

Basic DNS Troubleshooting for Cisco Unity Servers

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Introduction

Cisco Unity is an application that runs on Windows 2000 servers. It interacts with and relies on Exchange 2000, SQL 2000, Internet Information Server (IIS) 5.0, and so forth (especially on Active Directory).

This document is based on Cisco Unity configurations that use Active Directory for their Windows 2000 domains. Active Directory is based on the Internet technology, which is comprised of Domain Name System (DNS), Lightweight Directory Access Protocol (LDAP) and X.500. DNS is used to resolve the names of any computer in a customer's network and to resolve the names of the servers that have a specific function in these networks such as the Mail server, the Domain Controller, and so forth.

There may be issues as serious as:

- Cisco Unity no longer responds.
- Cisco Unity is unable to access the System Administrator (SA) web page.
- Cisco Unity is unable to create or import subscribers when some Cisco Unity services cannot resolve the names into IP addresses of the specific servers that have a special function in customer's networks. For example, the Domain Controller or the Exchange server.

This document is focused on basic DNS troubleshooting and problems that Cisco Technical Support has seen in the field.

Symptoms:

- SA or Status Monitor links cannot be resolved.
- Cannot import subscribers. Errors indicating that the Exchange server list or the Domain Controller cannot be found.
- Messages are not being delivered.
- Cisco Unity stops responding and does not start, and so forth.

Prerequisites

Requirements

Readers of this document should have knowledge of these topics:

- Basic understanding of MS Active Directory networks.
- Basic understanding of DNS.

Components Used

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

- Cisco Unity 3.x and later
- Windows 2000 Domain
- Exchange 5.5, Exchange 2000, and Domino

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

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

DNS According to the Cisco Unity Configuration

Cisco Unity is a Plain–Old–Voicemail (POV) System

A common problem that can be seen in POV configurations is when DNS is installed locally on the Cisco Unity server and there is another DNS server for the rest of the network. DNS is usually installed locally in the POV Cisco Unity server when it runs DCPromo to install the Active Directory that Cisco Unity uses as its directory. The person who runs DCPromo is prompted to enter a DNS server IP address. At this point, there are two options:

- A DNS server already installed and configured is entered.
- or
- DCPromo installs DNS for the Cisco Unity Active Directory Domain.

The DNS server that is entered during this process is very important because it is where the Cisco Unity Domain Controller is registered. The same occurs for the rest of the components in this network, such as Domain Controller, Mail server (Exchange or Domino), Global Catalog Domain Controller, and so forth.

The DNS server entered in the DCPromo, or the DNS server that has the same database as the DNS entered in the DCPromo process should be used to configure the DNS client. In this case, for Cisco Unity as this DNS is the one that contains the records for the Domain Controller (DC), Global Catalog Domain Controller (GCDC), and the Mail server. Cisco Unity uses this DNS server to query for these servers.

If you change these TCP/IP properties to point to a different DNS (a common reason would be to be able to resolve names in the Internet), you may receive an error message such as this one in the Event Viewer:

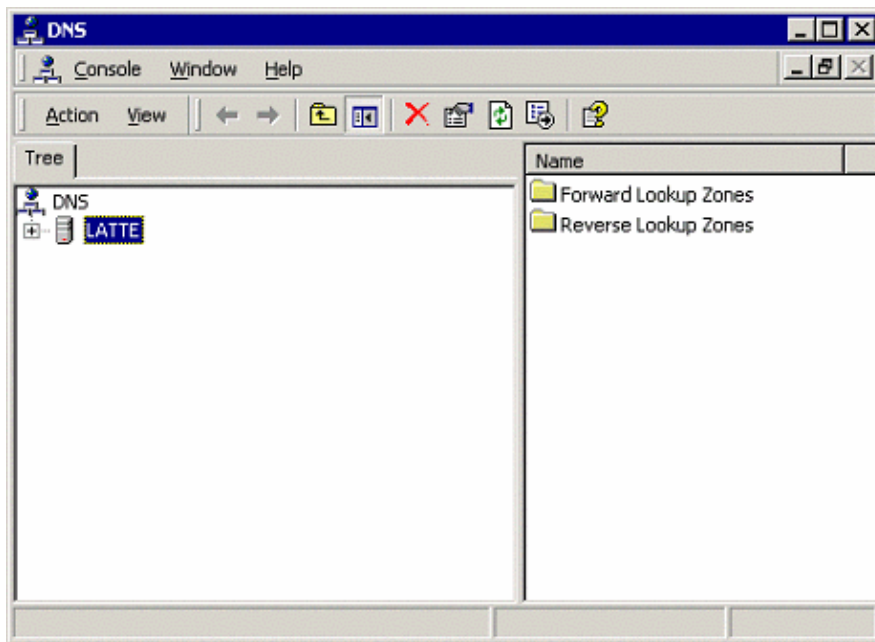
Event Type: Error
Event Source: MSExchangeDSAccess
Event Category: Topology
Event ID: 2102
Date: 10/24/2002
Time: 11:21:17 PM
User: N/A
Computer: <Unity_Server_Name>
Description:
Process MAD.EXE (PID=1500). All Domain Controller Servers in use are not responding: <Unity_Server_Name>.<Unity_Domain>.com

Note: PID= <Number> where this number is a random number.

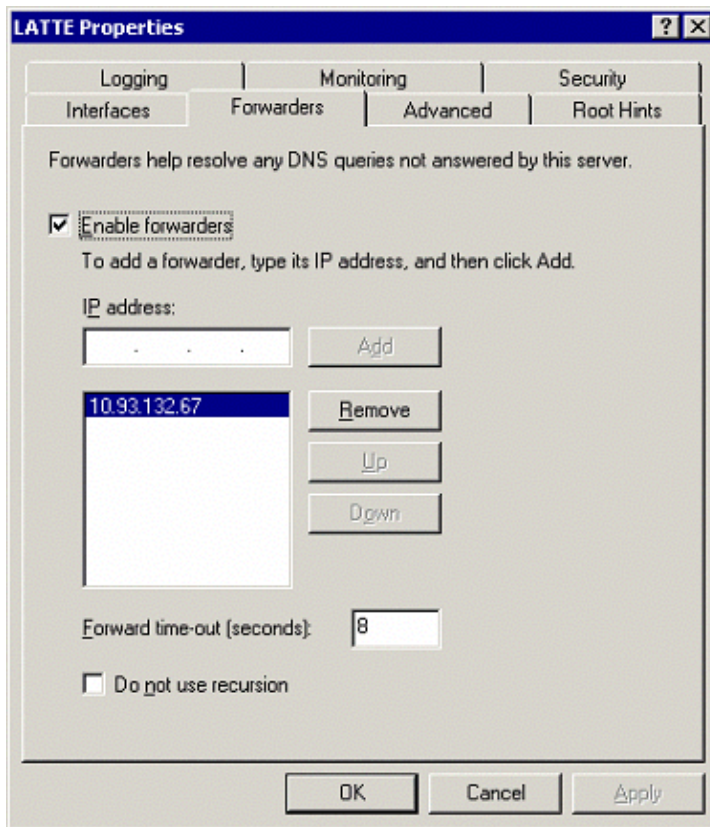
Verify whether you have DNS (server service) installed locally in your Cisco Unity server. If so, configure the DNS client for Cisco Unity to point to the local DNS server. In this case follow the procedure that guides you through how to change this setting where the preferred DNS server is the local IP address of your Cisco Unity server.

A possible solution or option for Cisco Unity to work with the local DNS and still be able to access the Internet is to send or forward the queries that the local DNS server receives upstream to another Corporate DNS server. Therefore, if the Cisco Unity server's DNS is not able to resolve a DNS name, it forwards the request to another DNS server that is connected to the Internet. In this case, enable forwarders to the local DNS zone for DNS queries that the local DNS cannot resolve by following this procedure:

1. Select **Start > Programs > Administrative Tools > DNS server**.



2. Select the Cisco Unity DNS server (**LATTE** in the example in step 1), and right-click on it.
3. Go to **Properties** and select the **Forwarders** tab.
4. Check **Enable forwarders**, and then enter the IP address for the External DNS servers in that window.



Other possibilities can be implemented, as long as the Cisco Unity DNS client points to the DNS server that contains all the records for the servers that have a specific function in the Cisco Unity domain. For example, DC, GCDC, Mail server, and so forth.

The `MSExchangeDSAccess` Error ID 2102 can also occur if Exchange 2000 is installed on a global catalog server, and no domain controller is available, which is explained in the Microsoft Knowledge Base Article 318067 .

Unified Configurations (Cisco Unity is a Member Server)

Usually the Cisco Unity server is configured as a member server in Unified configurations. In this situation, Cisco Unity should not act as a DNS server. DNS should not be installed in this Cisco Unity machine (same for Dynamic Host Configuration Protocol (DHCP), Windows Internet Naming Service (WINS), or any other service.).

An error message similar to this appears if DNS is installed in the Cisco Unity server by mistake and the Cisco Unity server is a member server of the Windows 2000 Domain.

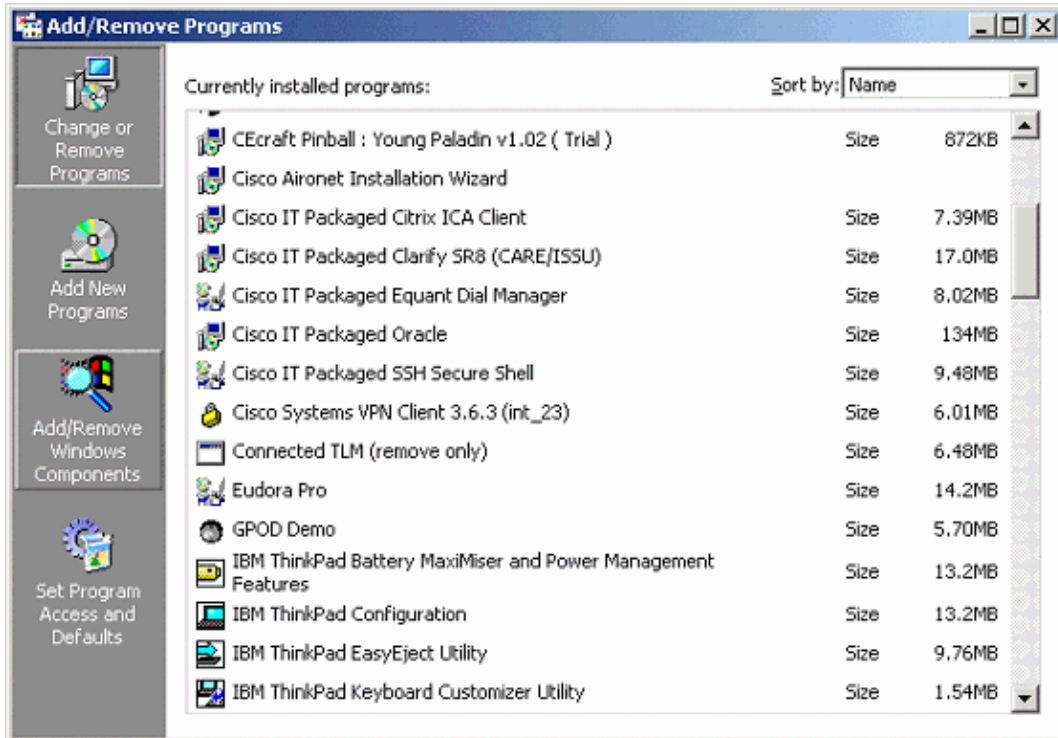
```
Event Type: Error
Event: 2064
Source: MSExchangeDSAccess
Description: Process MAD.EXE" (PID=1392) All the remote
DS Servers in use are not responding.
```

Note: PID= <Number> where this number is a random number.

In this case, uninstall DNS (server service) from the Cisco Unity server and configure the Unity DNS client accordingly. The procedure to uninstall the DNS server service from the Unity server is:

1. Select **Start > Settings > Control Panel**.

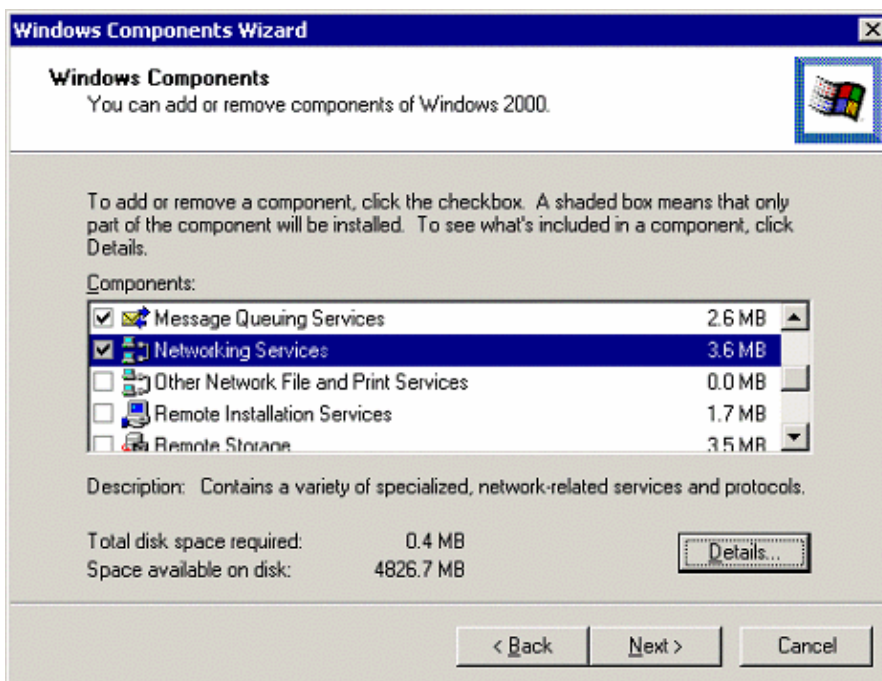
2. Double-click on **Add-Remove Programs**.
3. From the Add/Remove Programs window, click on **Add/Remove Windows Components**.



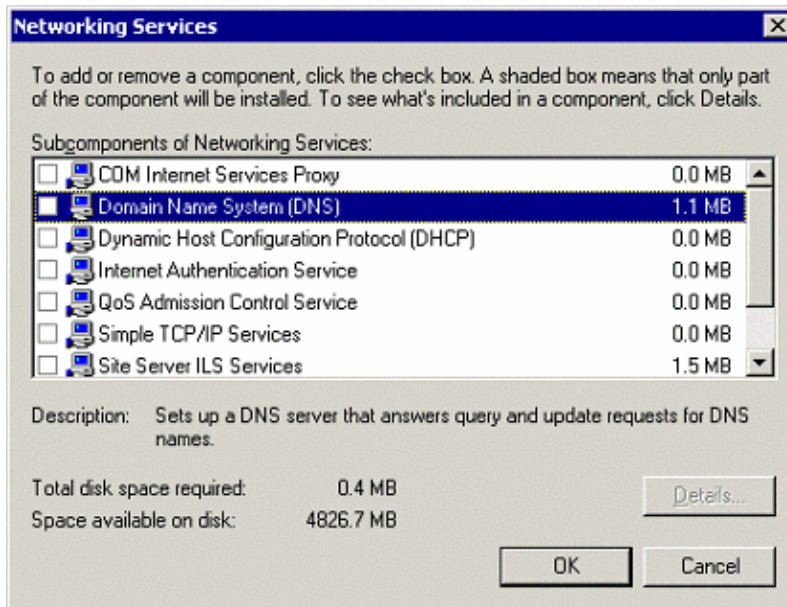
4. At the Windows Components Wizard, check **Networking Services** and click **Details**.



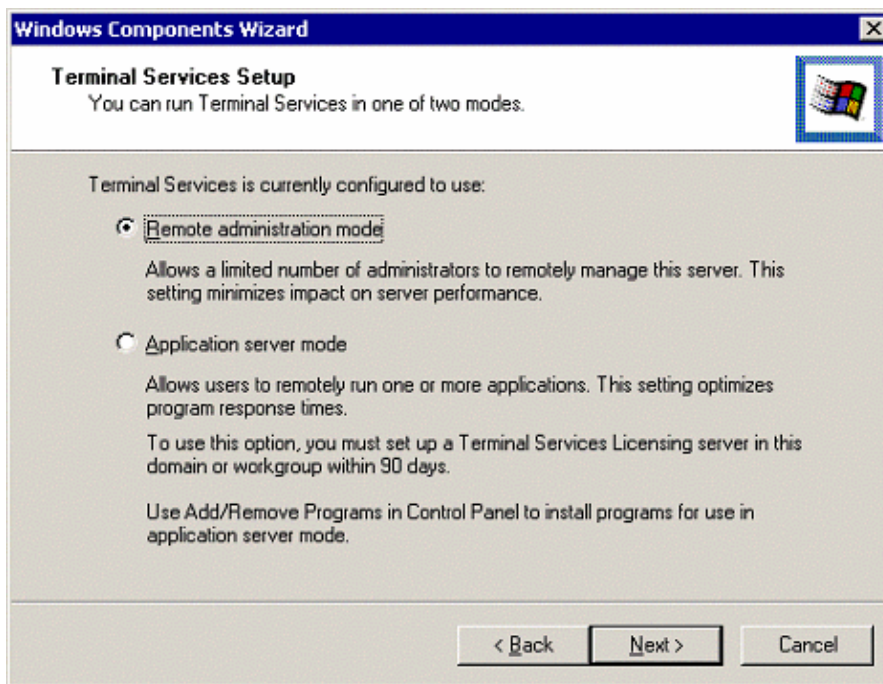
Caution: Leave the check box as checked for the Windows Components that have already been installed in the Cisco Unity server and that need to be kept as installed in your system. Unchecking their boxes uninstalls this component. Leaving it checked causes it not to reinstall if already installed.



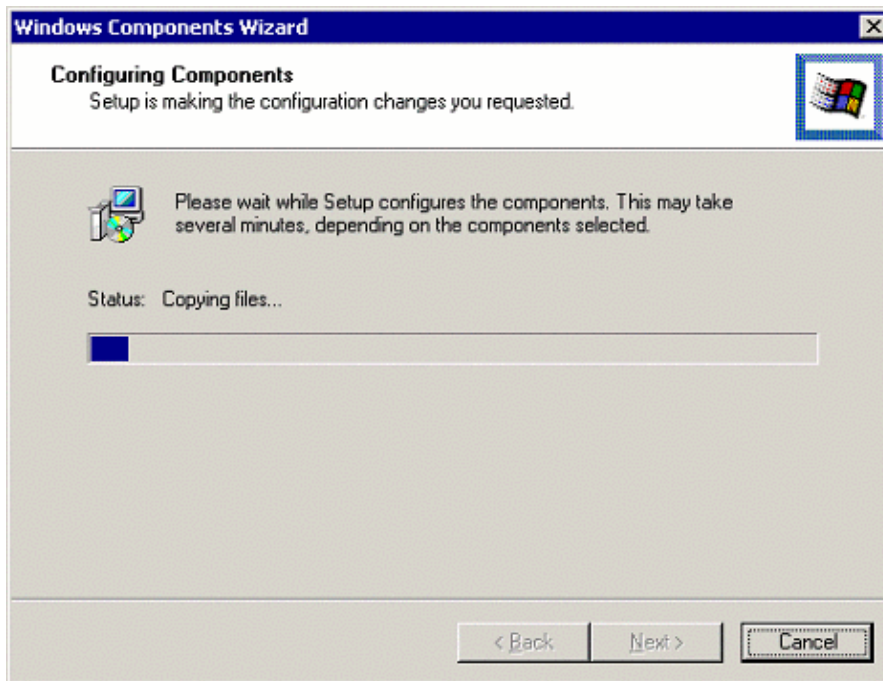
5. At the Networking Services Window, uncheck **Domain Name System (DNS)**.



6. Click **OK** on Networking Services, and then click **NEXT** at the Windows Component Wizard.
7. If you have Terminal Services installed, this screen appears. Please select according to your configuration.



After NEXT is clicked from step 7, a progress bar is displayed.



8. Click **Finish**.

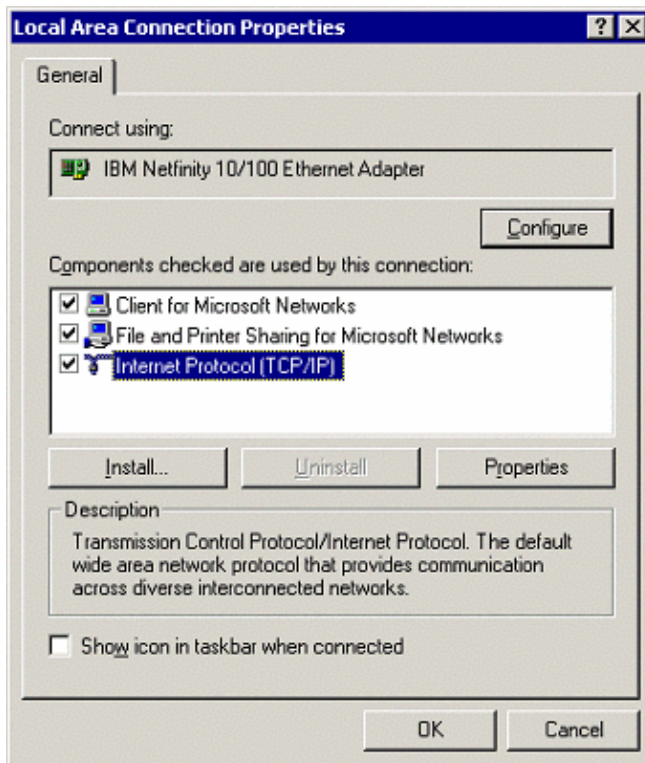


9. Restart the Server if prompted.

Configure the DNS Client at the Cisco Unity Server

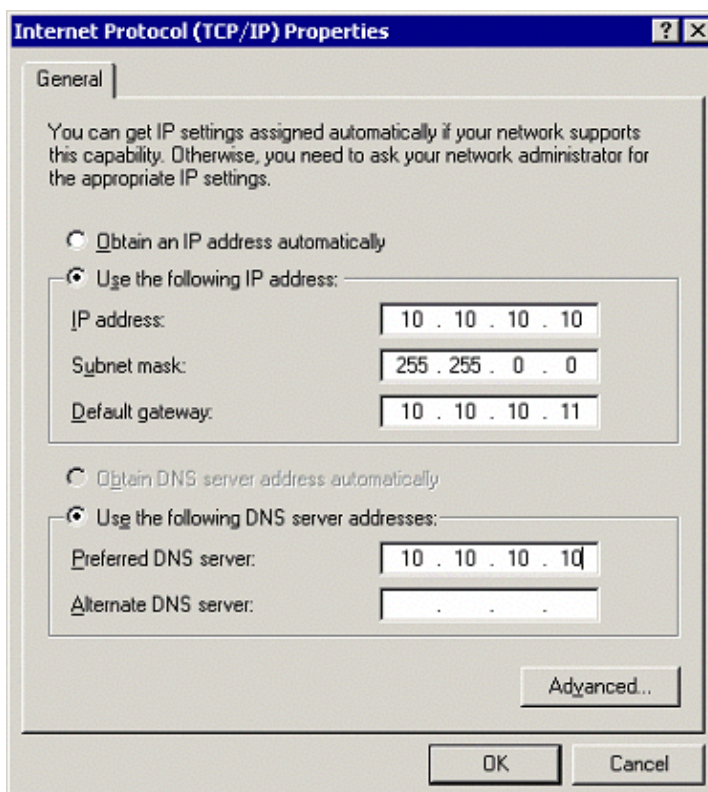
Complete these steps to configure the DNS client with a preferred and alternate DNS server.

1. Select **Start > Settings > Control Panel**.
2. Double-click **Network and Dial-up Connections**.
3. Right-click **Local Area Connection** and click **Properties**.



4. Click **Internet Protocol (TCP/IP)**, click **Properties**, and then check **Use the following DNS server addresses**.
5. In the Preferred DNS server box, specify the IP address of the DNS server to which you want this computer to send DNS queries.

Usually this is an existing DNS server in the same site. If this computer sends queries to the DNS server that is running on this computer, specify the IP address of this computer. Alternatively, in the Alternate DNS server box, specify an IP address of another DNS server to which you want this computer to send the queries if the Preferred DNS server does not respond.



Also the **Use following IP address** option should have been selected to specify the static IP address, subnet mask, and default gateway IP address in the appropriate boxes.

6. Click **OK** to close the Advanced TCP/IP Settings properties.
7. Click **OK** to accept the changes to your TCP/IP configuration.
8. Click **OK** to close the Local Area Connections properties.

Troubleshoot Tools for DNS

Please review these tools for how to use, when to use, and the switches and options for these tools at either Microsoft's home page or Microsoft's Support page .

- **ping** Customers should be able to **ping** at the command prompt from Cisco Unity to the DC, GCDC, or Cisco Unity's Exchange partner and vice versa, by host name, and (most important) by the Fully Qualified Domain Name. If an error appears, those entries can be entered in the host file as a workaround until the real DNS problem is located.
- **Netdiag** Use this tool to resolve network connectivity problems. Netdiag is a utility that helps isolate networking and connectivity problems. It performs a series of tests to determine the state of your network client and whether it is functional. For more information about Netdiag, see Windows 2000 Support Tools Help. For information about installing and using the Windows 2000 Support Tools and Support Tools Help, see the file **Sreadme.doc** in the **\Support\Tools** folder of your Windows 2000 operating system CD. For more information, refer to the Microsoft document Using Dcdiag and NetDiag in Windows 2000 to facilitate Domain Join and DC Creation .
- **Dnscmd.exe** The Dnscmd.exe tool performs DNS configuration from the command prompt. You can use the command–line tool Dnscmd.exe to perform most of the tasks that can be performed from the DNS console. For more information about Dnscmd.exe, see Windows 2000 Support Tools Help. For information about installing and using the Windows 2000 Support Tools and Support Tools Help, see the **Sreadme.doc** in the **\Support\Tools** directory on the Windows 2000 operating system CD.
- **Ipconfig** The **Ipconfig** command can be used to view DNS client settings, display and flush the resolver cache, and force a dynamic update client to register its DNS records.
- **Event Viewer** Event Viewer is used to view DNS client and server error messages.
- **Network Redirector Commands** DNS client caching can be stopped and the cache can be flushed by using the network redirector commands **net start** and **net stop**.
- **Monitoring in the DNS Console** This option of the DNS Console can be used to perform test queries. This can be used by using options on the **Monitoring** tab in the DNS console.
- **DNSLint** A Microsoft Windows utility that helps you to diagnose common DNS name resolution issues.

Related Information

- **Voice Technology Support**
- **Voice and IP Communications Product Support**
- **Recommended Reading: Troubleshooting Cisco IP Telephony**
- **Technical Support & Documentation – Cisco Systems**

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