

Troubleshooting ANI Server Connection Problems

Document ID: 19000

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Introduction

This document provides troubleshooting assistance when you are unable to connect to an Asynchronous Network Interface (ANI) server when selecting Campus Manager applications from CiscoWorks 2000 Interface.

Prerequisites

Requirements

Review the client and server prerequisites provided by the Installation Guide of your associated edition of CiscoWorks2000 bundle. All command line references require ROOT id (UNIX) or Local Administrator (Windows) access, according to your operating system platform.

Components Used

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

- Campus Manager 3.2
- Campus Manager 3.3

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.

Troubleshooting Connection Problems

If you are unable to connect to your ANI server verify this:

Order of File Entry

Verify that your first entry in the file, /etc/hosts in Solaris or C:\WINDOWS\system32\drivers\etc in Windows, is the actual IP address and hostname of the CiscoWorks server machine and not the loopback address 127.0.0.1. The actual IP address or hostname is the address that you put in the URL locator to connect to CiscoWorks through the browser.

Current Java Virtual Machine

Verify that you have the latest compatible Java Virtual Machine (JVM) loaded on your client machine. In order to verify, follow these steps:

1. Enable JVM console logging from the web browser:
 - a. Go to: **IE > Tools > Internet Options > Advanced Tab > Microsoft VM.**
 - b. Check all the boxes.
 - c. Save the changes.
 - d. Log out of CiscoWorks.
 - e. Close the browser.
 - f. Restart the browser.
2. Check the JVM version:
 - a. Go to **IE > View > Java Console**, and the javaconsole window appears.
 - b. Verify from the first line in the Java console window that the version of JVM is Microsoft (®) VM for Java, 5.0 Release 5.0.0.3309 or later.
 - c. If the JVM is not latest, download the latest JVM fix from the Microsoft site .
 - a. Choose **product name > Virtual Machine.**
 - b. Choose your **Operating System > Win95/98/NT/Windows2000.**
 - c. Download/Install the latest version.
3. Relaunch the application.

Campus Manager and MS Internet Explorer

If you use the MS Internet Explorer (IE) browser to access and launch Campus Manager, do not install Client Application Manager (CAM). If you already have CAM installed, uninstall it. In order to verify, do one of these:

From the CiscoWorks 2000 GUI, go to **CW2000Server/Server Configuration > Setup > Client Manager Admin**, and the CAM install/uninstall screen appears.

Or

From IE browser go to **Tools > Internet Options > General tab**, and do this:

- a. Under Temporary Internet Files, click **Settings**, and the Settings window appears.
- b. Click **View Objects**. CamRegistry is listed in the new window, under Program File.
- c. If CAM Registry is installed, right-click and choose **Remove**.
- d. Clear the browser cache; go to the General tab and choose **Delete Files and Clear History**.

- e. Restart the browser.

Restart the Server

Sometimes you can rectify the problem if you stop and restart the ANI server process from the screen. Follow these steps:

1. Stop the server: **CW2000Server/Server Configuration > Administration > Process Management > Stop Process.**
2. Restart: **CW2000Server/Server Configuration > Administration > Process Management > Start Process.**
3. Launch the Campus Manager again.

Corrupt Database Tables

A corruption in the database tables can cause connection problems. Reinitialize the database tables:

1. From the command line/dos prompt, log in as **root/local admin.**
2. Issue this command for your operating system:

```
* Unix:

cd CSCOpX/bin/
./reinitdb.pl

* NT:

cd CSCOpX/bin/
perl reinitdb.pl
```

3. The command, **reinitdb.pl** displays this prompt:

```
This will erase all data from the database. Are you sure [y/n]:
```

4. Type **y**.
5. Press the **ENTER/RETURN** key, and the ANI information in regard to Network Discovery (Wbu tables) is erased from the database, a new ANI Server connection is established, and network discovery is initiated.
6. If you are still unable to connect to the ANI Server, do this:

- a. Stop the CiscoWorks Daemon Manager.
- b. Re-type the **reinitdb.pl** command with **-restore** option.

```
* Unix:

cd CSCOpX/bin
./reinitdb.pl -restore

* NT/Windows2000:

cd CSCOpX/bin/
perl reinitdb.pl -restore
```

- c. Restart the CiscoWorks Daemon Manager if no errors are returned from the **reinitdb.pl** command. The **-restore** option deletes the existent ANI database, not just the contents, and a new ANI database is created.

SNMP Setting

Improper SNMP settings data, as defined in the format, can cause connection problems. In order to verify your setting, go to

```
CiscoWorks2000 Server/Server Configuration->setup->ANI
  Server Admin->SNMP Settings

target:read_community:UNUSED:timeout:retries:UNUSED:UNUSED:write_community
```

Note: There are 6 colons between the SNMP read only string and the SNMP read write string.

The target is the IP address/IP network that you want to discover with the SNMP strings indicated. An asterisk '*' represents a wildcard, so everything in that octet(0–255) is discovered.

For example, you can use the asterisk in any or all octets:

```
172.22.2.*:public::6:2:::private:
198.126.241.2:public::6:2:::public:
*.*.*.*:public::6:2:::private:
```

Verify Processes

Verify that these CiscoWorks2000 processes are running:

1. From the CiscoWorks 2000 Server, issue these commands:

```
* UNIX CLI mode:

      cd /opt/CSCOpX/bin/
      pdshow ANIServer

* NT/Windows2000 command mode:

      cd $NMSRoot\CSCOpX\bin
      pdshow ANIServer.
```

2. Ensure that this information is displayed:

```
Process= ANIServer
State  = Running but busy flag set
Pid    = 1204
RC     = 0
Signo  = 0
Stop   = Not applicable
Core   = Not applicable
Info   = ANIServer started.
```

3. Repeat these steps for the **ANIDbEngine** and **EDS**. The ANIServer depends on these processes to run.

Multi-Homed Server

A multi-home machine is one with multiple NIC cards, each configured with different IP addresses. Although Campus Manager 3.1 is supported by multi-homed machines, you must modify the gatekeeper configuration file to run it on multi-homed machines. Because of CORBA restrictions, only one IP address can be used by a

client to access CiscoWorks2000 Server.

In order to ensure that Campus Manager runs properly on multi-homed machines, follow these steps:

1. Open the gatekeeper configuration file (**gatekeeper.cfg**).

```
# Solaris: Located under the /opt/CSCOpX/lib/vbroker directory.  
Note: /opt is the default install location for Solaris  
# Windows: Located under the $NMSROOT\CSCOpX\lib\vbroker directory.  
Note: $NMSROOT is the default install location for Windows.
```

Note: You must be Administrator/root in order to modify this file or stop/start CW2000 processes.

2. Go to the section that begins with this line:

```
#***** BEGIN MULTI-HOME PROPERTIES *****
```

3. By default, these lines are commented with #. In order to uncomment the property, remove the # character.

4. Enter the appropriate IP address in these fields:

```
# vbroker.gatekeeper.backcompat.callback.host=<external-IP-address>  
# vbroker.se.exterior.host=<external-IP-address>  
# vbroker.se.iiop_tp.host=<external-IP-address>  
# vbroker.se.interior.host=<external-IP-address>
```

5. Save the file.

6. In order to stop the CW2000 processes, issue this command from a DOS window CLI:

```
# Solaris: /etc/init.d/dmgt stop  
# Windows: net stop crmdmgt
```

7. Delete the **gatekeeper.ior** file, located in this directory:

```
# Solaris: /opt/CSCOpX/www/classpath  
# Windows: $NMSROOT\CSCOpX\www\classpath
```

8. In order to start the CW2000 processes, issue this command from a DOS window CLI:

```
# Solaris: /etc/init.d/dmgt start  
# Windows: net start crmdmgt
```

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Related Information

- **CD One**
 - **Troubleshooting the ANI Discovery Used by Campus Manager and UserTracking**
 - **Technical Support & Documentation – Cisco Systems**
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Updated: May 14, 2009

Document ID: 19000
