains 'registered').



Registering to all SIP Gateways vs to a specific SIP Gateway

Each endpoint can register to a specific SIP Gateway or register to all configured SIP Gateways simultaneously. DGW handles each registration separately, allowing the registration of individual endpoints to different SIP Gateways.

You can define a specific gateway to register to each endpoint of the Mediatrix unit. For instance, you could set all endpoints of the Mediatrix unit to register to all SIP Gateways simultaneously and set a specific endpoint to register to just one of the SIP Gateways. Using one or more specific parameter usually requires to enable an override parameter and set the specific configuration to apply. Refer to [Advanced SIP Registration Parameters](#) (p.7) section.

Number of Registrations

The total number of registrations is the sum of all the endpoint and gateway pairs.

For most Mediatrix devices, the total number of registrations is limited to 64. However, for the Mediatrix G7 Series, the Mediatrix S7 Series, the Sentinel 400, and the Sentinel 100, the limit is 500. If a custom DGW profile is used, the limit can be different depending on what value was defined in the profile. For example, when using a Sentinel 400, up to 500 registrations are possible, but if the profile specifies 200, then the unit will only be able to manage up to 200 registrations.

The Mediatrix unit supports a maximum of 10 gateways. An endpoint configured with **All** gateways generates as many registrations as the number of gateways. In a setup with 3 gateways, one endpoint configured with **All** as the gateway name counts for 3 in the total number of registrations. The registrations are enabled gateway by gateway until the limit is reached. Endpoint registrations are used first, then unit registrations. The remaining registrations are not registered and do not appear in the **Status** table. If the number of registrations exceeds the defined limit, a warning is displayed on the Web interface (as well as in the CLI and SNMP interfaces) and a syslog notify (Level Error) is sent. Adding a gateway or an endpoint triggers a warning message if the total number of registrations configured reached the defined limit

Registration Number Example

In this example, three gateways (Default, gw1, and gw2) are used with the Mediatrix unit, as displayed in the **Gateway Configuration** table.

The default ports (0 = 5060 for plain SIP and 0 = 5061 for secure SIP) can be used for two gateways, as long as they are attached to different signaling networks (in the **Gateway Configuration** table, default/Uplink and gw1/Lan1 use the same ports 0 and 0). If you wish to define another gateway for the same signaling network, a different port should be used than the default ones (**Gateway Configuration** table, gw2 is attached to the Uplink signaling network, as is the default gateway. For this scope, gw2 is only functional if it uses different ports than the default gateway). When a **Gateway Name** for a **User Name** is set to **All**, this means that 3 registrations are used.

Gateway Configuration							
Name	Type	Signaling Network	Media Networks	Media Networks Suggestion	Port	Secure Port	
default	Trunk	Uplink		--- Suggestion ---	0	0	—
gw1	Trunk	Lan1		--- Suggestion ---	0	0	—
gw2	Trunk	Uplink		--- Suggestion ---	5062	5063	—
							+

Endpoints Registration					
Endpoint	User Name	Friendly Name	Register	Gateway Name	
Slot2/E1T1	ur1	ur1	Enable ▼	all ▼	
Slot3/E1T1	ur2	ur2	Enable ▼	gw2 ▼	

Unit Registration					
Index	User Name		Gateway Name		
1	te1		all ▼	-	
2	te2		all ▼	-	
3	te3		gw1 ▼	-	
4	te4		default ▼	-	
				+	

User Name	Gateway Name	Number of Registrations
ur1	All	3
ur2	gw2	1
te1	all	3
te2	all	3
te3	gw1	1
te4	default	1
TOTAL NUMBER OF REGISTRATIONS		12

SIP Registration Basic Tasks

The following technical bulletins describe the basic tasks related to registration. Keep in mind that these documents are for units configured with the default values of the parameters.

The following documents are published on the [Media5 Documentation Portal](#):

- [Technical Bulletin - Basic SIP Endpoint Registration](#)
- [Technical Bulletin - Basic SIP Gateway Registration](#)
- [Technical Bulletin - Basic SIP Unit Registration](#)
- [Technical Bulletin - Basic SIP Username Registration](#)

Advanced Parameters

Advanced SIP Registration Parameters

Although the services can be configured in great part in the DGW Web browser, some aspects of the configuration can only be completed with the MIB parameters by :

- using a MIB browser
- using the CLI
- creating a configuration script containing the configuration parameters

For more details on these advanced parameters, refer to the [DGW Configuration Guide - Reference Guide](#) published on the [Media5 Documentation Portal](#).

Non specific registration parameters

- Registration Delay Value: **SipEp.InteropRegistrationDelayValue**
- Behaviour on Initial-Registration Reception: **SipEp.BehaviorOnInitialRegistrationReception**
- Unregistered Unit Behavior: **SipEp.DefaultUnitRegistrationUnregisteredBehavior**
- Default Registration Retry Time Value: **SipEp.DefaultRegistrationRetryTime**
- Default Unregistered Endpoint Behaviour: **SipEp.DefaultRegistrationUnregisteredBehavior**

User Agent registration parameters

- Preferred Language: **SipEp.UserAgent.AcceptLanguage**
- Contact Domain: **SipEp.UserAgent.ContactDomain**
- SIP User Agent Header: **SipEp.InteropSendUaHeaderEnable**

Endpoint specific registration parameters

- Specific Unregistered Endpoint Behaviour:
SipEp.GwSpecificRegistration.UnregisteredBehavior

Gateway specific registration parameters

- Specific Unregistered Endpoint Behaviour:
SipEp.GwSpecificRegistration.UnregisteredBehavior
- Gateway Specific Registration Retry Time: **SipEp.GwSpecificRegistrationRetryTime**
- Expiration Value in Registration: **SipEp.GwSpecificRegistration.ExpirationValue**
- Registration Refresh: **SipEp.GwSpecificRegistration.RefreshTime**
- Registration Expiration: **SipEp.GwSpecificRegistration.ProposedExpirationValue**
- Enable Configuration: **SipEp.GwSpecificRegistration.EnableConfig**

Online Help

If you are not familiar with the meaning of the fields and buttons, click **Show Help**, located at the upper right corner of the Web page. When activated, the fields and buttons that offer online help will change to green and if you hover over them, the description will be displayed.

DGW Documentation

Mediatrix devices are supplied with an exhaustive set of documentation.

Mediatrix user documentation is available on the [Media5 Documentation Portal](#).

Several types of documents were created to clearly present the information you are looking for. Our documentation includes:

- **Release notes:** Generated at each GA release, this document includes the known and solved issues of the software. It also outlines the changes and the new features the release includes.
- **Configuration notes:** These documents are created to facilitate the configuration of a specific use case. They address a configuration aspect we consider that most users will need to perform. However, in some cases, a configuration note is created after receiving a question from a customer. They provide standard step-by-step procedures detailing the values of the parameters to use. They provide a means of validation and present some conceptual information. The configuration notes are specifically created to guide the user through an aspect of the configuration.
- **Technical bulletins:** These documents are created to facilitate the configuration of a specific technical action, such as performing a firmware upgrade.
- **Hardware installation guide:** They provide the detailed procedure on how to safely and adequately install the unit. It provides information on card installation, cable connections, and how to access for the first time the Management interface.
- **User guide:** The user guide explains how to customise to your needs the configuration of the unit. Although this document is task oriented, it provides conceptual information to help the user understand the purpose and impact of each task. The User Guide will provide information such as where and how TR-069 can be configured in the Management Interface, how to set firewalls, or how to use the CLI to configure parameters that are not available in the Management Interface.
- **Reference guide:** This exhaustive document has been created for advanced users. It includes a description of all the parameters used by all the services of the Mediatrix units. You will find, for example, scripts to configure a specific parameter, notification messages sent by a service, or an action description used to create Rulesets. This document includes reference information such as a dictionary, and it does not include any step-by-step procedures.

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