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Scenario Setup

System Console

1. Stop EAAS process

UCCE

1. Rename user.cisco.cmb to user.cisco.cmbb
2. Cycle MR PG on both sides

Problem Statement

Intermittent routing issues have been observed. MR PIM shows ACTIVE, but is disconnecting due to socket errors.

MR_PIM_Active_But_Showing_Socket_Errors

```
bxb-PG2A MR_PIM - pim2 - [CIM_PIM ACTIVE]
17:41:48 Peripheral 5006 sending OPC PIM_OK_ACK acknowledgment for command PIM_S
17:41:48 ProcessPIMSetActiveReq: Peripheral 5006 ACTIUATED.
17:41:48 Attempting to ACTIUATE Peripheral's Routing Client.
17:41:48 Failed an attempt to ACTIUATE the Peripheral's Routing Client. Will re
17:41:48 Trace: <->:
Message = CLOSE_REQ; Length = 8 bytes
Invoke ID = <52> Hex 00000034
Status = <1> Hex 00000001

17:41:48 Trace: Transport::SendMessage. SOCKET_ERROR=10054
17:41:48 Trace: Transport: Check Windows sockets error 10054 in winsock.h.
17:41:48 Error sending data to MR application.
Last API Error [10054]: An existing connection was forcibly closed by the remo
17:41:48 TCP connection to MR application has been broken.
17:41:50 Trace: MR_Peripheral::ProcessThisINRCMessage. INRC message: 2.
17:41:50 Peripheral's Routing Client successfully ACTIUATED.
17:41:50 Trace: MR_Peripheral::On_OP_C_RoutingEnabledEvent:
ROUTING_ENABLED_EVENT RCID=0 PID=0
17:41:50 Trace: Transport::SendMessage. SOCKET_ERROR=10038
17:41:50 Trace: Transport: Check Windows sockets error 10038 in winsock.h.
17:41:50 Error sending data to MR application.
Last API Error [10038]: An operation was attempted on something that is not a
17:41:50 Trace: MR_Peripheral::ProcessThisINRCMessage. INRC message: 2.
17:41:50 Peripheral's Routing Client successfully ACTIUATED.
```

Note: With Windows 2008 R2, these process windows would not be seen. Instead, the above would be observed using EMSMON or by dumping logs to text files.

Message Flow

In a normal startup, the MR PIM should follow the below flow:

1. OPEN_REQ
2. OPEN_RESP
3. MR_REGISTER_VARIABLES_REQ
4. MR_REGISTER_VARIABLES_RESP
5. ROUTING_ENABLED_EVENT
6. Routing Client successfully ACTIVATED

In this case, we are seeing:

1. OPEN_REQ
2. OPEN_RESP
3. CLOSE_REQ
4. CLOSE_RESP

The MR is never registering the ECC Variables.

EAAS Logs

The EAAS logs will provide guidance as to where the failure is occurring.

```
2011-06-05 23:16:08.080 GMT-0400 <@> ERROR <@> [788:Thread-369] <@> ProcessId:4184 <@> PID:1 <@> U
2011-06-05 23:16:08.080 GMT-0400 <@> ERROR <@> [788:Thread-369] <@> ProcessId:4184 <@> PID:1 <@> U
java.lang.NullPointerException
```

EAAS is unable to register user.cisco.cmb, which explains what we saw in the MR PIM logs.

ECC Variable Naming

EIM/WIM

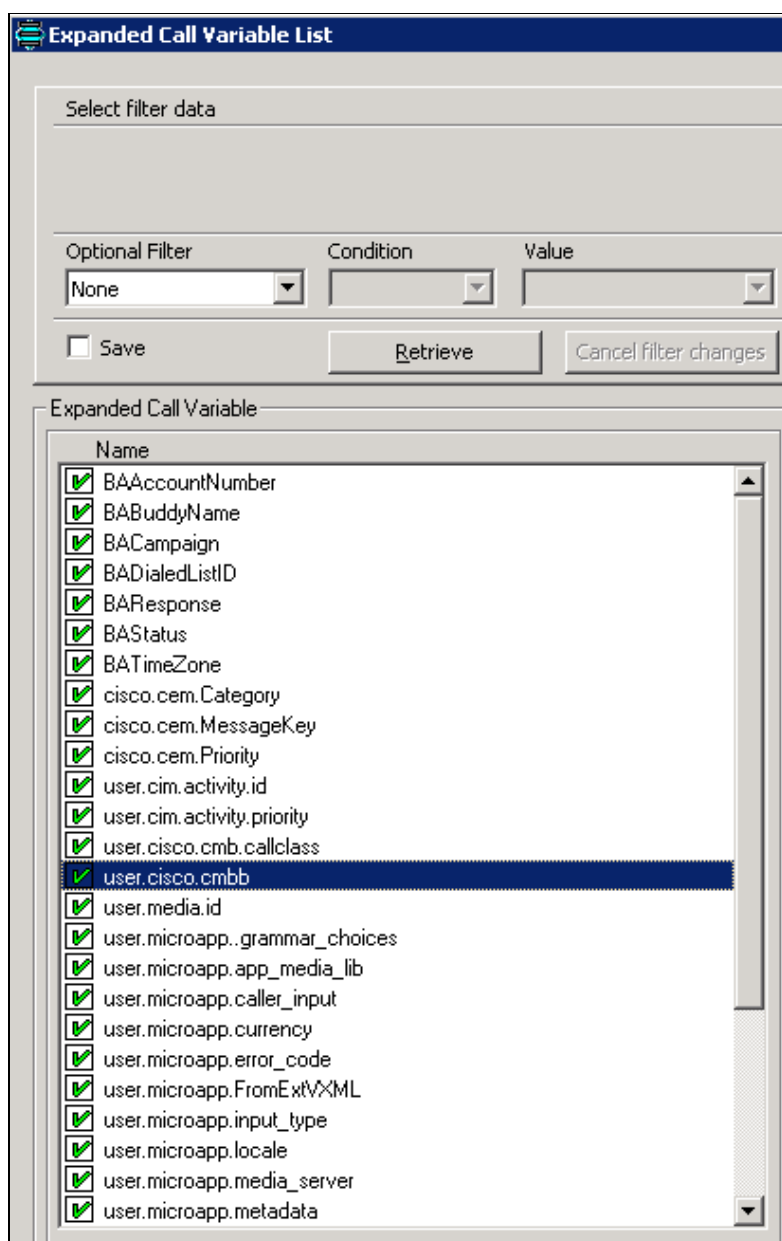
By default, EIM/WIM looks for ECC Variables with specific names. These variables are set on the File Server in C:\CIM\eservice\config\ipcc\egicm_ecc_variables_name.properties

```
# Name of ECC Variables used for Blended Collaboration and Callback queues
# Structure of this file is ecc variable name = unique identifier in CIM Code
user.cim.activity.id = 1
user.wim.customer.name = 2
user.cisco.cmb = 3
user.cisco.cmb.callclass = 4
```

We know that EAAS is looking for user.cisco.cmb correctly, so the issue must be on the UCCE side.

UCCE

Navigate to Configuration Manager > Expanded Call Variable List and look for user.cisco.cmb. Here we can see that the variable name has been typed incorrectly as "user.cisco.cmbb". Remove the extra "b" and save.



Cycle EAAS!

The EAAS process must be restarted once the ECC Variable names in UCCE have been updated.

```

23:58:28:603 pg2A-pim2 Attempting to connect to MR application at IP address 10.77.30.32 port 38101
23:58:28:603 pg2A-pim2 Trace: Transport: Making connection attempt to host1: 43srvc port: 38101
23:58:28:603 pg2A-pim2 Connection to MR application established.
23:58:28:603 pg2A-pim2 Trace: PG->Application:
Message = OPEN_REQ; Length = 20 bytes
  InvokeID = (66403500) Hex 03f53cac
  HeartbeatInterval = (5000) Hex 00001388
  MsgInterfaceRev = (1) Hex 00000001
  Hostname: icm751
  VersionNumber:

23:58:28:713 pg2A-pim2 Trace: Application->PG:
Message = OPEN_RESP; Length = 25 bytes

```

MR_PIM_Active_But_Showing_Socket_Errors

Invoke ID = (66403500) Hex 03f53cac
Prior Failure = (0) Hex 00000000
Status = (0) Hex 00000000
Hostname:
VersionNumber: 7.0.0.0

```
23:58:28:713 pg2A-pim2 Peripheral 5006 sending OPC PIM_OK_ACK acknowledgment for command PIM_SET_A
23:58:28:713 pg2A-pim2 ProcessPIMSetActiveReq: Peripheral 5006 ACTIVATED.
23:58:28:713 pg2A-pim2 Attempting to ACTIVATE Peripheral's Routing Client.
23:58:28:713 pg2A-pim2 Failed an attempt to ACTIVATE the Peripheral's Routing Client. Will retry.
23:58:28:791 pg2A-pim2 Trace: Application->PG:
Message = MR_REGISTER_VARIABLES_REQ; Length = 136 bytes
  InvokeID = (1) Hex 00000001
  Call Variable Mask: (1023) Hex 000003ff
  NumberOfVariables = (5) Hex 00000005
  NumberOfArrayElements = (0) Hex 00000000
ECC Variable Name: user.cim.activity.id
Value:
ECC Variable Name: user.wim.customer.name
Value:
ECC Variable Name: user.cisco.cmb
Value:
ECC Variable Name: user.cisco.cmb.callclass
Value:
ECC Variable Name: user.cim.activity.priority
Value:

23:58:28:791 pg2A-pim2 Trace: Media Routing Application registered ECC variable: "user.cim.activit
23:58:28:791 pg2A-pim2 Trace: Media Routing Application registered ECC variable: "user.wim.custome
23:58:28:791 pg2A-pim2 Trace: Media Routing Application registered ECC variable: "user.cisco.cmb"
23:58:28:791 pg2A-pim2 Trace: Media Routing Application registered ECC variable: "user.cisco.cmb.c
23:58:28:791 pg2A-pim2 Trace: Media Routing Application registered ECC variable: "user.cim.activit
23:58:28:791 pg2A-pim2 Trace: ICM->Application:
Message = MR_REGISTER_VARIABLES_RESP; Length = 8 bytes
  Invoke ID = (1) Hex 00000001
  Status = (0) Hex 00000000

23:58:29:994 pg2A-pim2 Trace: MR_Peripheral::ProcessThisINRCMessage. INRC message: 2.
23:58:29:994 pg2A-pim2 Peripheral's Routing Client successfully ACTIVATED.
23:58:29:994 pg2A-pim2 Trace: MR_Peripheral::On_OPC_RoutingEnabledEvent:
ROUTING_ENABLED_EVENT RCID=0 PID=0
23:58:29:994 pg2A-pim2 Trace: PG->Application:
Message = ROUTING_ENABLED_EVENT; Length = 0 bytes

23:58:30:041 pg2A-pim2 Trace: MR_Peripheral::ProcessThisINRCMessage. INRC message: 2.
23:58:30:041 pg2A-pim2 Peripheral's Routing Client successfully ACTIVATED.
```

Impact to CMB

How does this impact CMB? Place a callback request and observe that this fails as well.

Resolution

This scenario stressed the importance of items being configured as documented. Items such as Media Classes, Media Routing Domains, and ECC variables **must** be configured correctly for the integrated connections to come up properly.

The log message in the initial problem statement was misleading, as the root cause is something far from a socket error.