

The following "Best Practices" have been provided to customers in the past as a quick reference guide for system administrators.

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### **SPOF (Single Point of Failure) Improvements in CIM 4.3(x)**

The EIM/WIM 4.3(1) software is designed to eliminate several single points of failure. The cluster is made more resilient and restart of the cluster to recover from most errors is not required.

- No concept of primary Application Server.
- Application Server can be restarted without restarting the cluster.
- Messaging Server can be restarted without restarting the cluster.
- Services Server can be restarted without restarting the cluster.
- Cisco Services need to be stopped/started from the Windows Services console.

### **System Startup Basics**

1. Database Server
  1. Ensure that SQL server instance is running.
2. File Server
  1. If File server is co-located with an Application server, please ensure the machine is running
3. Messaging Server
  1. On the messaging server machine, start the Cisco service from the windows services panel.
  2. Open the Windows Task Manager and verify javaw/java processes are running.
  3. NOTE: As a best practice, the Messaging Server should be brought up before remaining servers. No specific start order is required for application and services server and they can be started in parallel.
4. Services Server
  1. In the Windows Services panel, start the Cisco service to start all CIM services.
  2. Open the windows task manager and verify javaw/java processes are running.
5. Application Server
  1. On the application server machine, start the Cisco service from the windows services panel.
  2. Open the Windows Task Manager and verify javaw/java processes are running
6. Web Server
  1. Ensure that the IIS service is running.
  2. Ensure World Wide Web Publishing service is running.

## How to verify Messaging Server and Application Server is up?

Messaging Server must come online for services to communicate. You can verify if the Messaging Server is up through the following URL: <http://<Messaging Server>:9001/>

Similarly, you can validate if Application Server is up with <http://<Application Server>:9001/>. If the JBoss welcome page is displayed, the service has started correctly.

## Role of Load Balancer

Load balancer should check for health of Web Server (using http or https) and Application Servers and Messaging Server (using JBOSS port). For IIS, ensure that an IIS response is returned to the Load Balancer. For JBOSS, ensure that a .jsp response is returned to the Load Balancer.

## How To Verify That All The Required Services Have Started

Use the link <http://<webserver>/system/web/view/platform/debug/listrmiobjects.jsp> NOTE: The services should read ?Remote Object is Alive?. This is a generic way to access monitor page where you can ensure that the object for processes is alive, such as DX, RX, EAAS and Listener. Ignore the processes which have ?NA? since there is no RMI call.

h2. Validating the State of MR and ARM Links Validate the state of EAAS (MR) and Listener (CTI/ARM) links using the following URL:

<http://<webserver>/system/web/view/platform/debug/ICMIntegratedConnections.jsp>

## Other Failure Recovery Scenarios

- If the CIM Services Server goes down and comes up:
  - ◆ Services (EAAS, Listener, etc.) will restart automatically (if set to auto).
- If the CIM Messaging Server goes down:
  - ◆ Active chats will be paused. Some messages will be queued until messaging server is restored. Messaging in transit will be lost.
  - ◆ The chat session can be recovered when messaging is restored.
  - ◆ New chats will not be processed when the messaging server is down. Messages in queue will be routed.
- If a CIM Application Server goes down:
  - ◆ Chat session is lost. The agent will be prompted to log back in. They must complete the session. The customer is notified the chat is lost.
- If EAAS, Listener Service goes down and comes up:
  - ◆ User do not need to logout and login.
- Is it recommended to set CiscoService to autostart or not ?
  - ◆ Yes, it is recommended to be set to auto-start so that there is no user intervention required in case a server restarts.