

The Cisco ICM `rttest` Utility

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Introduction

Prerequisites

Requirements

Components Used

Conventions

How to Run and Interpret `rttest`

Turning up ICM Call Router Tracing with `rttest`

Turn Off Debug Tracing in `rttest`

End an `rttest` Session

Related Information

Introduction

This document describes the Cisco Intelligent Contact Management (ICM) `rttest` utility, which allows you to view and set various parameters on an ICM Call Router. You can run the `rttest` utility in one of three ways:

- From a command prompt directly on one of the Cisco ICM Call Router nodes
- From a Telnet session into one of the Cisco ICM Call Router nodes
- From a command prompt using `pcAnywhere` to one of the Cisco ICM Call Router nodes

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco ICM
- TCP/IP Telnet Utility
- Symantec `pcAnywhere`

Components Used

The information in this document is based on these software and hardware versions:

- All Cisco ICM versions

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

How to Run and Interpret rttest

Type **rttest** at a command prompt followed by **/help** or **/?**. This gives you a syntax usage statement. For example:

```
c:\icr\cicr1\ra\logfiles>rttest /?
Version: Release 4.0, Build 04624
Usage: rttest [/f InputFile] [/system SystemName]
[/cust Customer]
[/node ICRNode] [/pipe OutputPipe] [/debug] [/stop] [/help] [/?]
```

The command line options required to invoke **rttest** are:

/cust Customer	Where Customer is a three-, four-, or five-letter acronym signifying the ICM customer instance. Refer to ICM Server Naming Conventions .
/node ICRNode	Where ICRNode is either routera or routerb, depending on the router rttest to run. Refer to ICM Server Naming Conventions .

1. Once **rttest** is running, enter a **?** or **help** at the **rttest** prompt to list all available **rttest** commands.
2. If the **rttest** command is run, you can quickly get a real time status of the entire ICM system.
3. At the **rttest** prompt, type **status**.
4. Press **Enter** at the **rttest** prompt.
5. The **status** directive returns the current state of each ICM central site process, ICM Peripheral Gateway (PG) server, and third-party automatic call distributor (ACD) and Voice Response Unit (VRU) peripheral.

```
c:\> rttest /cust csco /node routera
rttest:
rttest: status
Router Version: Release 2.5 (service pack 2), Build 03134
Release Date: 12/23/98 13:30:08
Current Time: 03/17 16:00:42
Local Time: 03/17 11:00:42 (-5.0 hr)
Router Up: 02/21 01:01:45 (24.6 day)
Router Sync: 03/11 11:06:20 (6.2 day) (A->B)
```

Process	LastStateChange	LastHeartBeat
A agi		
A cic		
A csfs	OK M- 03/06 11:10:20 (11.2 day)	
A dba	OK MH 03/06 11:10:20 (11.2 day)	03/17 16:00:12 (30 sec)
A dbw		
A lgr	OK MH 03/06 11:10:20 (11.2 day)	03/17 16:00:17 (25 sec)
A rcv	OK M- 03/06 11:10:20 (11.2 day)	
A rtr		

	OK MH 03/06 11:10:20 (11.2 day)	03/17 16:00:15 (27 sec)
A rts	OK MH 03/06 11:10:20 (11.2 day)	03/17 16:00:19 (23 sec)
A tsyr	OK M- 03/06 11:10:20 (11.2 day)	
B agi		
B cic		
B csfs	OK M- 03/11 11:08:34 (6.2 day)	
B dba	OK MH 03/11 11:07:02 (6.2 day)	03/17 16:00:38 (4 sec)
B dbw		
B lgr	OK MH 03/11 11:08:36 (6.2 day)	03/17 16:00:17 (25 sec)
B rcv	OK M- 03/11 11:08:35 (6.2 day)	
B rtr	OK MH 03/11 11:07:03 (6.2 day)	03/17 16:00:15 (27 sec)
B rts	OK MH 03/11 11:07:02 (6.2 day)	03/17 16:00:29 (13 sec)
B tsyr	OK M- 03/11 11:07:02 (6.2 day)	

Controller	LastStateChange	LastHeartBeat
ATT_NIC_1,128	CFO 03/06 11:10:22 (11.2 day)	03/17 16:00:39 (3 sec)
ATT_NIC_2,129	CFO 03/11 11:07:05 (6.2 day)	03/17 16:00:34 (8 sec)
CA_PG9,9	CFO 03/17 04:42:31 (11.3 hr)	03/17 16:00:31 (11 sec)
FL_PG7,7	CFO 03/11 10:30:16 (6.2 day)	03/17 16:00:32 (10 sec)
GA_PG6,6	CFO 03/12 10:50:43 (5.2 day)	03/17 16:00:29 (13 sec)
IA_PG5,5	CFO 03/11 11:29:27 (6.1 day)	03/17 16:00:32 (10 sec)
NY_PG3,3	CFO 03/11 16:31:36 (5.9 day)	03/17 16:00:38 (4 sec)
TX_PG4,4	CFO 03/11 16:33:37 (5.9 day)	03/17 16:00:38 (4 sec)
VA_PG1,1	CFO 03/13 22:18:32 (3.7 day)	03/17 16:00:33 (9 sec)

VB_PG2,2	CFO 03/16 23:31:31 (16.4 hr)	03/17 16:00:32 (10 sec)
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Peripheral	LastStateChange	LastHeardFrom
CA_PG9	COS 03/17 04:42:38 (11.3 hr)	03/17 16:00:40 (2 sec)
FL_PG7	COS 03/11 10:30:18 (6.2 day)	03/17 16:00:40 (2 sec)
GA_PG6	COS 03/16 06:21:18 (33.6 hr)	03/17 16:00:41 (1 sec)
IA_PG5	COS 03/11 11:29:30 (6.1 day)	03/17 16:00:40 (2 sec)
NY_PG3	COS 03/11 16:31:42 (5.9 day)	03/17 16:00:41 (1 sec)
TX_PG4	COS 03/11 16:37:53 (5.9 day)	03/17 16:00:34 (8 sec)
VA_PG1	COS 03/13 22:18:40 (3.7 day)	03/17 16:00:41 (1 sec)
VB_PG2	COS 03/16 23:31:33 (16.4 hr)	03/17 16:00:41 (1 sec)

The three main sections of the status output are Process, Controller, and Peripheral.

The first section, labeled Process in the first column of the status output, shows the status of each ICM central site process. One ICM central site consists of an ICM Call Router and an ICM database logger. In most cases, there are two ICM central sites – sideA and sideB for redundancy.

First, general information is displayed such as Router version and the build date. Then, these additional statistics are displayed:

Current Time	This is Coordinated Universal Time (UTC). Most telecommunications equipment uses UTC time as a common time reference.
Local Time	This is ICM local time, as determined by time zone settings on the Cisco ICM Call Router.
Router Up	This is how long the Cisco ICM Call Router function has been up and running.
Router Sync	This shows which side of the Cisco ICM Call Router last sent a state transfer to the other side.

Next is process status, divided into three columns: Process, LastStateChange, and LastHeartbeat. **Process** is the ICM central site process.

LastStateChange contains several fields:

OK	Signifies the process is running fine.
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M	Signifies the Cisco proprietary Message Delivery Service (MDS) protocol is used to keep the process synchronized.
H	Signifies the process sends and receives internal heartbeat messages using the MDS protocol.
Date	Current date.
Time	Current local time.
Up-Time	Displayed in parenthesis, this is the length of time the process has been in the current state.
LastHeartBeat	If the process sends and receives MDS heartbeats, this value is the timestamp of the last heartbeat sent or received by the process.

The second section, labeled Controller in the first column of the status output, shows the status of Cisco ICM PG servers.

Controller is the name of the controller (ICM PG) as defined in ICM Config Manager.

LastStateChange contains several fields:

C	Signifies the ICM PG server has successfully downloaded a configuration from the ICM Call Router.
F	Signifies the ICM PG is fully configured and the configuration is valid.
O	Signifies the ICM PG is online and communicates with the ICM Call Router.
Date	Current date.
Time	Current local time.
Up-Time	Displayed in parenthesis, this is the length of time the process has been in the current state.

The third section, labeled Peripheral in column 1, shows the status for third-party peripherals such as ACD and VRU devices.

Peripheral is the name of the peripheral (ACD or VRU) as defined in Configure ICR.

LastStateChange contains several fields:

C	Signifies the peripheral is configured correctly to communicate with the ICM PG.
O	Signifies the peripheral is online, for example, communications have been established with the ICM PG.

S	Signifies that the peripheral is in service, for example, agent and call data are sent to the ICM PG.
Date	Current date.
Time	Current local time.
Up-Time	Displayed in parenthesis, this is the length of time the process has been in the current state.
LastHeardFrom	The date, time, and length of time since the peripheral last sent valid data to the ICM PG.

Turning up ICM Call Router Tracing with `rttest`

You can enable specific trace levels within `rttest` if the `debug` command is issued, followed by one or more trace options. Respective trace entries can then be viewed in router logs.

For example, if the `debug /route` command is issued from within `rttest`, tracing is turned on. This shows:

- Dialed Number (DN)
- Automatic Number Identification (ANI)
- Caller Entered Digits (CED), if any
- ICM routing label returned to the carrier network

In order to see all possibilities for `rttest /debug`, at the `rttest` prompt, issue the `debug /?` command as shown:

```
rttest: debug /?
Usage: debug_control [/realtime] [/5minute]
[/agent] [/config] [/route]
[/halfhour] [/rcmeter] [/expr] [/select] [/dupadd]
[/failpgerror] [/symbol] [/tranroute] [/datain]
[/delivery] [/cic] [/admin] [/pervarsumm] [/pervardetail]
[/expform] [/vru] [/callq] [/activepath] [/all] [/help]
[/?]
```

All ICM processes write some default level tracing to log files that can be viewed with the `dumplog` utility. For more information, refer to [How to Use the Dumplog Utility](#).

Note:

- When specific trace levels are enabled, corresponding details are written to router log files in the logfile directory.
- Default individual log file size is 99k.
- Default aggregate log file size is 600k.
- If router tracing is turned too high, individual log files wrap quickly – potentially within a minute – if call volume is high.
 - ◆ In this case, not much data can be captured because the time span is very small.
 - ◆ In order to get around this, router log file capacities can be increased if a few Microsoft Windows NT registry settings are altered.

Note: Make sure there is enough disk space available before you increase log file capacities.

In order to enter the Windows NT registry:

1. From a command prompt, issue the **regedt32** command.
2. After the available disk space is checked, these two registry settings can be changed to allow for larger router log files:

Note: The values are displayed in hexadecimal by default. Click the Decimal radio button to see the base 10 value.

```
\\.\software\geotel\icr\cisco\routera\ems\currentversion\library\  
processes\rtr\EMSAIILogFilesMax  
\\.\software\geotel\icr\cisco\routera\ems\currentversion\library\processes\  
rtr\EMSLogFileMax
```

Note: These values are displayed on multiple lines due to space limitations.

The first parameter, **EMSAIILogFilesMax**, specifies the maximum amount of disk space the router allocates for all log files combined.

The second parameter, **EMSLogFileMax**, specifies the maximum size that the router allocates to each log file. For example, if you set **EMSAIILogFilesMax** to 20 mg, and **EMSLogFileMax** to 2 mg, the router eventually creates no more than 10 files, each being no more than 2 mg in size.

Turn Off Debug Tracing in rctest

When you have viewed router logs, it is good practice to disable all tracing that was added for troubleshooting purposes.

This is accomplished with the **/noall** directive in the **rctest** command, as shown:

```
c:\icr\cd\ra\logfiles>rctest /cust cd /node routera  
RTTEST Release 4.0 service pack 3, Build 04959  
  
rctest: debug /noall
```

End an rctest Session

It is very important that you **quit** your **rctest** session when finished. If too many **rctest** sessions are left running in the background, system resources are drained and call routing is adversely affected.

```
rctest: quit
```

Related Information

- [How to Use the Dumplog Utility](#)
- [Cisco ICM Server Naming Conventions](#)
- [Technical Support & Documentation – Cisco Systems](#)

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