Server

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OpenAir Windows Server "Waiting for Data"

Introduction

While trying to connect to our OpenAir Windows server, the terminal receives the Host list, an item is selected, and the user gets a "Waiting for Data" message.

After the Windows server is rebooted, it automatically starts Spectrum One and Access Point services. The problem in the Windows Task Manager is that rfswch is consuming all the Windows resources. This is caused by the lack of a Spectrum One transceiver connection to the Windows server.

Resolution

If not using Spectrum One, disable the service under the Windows control panel.

If using Spectrum One and Access Point services, make sure that there is a good connection to the Spectrum One Transceiver and that the Transceiver is functioning.

The work-around is to stop Spectrum One and Access Point from within PowerNet OpenAir Administrator, and then start Access Point services.

Network Storm Stops the Telnet or Apbase Server

Introduction

Cases that cause servers to stop functioning include, but are not limited to, the following: Telnet, FTP, HTTP HTTPS, finger, apbase.

The reason that the service stops is to protect itself from an incoming threat. The difficulty is in determining what or who is causing the network storm. This could be a deliberate network storm or in some cases an unintended random application network storm. This will require network traces at the site with the environmental problem.

For example, an unintended random application network storm is an application constantly updating, in a loop, a terminal client with unsolicited application user messages. Eventually, the IP stack will start to fill up its window buffer and will shut down.

Another example is an instance in which someone creates a deliberate network storm also known as a denial of service that shuts down the services of a given server.

Resolution

Using the network analyzer of choice, find the root cause of the network storm.

Changing AirLoader PowerNet Server with a Symbol Spectrum 24 Terminal

Introduction

In many cases, our resellers have different environments among their customers. They need to transfer control of the AirLoader to the ordered PowerNet product for that site. A good reseller will pre-configure the terminals for his customer's environment using the reseller's laptop.

The issue is that once the reseller removes the laptop from the customer's environment, the terminals do not look for a new AirLoader PowerNet Server on the customer's network.

Resolution

To change the AirLoader IP address on the terminal, use the following steps:

1. Reboot the terminal to get to the "Press Any Key" Prompt.
2. Press the Shift and "C" keys to get to the configuration screen.
3. Select option 2 "Terminal Setup".
4. Select "Exit".
5. At the E: prompt, type 'flshctl /w' followed by Enter.
6. Type 'del crfmgr' followed by Enter.
7. Type 'flshctl /ro' followed by Enter.
8. Reboot the terminal.

The terminal will now search for the customer's AirLoader PowerNet Server.

OpenAir Windows Server Dependency on Microsoft Internet Information Server or Peer Web Server

Introduction

The OpenAir Windows server is dependent on Microsoft Internet Information Server or Peer Web Server for managing the software interface via a WEB Browser.

Resolution

You must be the Administrator to install these products. If not, you may run into a security issue within Windows.

In order to manage the OpenAir server via a WEB interface, you must first have Microsoft IIS installed prior to installation of the OpenAir Windows server on a Windows NT, 2000, or XP computer. (OpenAir Windows 6.0 is not fully compatible with Windows Server 2003.)

Please refer to Microsoft's procedures for installing their products at.

NT: http://www.connectrf.com/Documents/install_iis4.html

2000: http://support.microsoft.com/default.aspx?scid=kb;en-us;266115

XP: http://www.microsoft.com/resources/documentation/windows/xp/all/proddocs/en-us/iiiisin2.mspx

OpenAir PowerNet Administrator "Page Not Found or Not Authorized" on Windows Server

This can occur under 3 scenarios, which are summarized here and explained in detail below:

A. **The web browser does not have permission to view the files in the OpenAir directory.** Different installations of Windows have different default permissions.

   Solution: Turn off Anonymous access in the IIS Manager.

B. **Installation of OpenAir Windows while logged on as a user who has permission to install software, but does not have permission to manage IIS.** In this scenario, the virtual directories used by OpenAir Windows are not created, but they can be created by hand afterwards, when logged on with the correct credentials.

   Solution: Create the virtual directories in IIS.

C. **Re-installation of OpenAir Windows in a different location.** When OpenAir Windows is uninstalled, the virtual directories in IIS are not removed, though the folder they point to is. When OpenAir Windows is re-installed in a new location, the installation program does not point the virtual directories to the new location.

   Solution: Point the virtual directories to the new location of the OpenAir folder.

Each of these solutions requires management of IIS. The Internet Services Manager (called Internet Information Services in Windows XP) is found in the Administrative Tools. The Administrative Tools folder is found in the on the Start Menu or the Control Panel in Windows 2000 and XP, and in the Start Menu Programs in NT. If it is not there, IIS is probably not installed; for information on installing IIS, see **OpenAir Windows Server Dependency on Microsoft Internet Information Server or Peer Web Server** earlier in this document.

Go to Administrative Tools:
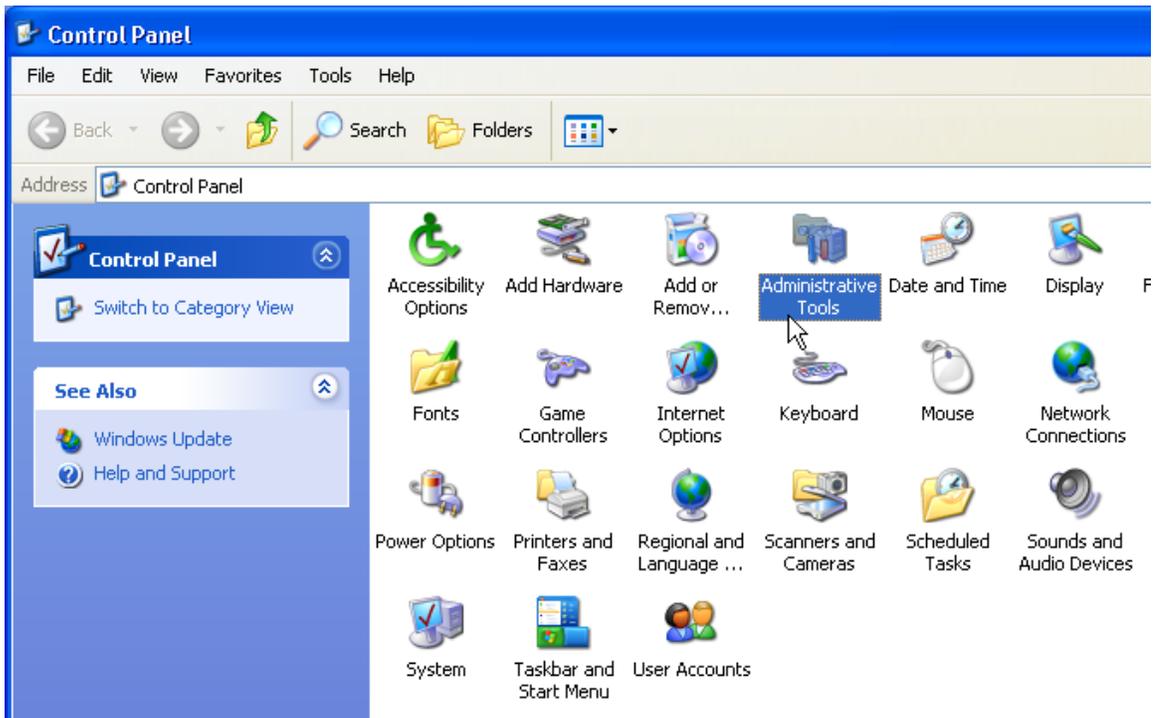
Click on Internet Information Services (or Internet Services Manager):
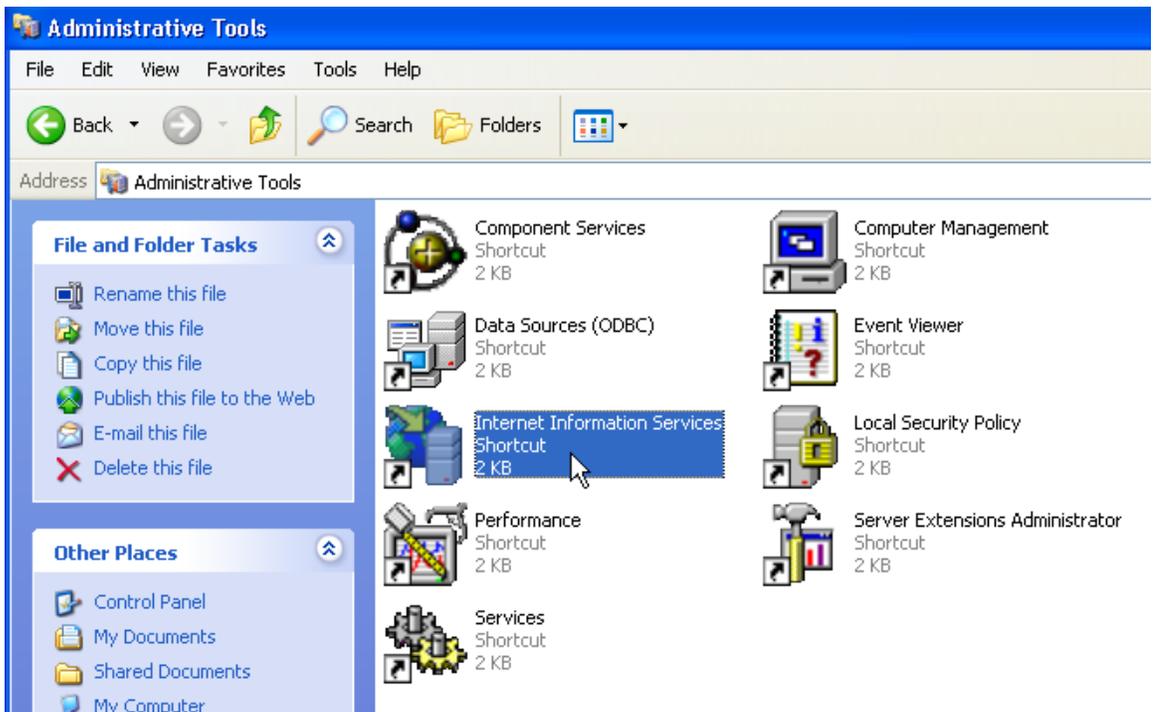
A. Turn off Anonymous access in the IIS Manager.
In the IIS Manager, click the Default Web Site, select Properties, click the Directory Security tab and click the Edit button in the Anonymous Access and Authentication Control (the wording is slightly different in different versions of Windows). Remove the checkbox allowing anonymous access.
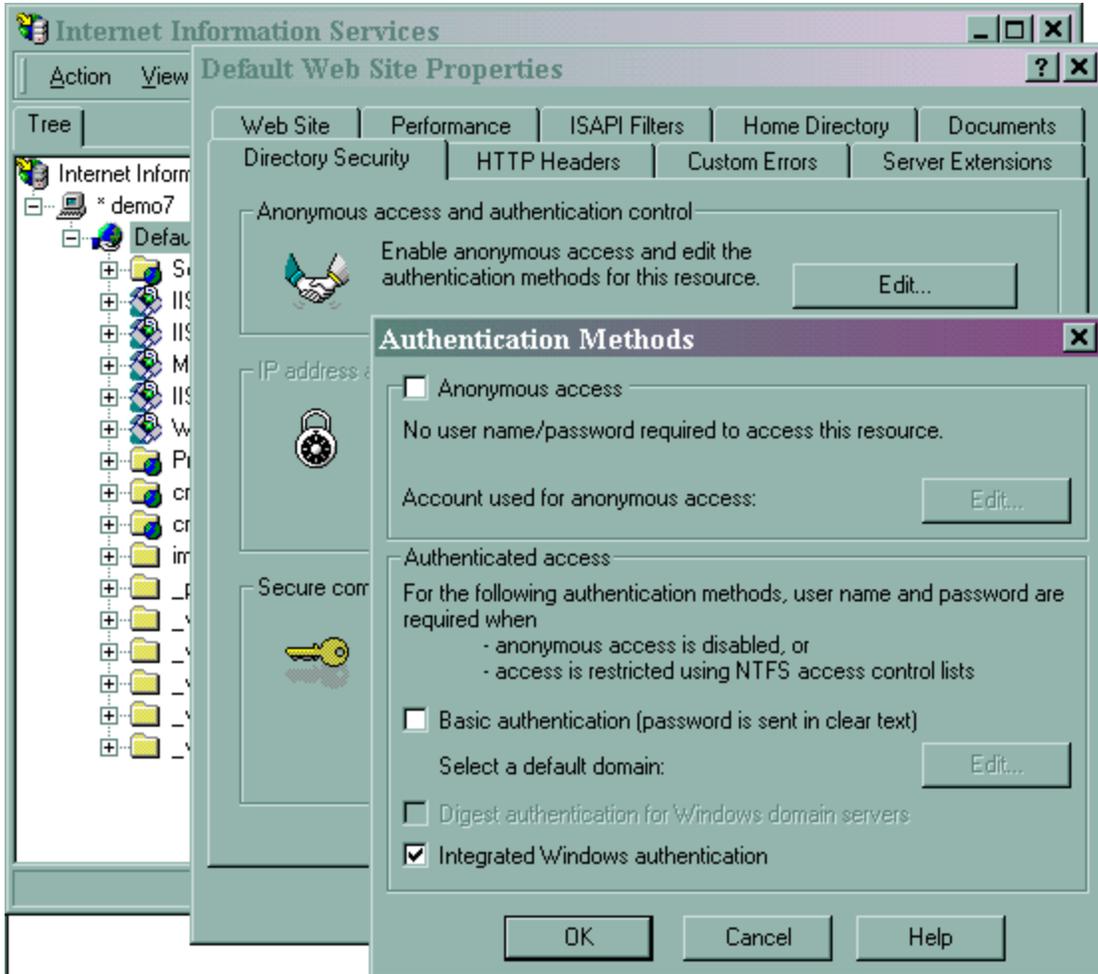
When you run the OpenAir Administrator, it will now prompt for User ID and Password. If you use the Administrator password, all functions will work.

B. **Create the virtual directories in IIS**, if they were not created during OpenAir installation. Look in the IIS Manager. There should be 2 icons in the list under Default Web Site called crf-cgi and crfadmin. If they are not there, you need to add them.
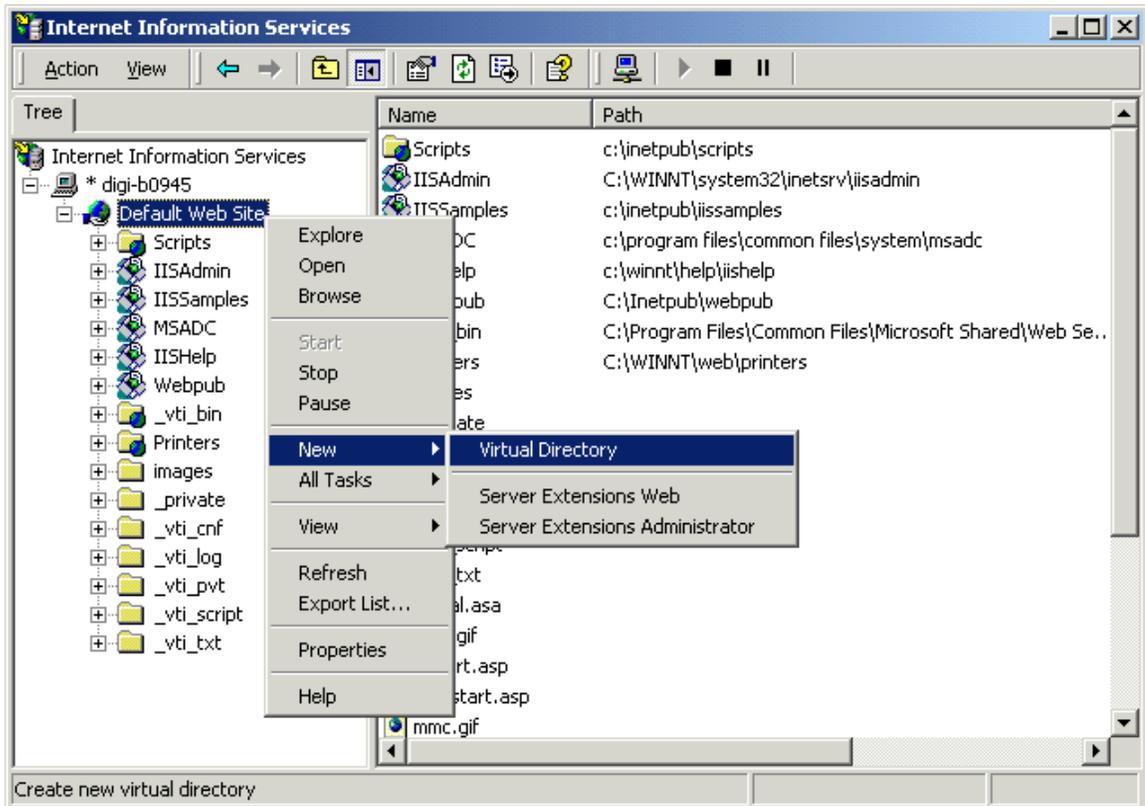
Click on The Default Web Site. Right Click and select New/ Virtual Directory.

Click Next to continue.
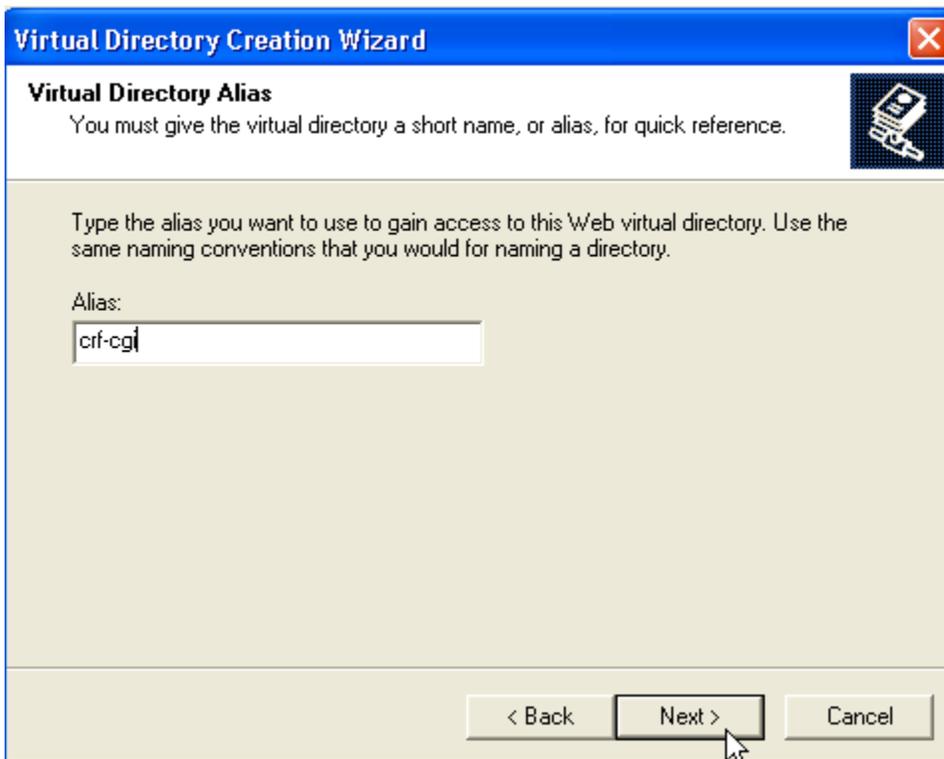
Type in crf-cgi as the alias.

When you are prompted for directory, click the Browse button. Point to the PowerNet Folder and within that folder, OpenAir. Then click Open. Then click Next.

Check the Read, Run scripts and Execute permissions boxes (the first 2 will probably already be checked). Then click Next.
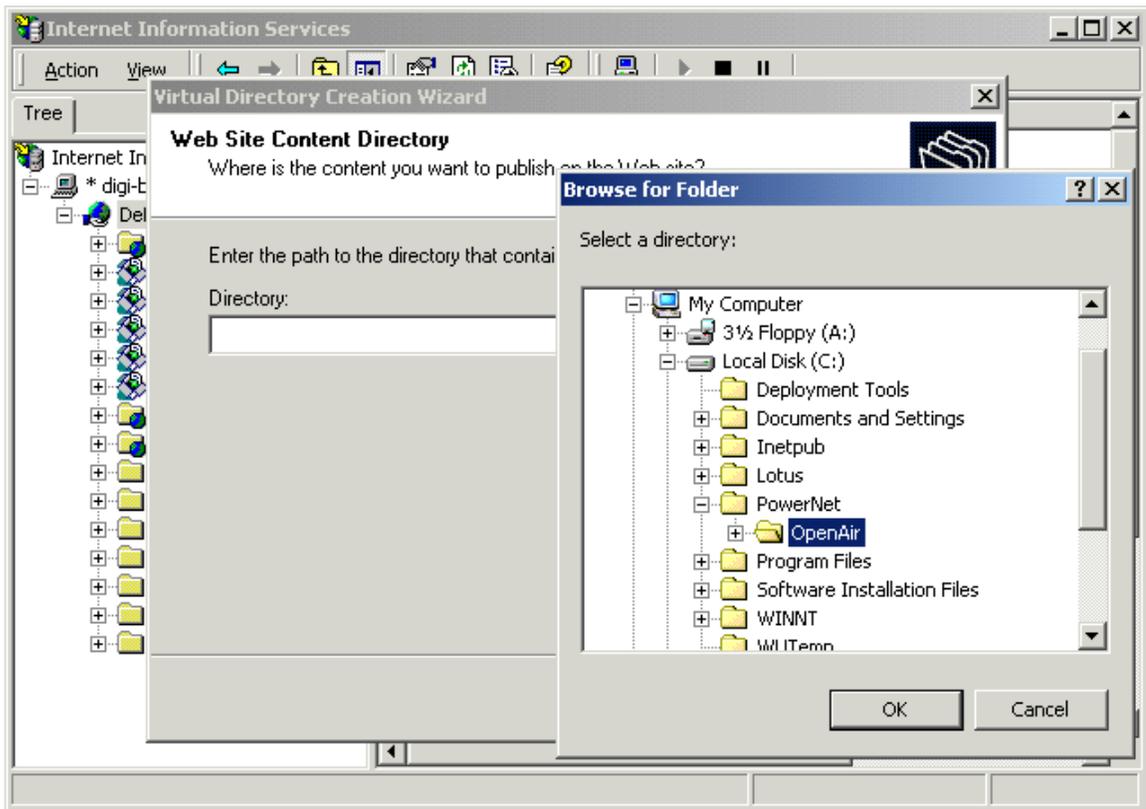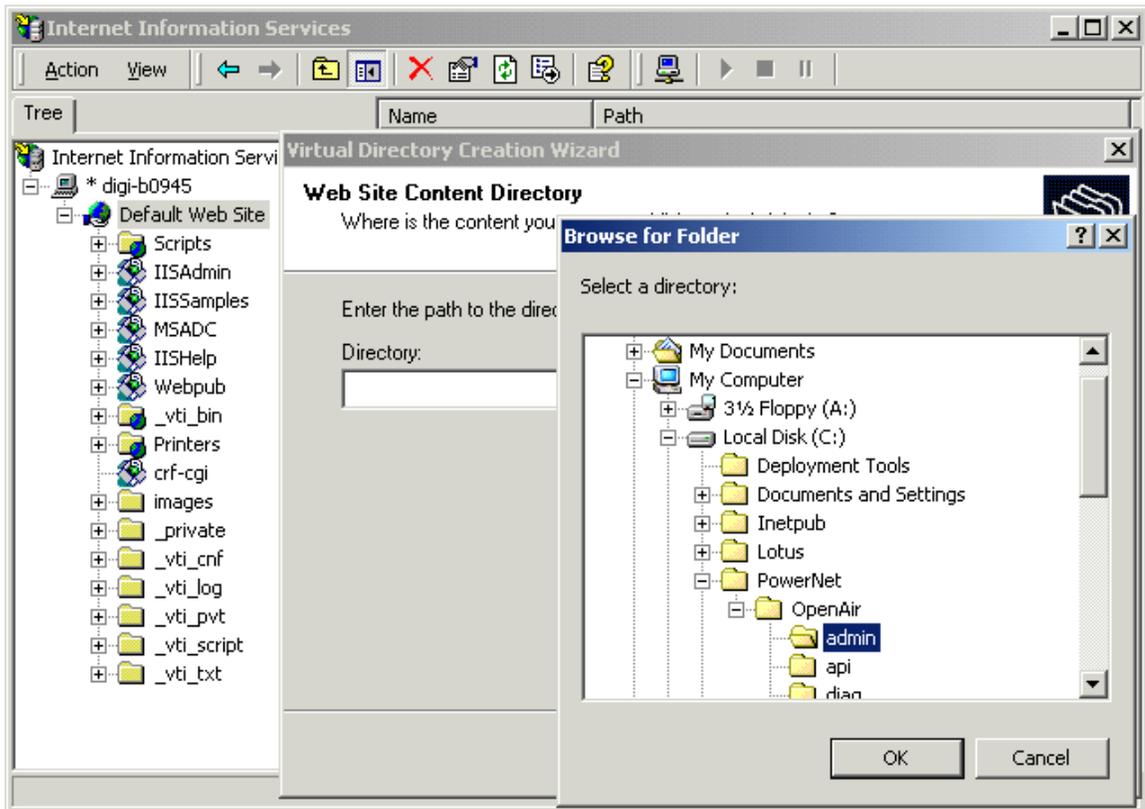
Now repeat the process to create a virtual directory called crfadmin. Again, right-click on the default website and select Create new virtual directory. Give it the alias crfadmin. When you are prompted for the directory, select Admin within the OpenAir folder, which is in the PowerNet folder.

Give it the same permissions as the other virtual directory, Read, Run scripts, and Execute.

Now, go to Programs/PowerNet/OpenAir Administrator, and the administrative interface will run correctly. You may bookmark the URL http://127.0.0.1/crfadmin, or access it from another workstation on your intranet by the IP address of the OpenAir Windows server computer, i.e. http://207.241.78.35/crfadmin.

C. **Re-installation of OpenAir Windows in a different location.**
In this case, the 2 needed virtual directories already exist, and all you need to do is edit the path to them.

For both virtual directories, crf-cgi and crfadmin, right-click and select Properties.
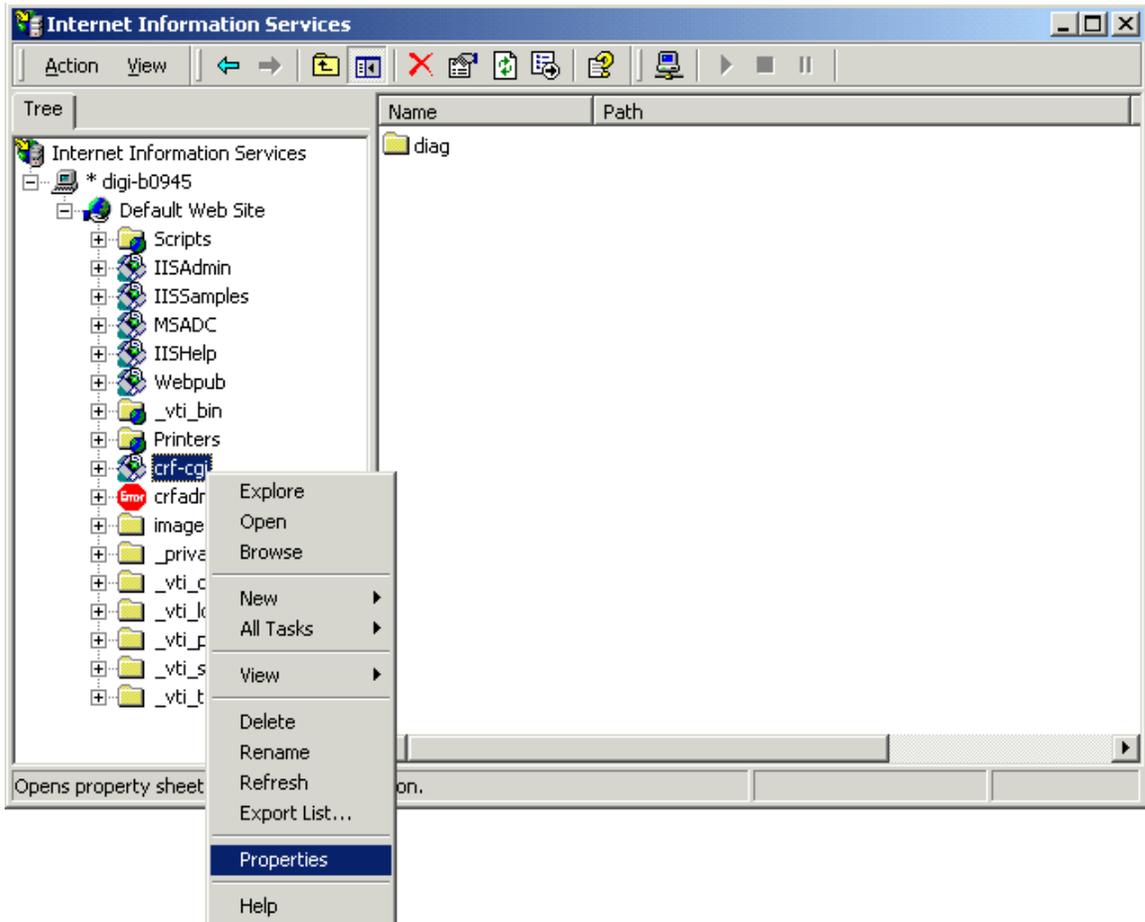
In the resulting dialog box, enter the correct path to the PowerNet folder (the crf-cgi virtual directory must still point to the OpenAir folder within the PowerNet folder, and the crfadmin virtual directory must still point to the Admin folder within that.)

Click OK and now the OpenAir Administrator will work correctly. To run it from the Start menu, go to Programs/PowerNet/OpenAir Administrator.

OpenAir Windows Installation Issue

Introduction

OpenAir Windows does not work on a system built as a Domain Controller.

Problem Description

We believe that this happens because the application permissions do not get set up correctly.

Resolution

The best option is to use another PC that is not the domain server.

Adding RF Devices to R6 OpenAir Server

Introduction

The following describes some guidelines and considerations when adding new devices to an OpenAir server.

Adding an RF device to an OpenAir server can be just as simple as entering the server address in the terminal and you're done. (With AirLoader even this simple step can be automated.)

OpenAir servers are designed to automatically adjust to a device, but there are still device specific and customer specific considerations when adding RF devices. These need to be discussed and worked out with the end user.

In general, adding a device should be considered an integration effort.

Note: Terminal integration is not included in PowerNet ASSIST/SPARE service plans. Connect offers QuickStart programs to assist with this and there is also plenty of self-help information available for this task on our WEB site.

General Information

- OpenAir servers are designed from the ground up to support multiple concurrent terminal types.

- When at all possible, server features are terminal neutral OR automatically adjust when it can (exceptions are listed below in the "Considerations" section).

- The user license is controlled by the OpenAir server and not the terminal. It can be found under Utilities/Authorization.

- The rules for a server license are below:

On initial OpenAir server setup, you can use whatever client is available for a supported device. If changes are made later, an upgrade or a new license might be required. Below are the rules for when this applies:

Upgrade Fee Applies When:

  o Upgrading a V6.0 client to V7.0 client.
  o Converting an OpenAir server license to a direct license with no device change.

New User License Is Required When:

  o RF Equipment model change, server or direct

- You can use any version of our terminal client on a server and it will adjust to its capabilities, but in general, we recommend that you use the latest available client.

- The current R6 server will work with all devices listed here under "Supported Equipment" listing: http://www.connectrf.com/ster.htm

- The OpenAir server may not support all features of a device and these are listed below under "Considerations".

Considerations

This section describes considerations and guidelines when adding new devices to a server.

Some OpenAir features, by their very nature, are terminal specific. Below is a listing of features that are terminal specific.

1. Key Remapping

You must have a separate keymap file for each device and keyboard type.

You can have more than one keymap file for a given host list entry. This allows one host list entry to have multiple key map files for different devices.

The server applies the right keymapping to the right terminal by looking for the device name in the keymap file name. This naming convention is done automatically by the OpenAir keymap utility and uses this format:

name.device.cfk

Example for a Symbol 6800 46-key terminal:

Test.680046.cfk

Example of multiple types for one host list entry titled "Test":

Test.680046.cfk
Test.610031.cfk
Test.390054.cfk

Question: What if the terminal I need is not listed under the OpenAir keymap utility?

Answer: You can use the keymap utility that is part of TwinClient manager to create the file then move to the OpenAir server and rename it to match the naming convention detailed above.

2. Scanner Decoder Control

You can share the same Scan Decoder Control Object as long as the scan options are the same between the devices.

If the options are different, you will need a separate object AND host list entry.

Unlike the Keymap objects, the server code does not know how to handle multiple objects under one common name.

Question: What if the terminal I need is not listed under the OpenAir Scan Decoder Control utility?

Answer: You can use the Scan Decoder Control utility that is part of TwinClient manager to create the object then move to the OpenAir server.

3. Scan Ahead Feature

Not all devices support this feature. If this option is on and the device does not support this feature, it will cause no operational errors.

Question: How can I tell if my device supports this feature?

Answer: You can check the "Supported Equipment Manual" at: http://www.connectrf.com/ster.htm

4. Dialog Script Objects

In general practice, the Dialog Script objects are not terminal specific. However, you could write a script in a manner that will cause problems. This generally happens in the "display" or "input" commands.

Example: If you have written a script to display a message on line 16 and the terminal only has 8 lines, it will cause an error when it tries to write to line 16.

Question: How can I make sure my script runs on multiple devices?

Answer: Write the script using the smallest screen size of the devices you need to support.

5. Screen Formatter Objects

Formatter objects are designed to "re-format" host screens to match a specific terminal display size. If you design the terminal screens for a terminal with a 16 x 21 display, they will not fit on a terminal with an 8 x 20 display.

Question: How can I make sure formatter objects run on multiple devices?

Answer: If the devices all have the same screen size, you don't need to do anything and they will display correctly on all of the devices.

If the devices have different screen sizes, design the screens for the smallest of the displays. The larger display devices will place the screens in the upper left hand part of the screen.

Often, if the screen size difference is large, the end user may want you to do a separate formatting object for the larger screen. (They may feel like they are "wasting" the extra screen space.)

This may require that you have multiple formatter objects and multiple host list entries.

Tip: If you need to make two objects, format the smaller display first then save a new copy of this. THEN change the screen size in the formatter to the larger display. This retains the formatting for the smaller screen and you just need to use the extra space.

Tip: Try increasing the font size for the larger display device. This could allow a formatter object designed for a smaller screen to use all of the available space on the larger display.

6. Terminal Control

This feature allows you to "marry" a host list entry to a specific device. If you are able to find your new device in the "Terminal Control" menu, you just need to select it.

Quite often what happens is that the new device is NOT in the list.

This feature is currently at its design maximum for the number of devices it can support. (Sorry, we didn't know we would support the hundreds of devices we do today).

Note: This feature will be removed in the next server release.

We have a replacement feature completed that is part of the next upcoming release. If your system is on a sustaining PowerNet ASSIST agreement, this feature can be added by a patch applied to your current R6 system at no cost. (The patch does not apply to pre R6 systems.)

7. Font Control - Double Wide/Hi and Variable

Not all terminals support Double Wide/Hi fonts. You can check the supported equipment manual to see if yours does. If the terminal does not support it, there will be no operational error but it will stay at its normal screen size.

Most CE devices and some non-CE devices now support variable fonts. The terminals that support this will have full support while running in direct mode but will have no support for this in server mode.

If your system is on a sustaining PowerNet ASSIST agreement, this support can (in most cases) be added by a patch applied to your current R6 system at no cost. (This does not apply to pre R6 systems.)

8. Printer Setup

You may find that a printer option that is available in direct mode will not be available in server mode. Bluetooth printer support is a good example.

If your system is on a sustaining PowerNet ASSIST agreement, this support can (in most cases) be added by a patch applied to your current R6 system at no cost. (This does not apply to pre R6 systems.)

9. Scan Features

Some devices add scanner support by use of a "Scan Wedge". A good example may be a CE device using our Generic CE client. If this is the case, the following server features will not work:

    Scanner Send Key
    Scanner Decoder Control
    Scan Data Editing
    Scan Data Mapping
    Scanner Striping
    Scanner Length Check
    Scanner Truncation
    Scan Spanning
    Scan Ahead
    Scanner Binary 128 Option

The reason this happens is that data from a Scan Wedge is "inserted" into the keyboard buffer. To TwinClient this "scanned" data looks like keyed data and it will not trigger execution of any of the scan features.

About This Document

This document is based on the following Technical Documents in our Notes Database that have been made obsolete: A1043, A1065, A1081, T1134, T1135, T1201, and T1237.

Please let us know about any errors in this document at:
http://207.241.78.223/isoxpert/calltrak.nsf/WebTracking?OpenForm.