



## Addition of Server Unreachable Field in CDR

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### Feature Summary and Revision History

#### Summary Data

Applicable Product(s) or Functional Area	PGW
Applicable Platform(s)	<ul style="list-style-type: none"><li>• ASR 5500</li><li>• VPC-DI</li><li>• VPC-SI</li></ul>
Related Changes in This Release	Not Applicable
Related Documentation	<ul style="list-style-type: none"><li>• <i>Command Line Interface Reference</i></li><li>• <i>PGW Administration Guide</i></li><li>• <i>Statistics and Counters Reference</i></li></ul>

#### Revision History



**Important** Revision history details are not provided for features introduced before releases 21.2 and N5.1.

Revision Details	Release
Support is added for addition of server unreachable field in CDR.	21.27

Revision Details	Release
First introduced.	21.22

## Feature Description

When the Online Charging System (OCS) sends negative messages, transport connection fails between the Policy and Charging Enforcement Function (PCEF) and the OCS. The connection error causes session establishment failure and prevents subscribers from the use of services. The following procedures are used to overcome the connection errors:

- **Failure Handling (FH):** The existing FH mechanism operates if the diameter session failover is present, allows the system to choose whether to continue the session and convert to offline, or to terminate the session when a connection or message-level error occurs.
- **Server Unreachability (SU):** This failure handling mechanism provides more granular control over failure procedures. In addition to the session after the message- and connection-level (transport) failures, this mechanism is used when the responses are slow from the OCS. It also provides the options to either continue the session for a specific time duration or quota exhaustion before termination.

To use the configured server and interim quota (volume and time), SU retries before a session is converted to offline or gets terminated.

When **gtp attribute servers-unreachable** is configured under gtp group and the SU feature is enabled then, serversUnreachableContinue or serversUnreachableTerminate in interim or final CDR allows the following process flow:

1. SU failure is triggered.
2. CDR is generated.
3. Based on the SU configuration in Call Control Profile, the generated CDR contains the serversUnreachableContinue or serversUnreachableTerminate fields.

The following table describes the serversUnreachable fields in the CDR.

**Table 1: ServersUnreachable Fields in CDR**

Field Name	Description	Tag	Format	Size	ASN1 Code
serversUnreachableContinue	When servers unreachable procedure is executed, element is present.	256	Boolean	1	0x9f8200
serversUnreachableTerminate	When servers unreachable procedure is executed, element is present.	257	Boolean	1	0x9f8201

**Table 2: ServersUnreachable CDR Fields in ACS Configuration**

SU Configuration	SU Detected Fields during Interim State	SU Detected Fields After End of Interim State	SU not Detected Fields (normal call with Gy)

<b>server-unreachable initial-request terminate</b>	When a CDR field is triggered differently, do not include the SU terminate field since it is an interim CDR <ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>FALSE</b></li> <li>• <b>SU Terminate</b> is <b>FALSE</b> in final CDR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>FALSE</b></li> <li>• <b>SU Terminate</b> is <b>TRUE</b> in final CDR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>FALSE</b></li> <li>• <b>SU Terminate</b> is <b>FALSE</b> in final CDR</li> </ul>
<b>server-unreachable update-request terminate</b>	When a CDR field is triggered differently, do not include the SU terminate field since it is an interim CDR <ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>False</b></li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>True</b> in both interim and final CDR</li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>False</b></li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>
<b>server-unreachable initial-request continue</b>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>False</b></li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>True</b> in both interim and final CDR</li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>False</b></li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>
<b>server-unreachable update-request continue</b>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>False</b></li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>True</b> in both interim and final CDR</li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>SU continue</b> is <b>False</b></li> <li>• <b>SU Terminate</b> is <b>False</b> in final CDR</li> </ul>

For more information, refer to the Gy chapter in the *PGW Administration Guide*.

## Adding Server Unreachable Field in CDR

Use the following configuration commands to add the server unreachable field in CDR:

```

configure
  context context_name
    gtp group group_name
      gtp attribute servers-unreachable
    end

```

NOTES:

- **gtp attribute servers-unreachable**: Specifying this option includes the optional field **ServersUnreachablesContinue** or **ServersUnreachablesTerminate** in the CDR.

## Monitoring and Troubleshooting

This section provides information to monitor and troubleshoot this feature using show commands.

### Show Commands and Outputs

This section provides information regarding show command and their outputs in support of this feature.

**show gtp group name <group name>**

Field	Description
Servers Unreachable present	Displays "Yes" or "No" to indicate the presence of servers unreachable element.