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# GVP Troubleshooting Guide

## Cluster Mode Connection Failure

12/14/2025

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# Cluster Mode Connection Failure

## Problem

In cluster mode, a message similar to the following is printed continuously in one of the Resource Manager (RM) logs:

```
RMCommTCPBonding.cxx:725 700351472 VGSocketError nSocket=605517456
```

This message indicates that the cluster connection between the two RMs has problems, and even after retries there is no further communication between the two RMs on the cluster port (which is used for exchanging messages).

## Resolution

Restart the RM process that is printing the log(s) where you find the repeating message.

## SIP Error Codes for Rejected Requests

This section describes specific SIP error codes that are returned by the Resource Manager (RM) when a request is rejected.

### 480 SIP Response Code (Event Pool Throttling)

The Media Server (MS) may reject incoming calls when the MS control event pools are running low on available events, in a behavior termed Event Pool Throttling.

When one of the event pools is above the high threshold configurable percentage of used events, it becomes a “saturated pool.” (Each control event pool's size is configurable.) When there is at least one saturated pool, the MS starts rejecting calls, using SIP response code 480.

When a saturated pool has dropped below a low threshold configurable percentage of used events, it is no longer a saturated pool. When there are no saturated pools, calls are accepted again.

### 503 Service Unavailable

This error occurs when the RM suspends the acceptance of new RM sessions before it gracefully shuts down. Requests for new RM session creation are rejected with this error code.

### 500 Server Internal Error

This error occurs if the RM tries to forward a message to a resource that does not have the TCP port open. The RM tries to use the TCP transport if the forwarded request exceeds the MTU size (estimation) or if the set route in the ROUTE header of the SIP message, or the Request-URI in the body of the message, dictates that it to go through TCP (transport=TCP).

### Resolution

Three options exist to resolve this issue:

1. Enable TCP on the resource side.
2. Increase the MTU size by configuring the **proxy.sip.mtusize** configuration option to a value greater than the default value of 1500.
3. Disable TCP on the RM.

The first resolution is recommended. The third resolution is would be considered a last resort solution, since both the proxy should have TCP and UDP ports available.

### 485 Ambiguous

This error occurs if the RM session ID is specified in a request, and the RM does not recognize it. The RM tries to create the session, but if the RM session creation fails, the 485 response code is returned.

### 482 Loop Detected

This error occurs if the RM detects a request that will be forwarded to itself.

### 481 Call/Transaction Does Not Exist

This error occurs if the RM receives a CANCEL request that does not match any existing INVITE transactions.

### Resolution

1. Check the route that is set, and ensure that the next hop is not the RM itself.
2. Check the configured resources to ensure that the Address of Record (AOR) does not point to RM itself.

If the User Agent Client (UAC)-to-UAC communication is SIPp when the error occurs in the call scenario, it generates a SIP BYE message with the RM's address in the Request-URI (instead of the address of the User Agent Server [UAS]). The RM receives the BYE message, determines that it points to itself, and rejects it with the 481 error. To workaround this issue, use SIPp with the `-nd` option.

### 480 Temporarily Unavailable

This error occurs in either one of two scenarios:

1. If all resources are down or unavailable.
2. If the port count, usage limit, or another limit is reached.

### 408 Request Timeout

This error occurs if the UAS does not respond within the timer-B or timer-F interval.

## 405 Method Not Allowed

This error occurs in either one of two scenarios:

1. If an out-of-dialog method, other than a SIP INVITE or OPTIONS message is sent to the RM.
2. If the SIP OPTIONS message contains a user-info parameter and does not have a Max-Forwards header configured with a value of 0.

## 404 Not Found

This error occurs in either one of three scenarios:

1. The Logical Resource Group (LRG) that is servicing the requested service type cannot be found.
2. A default IVR Profile is not specified and a matching IVR Profile, based on the DNIS cannot be found.and no default.
3. A resource cannot be allocated for a request is to be forwarded to a specific gateway or CTI Connector.

## 403 Forbidden

This error (which is the default) occurs when either the allow or disallow policy parameter for a Tenant or IVR Profile is enforced.

## 400 Bad Request

This error occurs when the request contains values that are not acceptable to the RM. For example:

- If the conference ID is missing in the sip:conf=@<host>:<port> request
- If the Min-SE header in the SIP message has a refresher value other than uac or uas.