



# **INDeX Contact Centre Modules**

## Installation & Maintenance

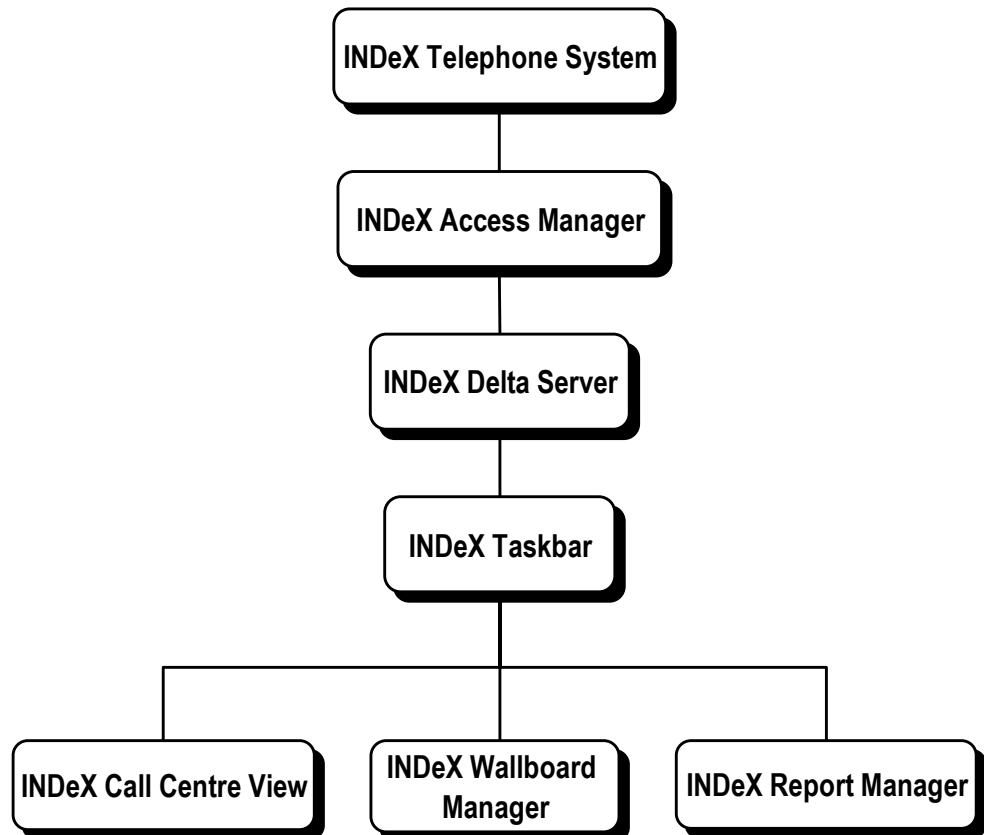
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# Introduction

## Overview

INDeX Contact Centre provides the user with the necessary tools to facilitate the management of call traffic. The diagram shows the concept of this contact centre:



This contact centre consists of the following components:

- INDeX Telephone System: The telephone system must be an INDeX system with Level 8 software.
- INDeX Access Manager: This is the only component connected to the INDeX Telephone System (using a serial cable) by the means of a bi-directional CTI link. The Access manager is responsible for obtaining all the relevant information from the INDeX Telephone System.
- INDeX Delta Server: This component connects to the Access Manager.
- INDeX Taskbar: This component communicates with Delta Server to provide User Access Level as well as Password Protection for the CCM modules.
- INDeX Call Centre View: This component communicates with Delta Server to enable the user to monitor, in real time, selected contact centre activity.
- INDeX Wallboard Manager: This component communicates with the Delta Server enabling the user to display selected contact centre activity on a wallboard device.
- INDeX Report Manager: This component comprises of 2 components (INDeX Report Server and INDeX Report Client). INDeX Report Server communicates with the Delta Server to enable you to obtain and schedule the available standard reports.
- INDeX Networked Administration: This component communicates with the Access Manager enabling you to change the INDeX Telephone System's configuration.

This document describes the equipment (including Software) required and the procedures to be followed to install the INDeX Contact Centre Manager modules on a customer's site.

**"INDeX Installation and Maintenance Manual"** covers the installation of the INDeX Telephone System.

## System Specification

There are three types of INDeX CCM Server hardware platform, the choice is determined by issues such as number of agents, call traffic levels, number of supervisors (Clients) and the retention period for historic data. These Server PC options are:

- |          |   |
|----------|---|
| Option 1 | CCM SPC – 5: Supports up to 5 Clients   |
| Option 2 | CCM SPC – 10: Supports up to 10 Clients |
| Option 3 | CCM SPC – 20: Supports up to 20 Clients |

The Operating System on Server PCs is Windows NT Server 4.0.

The Operating System of the Client PCs can be either Windows NT Workstation 4.0 or Windows 95/98/2000.

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### Computer Systems

Each Server PC and Client PC **must** meet the minimum requirements as detailed in this section.

- **Option 1 Server PC (SPC5): (Supporting Max 5 Clients):**
  - Pentium II 400MHz or higher, with 1 x 10GByte hard disk
  - Minimum 128MBytes of RAM
- **Option 2 Server PC (SPC10): : (Supporting Max 10 Clients):**
  - Pentium II 400 MHz or higher, with 1x30 GByte hard disk
  - Minimum 256 Mbytes of RAM
  - Backup Device (Optional)
- **Option 3 Server PC (SPC20): (Supporting Max 20 Clients):**
  - Pentium II 400 MHz or higher, with 1x60 GByte hard disk
  - Minimum 256 Mbytes of RAM
  - Backup Device (Optional)
- **Client PC:**
  - Pentium II 133MHz or higher, with >1GByte hard disk
  - Minimum 64Mbytes of RAM
- **Monitor:** 15" (or optional 17") SVGA supporting 800x600
- **Keyboard:** Win NT/95/98/2000 Compatible
- **Floppy Disk Drive A:** 3.5" 1.44 Mb high density
- **CD ROM Drive**
- **Backup Device:** On Stream 30GB Digital Drive
- **Modem** (Optional for Remote Access Use)

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### Expansion Cards

- **Wallboard Comms Card:** Advantech PC-LabCard (Model PCI – 1601A)
- **Network Card:** 3Com EtherLink 10/100Mbps PCI Combo (Model No: 3C905B-COMBO)

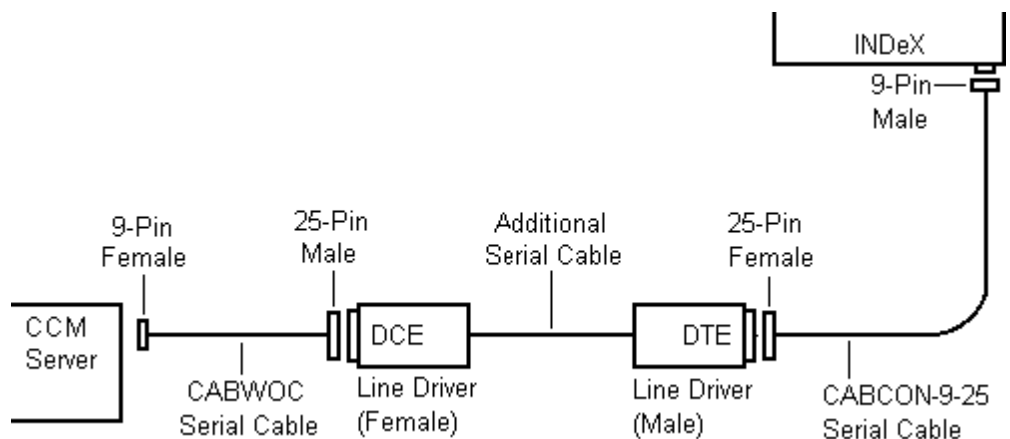
### System Software

- **Windows NT Server:** Version 4.0, Media: CD ROM
- **Windows NT Workstation:** Version: 4.0, Media: CD ROM
- **Windows 95:** Version: Latest, Media: CD ROM
- **Windows 98:** Version: Latest, Media: CD ROM
- **Windows 2000:** Version: Latest, Media: CD ROM
- **INDeX Application CD:** Latest Version, Media: CD ROM, incorporating all related INDeX CCM applications
- **INDeX Application Service Pack CD:** Latest Version, Media: CD ROM, incorporating:
  - Windows NT Server folder (containing Service Packs, ODBC Drivers and SQL 7 Service Pack)
  - Windows NT Workstation folder (containing Service Packs ,ODBC Drivers)
- **INDeX Report Manager Database CD:** Latest Version, Media: CD, incorporating:
  - Microsoft SQL Server 7.0

### Connecting the INDeX CCM Server

The instructions below assume that you are using cables plus line drivers supplied by Avaya. You may also require additional serial cable for long cable distances.

1. Connect one end of the CABCON-9-25 cable to a free port on the INDeX control cabinet (the cabinet containing the CPU Cassette).
  - You can use any of the 4 serial sockets on the cabinet. Avoid using the first (front) socket if possible, as this is required for some INDeX Telephone System maintenance tasks.
2. The diagram below shows the remaining connections.
  - Note the DTE and DCE settings of the line drivers.
  - You **must** connect CABWOC to serial port COM2 of the PC. If this is not a 9-pin port, you need a 9-pin male to 25-pin female serial converter.
  - If the cable distances are short, you may connect CABWOC directly to CABCON-9-25.



**Note**

The Comms Port default settings on the Access Manager is Port 2. If you use a different Comms Port, you must also change the Access Manager Comms Port Settings.

## Wallboard Devices

### INDeX Wallboard 22

Specification	
Voltage	220/240V AC <b>OR</b> 110V AC (Check label on rear of wallboard)
Wattage	108W
Cold Start Inrush Current	30A for up to 6ms
Baud Rate	9600 only
Input	RS 485
Weight	6 kg
Dimensions	L 1097 x D 75 x H 198 mm

Installation power distribution circuit rating to be greater than 6 amp, any circuit breakers must be capable of handling the cold start inrush current without tripping.

For details of INDeX Wallboard 22 Installation see "INDeX Wallboard 22" on page 95.

### INDeX Wallboard 10

Specification	
Voltage	Check label on rear of wallboard
Wattage	35W
Cold Start Inrush Current	30A for up to 6ms
Baud Rate	9600 only
Input	RS 485
Weight	4 kg
Dimensions	L 469 x D 75 x H 123 mm

Installation power distribution circuit rating to be greater than 6 amp, any circuit breakers must be capable of handling the cold start inrush current without tripping.

For details of INDeX Wallboard 10 Installation see "INDeX Wallboard 10" on page 102.

## LAN Utilisation

The following results should be interpreted for each customer Network. Use this only as a guideline.

The network of 1 Server and 9 Clients was defined as follows:

10 Base-T Ethernet: max. capacity (i.e. 100%) = 1220Kbytes/sec  
= 9.76Mbits/sec

The LAN was made up of three 8-port Hubs up-linked together.

### INDeX Call Centre View Individual Start-Up Results

No. of Clients	Average Utilisation (No Activity)	Peak Utilisation
1	0.5%	5%
2	0.7%	12%
3	1.2%	18%
4	1.5%	24%
5	1.7%	30%
6	2.0%	32%
7	2.3%	36%
8	2.7%	40%
9	3.0%	45%

From the results the following was concluded:

- Peak approx.: 4 to 6% greater as each client is logged on.
- Utilisation peaks at approx.: 63% if all statistics are reset with 9 clients logged on running INDeX Call Centre View and INDeX Wallboard Client.
- Log-off peak: 0.5%.

### Call Loading/Utilisation Results

Duration	Call Load Calls/hour	No. of Agents	Average Utilisation	Peak Utilisation
15 min	10200	70	30%	45%
15 min	8500	70	30%	42%
15 min	6200	70	22%	38%
15 min	4500	70	20%	34%



## Limitations

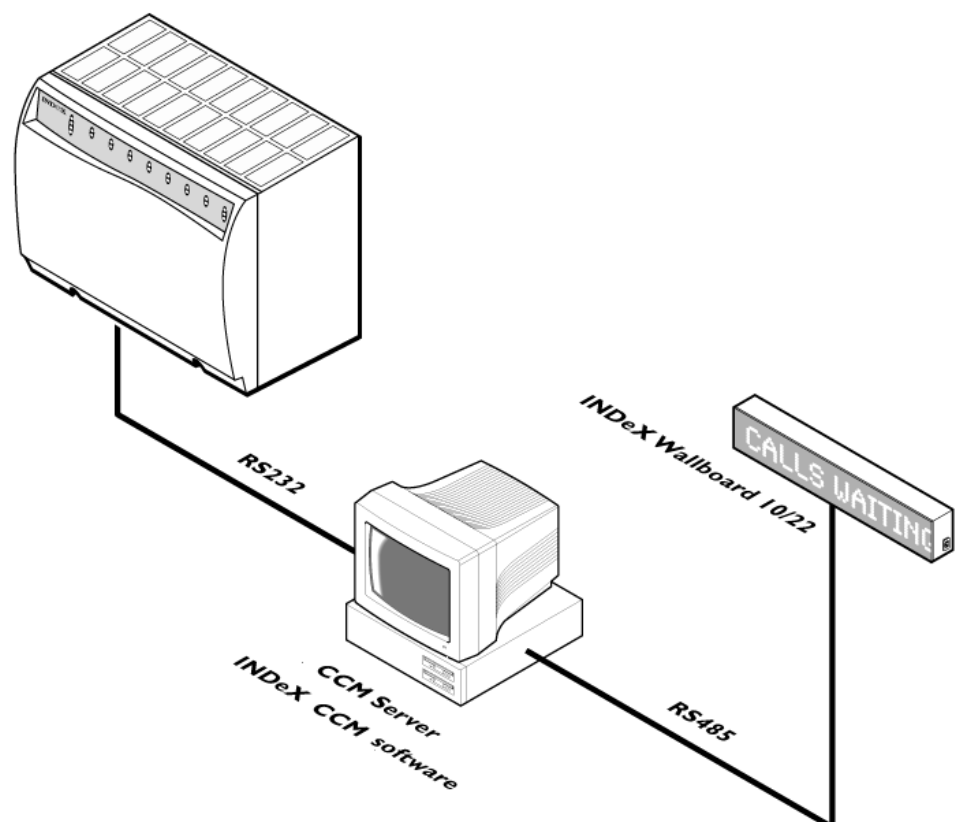
### 15 Agent Systems and below

The INDeX Contact Centre Manager comprises a suite of tightly integrated Contact Centre Modules installed on an INDeX CCM Server PC platform running Windows NT4. The INDeX Contact Centre Manager may be installed either with or without an INDeX Voice Manager. When installed without the INDeX Voice Manager, the INDeX Contact Centre Manager may be connected directly to one of the INDeX RS232 ports. Where INDeX Voice Manager is present, the INDeX Contact Centre Manager is connected via the LAN to the INDeX CT Server Cassette. The following lists the Contact Centre modules included within the INDeX Contact Centre Manager which are designed to run concurrently on the INDeX CCM Server PC: -

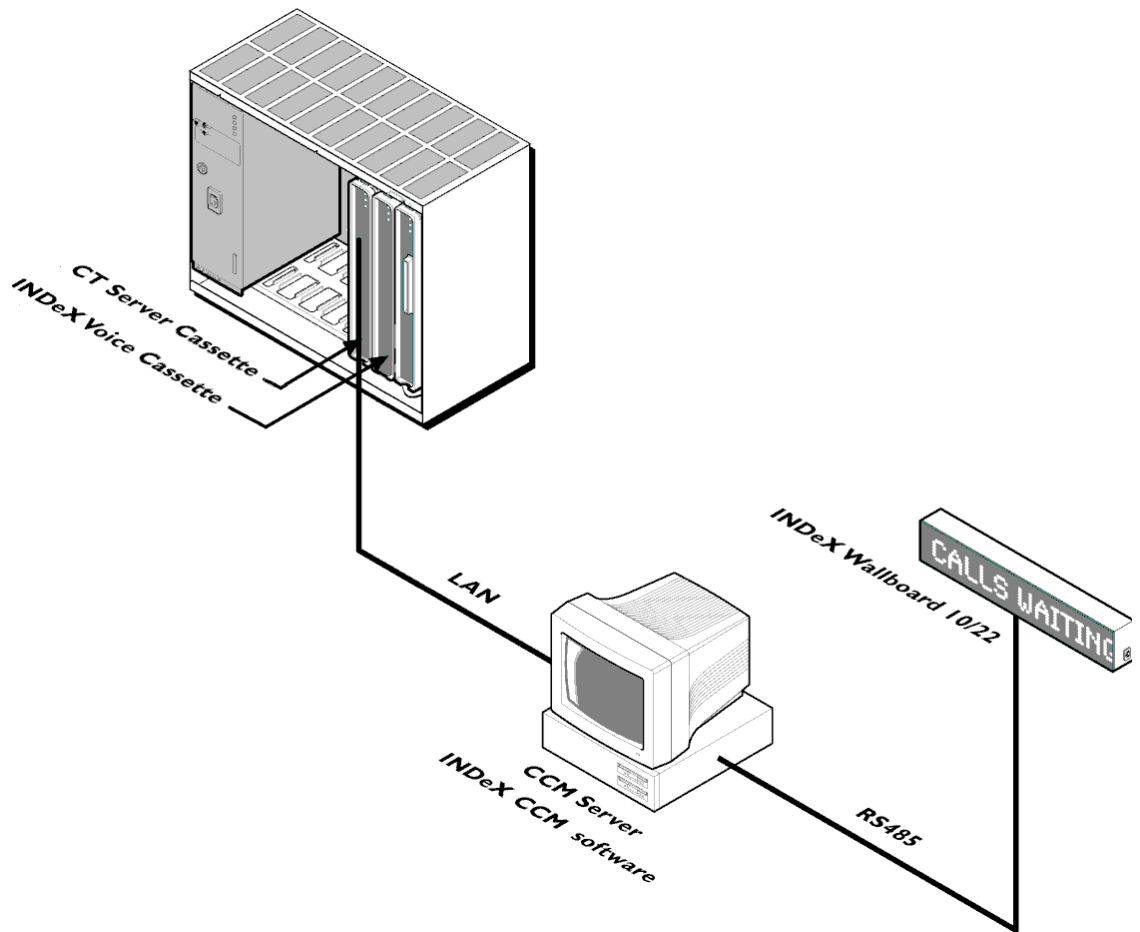
CCM Server PC

- INDeX Call Centre View.
- INDeX Wallboard Server.
- INDeX Report Server and Client.
- INDeX Report Designer (optional).
- INDeX Taskbar.
- INDeX Networked Administrator.
- INDeX Voice Processing Administration (if INDeX Voice Manager is present).

The following diagram shows the INDeX Contact Centre Manager connectivity, for systems of 15 agents and below, supplied on a standalone PC from Avaya **without** an INDeX Voice Manager.



The following diagram shows the INDeX Contact Centre Manager connectivity, for systems of 15 agents and below, where an INDeX Voice Manager is present.



## Systems above 15 Agents

Due to the traffic demands of Contact Centre's above 15 agents, the Report Server and Wallboard Server must reside on a dedicated PC. The product is offered as a complete solution supplied on 2 PC's, capable of being installed on the customer's existing LAN. Server Applications require Windows NT4 PC's, however Client applications are supported on Windows 95/98/2000 in addition to Windows NT4 Workstation.

The INDeX Contact Centre Manager supports the following concurrent supervisor positions:

CCM SPC5: 5 Supervisor (client) Positions

CCM SPC10: 10 Supervisor (client) Positions

CCM SPC20: 20 Supervisor (client) Positions

The INDeX Contact Centre Manager may be installed either with or without an INDeX Voice Manager. When installed **without** an INDeX Voice Manager the INDeX CCM Server PC is connected directly to one of the INDeX RS232 ports.

Where an INDeX Voice Manager is present, the INDeX CCM Server PC running the server applications is connected via the LAN to the INDeX CT Server Cassette. The other applications run on the supervisors Desktop on either an Avaya supplied CCM Client PC, or an existing Windows 95/98/2000 or Windows NT4 Workstation PC.

The following details where the applications reside:

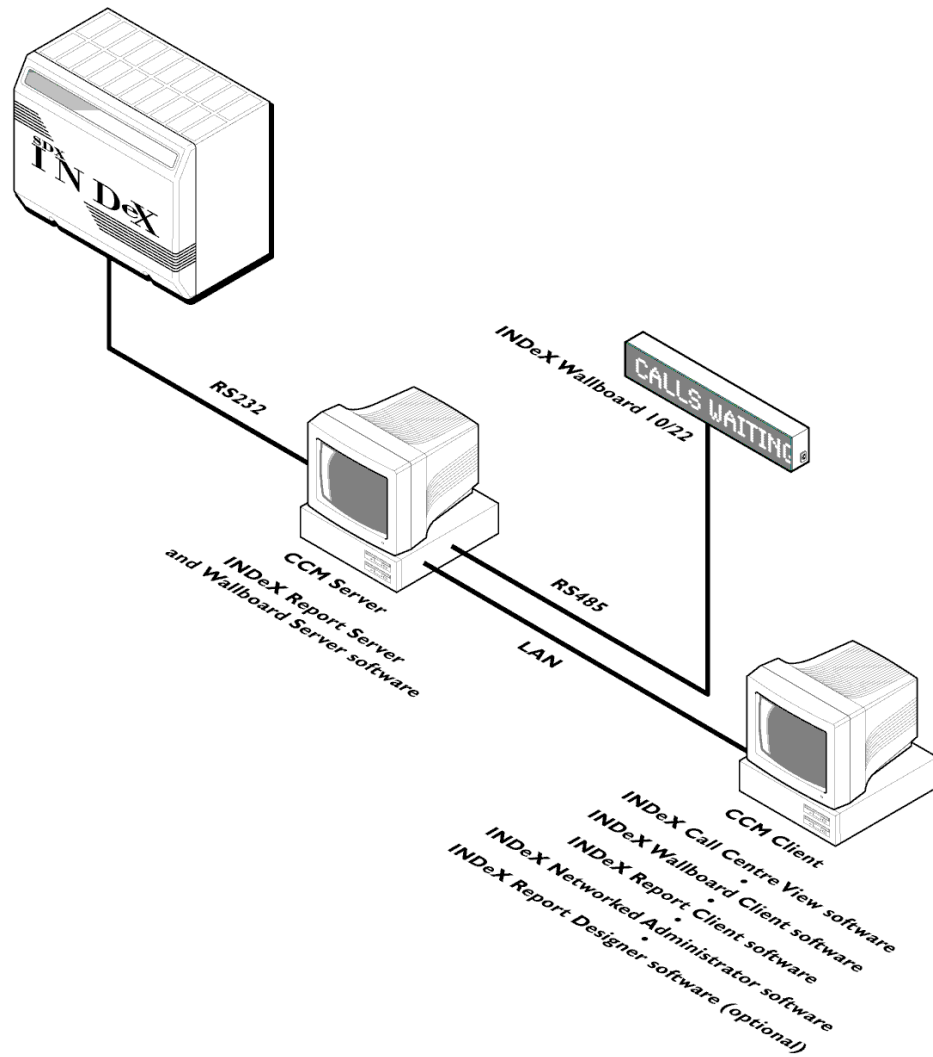
### INDeX CCM Client PC

- INDeX Call Centre View
- INDeX Wallboard Client
- INDeX Report Client
- INDeX Report Designer (Optional)
- INDeX Taskbar
- INDeX Voice Processing applications (if INDeX Voice Manager is present)

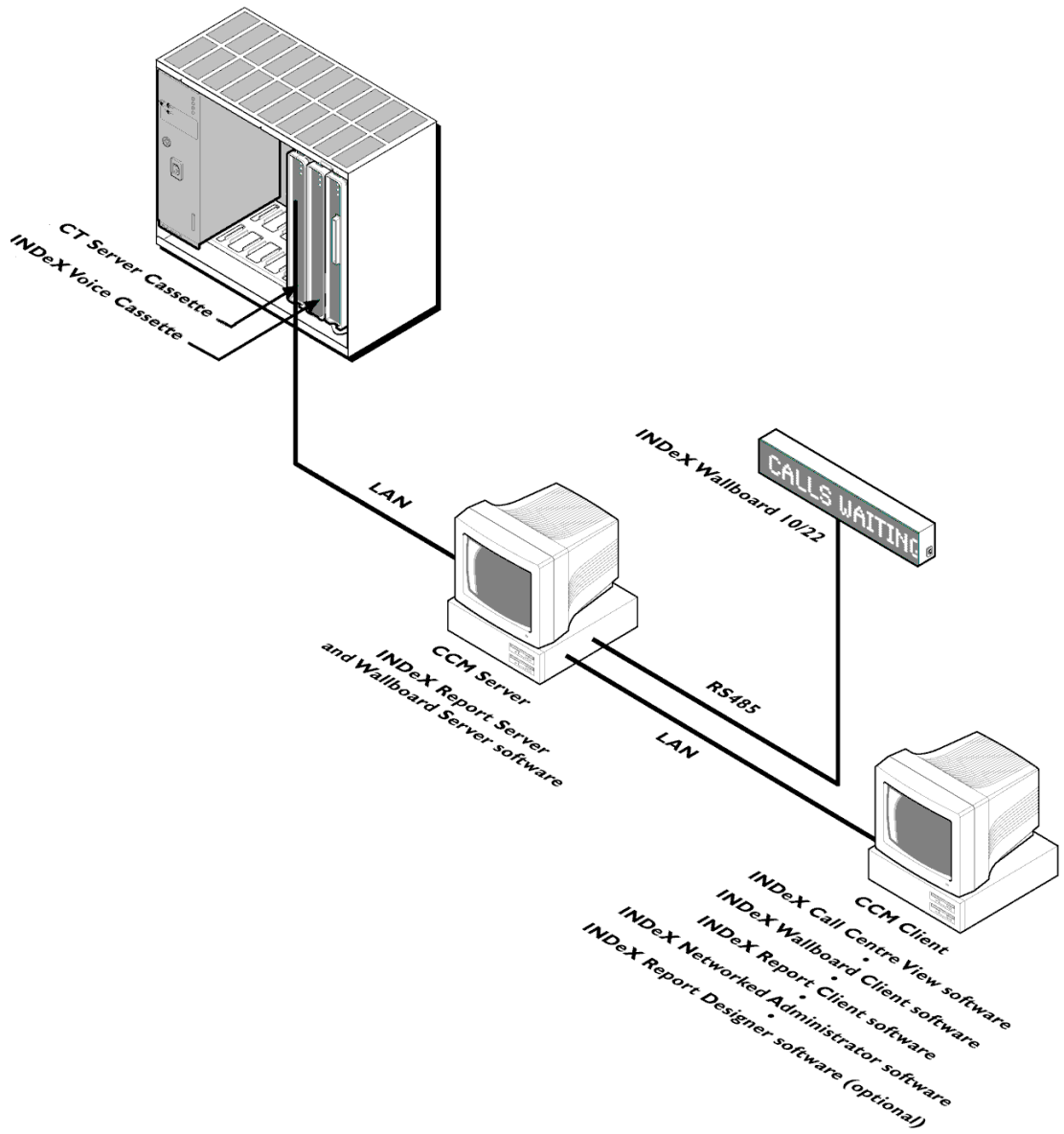
### INDeX CCM Server PC

- INDeX Report Server
- INDeX Wallboard Server
- INDeX Networked Administration
- INDeX Call Centre View
- INDeX Taskbar

The diagram below shows the INDeX Contact Centre Manager without an INDeX Voice Manager being installed.



The diagram below shows the INDeX Contact Centre Manager where an INDeX Voice Manager is present.



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# PC Configuration

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## Overview

The INDeX CCM Server PC requires a 2 GB partition for the software applications. The remaining of the hard drive is used for the INDeX Archiver database. During the Windows NT 4.0 installation, ensure the 2 GB partition is formatted as FAT.

This section details the PC configurations as follows:

1. Server PC (SPC20) configuration using Windows NT 4.0 Server – (Supporting Max 20 Clients). See page 15.
2. Server PC (SPC5/10) configuration using Windows NT 4.0 Server – (Supporting 5 or 10 Clients respectively). See page 37.
3. Client PC configuration using Windows NT 4.0 Workstation. See page 39.
4. Client PC configuration using Windows 98. See page 43.

## Server PC – SPC20 (Max 20 Clients)

This section details the following procedures required to prepare the Server PC (supporting Max of 20 Clients) to install INDeX CCM applications.

- Install Windows NT Server 4.0 .
- Install Service Pack 6a.
- Create NTFS Partition using Disk Administrator (different for SPC5 and SPC10).
- Install Display Adapter.
- Install EtherLink PCI Network Interface Card.
- TCP/IP Networking Setup.
- Install ADR OnStream Tape Drive.
- Install Advantech PCI Wallboard Comms Card.
- Install Microsoft SQL Server 7.0.
- Install ODBC (Open Database Connectivity).
- Windows NT Server Modifications.

The same procedure is required when configuring INDeX CCM SPC5 and SPC10 Server PCs with the exception of the Disk Administrator (NTFS partition), as detailed in "Server PC Setup – SPC5/10" on page 37.

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### Install Windows NT Server 4.0

1. Insert Windows NT Server CD-ROM and Windows NT Setup Disk 1 and reboot the PC.
2. When prompted, insert Windows NT Setup Disk 2 and press Enter.
3. Press Enter "*To setup Windows NT now*".
4. Press Enter to attempt to detect *Mass Storage Devices* in your PC.
5. When prompted, insert Windows NT Setup Disk 3 and press Enter to continue.
6. Press Enter to confirm that there is only one CD ROM storage device.
7. Press Page Down until you reach the end of the Licensing Agreement text and then press F8 to agree.
8. With the *Keyboard Layout: US* highlighted, press Enter and then select United Kingdom, to change the Keyboard Layout from US to United Kingdom.
9. With "*The above list matches my computer*" highlighted, press Enter.
10. You may have to delete the existing partitions before you are able to create the 2000 MB partition on the C: drive.
11. With "*Create partition of size (in MB): 2000*" highlighted, press Enter.
12. Press Enter again to continue.
13. Select Format the Partition using FAT file system and press Enter to format the partition.
14. At *WINNT* press Enter for this directory.
15. Press Enter to carry out an exhaustive search. Setup files will now be copied to the PC.
16. When asked, remove the floppy disk (leaving the Windows NT CD in the CD-ROM Drive) and press Enter.
19. The PC restarts presenting a Windows NT Setup Wizard from which click *Next*.
20. Type your Name as **Administrator** and your Organisation, click *Next*.
21. Enter the CD Key (from the yellow sticker on the back of the Windows NT CD case) for Registration, click *Next*.

22. Enter the correct number of Client Access License and then click *Next*.
  - For CCM SPC5 – 5
  - For CCM SPC10 – 10
  - For CCM SPC20 – 20
23. Type Computer Name as **ARCHIVERSQL** and click *Next*.
24. Select **Stand-Alone Server** as the "Server Type" and click *Next*.
25. Enter the Password fields as required and then click *Next*.
26. From the "Emergency Repair Disk" screen, select "No, do not create an emergency repair disk" and click *Next*.
27. From the "Select Components" screen, leave the default selection and click *Next*.
28. With **2) Installing Windows NT Networking** selected, click *Next*.
29. Click to select "Do not connect this computer to a network at this time", click *Next*.

**Note**

**Installing the Network Interface Card is detailed in "Install EtherLink PCI Network Interface Card" on page 23.**

30. Click *Finish* to complete the setup.
31. From the Date/Time Properties screen, ensure Time Zone is set to the local time [e.g. for UK set it to English (United Kingdom)] and click *Close*.
32. From the Detected Display screen, click *OK* and then *TEST* to test the display and then click *OK*.
33. Wait till colour screen closes, from the Testing Mode screen, click *Yes* and then *OK* to save the display settings. From the Display Properties screen click *OK*.
34. Remove any floppy disks and CDs from the PC, click *Restart Computer To* reboot the PC.
35. From the **Begin Logon** screen press *Ctrl+Alt+Delete* to log on.
36. From the **Logon Information** screen, enter the User Name and Password, click *OK*.



## Install Windows NT Server Service Pack 6a

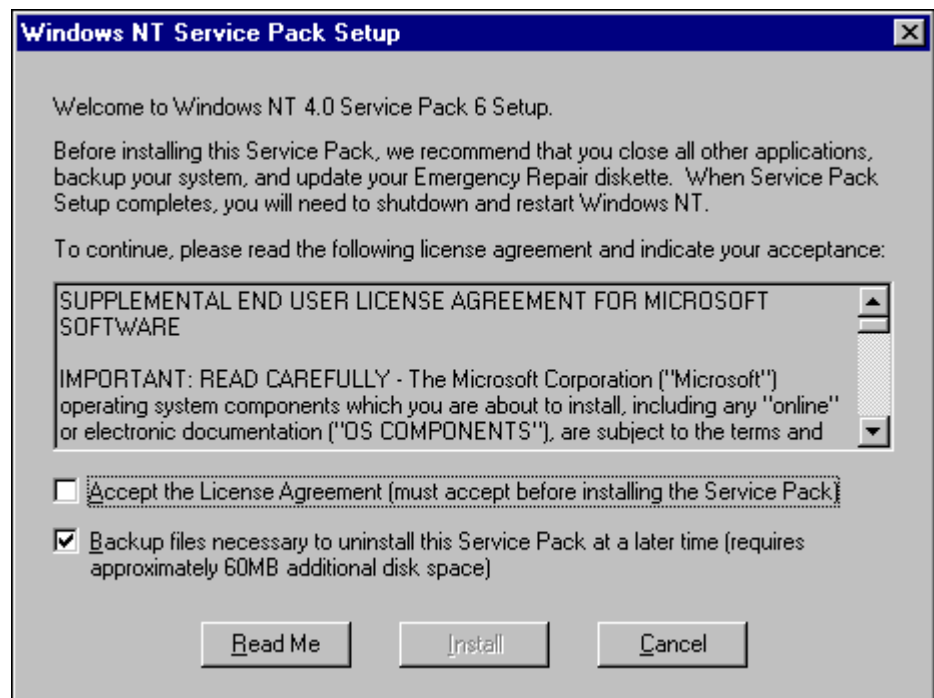
Alterations to Windows NT 4.0's configuration including the addition of software, mean that the Service Pack (containing Microsoft bug fixes), needs to be reapplied.

The same procedure is applicable when reinstalling the Service Pack 6a.

1. Insert the **INDeX Application Service Pack CD** in the CD ROM Drive, from the Windows NT desktop, click Start and then select Run. In the Open box type **D:\sp6i386.exe**, as shown in the following screen:

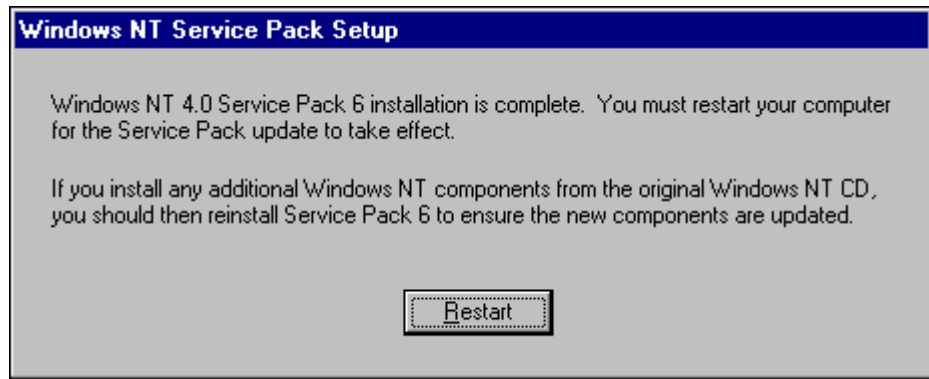


2. Click OK, the following screen appears:



3. Click to select "**Accept the License Agreement**".
4. Click to uncheck "**Backup files necessary to uninstall this Service Pack at a later time**".
5. Click *Install*, the Windows NT Service Pack Setup screen appears to indicate the installation of the System files on to the PC.

6. Once the installation is complete the following screen appears:



7. Click *Restart*.
8. Recheck the **Regional Setting** to ensure it is set to English (United Kingdom).

## Create NTFS Partition using Disk Administrator

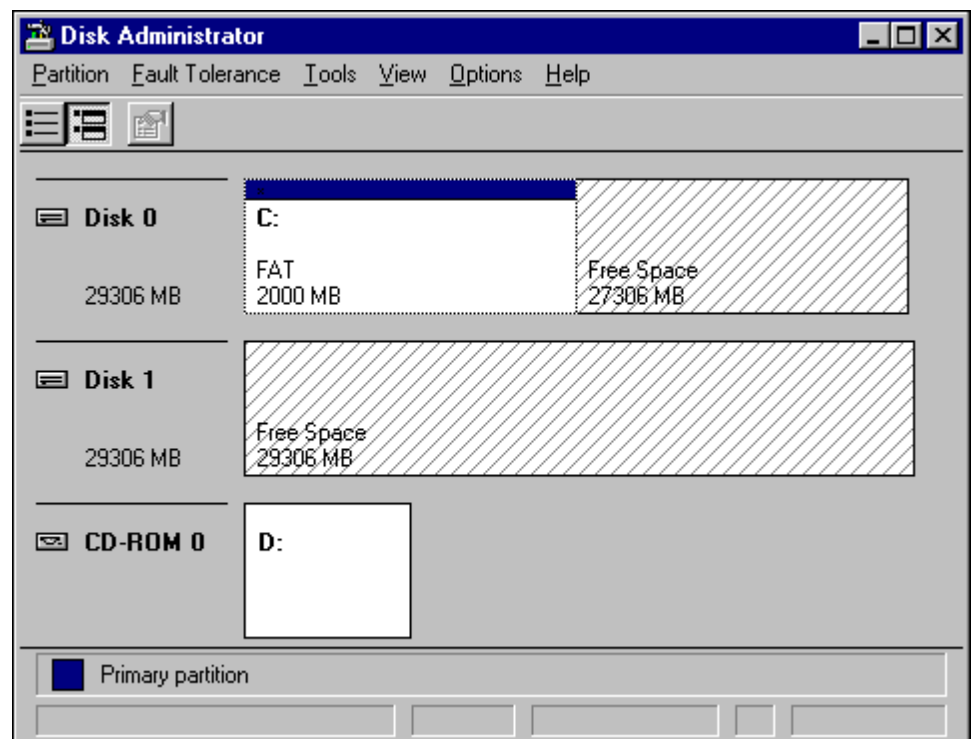
Disk Administrator is a graphical tool for managing disks. This tool encompasses and extends the functionality of character-based disk management tools such as MS-DOS **FDISK**.

This section details the procedure required to create and format the NTFS partition of the SPC20 hard drive.

1. From the Windows Taskbar, click Start, point to Programs, point to Administrative Tools (Common) and click Disk Administrator. When running this application for the first time, the following screen appears:



2. Click *Ok* and then *OK* to the following confirmations.
3. A scrollable, graphical representation of all the physical disks connected to your computer along with their partition appears. A status bar at the bottom of the window provides basic information on partitions. A colour-coded legend on top of the status bar shows what the different partition colours and patterns represent.

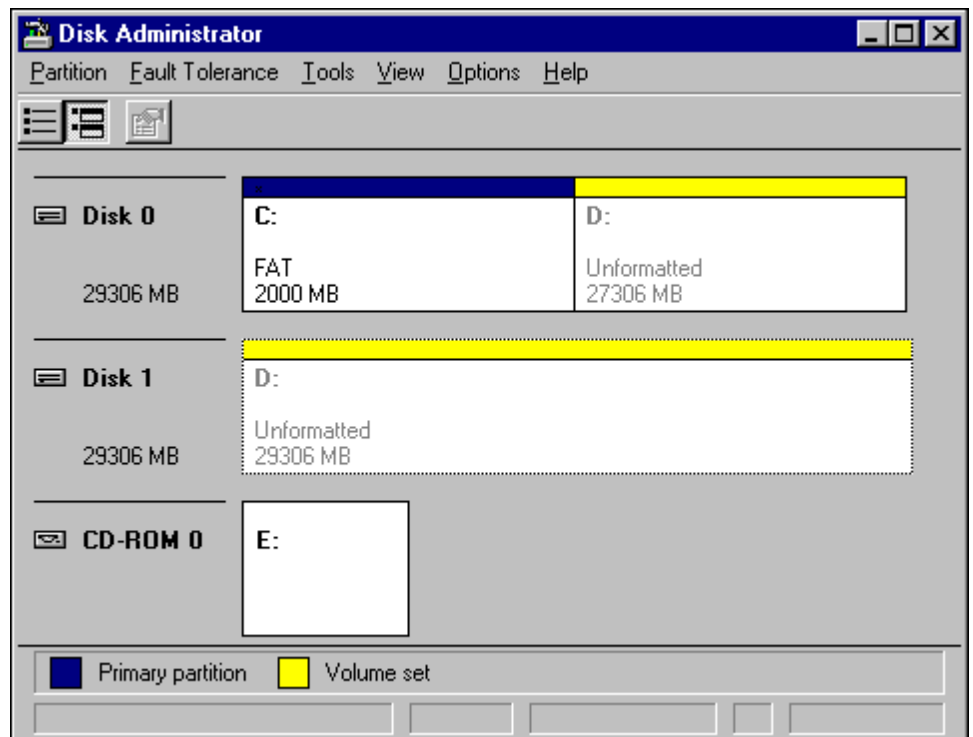


4. Click the D drive (i.e. CD-ROM).

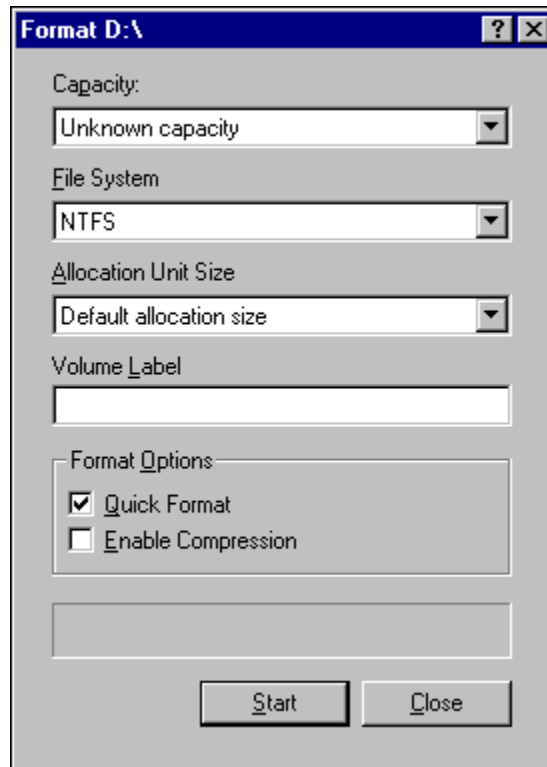
- From the Tools menu, click Assign Drive Letter, the following screen appears:



- Click to select Assign Drive Letter, and select letter E.
- Click OK.
- From the Confirmation screen, click Yes to continue.
- To create a **Volume Set** of the remaining hard drive, select the first area of free space and then pressing CTRL and click each of the other areas.
- From the Partition menu, select **Create Volume Set**. Disk Administrator displays the minimum and maximum sizes for the volume set.
- Click OK.



12. From the **Partition** menu, select **Commit Changes Now**, the following screen appears:
13. Click **Yes** to save the changes. At the Confirmation screen, click **Yes** and then click **OK** to update the Disks.
14. Click **OK** to initiate system shutdown.
15. Once the PC has rebooted, from the Windows Taskbar, click **Start**, point to **Programs**, point to **Administrative Tools (Common)** and click **Disk Administrator**.
16. Click the newly created drive (i.e. D: drive), from the **Tools** menu and select **Format**.
17. Set **File System** to **NTFS** and click to select **Quick Format** as displayed in the following screen:



18. Click **Start** to initiate the format request, the following screen appears:
19. At the Warning screen, Click **OK**, when the formatting is finished, the following screen appears:
19. Once formatting is complete, Click **OK**. From the Format D:\ screen, click **Close** to return to the Disk Administrator window.
20. From the **Partition** menu, click **Exit** to close the Disk Administrator application.
21. Reboot the PC.

## Install Display Adapter

Since INDeX CCM applications are designed to use a screen resolution of 800 by 600 pixels, it is necessary to install a third party display adapter driver that is not installed by default when installing Windows NT Server.

1. Insert the Display Adapter CD in the CD Drive, click ATI Easy Install.
2. At the Welcome screen click *OK* to proceed.
3. At the Software License Agreement click *Yes* to continue.
4. Click **Express: Recommended** and then once the Setup has finished copying files to the PC, click *Finish* to restart the PC:
6. Once the PC has rebooted, log back on, the following screen appears:



7. Click *OK*.
8. From the Display Properties screen set the Desktop Area to **800 by 600** pixels, and set the Color Palette to **65536**, click *Test*:
9. At the Testing Mode screen, click *OK* to test the display.
10. Wait till colour screen disappears. From the Test Mode screen, click *Yes* if the colours were coherent and then click *OK* to save the display set up.
11. From the Display Properties screen, click *Apply* and then click *OK*

## Install EtherLink PCI Network Interface Card

There are four steps to the Network Interface Card (NIC) installation:

- a) Run the pre-installation program before installing the NIC in the PC.  
The EtherCD pre-installation program prevents conflicts with the NIC and your operating system. It guides you through the NIC installation and must be run before you physically install the NIC in the PC.
- b) Install the NIC in the PC.
- c) Connect the NIC to the network.
- d) Install the network driver.

**Note**

*If there is network card in the PC, you must remove the Network card and the associated software from the PC.*

### a) Run the Pre-installation Program

Before you physically install the NIC in a PC, run the NIC pre-installation program to properly set up your system environment.

The pre-installation program prevents conflicts with the NIC and your operating system. It guides you through the NIC installation and must be run before you physically install the NIC in the PC.

To run the NIC pre-installation program:

1. Do **NOT** install the NIC in the PC.
2. Turn on the power to the PC and start Windows.
3. Quit any open applications and disable the automatic protection feature of any anti-virus software that may be running.
4. Insert the EtherCD in the CD-ROM drive.  
The EtherCD Welcome screen appears. If the EtherCD Welcome screen does not appear, enter the following command from the Run option of the Windows Start menu: X:\installs\setup.exe where X:\ represents the letter of the CD-ROM drive.
5. Click **NIC Software**.
6. Click **NIC Drivers and Diagnostics**.
7. Click **Install NIC Driver**.  
To install the network driver and the 3Com NIC Diagnostics program, click **Install with Diagnostic Program**. (We recommend you select this option).  
To install the network driver only, click **Install without Diagnostic Program**.  
Files are copied. A message box appears when the installation is complete.
8. Click **OK**.
9. Select your operating system (Windows NT) to continue the installation.  
The Completing NIC Installation screen appears.
10. Click **Done**.
11. Exit the EtherCD, and then shut down Windows.
12. Turn **off** the power to the PC.

**b) Install the NIC in the PC**

To install the NIC in the PC:

1. Make sure that you have run the pre-installation program, as described in the previous section.
2. Turn off the power to the PC and unplug the power cord.
3. Remove the cover from the PC.
4. Locate an empty, non-shared bus-mastering PCI slot and remove its slot cover. Save the screw.  
Do not install the NIC in a shared PCI slot. Avoid any PCI slot next to an ISA slot. This is often a shared slot and does not support bus mastering.
5. Carefully insert the NIC in the empty PCI slot. Press firmly to ensure that the NIC is fully seated in the slot.
6. Secure the NIC with the screw you removed earlier.
7. Replace the PC cover and plug in the power cord.  
Do **NOT** turn on the power to the PC.

**c) Connect the NIC to the Network**

Connect the appropriate network cable to the NIC provided by the Network Administrator of the Customer's Site.

**d) Install the Network Driver**

To install the network driver:

1. Turn on the power to the PC.
2. Double-click the My Computer icon, then the Control Panel icon and then the Network icon. The **Network** window appears.
3. Click the **Adapters** tab. If networking has not been installed on your PC before, Windows NT asks you if you want to install networking. Click Yes. See the WINNT.TXT file located on the EtherCD or your Windows NT documentation for instructions.
4. Click *Add*. The Select **Network Adapter** dialog box appears.
5. Click *Have Disk*. The Insert Disk dialog box appears.
6. Insert the EtherCD in the CD-ROM drive.
7. Make sure that the letter of the CD-ROM drive (for example, e:\) appears in the entry box, and then click OK. The Select OEM Option dialog box appears.
8. Make sure that the 3Com EtherLink PCI NIC is selected, and then click OK. The Adapters tab of the Network screen appears.
9. Click *Close*. If the Microsoft TCP/IP Properties screen appears, enter the requested information for your network environment. Refer to your Network System Administrator or the Windows NT documentation for assistance. If the Microsoft TCP/IP Properties screen does not appear, the installation is complete.
10. Click Yes to restart the PC. The network driver installation is complete.

You are now ready to adjust the Networking Setup according to the Customer's Network; i.e. either TCP/IP or IPX/SPX as detailed in following pages.



## TCP/IP Networking Setup

The process of configuring the INDeX CCM Server PC to use TCP/IP consists of the following stages.

1. Check the TCP/IP settings required, these should be supplied by the customer Network Manager, for example:
  - IP Address.
  - Subnet mask.
  - Default gateway.
2. Re-configure Server/Client PC to TCP/IP.
3. Allow the **Server PC** and **Client PCs** to restart and then check the connection.

---

### **Changing a Server/Client PC to TCP/IP**

The following process may require you to have the original Windows NT4 Server/Workstation CD available. It will also require the PC to be restarted after completion. The following procedure applies to both Server PC and the Windows NT Client PC.

1. Right-click the **Network Neighborhood** icon and select **Properties**.
2. Click the **Adapters** tab to check that the PC's network card is listed.
  - If the network card is not shown, refer to the manufacturers supplied information for correct installation.
3. Click the **Protocols** tab. Check that **TCP/IP Protocol** is shown. If not shown then use the process below to install the protocol.
  - Click on **Add** and select **TCP/IP Protocol**. After installation, the list of protocols should include **TCP/IP Protocol**.
4. Click the **Bindings** tab, then return to the **Protocols** tab.
5. Highlight **TCP/IP Protocol** and click *Properties*. Add the settings specified by the customer's Network Manager and then click on **OK**.
6. Click **OK** and allow the PC to restart.

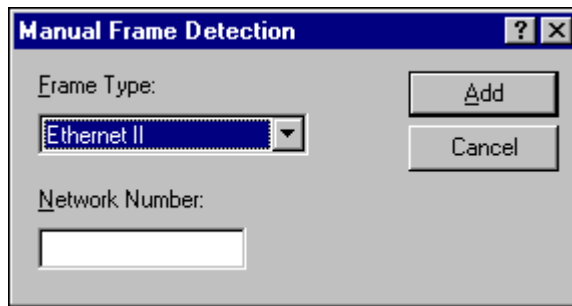
**IPX/SPX Frame Type Networking Setup**

This is applicable if the Customer Site Network uses **IPX Frame Type**.

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel, open **Network**, click the **Protocols** tab.
3. With the **NWLink IPX/SPX Compatible Transport** selected, click *Properties*.

This represents three scenarios:

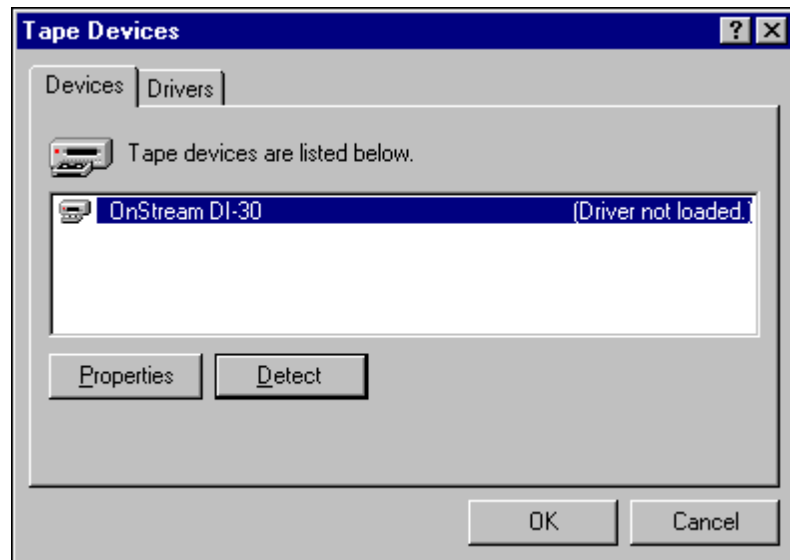
- If a Novell NetWare Server is present on the network, ensure the CCM Server PC uses the same frame type as NetWare Server.
  - If a Server Cassette (Voice) is on the network, ensure the CCM Server PC uses the same frame type as Server Cassette (the required settings for INDeX CCM is Ethernet II).
  - If no other servers are on the network, ensure that all PCs running INDeX products are using the same frame type.
4. Click *Properties*.
  5. Click *Add* and select **Ethernet II** as the Frame Type as displayed in the following screen:



6. Click *Add*.
7. From the NWLink IPX/SPX Properties screen click *Apply* and then *OK*.
8. Click *Yes* to restart the PC.

## Install ADR OnStream Tape Drive

1. Ensure the Tape Drive unit is installed in the PC according to the Manufacture's instructions (Installing the Hardware section).
2. Once the PC is rebooted and you have logged on, insert the ADR Installation CD in to the CD ROM Drive. Close the OnStream CD Setup Window.
3. From the Windows taskbar, click Start, point to Settings and select Control Panel.
4. From the Control Panel, double click Tape Devices, the following screen appears:



5. Click *Detect*. Once the tape drive has been detected, click the *Drivers* tab, from which screen click *Add*.
6. From the Install Driver screen, click *Have Disk*, click *Browse*, and then select the Path "X:\NT Driver", where X is the drive letter associated with the CD ROM Drive.

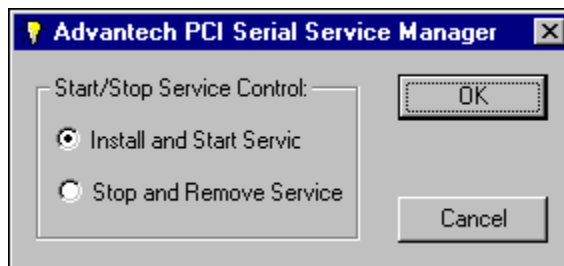


7. Click *OK*. With the Tape Drive selected, click *OK*. Once the tape driver is installed click *OK*.
8. Tape Devices screen will now display the details for the newly installed driver. Click *OK* to close the screen. Click *Yes* to restart the PC. The Tape drive is now ready for use.

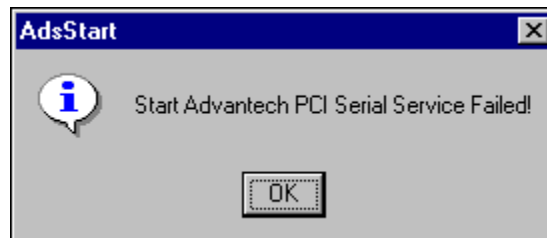
## Install Advantech PCI Wallboard Comms Card

Before installing the Wallboard Comms card in to the system, you must install the driver first. Once the driver is installed, check the card jumpers and Switch locations are set as detailed in this section.

1. Ensure the card is **NOT** plugged in to the PC.
2. Insert the Advantech installation diskette #1 into drive A:\.
3. From the Windows NT desktop, click Start and then select Run. In the Open box type **A:\Setup.exe**.
4. Click **OK** to proceed. At the Welcome screen click *Next*. From the Software License Agreement screen click *Yes* to continue.
5. From **Choose Destination Location** screen, click *Next* to continue.
6. From **Select Program Folder** screen, click *Next* to continue.
7. When prompted, insert diskette #2 in to drive A:\.
8. Click **Finish** to complete the Setup, the following screen appears:



9. With **Install and Start Service** selected, click **OK**.
10. When the files have been copied, the following screen appears:



11. Click **OK**.
12. Switch the PC off.
13. Plug the Card in to a free PCI slot with the following Jumper Settings. Switch the PC on.

### **Jumper Settings:**

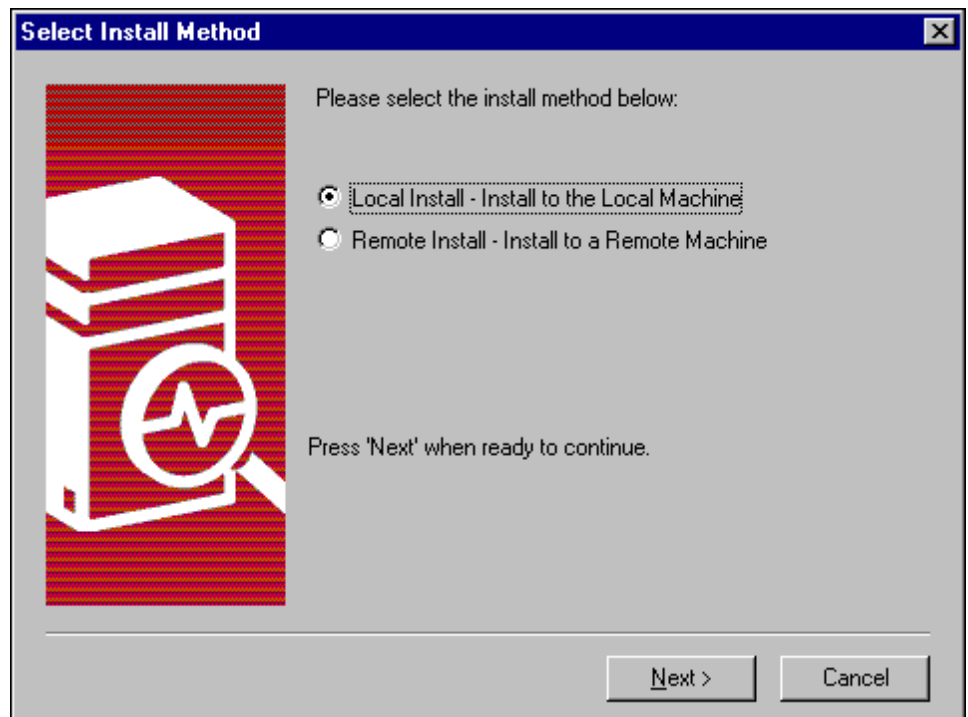
- Set Jumpers JP1 and JP2 to 485
- Set Channels 1 & 2 Dip Switches to 'ON'.

After the PC is restarted, reinstall Service Pack 6a as detailed in "Install Windows NT Server Service Pack 6a" on page 17.

## Install Microsoft SQL 7.0

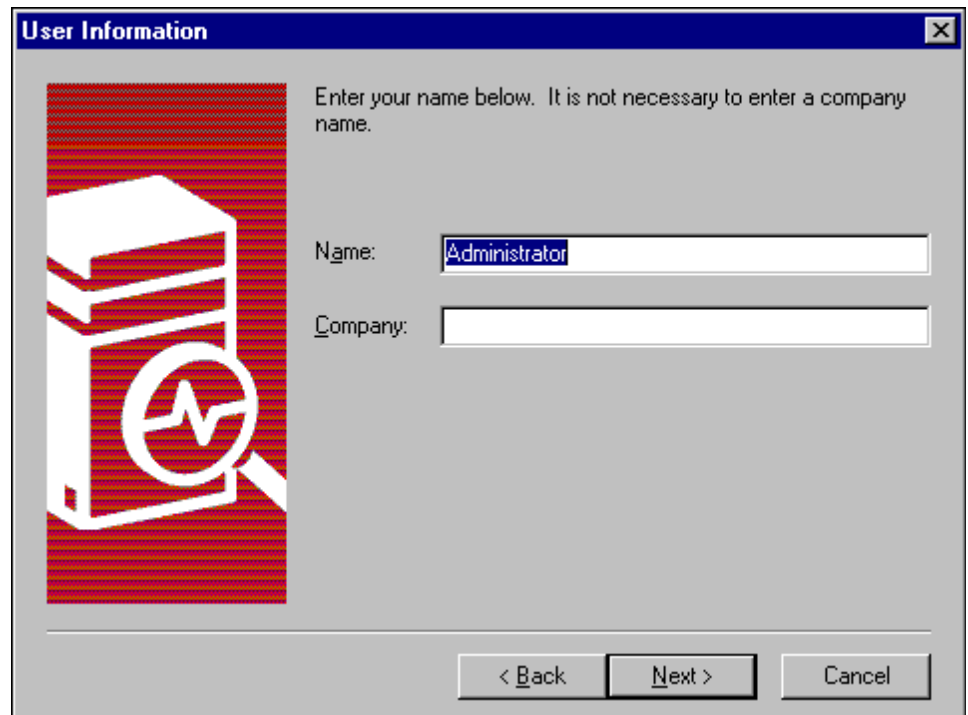
Microsoft SQL is a database application that is installed to store data for use with the INDeX Archiver. It also provides a means of administering the related database services (e.g. Backup and Restoring of the database).

1. Insert the **Report Manager Database CD** in the CD Drive. Microsoft SQL Server Automenu screen appears.  
You must ensure if there are any prerequisites (i.e. Internet Explorer 4.01 Service Pack 1) are needed, before installing SQL Server 7.0 components
2. If Internet Explorer 4.01 Service Pack 1 is not loaded on the PC, click Install SQL Server 7.0 Prerequisites. Select Windows NT, select Launch Setup Wizard and then follow the instructions on the Internet Explorer 4.01 SP1 Active Setup wizards to install the application.
3. Once the above is complete, from the Microsoft SQL Server Automenu screen click Install SQL Server 7.0 Components.
4. From the Install SQL Server 7.0 Components screen select Database Server – Standard Edition, the following screen appears:



5. Click *Next* to proceed to the **Welcome** screen, from which click *Next* to proceed.

- From the Software License Agreement screen click Yes to proceed to the following screen:



**User Information**

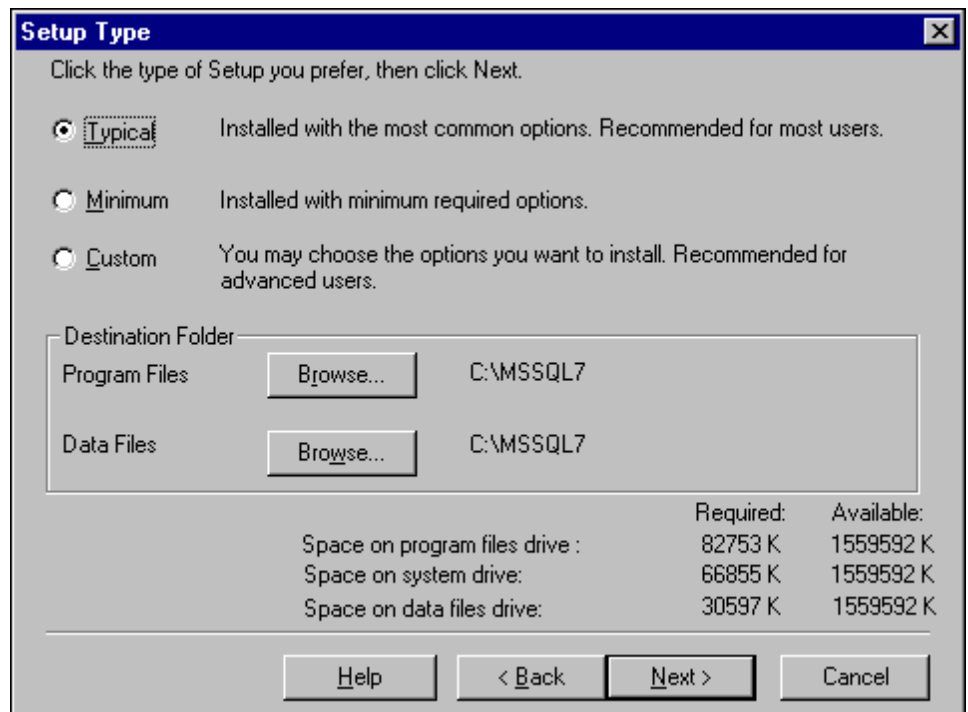
Enter your name below. It is not necessary to enter a company name.

Name:

Company:

< Back    Next >    Cancel

- Enter the Name as Administrator and your Organisation's name and then click *Next* to proceed.
- Enter the "10 digit CD Key" and then click *OK* to proceed.
- Take a record of the Product ID number, as you will be asked for this number if you need to call Microsoft for Technical Support. Click *OK* to proceed to the following screen:



**Setup Type**

Click the type of Setup you prefer, then click Next.

**Typical**    Installed with the most common options. Recommended for most users.

**Minimum**    Installed with minimum required options.

**Custom**    You may choose the options you want to install. Recommended for advanced users.

Destination Folder

Program Files	<input type="button" value="Browse..."/>	C:\MSSQL7
Data Files	<input type="button" value="Browse..."/>	C:\MSSQL7

	Required:	Available:
Space on program files drive :	82753 K	1559592 K
Space on system drive:	66855 K	1559592 K
Space on data files drive:	30597 K	1559592 K

Help    < Back    Next >    Cancel

- Select **Typical**.

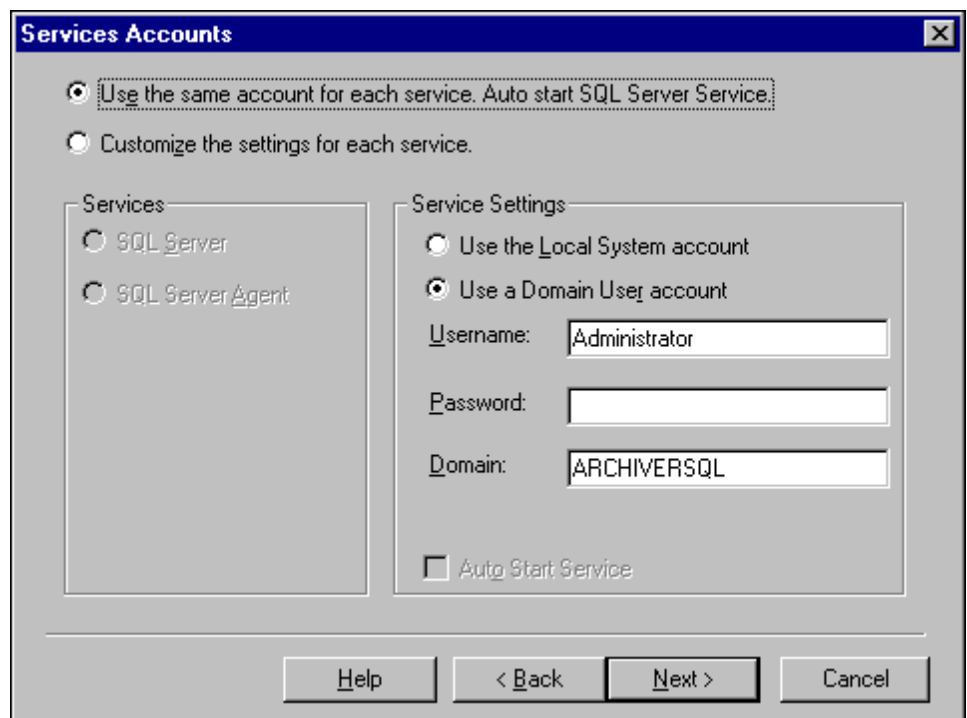
11. Click Browse associated with Data Files.

**Note**  
It is **ESSENTIAL** that Data Files are saved in the D DRIVE

12. Select the D Drive and type D:\MSSQL7 in the Path text box, as displayed in the following screen:



13. Click OK and then from Setup Type screen click Next to proceed to the following screen:



14. Click "Use the Local System account", then click Next, and then click Next again to proceed to the Choose Licensing Mode screen.

15. Click **Add Licenses** the following screen appears:



16. Enter the number of purchased licenses.
17. Once you have selected the required Server License Quantities, click **OK** to the **Per Server Licensing** screen, from which click to select “*I agree that*” and then from the **Choose Licensing Mode** screen click **Continue**.
18. From **Client Licensing** screen, click to select “*I agree that*” and then click **OK** to proceed.
19. Click **Finish** to complete the Setup.
20. Once the PC is rebooted, the ARCHIVERSQL Server will automatically be registered.

---

### **Install Microsoft SQL 7.0 Service Pack 1**

Alterations to Microsoft SQL's configuration, mean that the Service Pack (containing Microsoft bug fixes), needs to be applied.

1. Insert the CD in the CD ROM Drive, from the Windows NT taskbar click Start, select Run, and type X:\English\setup.bat, as displayed in the following screen (X is the letter associated with the CD Drive of the PC):



2. Click **OK**.
3. From the **Welcome** screen, click **Next** to proceed.
4. From the Software License Agreement screen, click **Yes** to continue.
5. Click to select “*The SQL Server system administrator login information (SQL Server authentication)*”, leaving the password field blank.
6. Click **Next** to proceed.
7. Click **Next** to begin copying the files.
8. Once Setup has finished copying the files to the PC click **Finish** to restart the PC.

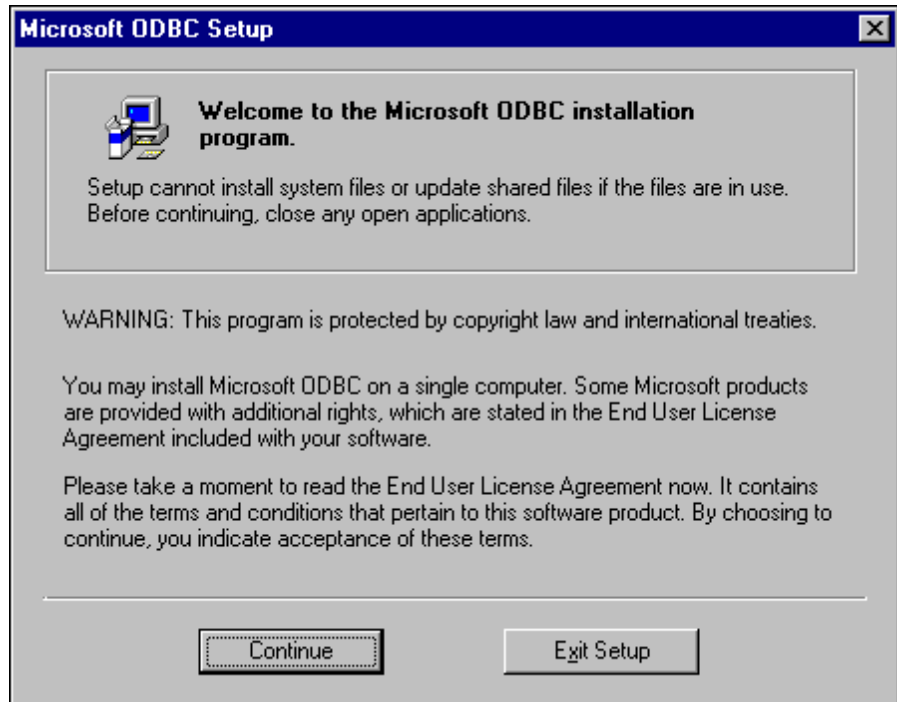
Once the PC has been restarted, the SQL Server will be operational with the Service Pack fully installed.



## Install ODBC (Open Database Connectivity)

Open Database Connectivity needs to be installed to provide a link between the SQL database and the INDeX Report Manager.

1. Insert the **INDeX Application Service Pack CD** in the CD Drive. From the Windows taskbar, click Start and then select Run
2. In the Open text box type **X:\NT Server\ODBC\Setup.exe**. **X** is the letter associated with the CD Drive of the PC. Click **OK** and then click *Continue*.



3. Click **Continue** to proceed. Enter name as **Administrator** and the name of your Organisation, click **OK**.
4. Click *Change* to modify the information. Otherwise, click **OK** to confirm the information to proceed.
5. Click *Typical* to continue with the installation.
6. Once the installation is complete, click **OK**.

### IT IS HIGHLY RECOMMENDED TO RESTART THE PC.

You are now ready to install INDeX CCM applications.

**Note**

*If the Server PC name has been changed you must perform the procedures detailed in "Changing the ODBC Settings" on page 74.*

1. Once the INDeX CCM applications have been installed, you need to expand the database device as detailed in "the box next to **SDXrepository**. Whilst this is highlighted ensure that the two boxes '**PUBLIC**' and '**DB\_OWNER**' are checked in the lower half of the window
2. Close the properties window, exit SQL Enterprise Manager.

Expand a Database" on page 88.

## Windows NT Server Modifications

### Regional Settings

The Regional Settings need to be changed from the default installation settings which are usually English (United States).

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel, open **Regional Settings**.
3. From the **Regional Settings** tab select **English (United Kingdom)**, click *Apply*, and then click *OK*.

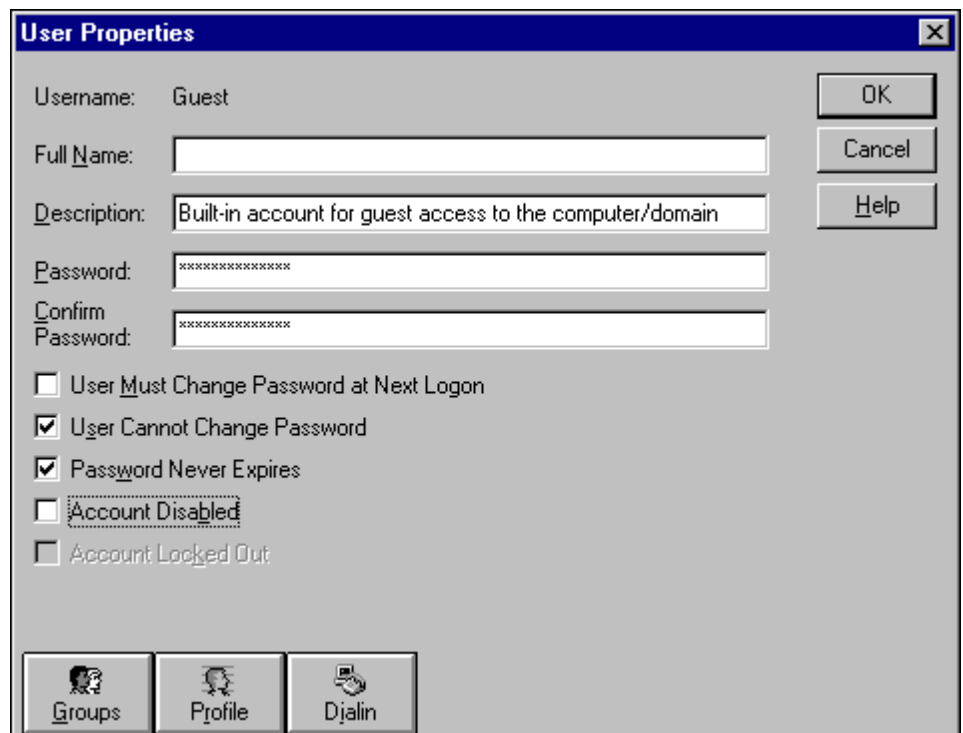
**Note**

*Ensure the Regional Setting is appropriate for the relevant country.*

### Guest Account

For INDeX CCM applications to communicate, the Guest Account on Windows NT needs to be enabled. This is modified through the User Manager.

1. From the Windows taskbar, click Start, point to Programs and from Administrative Tools (Common), select **User Manager**:
2. Double click **Guest**, ensure **Account Disabled** is unchecked as displayed in the following screen. Click *OK*.

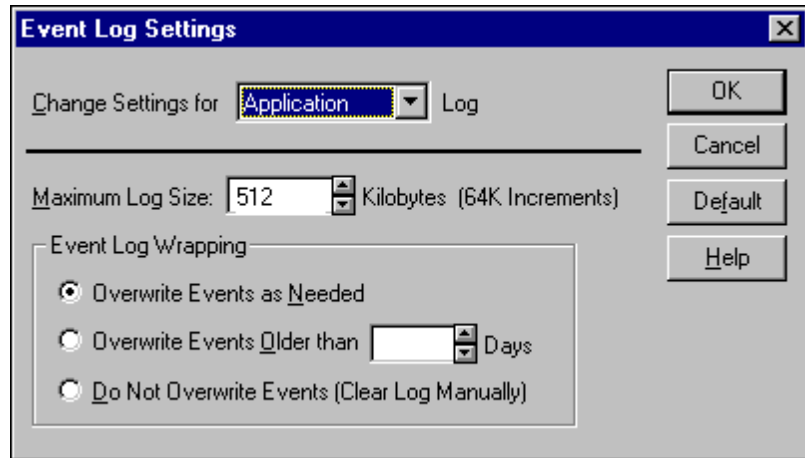


3. From the **User menu**, select **Exit** to close User Manager.

### Event Log Settings

The Event Log settings are altered through the Windows NT Event Viewer.

1. From the Windows taskbar, click Start, point to Programs and from Administrative Tools (Common), select **Event Viewer**.
2. From the Log menu, select Log Settings, the following screen appears:



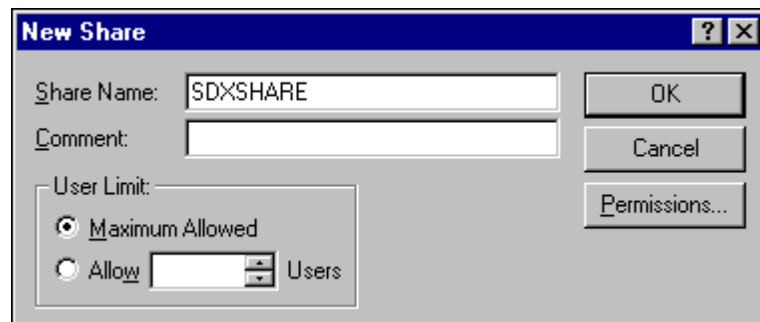
3. There are three Settings available: System, Security and Application.
4. Use the pull down list select **System** and from the Event Log Wrapping options ensure **Overwrite Events as Needed** is selected.
5. Repeat step 3 for the other two settings, i.e. Security and Application.
6. Click **OK**.
7. From the **Log menu**, select **Exit** to close the **Event Viewer**.

### Sharing the Hard Drives

The following needs to be carried out on the Server PC running the INDeX CCM Server applications.

In order for all INDeX CCM applications and the INDeX Taskbar to function correctly, the drives on a Windows NT Server 4.0 PC must be shared.

1. From the Windows taskbar, click Start, point to Programs and select **Windows NT Explorer**.
2. Click the C: drive using the right hand mouse button. From the context-sensitive menu, select **Sharing**. You need to create a share named **SDXSHARE** and **C** if one does not already exist.
3. From the **(C:) Properties** screen, click *New Share*. Type **SDXSHARE** (must be **UPPERCASE**) as the Share Name as displayed in the following screen:



4. Ensure **Maximum Allowed** is also selected. Click **OK**.
5. Follow the above steps to create another share name called **C**.
6. From the **(C:) Properties** screen, click *Apply* and then click **OK**.
7. From the File menu, select **Close** to close the Windows NT Explorer.

Please refer to page 52 for information on how to Install INDeX CCM Applications.

## Server PC Setup – SPC5/10

The same procedure is required when configuring INDeX CCM SPC5 and SPC10 Server PCs with the exception of the Disk Administrator (NTFS partition), as detailed in this section.

1. Install Windows NT Server 4.0 as detailed on page 15
2. Install Windows NT Server Service Pack 6a as detailed on page 17
3. Create NTFS Partition using Disk Administrator as detailed on page 37
3. Install Display Adapter as detailed on page 22
4. Install EtherLink PCI Network Interface Card as detailed on page 23 and the relevant Network setup as required
5. TCP/IP Networking Setup as detailed on page 25
6. Install ADR OnStream Tape Drive as detailed on page 27 (For SPC–10)
7. Install Advantech PCI Wallboard Comms Card as detailed on page 28
8. Install Microsoft SQL 7.0 as detailed on page 29
9. Install ODBC (Open Database Connectivity) as detailed on page 33
10. Windows NT Server Modifications as detailed on page 34

---

### Create NTFS Partition using Disk Administrator

Disk Administrator is a graphical tool for managing disks. This tool encompasses and extends the functionality of character-based disk management tools such as MS-DOS **FDISK**.

1. From the Windows Taskbar, click Start, point to Programs, point to Administrative Tools (Common) and click Disk Administrator. When running this application for the first time, the following screen appears:



A scrollable, graphical representation of all the physical disks connected to your computer along with their partition appears. A status bar at the bottom of the window provides basic information on partitions. A colour-coded legend on top of the status bar shows what the different partition colours and patterns represent.

2. Click the D drive (i.e. CD-ROM).
3. From the **Tools** menu, click **Assign Drive Letter**. Click to select **Assign Drive Letter**, and select letter **E** and then Click **OK**.
4. From the Confirmation screen, click Yes to continue.

5. If an NTFS partition does not exist on Disk 0, where the 1024MB partition is, you need to create one by selecting the area of free space. From the **Partition** menu, select **Create**. Click *Yes* to continue and create the partition. The Create Primary Partition screen displays the size of the partition to be created. This will usually be the maximum since it will contain all of the free space available. Click *OK*.
6. From the **Partition** menu, select **Commit Changes Now**. Click *Yes* to save the changes.
7. Click *Yes* to save the changes.
8. Click *OK* to update the emergency repair configuration and create a new Emergency Repair Disk.
9. Click the D: drive, from the **Tools** menu, click **Format**. Set File System to NTFS. Click *Start* to initiate the format request and then click *OK* to continue.
10. When the formatting is finished, click *OK*.
11. From the Format D:\ screen, click *Close* to return to the Disk Administrator window.
12. From the **Partition** menu, click **Exit** to close the Disk Administrator application.
13. Reboot the PC.

## Client PC Setup (Windows NT – Workstation)

This section details the **Client PC** configuration as follows:

- Install Windows NT Workstation.
- Install Windows NT Service Pack 6a.
- Windows NT Workstation modifications for INDeX CCM applications.
- Map Network Drive
- Install Display Adapter.
- Install ODBC.

---

### Install Windows NT 4.0 Workstation

1. Insert Windows NT CD-ROM and Windows NT Setup Disk 1 and reboot the PC.
2. When prompted, insert Windows NT Setup Disk 2 and press Enter.
3. Press Enter "*To setup Windows NT now*".
4. Press Enter to attempt to detect *Mass Storage Devices* in your PC.
5. When prompted, insert Windows NT Setup Disk 3 and press Enter to continue.
6. Press Enter to confirm that there is only one CD ROM storage device.
7. Press Page Down until you reach the end of the Licensing Agreement text and then press F8 to agree.
8. With the *Keyboard Layout: US* highlighted, press Enter and then select United Kingdom, to change the Keyboard Layout from US to United Kingdom.
9. With "*The above list matches my computer*" highlighted, press Enter.
10. With "*Create partition of size (in MB): 1000*" highlighted, press Enter.
11. Press Enter again to continue.
12. Select Format the Partition using FAT file system and press Enter to format the partition.
13. With C:FAT, highlighted press Enter.
14. With "*Leave the current file system intact*", highlighted press Enter.
15. At *WINNT* press Enter for this directory.
16. Press Enter to carry out an exhaustive search. Setup files will now be copied to the PC.
17. When asked, remove the floppy disk (leaving the Windows NT CD in the CD-ROM Drive) and press Enter.
18. The PC restarts presenting a Windows NT Setup Wizard from which click *Next*.
19. From the "Setup Options" screen select Typical and click *Next*.
20. Type your Name as **Administrator** and your Organisation, click *Next*.
21. Enter the ID Number (from the Windows NT Workstation Manual), click *Next*.
22. Type Computer Name and click *Next*. You must ensure the PC name is **NOT** called ARCHIVERSQL (e.g. Client\_01).
23. Leave the Password fields blank and then click *Next*.
24. From the "*Emergency Repair Disk*" screen, select "*No, do not create an emergency repair disk*" and click *Next*.
25. Select "*Install the Most common Components (recommended)*", click *Next*.
26. With **2) Installing Windows NT Networking** selected, click *Next*.
27. Click to select "*Do not connect this computer to a network at this time*", click *Next*.

**Note**  
*Installing the Network Interface Card is detailed in “Install EtherLink PCI Network Interface Card” on page 23.*

28. Click *Finish* to complete the setup.
29. From the Date/Time Properties screen, Set Time Zone to GMT and click *Close*.
30. From the Detected Display screen, click *OK* and then *TEST* to test the display.
31. Wait till colour screen closes, from the Testing Mode screen, click *Yes* and then *OK* to save the display settings. From the Display Properties screen click *OK*.
32. Remove any floppy disks and CDs from the PC, click *Restart Computer To* reboot the PC.
33. From the **Begin Logon** screen press *Ctrl+Alt+Delete* to log on.
34. From the **Logon Information** screen, enter the User name and Password, click *OK*.

---

### Install Service Pack 6a

Alteration to Windows NT 4.0's configuration including the addition of software mean that the Service Pack (containing Microsoft bug fixes) need to be reapplied.

Perform the procedures detailed in “Install Windows NT Server Service Pack 6a” on page 17.

---

### Windows NT Workstation 4.0 Modifications

To be able to install and run the INDeX CCM application it is essential to modify Windows NT as detailed in this section.

Perform the following procedures as detailed in:

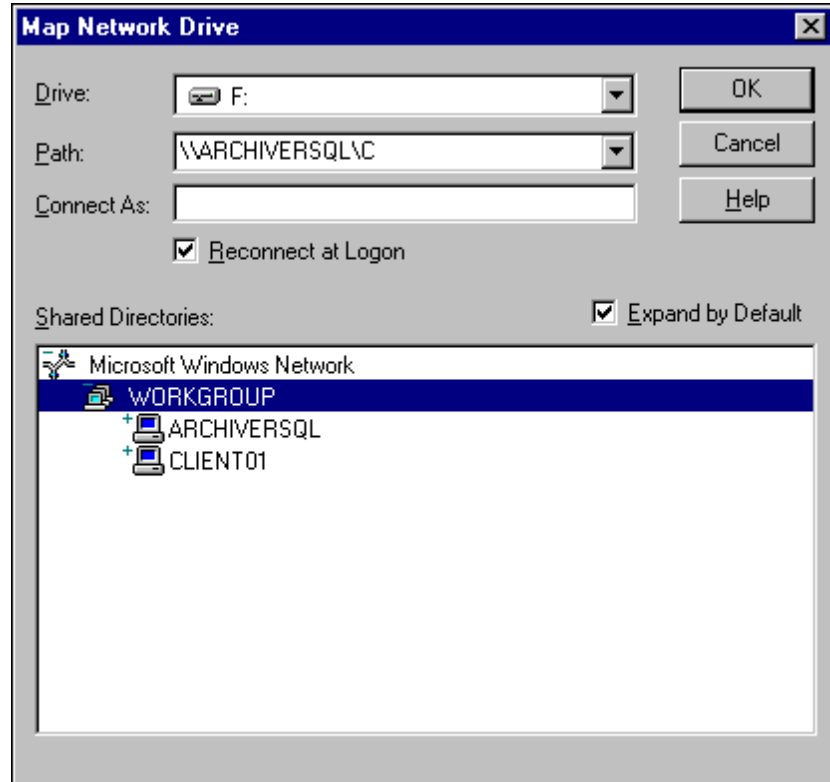
- Regional Settings as detailed on page 34
- Guest Account as detailed on page 34
- Event Log Settings as detailed on page 35
- Install EtherLink PCI Network Interface Card as detailed on page 23 and the relevant Network setup as required



## Map Network Drive

### Sharing INDeX CCM

1. From the Windows NT desktop, click (using the right mouse button) Network Neighborhood and select Map Network Drive.
2. Select a Map Drive (e.g. E:), in the Path Type `\\ARCHIVERSQL\C`, ensuring **Reconnect at logon** is also checked as shown on the following screen:

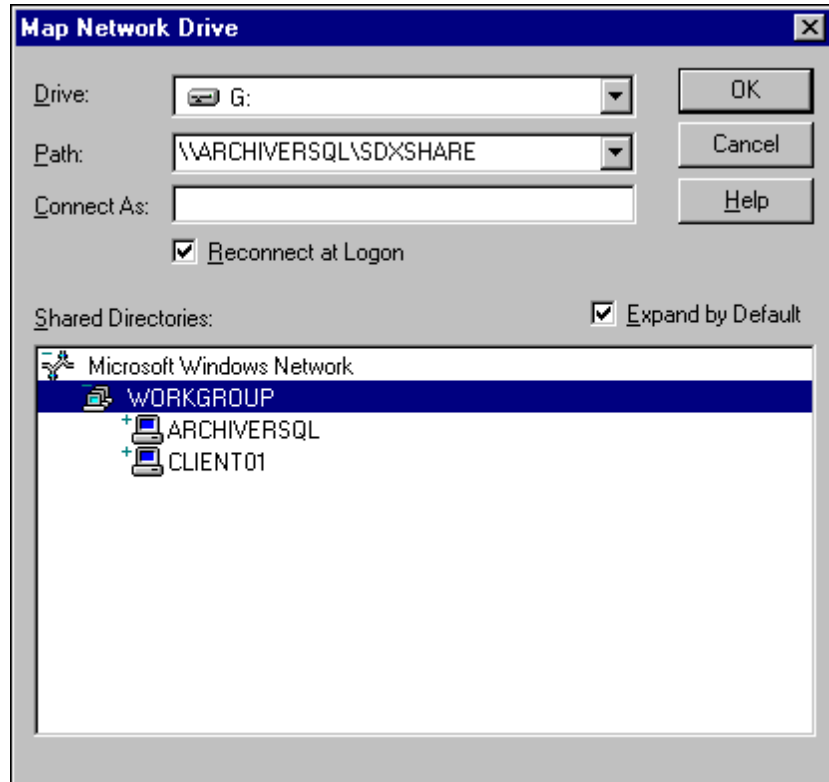


3. Click OK.

This enables you to share the INDeX CCM (e.g. INDeX Call Centre View) files.

**Sharing INDeX Taskbar**

1. From the Windows NT desktop, click (using the right mouse button) Network Neighborhood and select Map Network Drive.
2. Select a Map Drive (e.g. F:), in the Path Type \\ARCHIVERSQL\SDXSHARE, ensuring **Reconnect at logon** is also checked as shown on the following screen:



3. Click OK.  
This enables you to share the INDeX Taskbar files.

**Install Display Adapter**

Since INDeX CCM applications are designed to use a screen resolution of 800 by 600 pixels, it is necessary to install a third party display adapter driver, which is not installed by default when installing Windows NT.

To install Display Adapter see "Install Display Adapter" on page 22.

**Install ODBC**

ODBC provides a link between the database in the Server PC and the Client PC.  
To install ODBC, see "Install ODBC (Open Database Connectivity)" on page 33.

**Note**

*If the Server PC name has been changed you must perform the procedures detailed in "Changing the ODBC Settings" on page 74.*

You are now ready to install INDeX CCM applications.

## Client PC Setup (Window 98)

This section details the **Client PC** configuration as follows:

- Format the hard drive (if required).
- Install Windows 98.
- Install Display Adapter.
- Essential Windows 98 modification for INDeX CCM applications.
- Install EtherLink PCI network Interface Card.
- Map Network Drive.
- Install ODBC.

---

### Format Hard Drive

1. With the PC switched off insert the Windows 98 Setup Disk in to the A:\ Drive. Then switch the PC on.
2. At the X:\>Win98> (X is the letter associated with the CD ROM drive) prompt, type cd\ and then press Enter. At the X:\> prompt type A:
3. At the A:\ prompt, type Format C: and press Enter. The following message will be displayed:

**"WARNING:**

**ALL DATA ON NON-REMOVABLE DISK DRIVE C: WILL BE LOST!**  
**Proceed with format (Y/N?)"**

4. Type **Y** and press Enter.
5. After formatting, press Enter to leave the volume label blank.

---

### Install Windows 98

1. Insert Windows 98 CD-ROM and Windows 98 Setup Disk 1 and reboot the PC.
2. At the A:\ prompt, type **X:**, (X is the letter associated with the CD drive of the PC) and press Enter.
3. At the **X:\>** prompt, type **Setup** and press Enter. Press Enter to continue. Press X to exit Scan Disk. From the Windows 98 Setup Welcome screen, click *Continue* to begin setup.
4. Select Directory C:\Windows, click *Next*. Select **Typical**, click *Next*.
5. Select *Install the most common components (recommended)*, click *Next*.
6. Type Computer Name as required (i.e. Client\_01), leaving the WORKGROUP as it is. Click *Next*, select United Kingdom and then click *Next*.
7. At "Startup Disk" screen click *Next* to create a Startup Disk. Insert the *Win98 Startup Disk* and then click *OK*. When it has finished creating the Startup disk, remove the disk from A:\ drive, and click *OK*.
8. Click *Next* to Start Copying Files. Type your name and Organisation, click *Next*.
9. Click to select "*I accept the Agreement*", click *Next*. Type Product Key, click *Next* and then click *Finish*.
10. From the Date/Time Properties screen, Set Time Zone to GMT London and click *Apply* and then click *OK*.
11. Once the PC has restarted, enter the Network Password, click *OK*. Enter Windows Password, click *OK*.
12. From Add New Hardware Wizard screen click *Next* and then follow the instruction to install the Plug and Play Monitor, ensuring both Floppy Disk drivers as well as CD-ROM drivers are selected.
13. Click *Finish*. Once the PC is restarted, close the *Welcome to Windows 98* screen.

---

## Install Display Adapter

Since INDeX CCM applications are designed to use a screen resolution of 800 by 600 pixels, it is necessary to install a third party display adapter driver which is not installed by default when installing Windows NT.

To install Display Adapter see "Install Display Adapter" on page 22.

---

## Windows 98 Modifications

Once Windows 98 is installed, you need to make the following adjustments to be able to run the INDeX CCM applications:

---

### *Regional Settings*

When installing/running the INDeX CCM applications in the United Kingdom, the Regional Settings needs to be changed from the default installation setting which is usually set to English(United States).

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel options, open Regional Settings,
3. From the Regional Settings tab select English (United Kingdom), click *Apply*, click Yes to restart the PC.

**Note**

*Ensure the Regional Setting is appropriate for the relevant country.*

## Install EtherLink PCI Network Interface Card

There are four steps to the NIC installation:

1. Run the pre-installation program before installing the NIC in the PC.  
The EtherCD pre-installation program prevents conflicts with the NIC and your operating system. It guides you through the NIC installation and must be run before you physically install the NIC in the PC.
2. Install the NIC in the PC.
3. Connect the NIC to the network.
4. Install the network driver.

**Note**

*If there is network card in the PC, you must remove the Adapter and the Network card from the PC.*

### 1. Run the Pre-installation Program

Before you physically install the NIC in a PC, run the NIC pre-installation program to properly set up your system environment.

The pre-installation program prevents conflicts with the NIC and your operating system. It guides you through the NIC installation and must be run before you physically install the NIC in the PC.

To run the NIC pre-installation program:

1. Do **NOT** install the NIC in the PC.
2. Turn on the power to the PC and start Windows.
3. Quit any open applications and disable the automatic protection feature of any anti-virus software that may be running.
4. Insert the EtherCD in the CD-ROM drive.  
The EtherCD Welcome screen appears. If the EtherCD Welcome screen does not appear, enter the following command from the Run option of the Windows Start menu: X:\installs\setup.exe where X:\ represents the letter of the CD-ROM drive.
5. Click **NIC Software**.
6. Click **NIC Drivers and Diagnostics**.
7. Click **Install NIC Driver**.  
To install the network driver and the 3Com NIC Diagnostics program, click **Install with Diagnostic Program**. (We recommend you select this option).  
To install the network driver only, click **Install without Diagnostic Program**.  
Files are copied. A message box appears when the installation is complete.
8. Click **OK**.
9. Select your operating system (Windows 98) to continue the installation.  
The Completing NIC Installation screen appears.
10. Click **Done**.
11. Exit the EtherCD, and then shut down Windows.
12. Turn **off** the power to the PC.

## 2. Install the NIC in the PC

To install the NIC in the PC:

1. Make sure that you have run the preinstallation program, as described in the previous section.
2. Turn off the power to the PC and unplug the power cord.
3. Remove the cover from the PC.
4. Locate an empty, nonshared bus-mastering PCI slot and remove its slot cover. Save the screw.  
Do not install the NIC in a shared PCI slot. Avoid any PCI slot next to an ISA slot. This is often a shared slot and does not support bus mastering.
5. Carefully insert the NIC in the empty PCI slot. Press firmly to ensure that the NIC is fully seated in the slot.
6. Secure the NIC with the screw you removed earlier.
7. Replace the PC cover and plug in the power cord.  
Do **NOT** turn on the power to the PC.

## 3. Connect the NIC to the Network

Connect the appropriate network cable to the NIC provided by the Network Administrator of the Customer's Site.

## 4. Install the Network Driver

To install the network driver:

1. Turn on the power to the PC. Windows 98 detects the NIC.
2. The Add New Hardware Wizard starts, click to select "*Display a list of all the drivers in a specific location*" and then click *Next*.
3. With the Network Adapter selected, click *OK*.
4. When prompted insert the EtherCD in the CD ROM drive and then click *OK*.
5. From Insert Disk screen, type the CD ROM drive letter, (e.g. d:\).
6. Click *OK* and then click *Finish*.
7. You must restart the PC to complete the installation.

You are now ready to adjust the Networking Setup according to the Customer's Network, i.e. either TCP/IP or IPX/SPX as detailed in following pages.

---

### ***TCP/IP Networking setup***

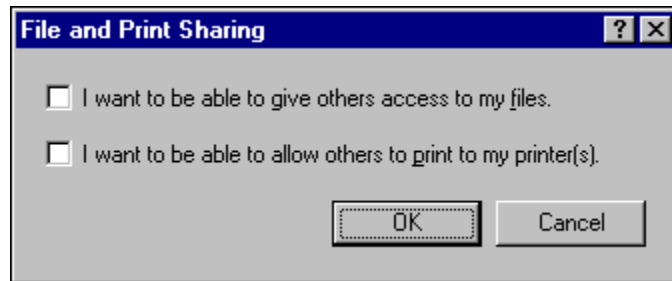
This is only applicable if the site network uses **TCP/IP**. Otherwise, configure the network according to the Site's Network.

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel options open, **Network**.
3. Highlight **TCP/IP Protocol** and click *Properties*. Add the settings specified by the customer's Network Manager and then click *OK*.
4. Click *OK* and allow the Client PC to restart.

**Network IPX Frame Type**

This is only applicable if the site network uses **IPX Frame Type**. Otherwise, configure the network according to the Site's Network.

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel options open, **Network**.
3. Click **IPX/SPX compatible Protocol**, click *Properties*.
4. Click to select, "I want to enable NetBOIS over IPX/SPX" and then click *OK*.
5. From the **IPX/SPX compatible Protocol Properties** screen, click the **Advanced** tab, and highlight the '**Frame Type**' Property, then from the Value drop-down list, select **Ethernet II**.
6. Click *OK*.
7. From the Network screen, click *File and Print Sharing* the following screen appears:

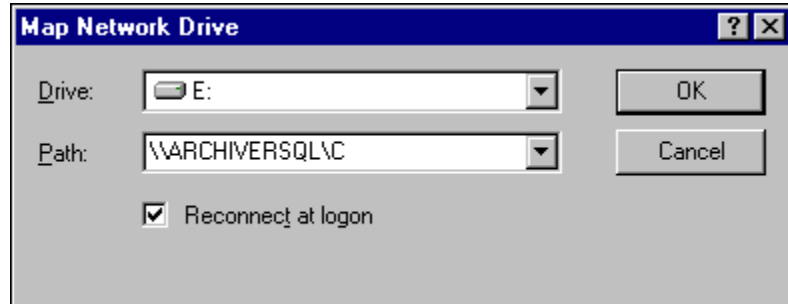


8. Click to select **both** options and click *OK*.
9. From the **Network** screen, click the **Identification** tab, enter the Computer name and Workgroup as required.
10. Click *OK*.
11. When prompted, click Yes to restart the PC.

## Map Network Drive

### Sharing INDeX CCM

1. From the Windows 98 desktop, click (using the right mouse button) Network Neighborhood and select Map Network Drive.
2. Select a Map Drive (e.g. E:), in the Path Type **\\ARCHIVERSQL\C**, ensuring **Reconnect at logon** is also checked as shown on the following screen:

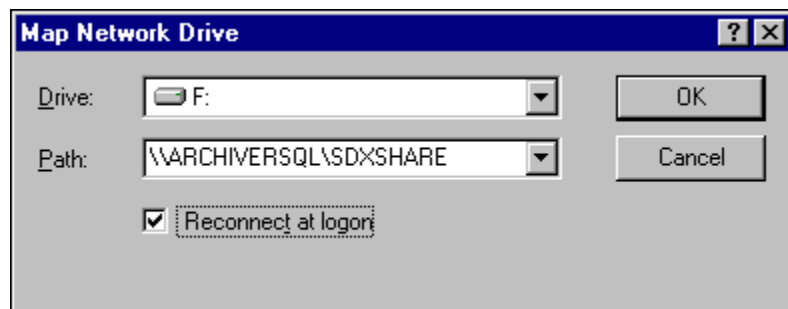


3. Click **OK**.

This enables you to share the INDeX CCM (e.g. INDeX Call Centre View) files.

### Sharing INDeX Taskbar

1. From the Windows 98 desktop, click (using the right mouse button) Network Neighborhood and select Map Network Drive.
2. Select a Map Drive (e.g. F:), in the Path Type **\\ARCHIVERSQL\SDXSHARE**, ensuring **Reconnect at logon** is also checked as shown on the following screen:



3. Click **OK**.

This enables you to share the INDeX Taskbar files.

---

## Install ODBC

ODBC provides a link between the database in the Server PC and the Client PC. To install ODBC see "Install ODBC (Open Database Connectivity)" on page 33.

#### *Note*

*If the Server PC name has been changed you must perform the procedures detailed in "Changing the ODBC Settings" on page 74.*

You are now ready to install INDeX CCM applications.



---

## Client PC Setup (Windows 2000)

This section details the **Client PC** configuration as follows:

- Install Windows 2000 Service Pack 1.
- Windows 2000 modifications for INDeX CCM applications.
- Map Network Drive
- Install Display Adapter.
- Install ODBC.

---

### Install Service Pack 1

Alteration to Windows 2000's configuration including the addition of software mean that the Service Pack (containing Microsoft bug fixes) needs to be reapplied.

Follow the instructions on your Windows 2000 disk to re-install the service pack.

---

### Windows 2000 Modifications

To be able to install and run the INDeX CCM application it is essential to modify Windows 2000 as detailed in this section.

Perform the following procedures as detailed in:

- Regional Settings as detailed below
- Guest Account as detailed on page 50
- Event Log Settings as detailed on page 50
- Install EtherLink PCI Network Interface Card as detailed on page 23 and the relevant Network setup as required

---

#### ***Regional Settings***

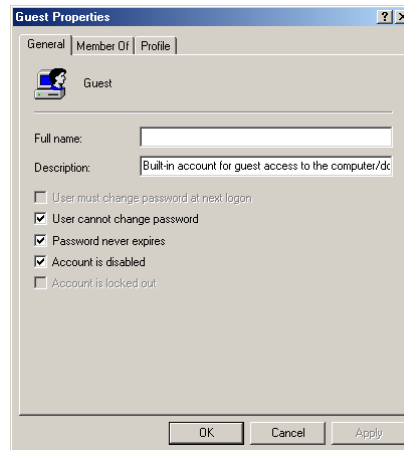
The Regional Settings need to be changed from the default installation settings which are usually English (United States).

1. From the Windows Taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel, open **Regional Options**.
3. From the General Tab select **English (United Kingdom)**, click *Apply* and then click on *Ok*.

## Guest Accounts

For INDeX CCM applications to communicate, the Guest Account on Windows 2000 needs to be enabled. To modify the Guest Account:

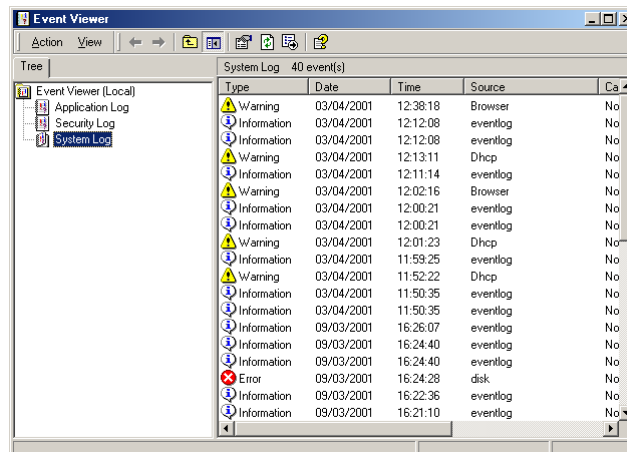
1. From the Windows Taskbar, click Start, point to settings and select Control Panel.
2. From the Control panel, open **Users and Passwords**
3. Click on the **Advanced Tab**. In the Advanced User Management section click on the **Advanced** button.
4. Open the *Users* folder and then double click on Guest.
5. Click on the General Tab. Remove the tick by 'Account is disabled' then click on the *Apply* button. Click on *Ok* and then close all screens.



## Event Log Settings

The Event Log settings are altered through the windows Event Viewer. To do this:

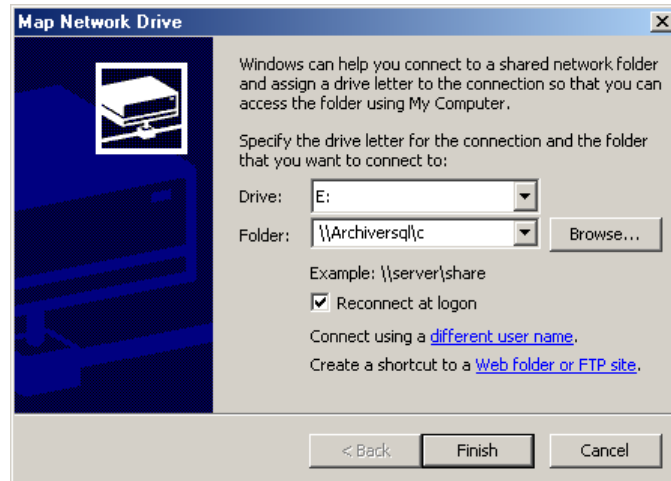
1. From the Windows Taskbar, Click Start, point to settings and select Control Panel.
2. From the Control panel open **Administrative Tools**
3. Open Event Viewer.
4. Right Mouse click on Application Log and select properties. In the Log size section select *overwrite events as needed*. Click on *apply* and then *Ok*.
5. Right mouse click on Security Log and select properties. In the Log size section select *overwrite events as needed*. Click on *apply* and then *Ok*.
6. Right mouse click on System Log and select properties. In the Log size section select *overwrite events as needed*. Click on *apply* and then *Ok*.
7. Close all open windows.



## Map Network Drive

### Sharing INDeX CCM

1. From the Windows desktop, click (using the right mouse button) my Network Places and select Map Network Drive.
2. Select a Map Drive (e.g. E:).
3. In the Folder section type **\\ARCHIVERSQL\C**
4. Make sure that the **Reconnect at logon** is also checked as shown on the screen shown below.
5. Click on *Finish*.



This enables you to share the INDeX CCM (e.g. INDeX Call Centre View) files.

### Sharing INDeX Taskbar

1. From the Windows desktop, click (using the right mouse button) My Network Places and select Map Network Drive.
2. Select a Map Drive (e.g. F:).
3. In the Path Type **\\ARCHIVERSQL\SDXSHARE**, ensuring **Reconnect at logon** is also checked.
4. Click on *Finish*.

## Install Display Adapter

Since INDeX CCM applications are designed to use a screen resolution of 800 by 600 pixels, it is necessary to install a third party display adapter driver, which is not installed by default when installing Windows.

To install Display Adapter see "Install Display Adapter" on page 22.

## Install ODBC

ODBC provides a link between the database in the Server PC and the Client PC.

To install ODBC, see "Install ODBC (Open Database Connectivity)" on page 33.

### Note

**If the Server PC name has been changed you must perform the procedures detailed in "Changing the ODBC Settings" on page 74.**

You are now ready to install INDeX CCM applications.

# Install INDeX CCM Applications

## Overview

This section describes the procedures of installing the software for the INDeX Contact Centre suite. The installation procedure is divided into the following steps, which must be performed:

1. Install INDeX CCM applications.
2. Setting SQL Server Configuration Information.
3. Install Windows NT Service Pack 6a.

**Note**

*Once you have completed the installation of the INDeX CCM, ensure you REINSTALL Windows NT Service Pack 6a, as detailed "Install Windows NT Server Service Pack 6a" on page 17*

## Integration of INDeX CCM with INDeX Voice Manager

To integrate INDeX CCM with INDeX Voice Manager, there must only be one Access Manager running within the system. In this case, the Access Manager must reside on the Server Cassette.

For the installation of the INDeX Voice Manager, refer to the "*INDeX Voice Manager Installation and Maintenance Manual*".

Since the Access Manager resides within the Server Cassette, to integrate INDeX CCM with INDeX Voice Manager, you need to **Disable** the INDeX Access Manager Service residing in the INDeX CCM Server PC.

1. After the INDeX CCM Server PC is restarted, from the Windows NT taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel options open, **Services**.
3. Select the INDeX Access Manager and then click **Stop**.
4. Click Yes to agree to stop the service.
5. With the INDeX Access Manager selected, click *Startup*.
6. From **Service** screen, click to select *Disable* as the **Startup Type** and then click *OK*.
7. From **Services** screen, click *Close* and then exit Control Panel.

**Note**

*To enable the INDeX Access Manager Service, set the Startup Type to Automatic and then restart the PC.*

## INDeX CCM on Standalone Server PC

The required INDeX CCM applications are:

1. INDeX Access Manager
2. INDeX Delta Server
3. INDeX Wallboard Server
4. INDeX Report Manager
5. INDeX Taskbar
6. INDeX Network Administrator
7. INDeX Call Centre View

If integrating INDeX CCM with INDeX Voice Manager, follow the procedures detailed in "Integration of INDeX CCM with INDeX Voice Manager" on page 52, when installing the Access Manager.

When installing more than one Server Components there is a 2-minute time delay between each Server application.

After having installed all the Server and Client Components:

1. from the INDeX Install Wizard, click *Finish* to end the INDeX Install Wizard. Restart the PC.
2. ensure that all the files copied to Windows NT are up to the Service Pack 6a level, by installing Service Pack 6a **AGAIN** as detailed in "Install Windows NT Server Service Pack 6a" on page 17.

**IT IS HIGHLY RECOMMENDED TO RESTART THE PC ONCE THE INSTALLATION OF THE INDEX CCM APPLICATIONS IS COMPLETE.**

**Note 1:**

*After starting up the Server PC, it is necessary to Logon to it. This should be done no sooner than 10 seconds after the Logon prompt is displayed.*

**Note 2:**

*After Logging onto a newly started Server PC, INDeX Taskbar, INDeX Access Manager, INDeX Delta Server, Document Agent Server and INDeX Archiver will all start automatically. These are all timed starts and this will take 1-2 minutes.*

## INDeX CCM on Server PC/Client PC

For a Server PC/Client PC scenario the required INDeX CCM applications are:

### **Server PC:**

1. INDeX Access Manager
2. INDeX Delta Server
3. INDeX Taskbar
4. INDeX Network Administrator
5. INDeX Report Manager
6. INDeX Wallboard Server

### **Client PC:**

1. INDeX Taskbar
2. INDeX Report Client
3. INDeX Wallboard Client
4. INDeX Call Centre View
5. INDeX Network Administrator

If integrating INDeX CCM with INDeX Voice Manager, follow the procedures detailed in "Integration of INDeX CCM with INDeX Voice Manager" on page 52, when installing the Access Manager.

After having installed all the Server and Client Components:

1. from the INDeX Install Wizard, click *Finish* to end the INDeX Install Wizard. Restart the PC.
2. ensure that all the files copied to Windows NT are up to the Service Pack 6a level, by installing Service Pack 6a **AGAIN** as detailed in "Install Windows NT Server Service Pack 6a" on page 17.

When installing more than one Server Components there is a 2-minute time delay between each Server application.

**IT IS HIGHLY RECOMMENDED TO RESTART THE PCs ONCE THE INSTALLATION OF THE INDEX CCM APPLICATIONS IS COMPLETE.**

**Note 1:**

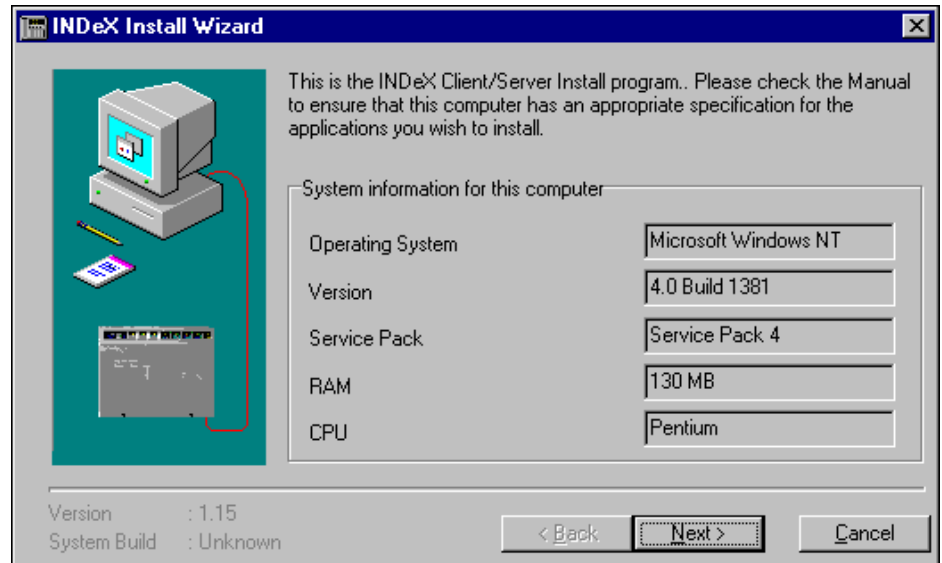
*After starting up the Server PC, it is necessary to Logon to it. This should be done no sooner than 10 seconds after the Logon prompt is displayed.*

**Note 2:**

*After Logging onto a newly started Server PC, INDeX Taskbar, INDeX Access Manager, INDeX Delta Server, Document Agent Server and INDeX Archiver will all start automatically. These are all timed starts and this will take 1-2 minutes.*

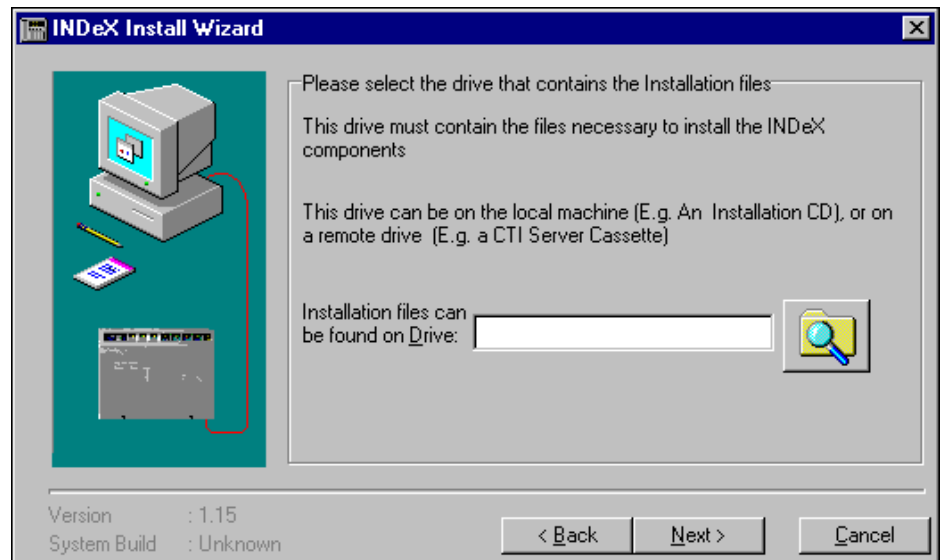
## INDeX CCM Server Applications

1. With the Windows NT running, insert the **INDeX Application CD** in the CD Drive. The auto run sequence executes the Installation.

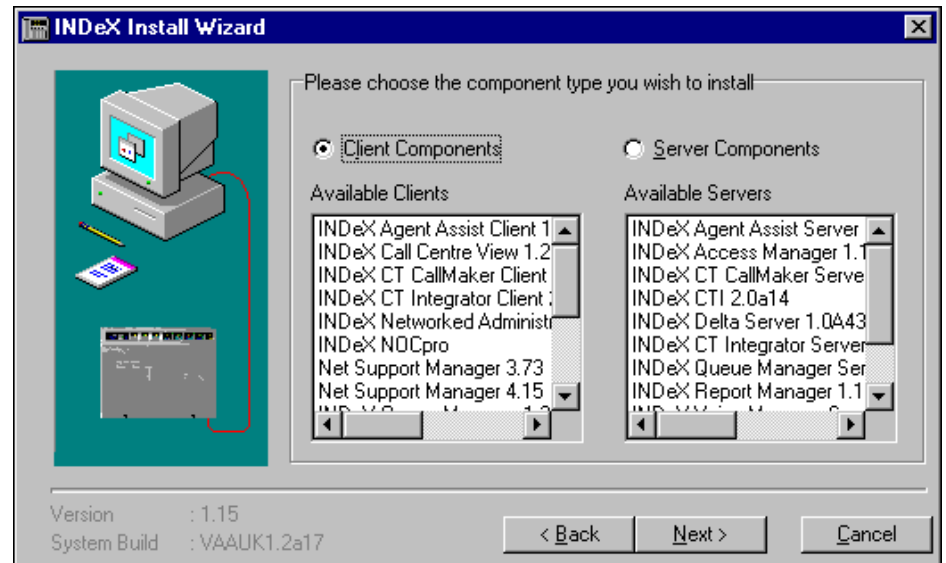
**Note**

*INDeX CCM application's PC, requires a MINIMUM of 128MB of RAM for the Server PCs and 64MB of RAM for the Client PCs.*

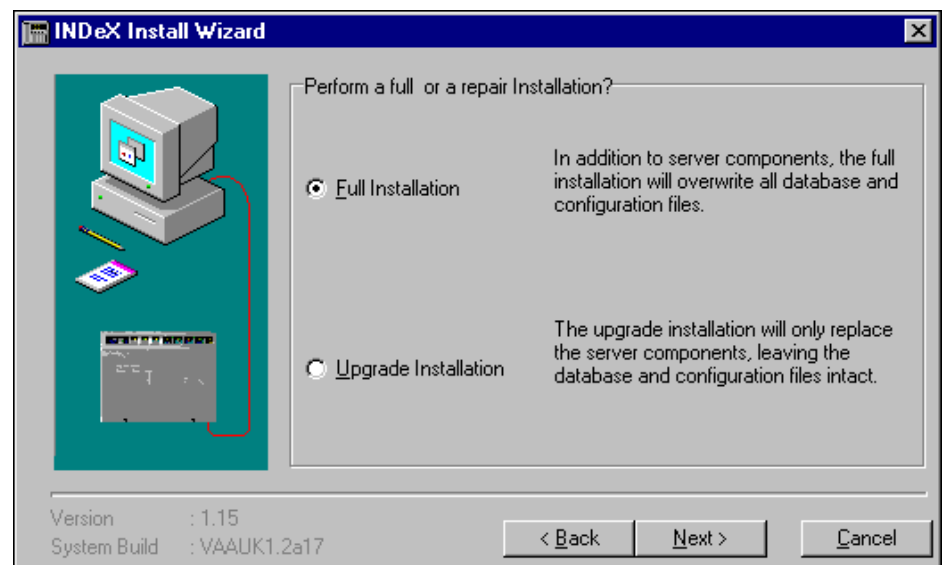
2. Click **Next** the following screen appears:



- Enter the CD-ROM Drive (e.g. e:) and then click *Next* the following screen appears, listing the Client and Server Components available for installation:

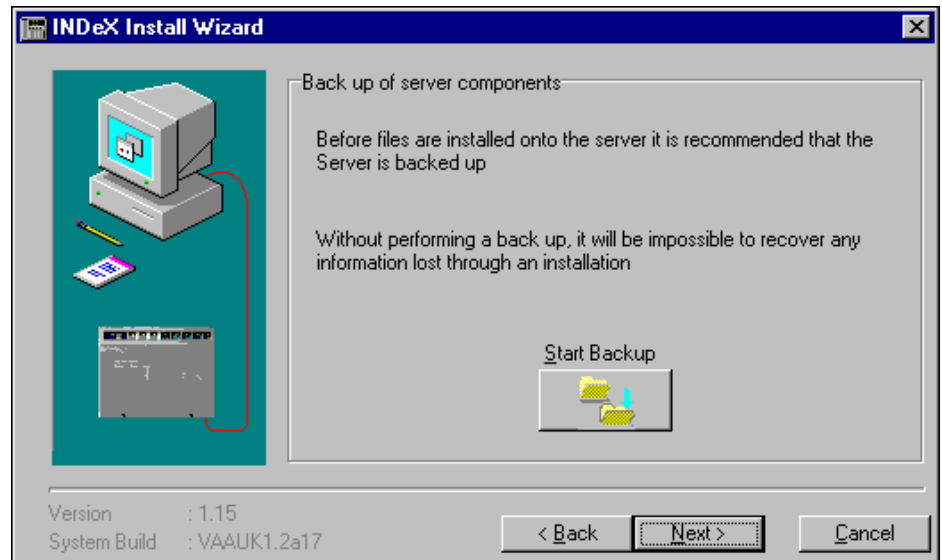


- Check that the Available Servers list includes the required Server applications.
- Select **Server Components** and click *Next*, the following screen appears:

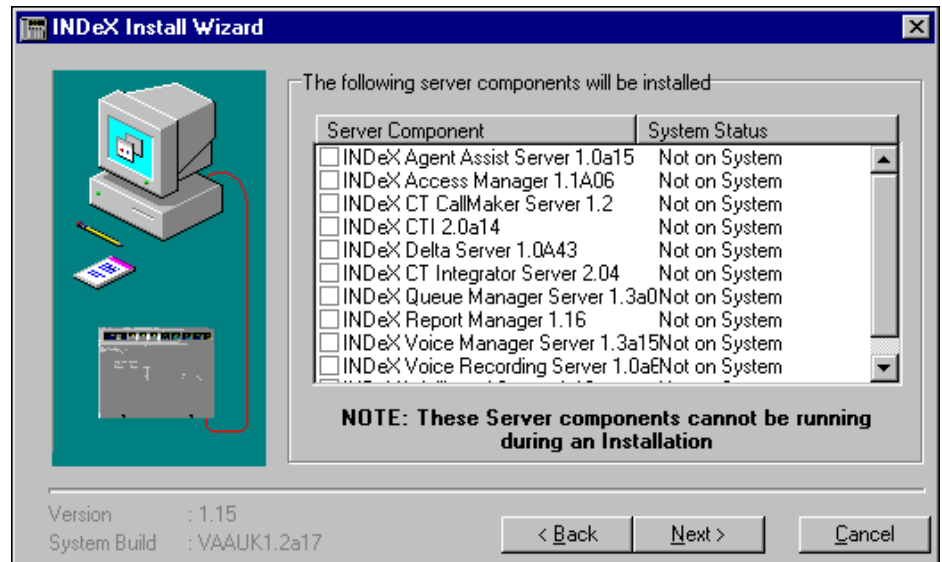




6. Select **Full Installation** and click *Next*, the following screen appears:



7. Click *Next* to proceed to the following screen.



This screen displays the list of available INDeX Server Components as well as the status of the existing server components on the Server PC.

**Note**

*Picking one component may automatically select other components normally installed with it. You can manually de-select those other components if not required. For example, selecting INDeX Wallboard Server, you will notice that the INDeX Access Manager and INDeX Delta Server are automatically checked.*

**System Status:**

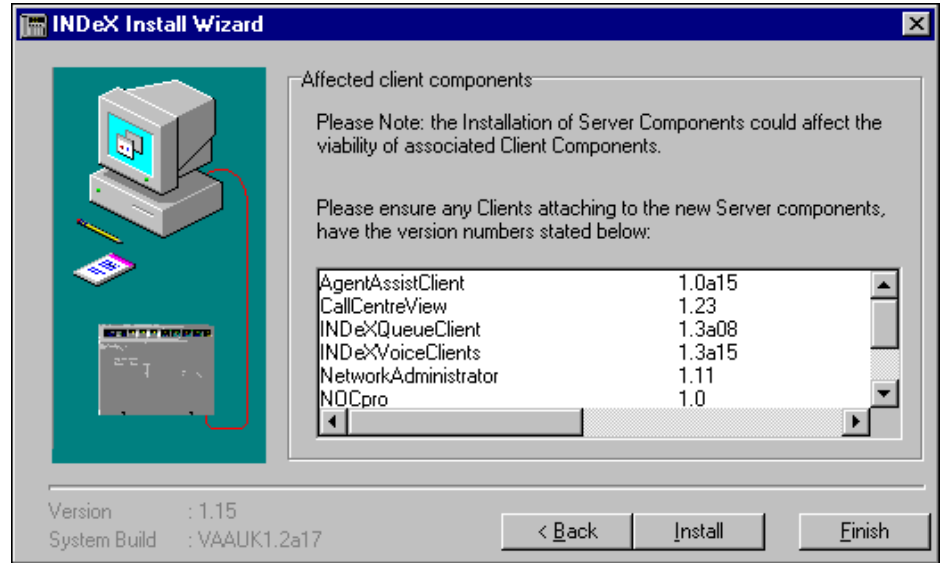
**Not on System** – The Server Component is not installed;

**System is Current** – The same version of the Server Component is already installed;

**System is Older** – The Server Component is already installed and is a later version of the one available for installation;

**System Incompatible** – The Server Component available for installation is not compatible with other components already installed.

8. Select the required Server Component(s) and then click *Next* to proceed to the following screen:

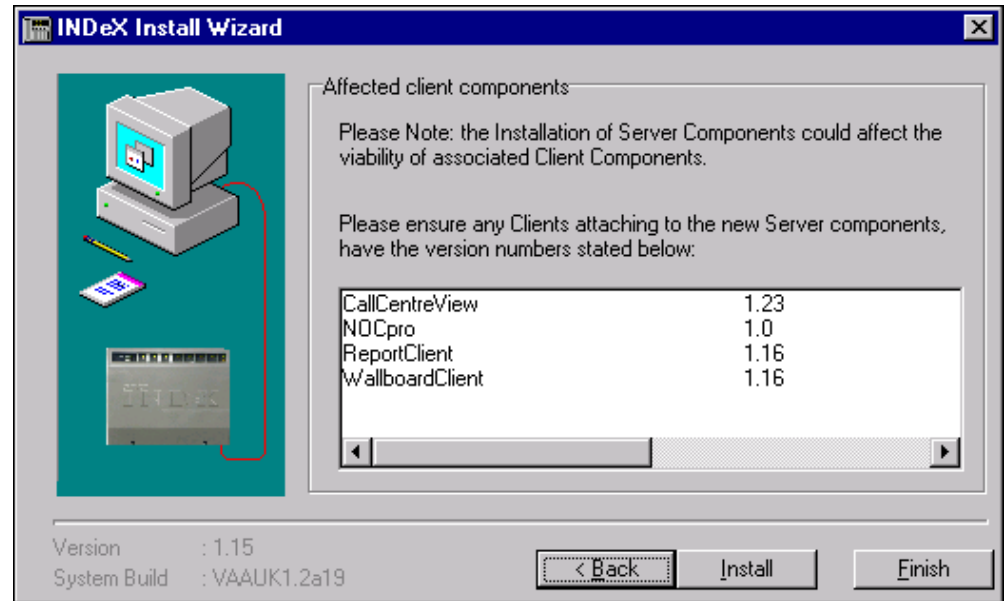


9. The list of Client applications depends upon the Server applications that are selected to be installed. Click *Install*. See the relevant sections for each product installation.

Once all the Server Components have been installed, follow the instructions detailed in "INDeX CCM Client Applications" on page 59 to install the Client components.

## INDeX CCM Client Applications

If you have just completed installing INDeX CCM Server applications, the following screen appears:



The list of Client applications depends upon the Server applications that are selected to be installed.

Click *Back* till you reach the screen in step 3 (below) and follow the instructions from step 4 onwards.

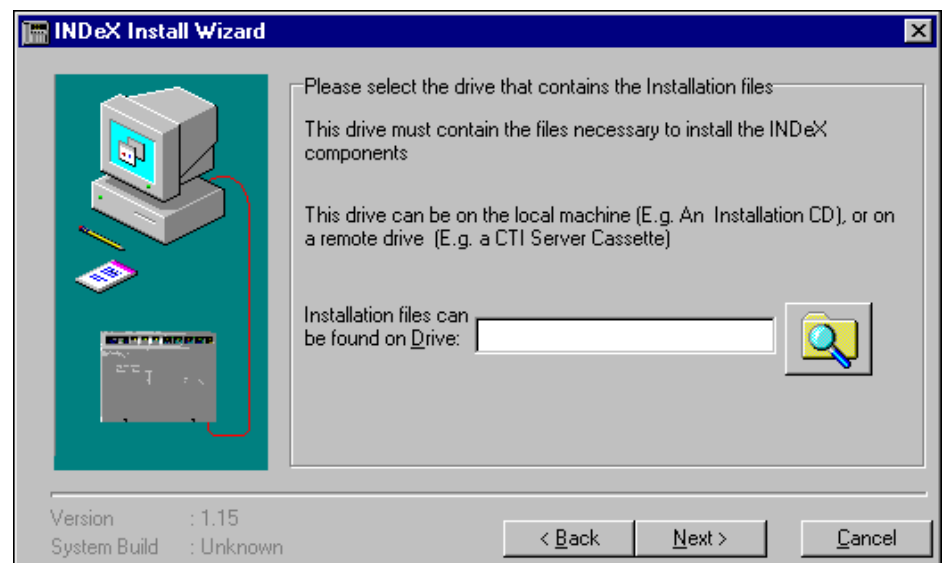
Otherwise:

1. Insert the **INDeX Application CD** in the CD Drive. The auto run sequence executes the Installation Wizard.

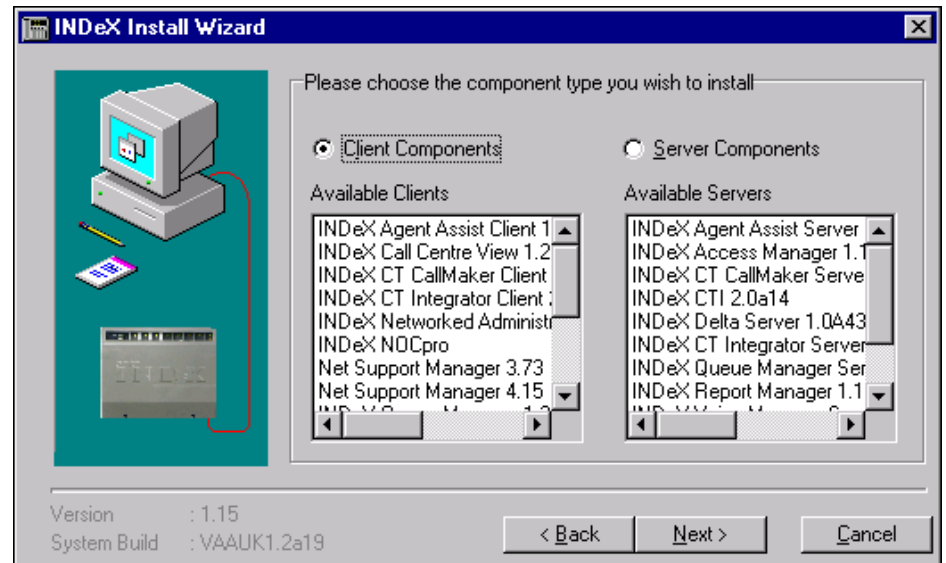
**Note**

*INDeX CCM application's PC, requires a MINIMUM of 64MB of RAM.*

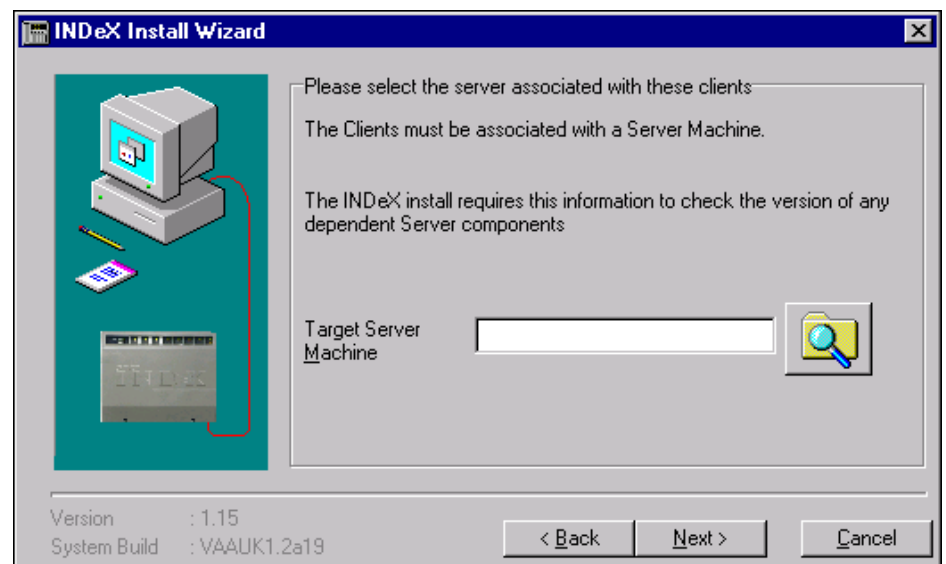
2. Click *Next* the following screen appears:



- Enter the CD-ROM Drive (e.g. e:) and then click *Next* the following screen appears, listing the Client and Server Components available for installation:

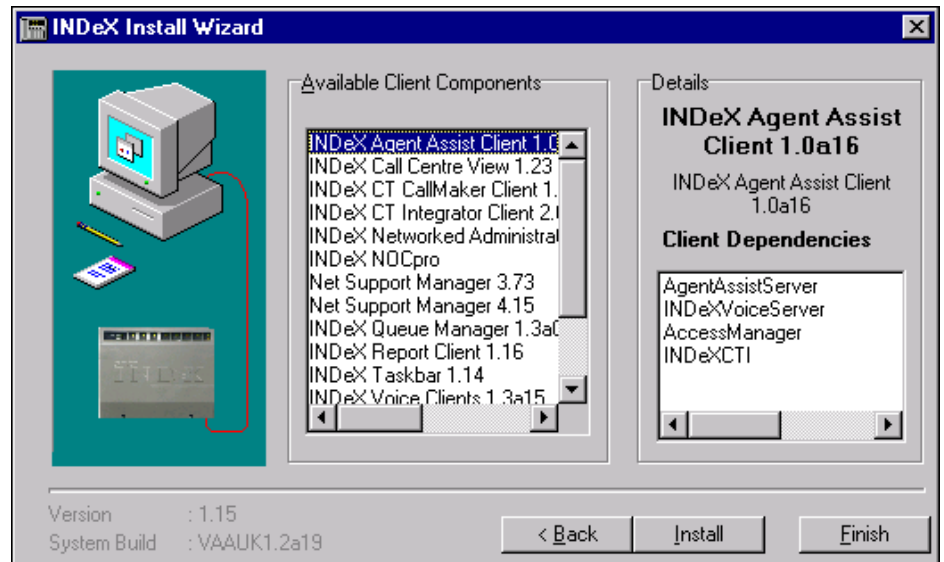


- Click *Next* to proceed to the following screen:



- Click Search button, Browse for Computer screen .
- Select the Target Server Machine (e.g. Archiversql), click *OK*.

7. Click *Next* to the following screen:



This screen shows the list of Available Client Components plus a list of Client Dependencies for whichever Client Component is currently highlighted. The presence and version numbers of those Client Dependencies will be checked when you install any of the Client Components.

Each of the Client Dependencies for the Client Component is checked.

- If it is compatible, no message appears.
- If a Client Dependency is not present or an incompatible version, then a warning message will be displayed. Take a note of the message before canceling installation by clicking on *Finish*. You will have to install the missing dependency before installing the Client Components.

8. Select the required Client application and then click *Install Client*. See the relevant sections for each product installation.

When all the INDeX CCM Client applications have been installed, click *Finish* to close the INDeX Install Wizard and restart the PC..

**Note**

**When installing INDeX CCM Client applications on Windows NT Workstation/Server, ensure to reinstall Service Pack 6a as detailed in "Install Windows NT Server Service Pack 6a" on page 17.**

---

## INDeX Wallboard Server

1. Once you clicked *Install Servers*, the *Welcome* screen appears.
2. Click *Next* a *Restart* message screen appears.
3. Click *OK* to complete the INDeX Wallboard Server installation.
4. Click *Finish*.

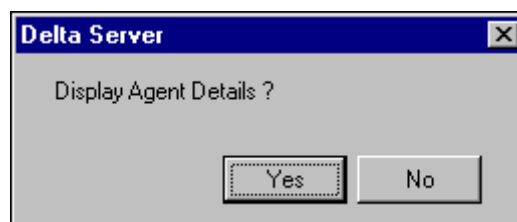
When installing more than one Server Component there is a 2-minute time delay between each Server application.

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## INDeX Delta Server

With the installation of the INDeX Wallboard Server complete, the Delta Server *Welcome* screen appears to indicate the start of the INDeX Delta Server installation program:

1. From the *Welcome* screen, click *Next* to commence the installation, the following screen appears:



2. If you **do not** wish to view the Agent details in any of the INDeX CCM applications (i.e. Call Centre View, Wallboard Server, Report Client) you must click *No*.
3. If you wish to view the Agent details in any of the INDeX CCM applications (i.e. Call Centre View) you must click *Yes*.

**Note**

*This feature has been introduced for the German Market.*

4. When the *Installation Completed* screen appears, click *Finish* to complete the INDeX Delta Server installation.

When installing more than one Server Component there is a 2-minute time delay between each Server application.

## INDeX Access Manager

With the installation of the INDeX Delta Server complete, the INDeX Access Manager Welcome screen appears to indicate the start of the installation program.

1. From the Welcome screen, click *Next* to commence the installation.

**Note**

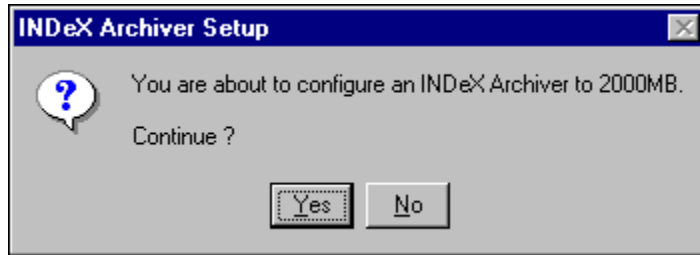
*If integrating INDeX CCM with INDeX Voice Manager, follow the procedures detailed in "Integration of INDeX CCM with INDeX Voice Manager" on page 52, when installing the Access Manager.*

When installing more than one Server Component there is a 2-minute time delay between each Server application.

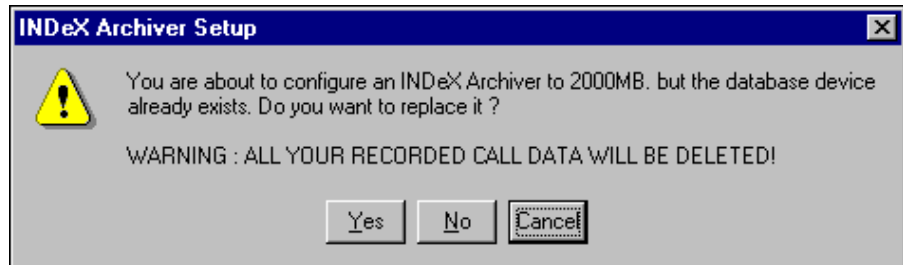
## INDeX Report Manager

With the installation of the INDeX Access Manager complete, the following screen appears to indicate the start of the INDeX Report Manager installation program.

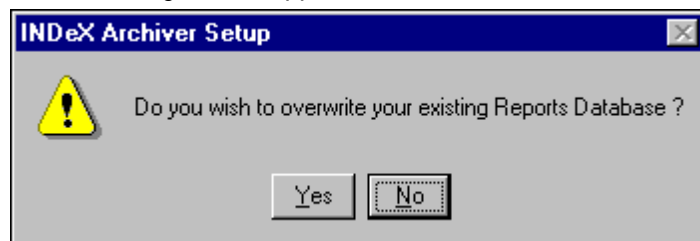
1. From the Welcome screen, click *Next* to commence the installation. During the installation the following screen appears:



3. When installing this application for the first time, you **MUST** click *Yes* to configure the INDeX Archiver to 2000MB. (This takes about 20 minutes).
4. When upgrading this application, follow the **Release Notes** associated with Upgrading the INDeX Report Manager application. However if you click *Yes*, the following appears:



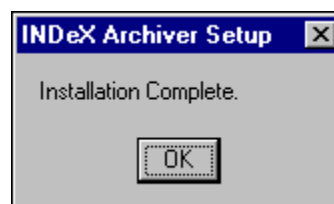
5. Click *No*, the database device will not be replaced and go to step 10. Alternatively,
6. Click *Yes* the following screen appears:



7. Click *Yes* to overwrite the existing Reports Database.

### Alternatively:

8. Click *No*.
9. Once the INDeX Archiver database configuration is complete the following screen appears:



10. Click *OK*.
11. Form the Installation Complete screen, click *Finish*.

When installing more than one Server Component there is a 2-minute time delay between each Server application.



## INDeX Taskbar

1. From the INDeX Install Wizard screen, select INDeX Taskbar:
2. Click *Install*.
3. Select the required Setup language and then click *OK*.
4. From the Welcome screen, click *Next* to continue.
5. From Select Program Folder click *Next* to continue.
6. At the Microsoft comctl32.dll Update warning message, click *OK* to continue.
7. Click *OK* to proceed to the following screen:
8. Click *Finish* to complete the installation program.

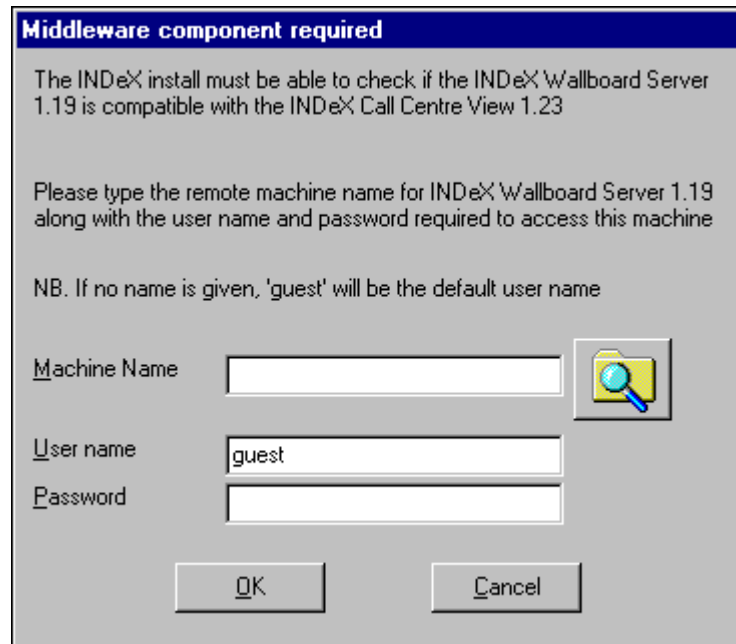
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## INDeX Networked Administration

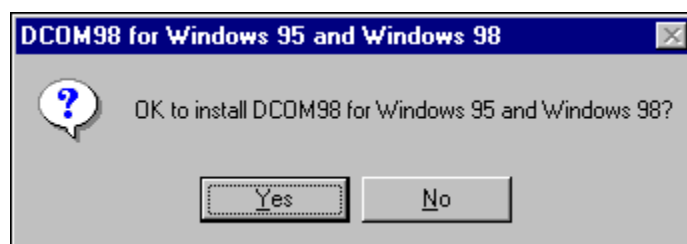
1. From the INDeX Install Wizard screen, select INDeX Networked Administration.
2. Click *Install*.
3. Select the required Setup language and then click *OK* to continue.
4. Click *Next* to continue.
5. To install to a different directory, click *Browse*, and select another directory.
6. To install to the directory on the screen, click *Next* the following screen appears:
7. Click *Finish* to complete the installation.

## INDeX Call Centre View

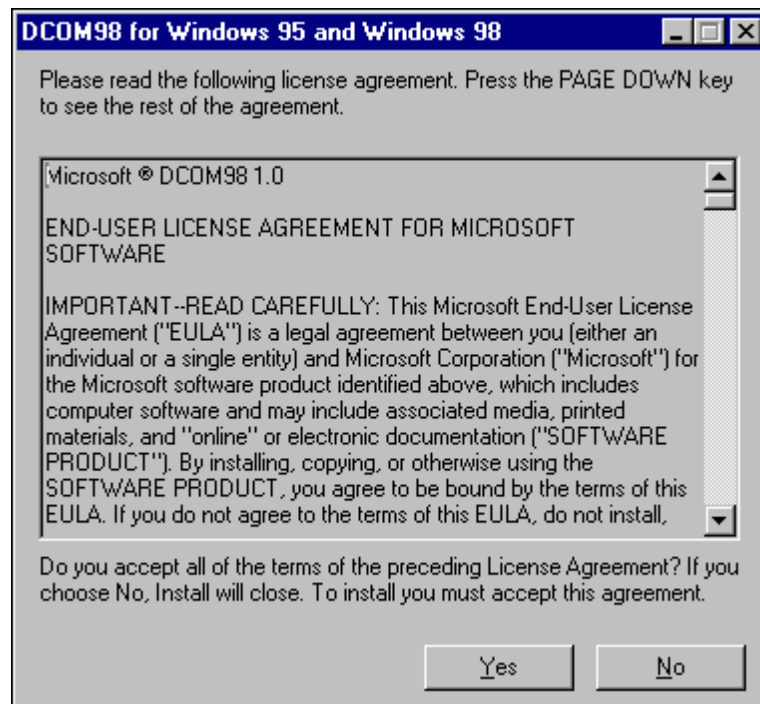
1. From the INDeX Install Wizard screen, select INDeX Call Centre View:
2. Click *Install*.
3. From the Welcome screen, click *Next* the following screen appears:



4. **Middleware component** checks the version number of the relevant Server applications required when running the Client application.
5. Type the name of the PC where the Server application resides or click Search and select from the list. Type **Administrator** as the User name and type the Password if one specified. Click *OK* to continue. You will need to enter the information twice depending upon the Server dependencies.
6. When installing this application on Window95/98 the following screen appears:



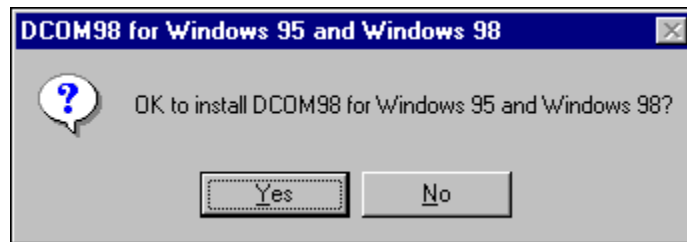
- Click Yes to proceed to the following screen:



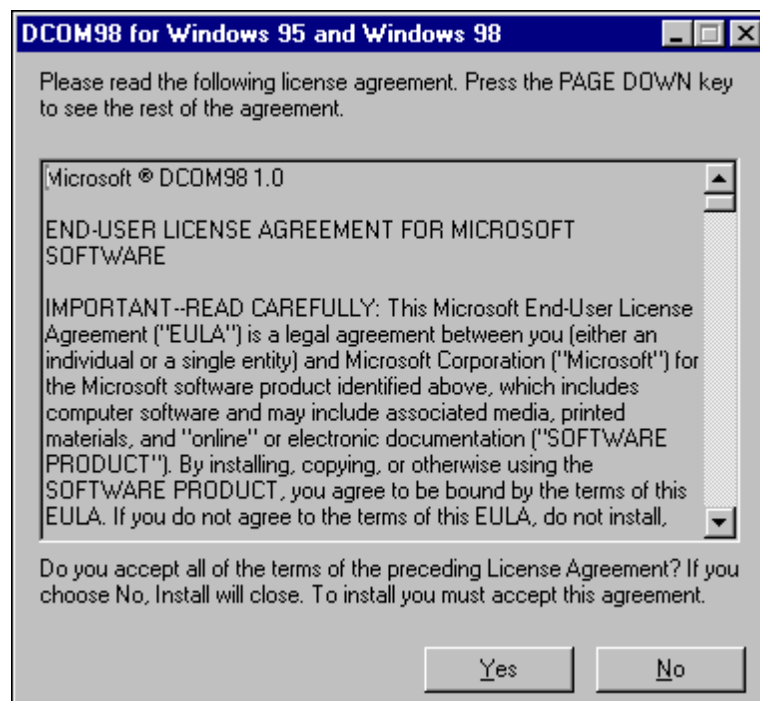
- Click Yes to accept the License Agreement.
- From the Installation Complete, click *Finish* to complete the installation.

## INDeX Report Client

1. From the INDeX Install Wizard screen, select INDeX Report Client:
2. Click *Install*.
3. From the Welcome screen, click *Next* to continue.
4. **Middleware component** checks the version number of the relevant Server applications required when running the Client application.
5. Type the name of the PC where the Server application resides or click Search and select from the list. Type **Administrator** as the User name and type the Password if one specified. Click *OK* to continue. You may need to enter the information twice depending upon the Server dependencies.
6. When installing this application on Window95/98 the following screen appears:



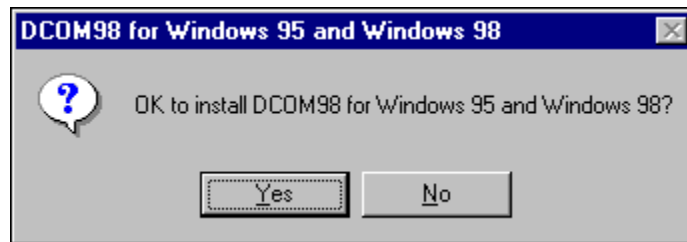
7. Click Yes to proceed to the following screen:



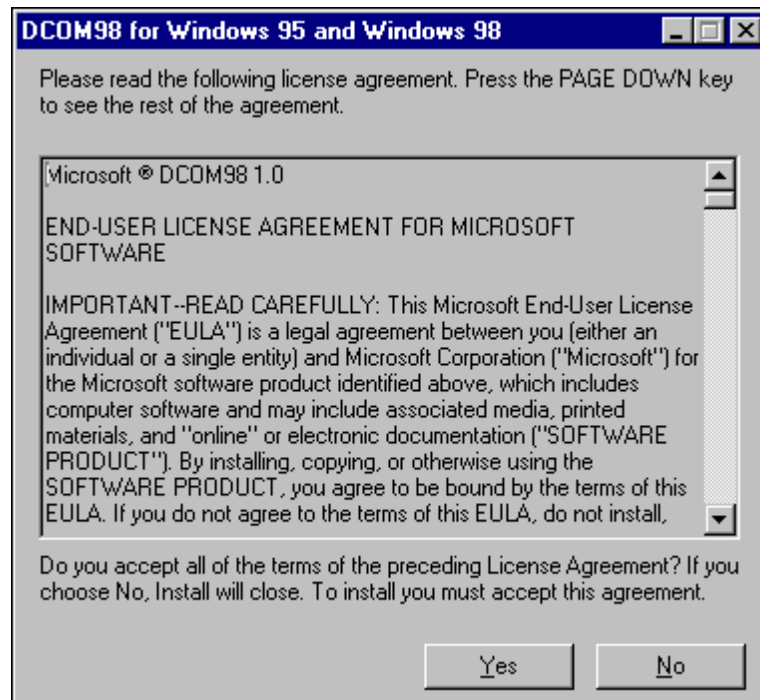
8. Click Yes to accept the License Agreement.
9. From the Installation Complete, click *Finish* to complete the installation.

## INDeX Wallboard Client

1. From the INDeX Install Wizard screen, select INDeX Wallboard Client:
2. Click *Install*.
3. From the Welcome screen, click *Next* to continue.
4. **Middleware component** checks the version number of the relevant Server applications required when running the Client application.
5. Type the name of the PC where the Server application resides or click Search and select from the list. Type **Administrator** as the User name and type the Password if one specified. Click *OK* to continue. You may need to enter the information twice depending upon the Server dependencies.
6. When installing this application on Window95/98 the following screen appears:



7. Click *Yes* to proceed to the following screen:



8. Click *Yes* to accept the License Agreement.
9. From the Installation Complete, click *Finish* to complete the installation.

## Trouble Shooting

This section details how to correct many common problems, however as a last resort read the appropriate manual.

---

### INDeX CCM Installation

1. Whenever anything is loaded from the I386 directory on a Windows NT4 installation CD, re-installation of NT4 Service Pack 6a is **NECESSARY**.
2. On the Server PC, ensure that the guest account is enabled. Also ensure that the C drive is shared with the names 'C' and 'SDXSHARE'.
3. If, for whatever reason, the Server PC has to be renamed from the default name (ArchiverSQL), be aware that Microsoft SQL cannot be guaranteed to operate correctly if a name that includes spaces is used. Also be sure to rename the server fields in the ODBC system DSN's for SDXArchiver as well as SDXRepository.
4. Only pilot numbers are regarded to be DDI numbers. When reporting on DDI numbers any DDI number that is not a pilot number cannot be reported on.

---

### INDeX CCM Client applications

1. It is possible that a Client application will **NOT** automatically find the INDeX Access Manager/INDeX Delta Server, if the Client application and INDeX Access Manager/INDeX Delta Server are on PCs on different networks. When this happens, click the 'Advanced' button (from Find Server screen) and select the option to enable the name of the PC running the INDeX Access Manager/INDeX Delta Server to be typed in.
2. When using Microsoft Windows 98, for Client applications mapping a drive to the C drive on the Server PC will speed up Server discovery.
3. When using a Global/Seltek Voice Manager for queuing which uses the traditional pickup method, the number of calls presented along with the answer time statistics for an agent/agent group may not be as expected.

---

### INDeX Taskbar

1. After creating new Users on the INDeX Taskbar, the INDeX Taskbar on the Server needs to be restarted. If an INDeX Wallboard Server is running on the Server this will also need to be restarted.

---

### INDeX Report Manager

1. If the IPX/SPX protocol is being used to connect the INDeX Report Client to a server and the INDeX Report Client takes longer than a minute to start then try changing the frame type.
2. To be sure that the INDeX Archiver is passing information into the database it is a good idea to keep the status window displayed.
3. From the Document Agent Server Options screen, you **MUST** set the Performance [Number of tasks allowed to run concurrently], attribute to 1. This allows the overlapped scheduled reports, to run correctly.

---

### INDeX Wallboard Server/Client

1. On the INDeX Wallboard Server/Client, scheduled messages can only be removed from the schedule by a User with a higher access level than the User that scheduled the message or by the user that scheduled the message. It therefore follows that if a user with Administrator access rights has scheduled a message then only that User can remove that message from the schedule.

# Change Server PC Name

## Overview

It is vital that the Server PC used to run the INDeX CCM modules is called ARCHIVERSQL whilst installing the applications. Once the installation is complete, change the PC name and workgroup name if desired, as detailed in this section, prior to connecting the PC to the network.

The following procedure has to be performed **after** the INDeX CCM applications have been installed on the relevant PCs. However you **must** ensure none of the INDeX CCM applications are running.

## Server PC

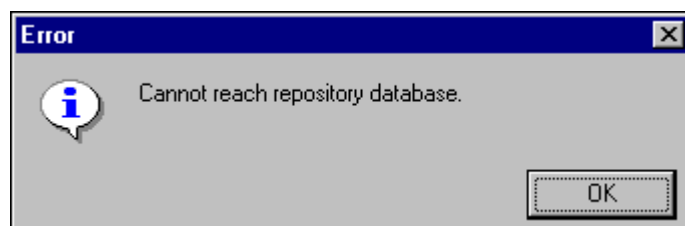
To change the Server PC name the following procedures have to be performed:

1. Change the Server PC Name as detailed below
2. Change the ODBC Setting for both the SDXArchiver and SDXRepository databases as detailed in "Changing the ODBC Settings" on page 74;
3. Register the new SQL 7.0 Server.

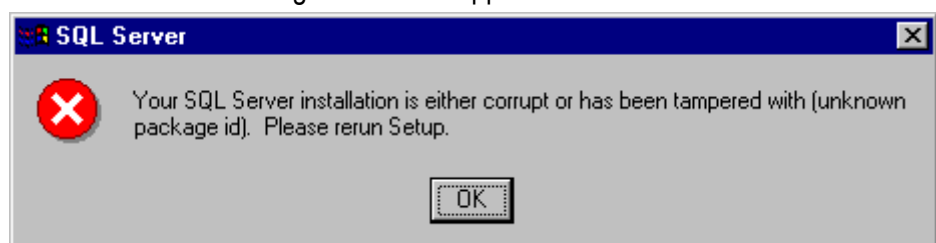
### Change Server PC Name

If there is another ARCHIVERSQL PC on the Network, then install the INDeX CCM applications without the PC plugged to the Network.

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel, double click **Network**,
3. From the Identification tab. Click *Change*.
4. Type your computer name as required. Click *OK*.
5. From the Identification tab, click *OK* to confirm.
6. When prompted, click *Yes* to restart the PC.
7. Once the PC has restarted the following screen may appear:



8. Click *OK*. The following screen also appears:

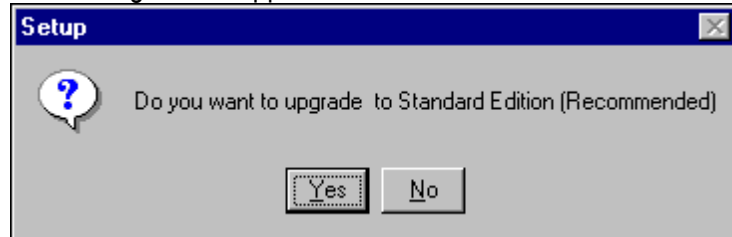


10. Click *OK*. You must register the new PC Server name.
11. Close **all** the INDeX CCM applications.

## Registering Server (SQL Server 7.0)

When you run SQL Server Enterprise Manager for the first time, it registers the local server running SQL Server automatically. If you change the name of the PC Server, you need to update the SQL 7.0 Setup files and run the **Register Server Wizard** to register the new Server.

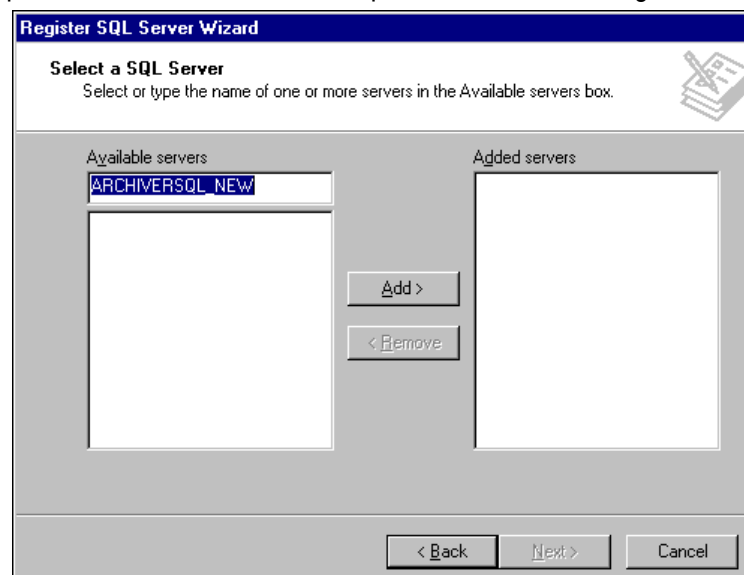
1. Insert the SQL 7.0 Server CD in the CD ROM drive.
2. From the Microsoft SQL Server Automenu screen click **Install SQL Server 7.0 Components**.
4. From the Install SQL Server 7.0 Components screen **select Database Server – Standard Edition**.
5. Ensure **“Local Install – Install to the Local Machine”** is selected and then click *Next*, the following screen appears:



6. Click *Yes* to upgrade the SQL Server 7.0 Setup.
7. From Setup Complete screen, click *Finish*.
8. Click *Exit* to close the SQL Server Automenu. Restart the PC.

Once the PC is rebooted You must register the server before you can administer and manage it by using SQL Server Enterprise Manager. When you register a server, you must specify:

- The name of the server.
  - The type of security used to log on to the server.
  - Your login name and password, if appropriate.
  - The name of the group where you want the server to be listed after it is registered.
1. From the Windows NT Taskbar, click the Start button, point to Programs and Microsoft SQL Server 7.0 and then select Enterprise Manager.
  2. Click (using the right hand mouse button) SQL Server Group and select New SQL Server Registration, the Register SQL Server Wizard Welcome screen appears, from which click *Next* to proceed to the following screen:





3. Click *Add* and then click *Next* to proceed.
4. From **Select an Authentication Mode** screen, click to select *SQL Server Authentication*, and then click *Next* to proceed to the following screen:

The screenshot shows the 'Register SQL Server Wizard' dialog box. The title bar reads 'Register SQL Server Wizard'. The main heading is 'Select Connection Option'. Below the heading is a descriptive text: 'When you connect using SQL Server account information you can store your login name and password or provide it each time you connect.' There are two radio button options: the first is selected and reads 'Login automatically using my SQL Server account information.' Below this option are two text input fields labeled 'Login name:' and 'Password:'. The second radio button option is 'Prompt for the SQL Server account information when connecting.' At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

5. Type **sa** as the Login name and then click *Next* to proceed.
6. Ensure **SQL Server Group** is selected and then click *Next* to proceed.
7. Click *Finish* to connect the new server, the following screen appears:

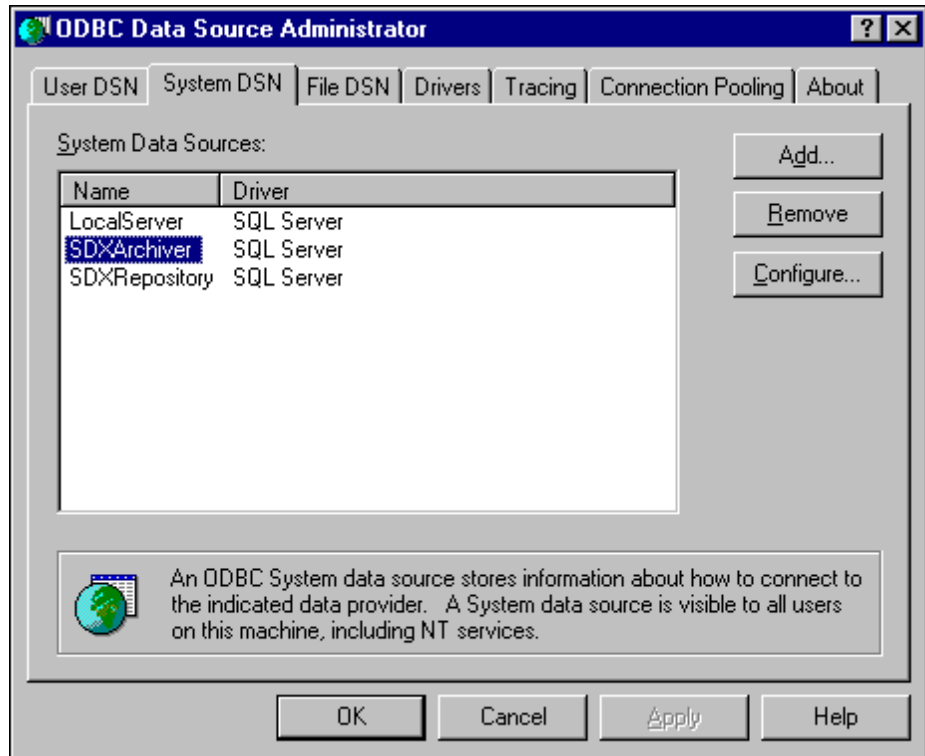
The screenshot shows the 'Register SQL Server Messages' dialog box. The title bar reads 'Register SQL Server Messages'. The main text says 'Server registration completed.' Below this is a 'Status:' label followed by a list box containing one entry: 'ARCHIVERSQL\_NEW - Registered successfully'. At the bottom, there is a paragraph of text: 'To change settings for any SQL server that was not registered successfully, select the server and then click the Properties button. To stop the server registration, click the Stop button. (Note: Servers already registered will remain registered. Any remaining unregistered servers will not be registered.)' At the bottom right, there are three buttons: 'Properties', 'Stop', and 'Close'.

8. Once the Server Registration is complete, click *Close*.
9. To start SQL Server automatically, select *Automatically start SQL Server when connecting*.

## Changing the ODBC Settings

Ensure you perform the following procedure for both the SDXArchiver and SDXRepository System Data Sources.

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel, open **ODBC**, and click **System DSN** tab, the following screen appears:



The System DSN Tab adds, deletes, or sets up data sources with system DSNs. These data sources are local to a computer, rather than dedicated to a user. When the computer's name changes, you must also change the settings of the data sources. The system, or any user having privileges, can use a data source set up with a system DSN.

**Note**

*System data sources lists all the system DSNs that includes the name of each DSN and the driver associated with the DSN. Double-clicking a system DSN displays the driver-specific data source setup dialog box.*

3. Select the **SDXArchiver** and then click *Configure*.

**Note**

*Configure – Displays the driver-specific data source setup dialog box that enables you to change the configuration of an existing system data source. You must select the name of a system data source from the list before choosing the Configure button.*

4. In the **Description** box, enter the new Server name (e.g. if the PC name has been changed to ARCHIVERSQL123, then in the above screen, SDXArchiver on server ARCHIVERSQL changes to SDXArchiver on server ARCHIVERSQL123).
5. In the **Server** box, enter the new server name (e.g. ARCHIVERSQL123), click *Next*, the following screen appears:
6. Ensure “*With SQL Server authentication using a login ID and password entered by the user*” is selected.
7. Enter the **Login ID** as **sa**, leaving the Password field blank.
8. Click *Next*, ensure SDXArchiver is selected, click *Next*.
9. Ensure “*Let SQL Server ODBC driver choose the translation method*” is selected.
10. Click *Next* and then click *Finish*.
11. Click *Test Data Source* to ensure the configuration is created and then click *OK*.

**Note**

*You MUST ensure to repeat the above procedure for the SDXRepository Data Source.*

12. From the ODBC Data Source Administrator screen, click *OK*.
13. Switch the PC off, connect the PC to the Network, and switch the PC back on.

## Client PC (Windows NT Workstation)

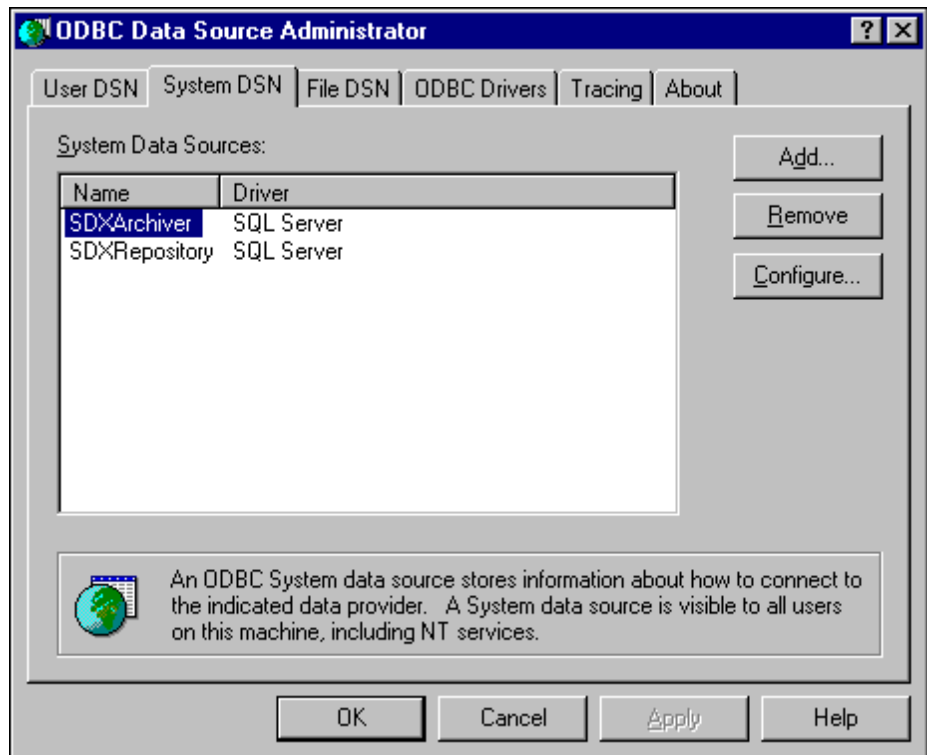
Once the Server PC name has changed, you must change the ODBC settings of the SDXArchiver and SDXRepository databases as detailed in "Changing the ODBC Settings" on page 74.

## Client PC (Windows 98)

When you change the name of the Server PC, the you also need to make the relevant database changes on the Client PC. This is vital when running the INDeX Report Client.

Ensure you perform the following procedure for **both** the SDXArchiver and SDXRepository System Data Sources.

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel, open **32bitODBC**, and click **System DSN** tab, the following screen appears:



3. Select the SDXArchiver and then click *Configure*.
4. In the **Description** box, enter the new Server name (e.g. if the PC name has been changed to ARCHIVERSQL123, then in the above screen, SDXArchiver on server ARCHIVERSQL changes to SDXArchiver on server ARCHIVERSQL123).
5. In the **Server** box, enter the new server name (e.g. ARCHIVERSQL123), click **OK**.

**Note**

*You must ensure you repeat the above procedure for the SDXRepository Data Source.*

6. From the ODBC Data Source Administrator screen, click **OK**.

---

# PC Upgrade

---

## Overview

The INDeX Contact Centre Manager supports a minimum of 5 (using SPC5) concurrent supervisor positions. However you can increase the number of clients, by upgrading to either the SPC10 or SPC20.

This section explains, in detail, the procedures of transferring the relevant data as well as the SDXArchiver and SDXRepository database from a lower Server PC specification to a higher Server PC specification (e.g. SPC5 to SPC10/SPC20).

The same procedure is applicable when transferring the data from an earlier version of the INDeX CCM Server PC to SPC5/10/20.

To upgrade to a higher Server PC specification, as your Server PC within the network, you need to:

- Change the name of the Source PC as detailed in “Change Server PC Name” on page 71
- Transfer the Wallboard Server Database from Source PC to Destination PC;
- Copy INDeX Call Centre View folder from Source PC to Destination PC;
- Copy INDeX Taskbar Login Data folder from Source PC to Destination PC;
- Transfer the SDXArchiver Database from Source PC to Destination PC.

**Note**

*During this process you must ensure NONE of the INDeX CCM applications are running.*

---

## INDeX Wallboard Server Database Transfer

1. From the Source Server PC, map a drive to the Destination Server PC (e.g. \\newserver\c) as detailed in "Map Network Drive" on page 41.
2. From the Source Server PC, using Windows NT Explorer, copy "SDXWB.ini" "DEVICES.mdb", "WALLBRD.mdb" and "AggregateVars.mdb" to the same location on the Destination Server PC (i.e. C:\lucent\WBSERVER).

---

## INDeX Call Centre View Database Transfer

1. From the Source Server PC, map a drive to the Destination Server PC (e.g. \\newserver\c) as detailed in "Map Network Drive" on page 41.
2. From the Source Server PC, using Windows NT Explorer, copy LANGUAGES, MUGSHOTS and OPERATOR folders to Destination Server PC (i.e. C:\lucent\CCV).

---

## INDeX Taskbar Login Data Transfer

1. From the Source Server PC, map a drive to the Destination Server PC (e.g. \\newserver\c) as detailed in "Map Network Drive" on page 41.
2. From the Source Server PC, using Windows NT Explorer, copy DATA folder to Destination Server PC (i.e. C:\SDX\Data).

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# Administering Database

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## Backing Up and Restoring Overview

The backup and restore component of Microsoft® SQL Server™ provides an important safeguard for protecting critical data stored in SQL Server databases. Backing up and restoring a database allows for the complete restoration of data over a wide range of potential system problems:

- **Media failure**  
If one or more of the disk drives holding a database fail, you are faced with a complete loss of data unless you can restore an earlier copy of the data.
- **User errors**  
If a user or application either unintentionally or maliciously makes a large number of invalid modifications to data, the best way to deal with the problem may be to restore the data to a point in time before the modifications were made.
- **Permanent loss of a server**  
If a server is disabled permanently, or a site is lost to a natural disaster, you may need to activate a warm standby server or restore a copy of a database to another server.

Additionally, backing up and restoring databases is useful for non-system problems, such as moving or copying a database from one server to another. Backing up a database from one computer, and restoring the database to another can make a copy of a database made quickly and easily.

---

### Backing Up a Database

Backing up a database makes a copy of a database, which can be used to restore the database if it is lost. Backing up a database copies everything in the database. A backup operates like a fuzzy snapshot taken of a database :  
A database backup records the complete state of the data in the database at the time the backup operation completes.

---

### Restoring a Database

Restoring a database backup returns the database to the same state it was in when the backup was created. Any incomplete transactions in the database backup, (transactions that were not complete when the backup operation completed originally), are rolled back to ensure the database remains consistent.

## Creating Database Backup

When creating a database backup, the backup operation copies only the data in the database to the backup file; it does not copy out unused space in the database. Because the database backup contains only the actual data in the database, not any empty space, the database backup is likely to be smaller than the database itself.

If you are producing database backups only, the backup interval should be long enough to keep the backup overhead from affecting production work, yet short enough to prevent the loss of significant amounts of data. Databases that do not contain critical data and have few modifications can be backed up on a weekly or biweekly basis. Data that is more critical or more volatile may need to be backed up daily, or even more frequently. Some databases that are usually read-only may need to be backed up only after a periodic refresh with new data.

**Note**

*If any files are added or removed from a database, a database backup should be created immediately.*

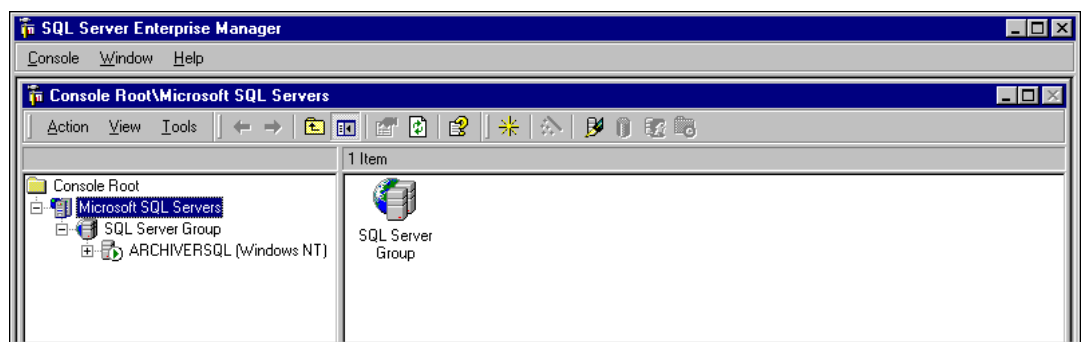
### Database - Complete

During the installation of the Report Manager, Backup administration is configured and the SDXArchiver database is automatically backed-up in the D:\MSSQL7 drive. To change the location of the backup destination to the Tape Drive, perform the following procedure.

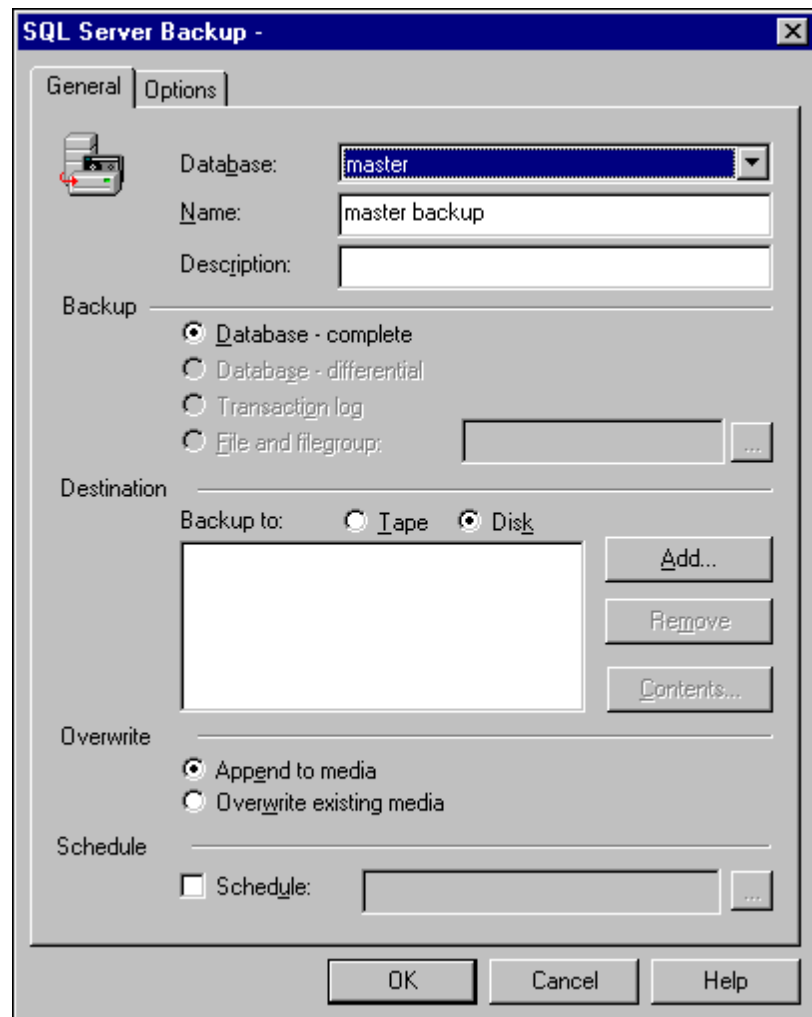
**Note**

*Ensure the Tape drive is already installed to be able to change the destination of the database backup drive.*

1. From the Windows NT Taskbar, click the Start button, point to Programs and Microsoft SQL Server 7.0 and then select Enterprise Manager, the following screen appears:



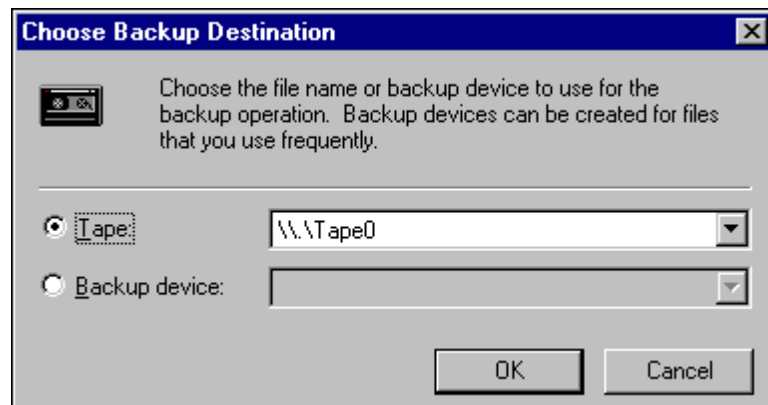
- Highlight the Server item (i.e. ARCHIVERSQL in the above screen) on the explorer tree and then from **Tools** menu, select **Backup Database**, the following screen appears:



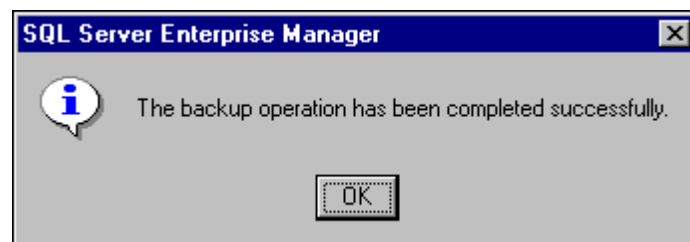
- Using the pull down arrow associated with **Database** field, select **SDXArchiver** database.
- From the list of **Backup** options, ensure **Database – complete** is selected. This is recommended when backing up the database for the first time. Refer to “Database – Differential” on page 81 to select the Differential Backup option.



- Click to select **Tape** for the **Backup Destination** and then click *Add*. Click to select **Tape** and then from the pull down arrow select **Tape** as displayed in the following screen:



- Click *OK*.
- From the SQL Server Backup screen, select **Overwrite – Append to media** option. Click *OK*.
- Once the database has been copied, the following screen appears:



- Click *OK*.

---

### **Database – Differential**

You can supplement database backups by using differential database backups that record only the changes made to the database after the last database backup. For example, you can create a database backup nightly, and create differential database backups at shorter intervals, such as every four hours.

Each differential database backup records all modifications made to a database after the last database backup, not just the changes made after the last differential database backup. If you create a database backup, followed by multiple differential database backups, you do not have to restore the database backup followed by all of the differential database backups; you only have to restore the database backup and the last differential database backup created.

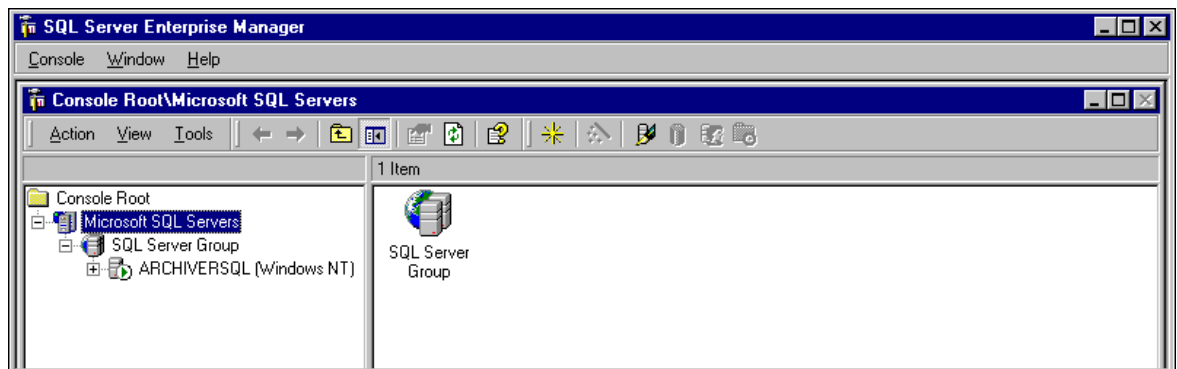
Perform the procedure detailed in the “**Error! Reference source not found.**” on page **Error! Bookmark not defined.**, however select **Database – Differential** as the **Backup** option.

## Automatic Backup

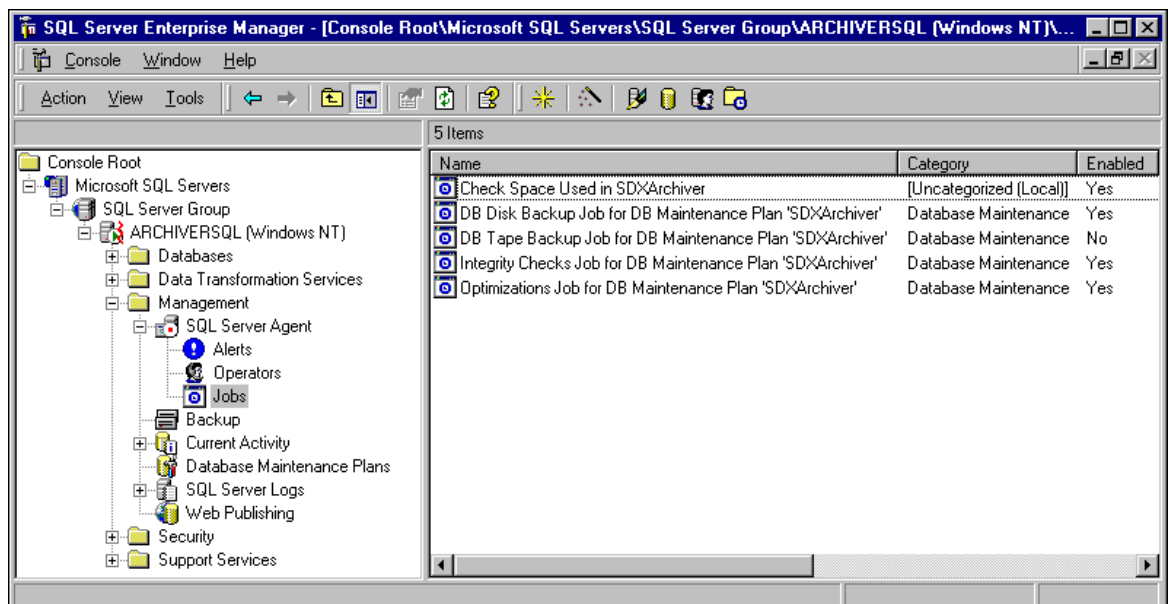
You can automate administrative tasks using SQL Server Agent jobs. You define the job one time, yet you can run it many times.

By default the SDXArchiver database is automatically backed up on to the D:\MSSQL7 disk drive. This section details the procedure required to automatically enable the Tape drive as the backup device. Once the Automatic Tape Drive Backup has been enabled it is advisable that you disable the backup job to disk drive as detailed in this section.

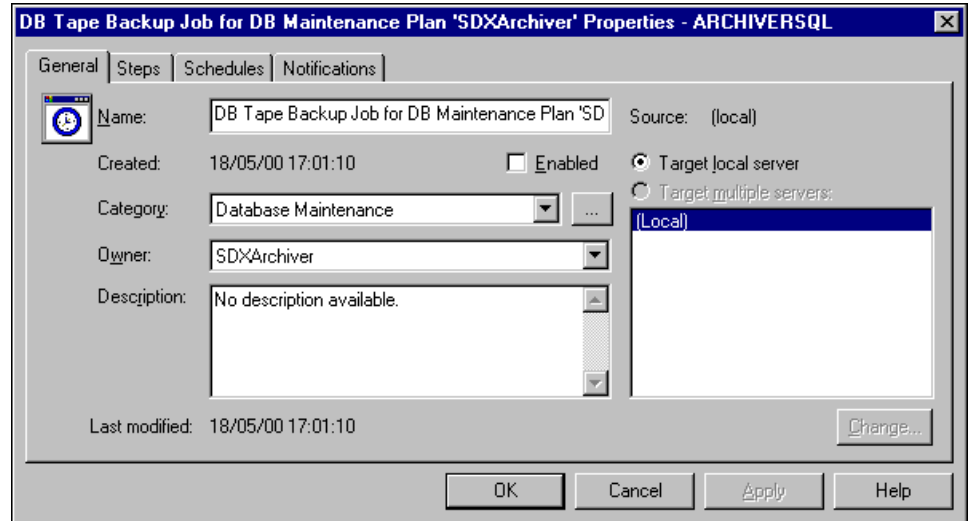
1. From the Windows NT Taskbar, click the Start button, point to Programs and Microsoft SQL Server 7.0 and then select Enterprise Manager, the following screen appears:



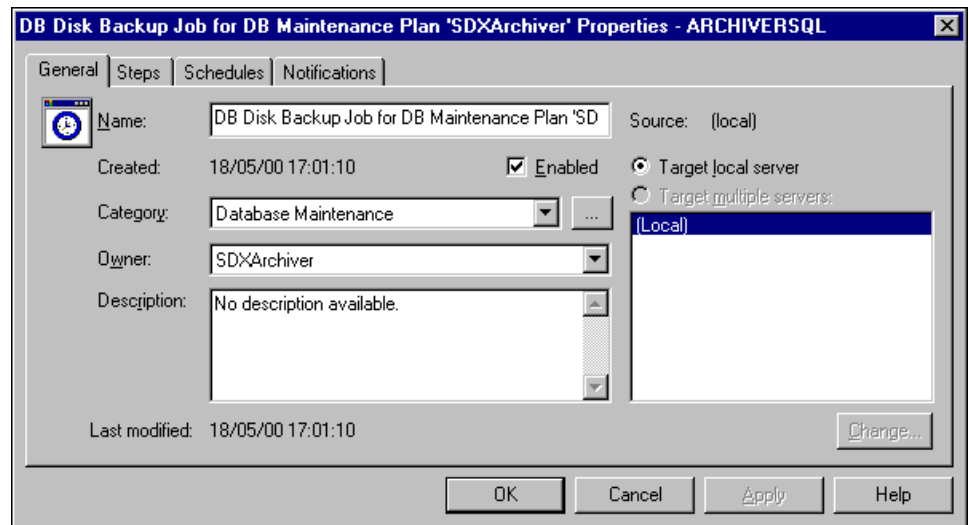
2. Click the Server item (i.e. ARCHIVERSQL in the above screen) on the explorer tree, then click **Management** folder, from which SQL Server Agent and then click Jobs as shown in the following screen:



- Click "DB Tape Backup Job for DB Maintenance Plan 'SDXArchiver'" (using the right hand mouse button) and select **Properties**, the following screen appears:



- Click to select **Enabled**, click *Apply* and then *OK*.
- To disable the Disk Backup, click "DB Disk Backup Job for DB Maintenance Plan 'SDXArchiver'" (using the right hand mouse button) and select **Properties**, the following screen appears:



- Remove tick from **Enabled**, click *Apply* and then *OK*.

## Backup to a Remote Device

To enable the backing up of a SQL database to a remote backup device residing on a Windows NT PC the following procedures must be carried out:

### On the Source SQL Server PC:

1. Using User Manager, create a New User and grant the newly created User the rights to log on as a Service;
2. For any NTFS drives that contain SQL files or SQL devices, ensure that the Newly created user has the right to read, write, execute and delete
3. Configure the MSSQLServer Service.

### On the Destination Windows NT PC

1. Using User Manager, create a New User (with the same name as the one on the Source PC), specifying a password if desired;
2. Configure the Drive/Directory, in which the backup device is to reside, to be shared;
3. For any NTFS drives that contain SQL files or SQL devices, ensure that the new user has Full Control Access;
4. Using the SQL Server 7.0 Enterprise Manager, configure the Backup Database as detailed in "Creating Database Backup" on page 79, ensuring the destination backup device is set to this PC.

---

### **Create a New User**

User Manager enables you to manage security for a computer running Windows NT. With User Manager, you can create and manage user accounts, create and manage groups and manage the Windows NT's accounts (passwords), user rights and auditing policies.

1. From the Windows taskbar, click Start, point to Programs and from Administrative Tools (Common), select **User Manager**.
2. From the **User** menu, select **New User**, the following screen appears:
3. Type the appropriate information:
  - In **Username**, type a user name;
  - In **Full Name**, type the user's complete name;
  - In **Description**, type a description of the user or the user account;
  - In both **Password** and **Confirm Password**, type a password of up to 14 characters (if desired);

**Note**

**A user name cannot be identical to any other user or group name of the computer being administered.**

4. Click to clear **User Must Change Password at Next Login**.
5. Click to select **User Cannot Change Password** and **Password Never Expires**.
6. Click **Add** and then click **Close**.
7. From the **Policies** Menu, select User Rights. Click to select **Show Advanced User Rights**.
8. Click **OK**. From the User menu, select **Exit** to close the User Manager application.


---

**Configure the NTFS Drive**

1. Double click My Computer.
2. Click (using the right hand mouse button) the NTFS Drive (that contains SQL Devices and Database), select **Properties** from the pull down menu.
3. Click the **Security** tab and click *Permissions*, ensure that the newly created user has Full Control Access (i.e. the right to read, write execute and delete).
4. If the newly created user name is not listed, click *Add*.
5. From Add Users and Groups screen, select the new user name and then select **Full Control** for Type of Access. Click *OK*.
6. From Directory Permissions screen click *OK*.
7. From Drive **Properties** screen, click *OK*. Close My Computer.

---

**Configure MSSQLServer Service**

1. From the Windows NT taskbar, click Start, point to Setting and select Control Panel.
2. From the Control Panel, double click Services. Select MSSQLServer and then click Startup.
3. By default, this service is set to Log On As: System Account.
4. Click to select **This Account**. Click  Add User screen appears.
5. Select the new user name, click *Add* and then *OK*.
6. Enter the User's Password (if one was specified) and Confirm Password and then click *OK*.
7. With the MSSQLServer service highlighted click *Stop* and then click *Start*.

## Restoring a Database Backup

Restoring a database backup returns the database to the same state it was in when the backup was created. When restoring a database, SQL Server re-creates the database and all of its associated files automatically by performing these steps:

1. All of the data from the backup is copied into the database; the rest of the database is created as empty space.
2. Any incomplete transactions in the database backup, (transactions that were not complete when the backup operation completed originally), are rolled back (undone) to ensure the database remains consistent.

This process ensures that the restored database is a copy of the database as it existed when the backup operation completed, except that all incomplete transactions have been rolled back. This is required to restore the integrity of the database.

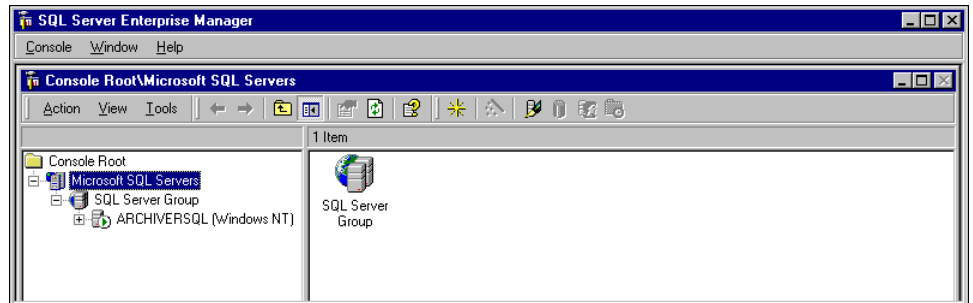
Additionally, to prevent overwriting a database unintentionally, the restore operation can perform a safety check automatically. The restore operation fails if:

- The database named in the restore operation already exists on the server and the database name does not match the database name recorded in the backup set.
- The database named in the restore operation already exists on the server but it is not the same database as the database contained in the database backup. For example, the database names are the same but each database was created differently.
- One or more files need to be created automatically by the restore operation (regardless of whether the database already exists) but files with the same file name as those that need to be created already exist.

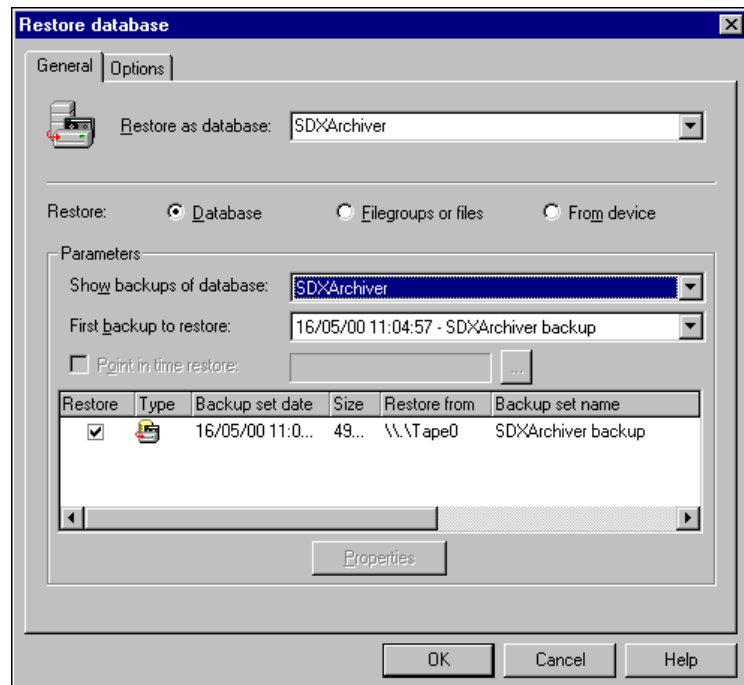
These safety checks can be disabled if the intention is to overwrite another database.

This section details the procedure that is required to restore the database from the Tape Drive.

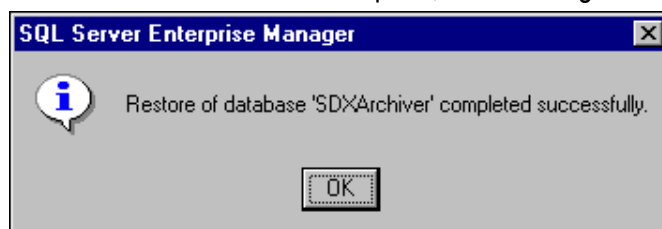
1. From the Windows NT Taskbar, click the Start button, point to Programs and Microsoft SQL Server 7.0 and then select Enterprise Manager, the following screen appears:



2. Highlight the Server item (i.e. ARCHIVERSQL in the above screen) on the explorer tree and then from **Tools** menu, select **Restore Database**. Select the SDXArchiver database as shown in the following screen:



3. Click OK.
4. Once the Restore of the database is complete, the following screen appears:



5. Click OK.

---

## Restoring a Database to a Different PC

This is to help those who are attempting to restore a previously backed up database onto a different machine. The following steps should be completed from the new machine within SQL Enterprise Manager after you have restored the database.

3. Within Enterprise Manager expand the Security folder.
4. Click on **Logins** and then Right mouse click on the **SDXArchiver** and select **properties**.
5. Click on the **Database Access** Tab.
6. Tick the box next to **SDXArchiver**. Whilst this is highlighted ensure that the two boxes 'PUBLIC' and 'DB\_OWNER' are checked in the lower half of the window.
7. Tick the box next to **SDXrepository**. Whilst this is highlighted ensure that the two boxes 'PUBLIC' and 'DB\_OWNER' are checked in the lower half of the window
8. Close the properties window, exit SQL Enterprise Manager.

---

## Expand a Database

Microsoft® SQL Server™ can expand a database automatically, according to growth parameters defined when the database was created. However this feature is disabled during the installation of the INDeX Report Manager. You can manually expand the SDXARCHIVER database by allocating additional file space on an existing database file

When expanding a database, you must increase the size of the database by at least 1 megabyte (MB). When a database is expanded, the new space is made immediately available to the data file.

During the INDeX Report Manager installation, 2GB database is created on the D:\ drive. It is advisable to increase the size of the database as follows:

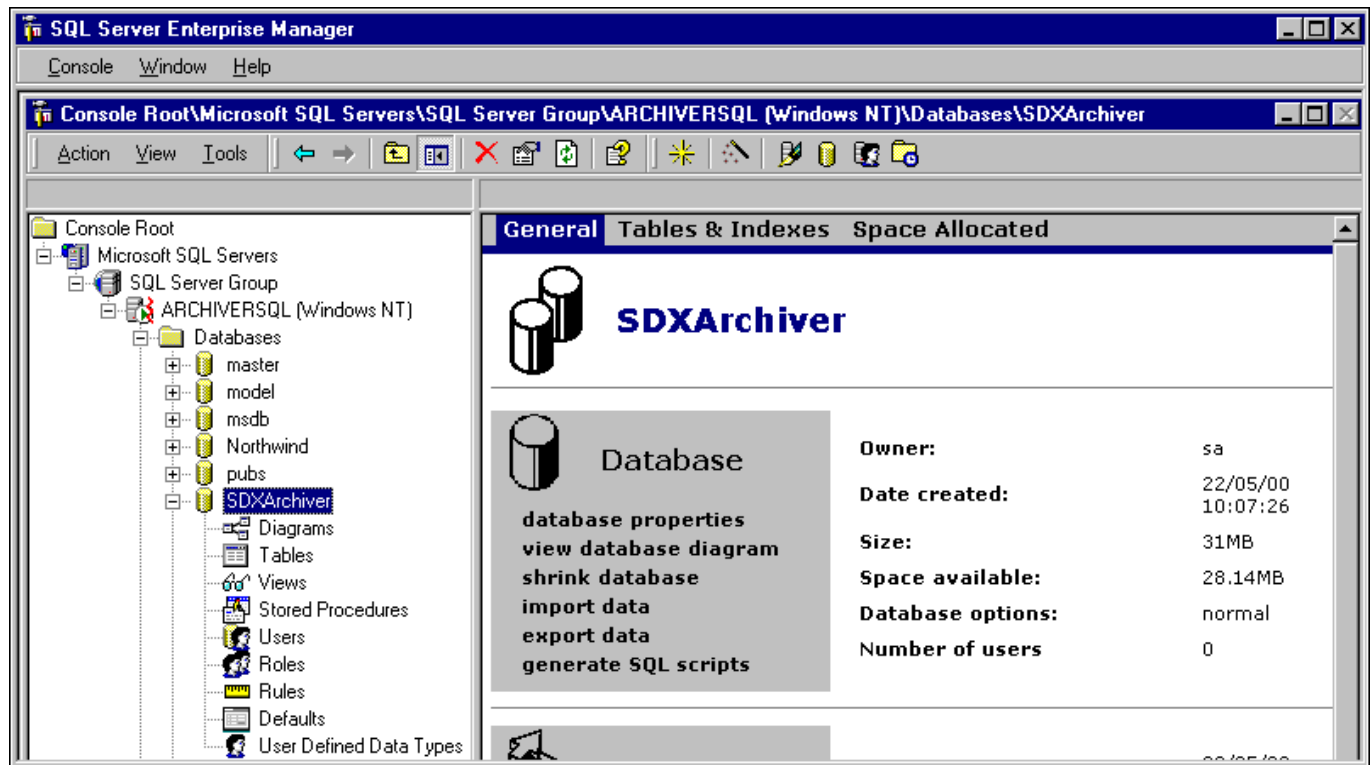
- For SPC5 expand the database to: 5GB
- For SPC10 expand the database to: 20GB
- For SPC20 expand the database to: 41GB

When the database is 80% full you will be presented by a Free space Disk warning. Once it gets to 95% another message is displayed warning you that it will start clearing the oldest day's data.

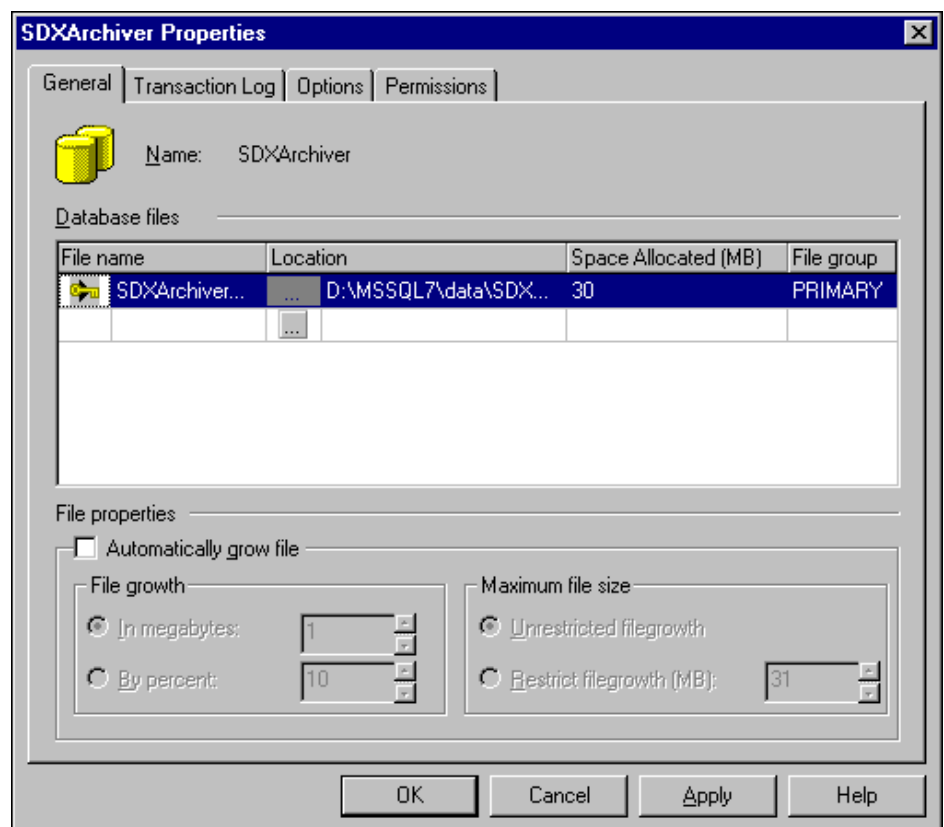
This section details the procedure required to expand the SDXArchiver database.

1. From the Windows NT Taskbar, click the Start button, point to Programs and Microsoft SQL Server 7.0 and then select Enterprise Manager.
2. Expand the Server group (i.e. SQL Server Group), expand the Server (i.e. ARCHIVERSQL) and then the Databases, as displayed in the screen on the following page:





3. Click (using the right hand mouse button) SDXArchiver and then select Properties, the following screen appears:



4. In the **Space Allocated (MB)** enter the appropriate number, click *Apply* and then click *OK*.

# INDeX Telephone System

## Requirements

This section assumes that the installer is familiar with the basic programming of the INDeX Telephone System and the INDeX Programming manual is available.

- INDeX Telephone System Software must be Level 8.0+.
- When using INDeX CCM applications, you can only use INDeX 2050/DT5 Handsets with ACD Agents logged on and Turret devices. However INDeX Report Client obtains information on all devices.
- Server Licence numbers for INDeX applications are:

Server Licence No.	INDeX CCM application
23	INDeX Call Centre View
24	INDeX Wallboard Server
25	INDeX Archiver
27	INDeX Report Client
28	INDeX Report Designer
29	Agent Numbers (5)
30	Agent Number (1)

### Agent Licence Pack

The relevant agent Licence pack is required if information on individual agent's status and activity is to be displayed on INDeX Call Centre View screens as well as Wallboard devices.

The relevant agent Licence pack is required if information on individual agent's status is to be reported upon by the INDeX Report Manager.

Call Activity is available for all INDeX users without the Agent Licence Pack.

### Naming Directory Numbers

Since the INDeX Telephone System programming is reflected within the INDeX Contact Centre Manager applications, it is important to name the directory numbers (i.e. Agents, Groups, Trunks, DDIs, etc).

It is also highly recommended that the directory number names be unique to aid identification of specific directory number within the Standard Reports.

Where directory numbers of a specific type are unnamed, or where more than one directory number as a specific type has the same name, the Standard Reports will group data for those directory numbers as a single entity (e.g. all unnamed agents will be grouped together as a single agent called "No Name", and all DDIs named "Company DDI" will be grouped together as a single DDI called "Company DDI, etc.).

If the directory numbers have not been named, then the terminology for the directory numbers implemented in the INDeX Contact Centre Manager applications is:

Agent – ACD Agent (XXXX\*) – XXXX

Group – Agt Group (XXXX) – XXXX

Trunk Grp – Trunk GP (XXXX) – XXXX

Tie Line (Trunk) – Tie Line (XXXX) – XXXX

DPNSS (Trunk) – DPNSS (XXXX) – XXXX

DASS (Trunk) – DASS (XXXX) – XXXX

Alog (TWC) – Alog (TWC) (XXXX) – XXXX

Pilot (Trunk) – Pilot (XXXX) – XXXX

\* Where XXXX is the directory number.

---

## Group Reporting

When configuring the INDeX it is important to understand how calls are attributed to groups on the Call Centre View, Wallboards and Report Manager.

### INDeX-Net in the Contact Centre Environment

Staff Management is a LOCAL issue hence all real time and historic analysis for teams will require local CCM's.

Traffic Management is a GLOBAL issue. Therefore in an INDeX-Net configuration calls waiting across an entire network (queued) are displayed on all Call Centre View implementations across INDeX-Net.

### Call Centre View and Wallboard Manager

The INDeX Call Centre View and Wallboard Manager products report on groups directly derived from the INDeX Database. Agents and Trunks may be reported on in as many groups as they are members of within the INDeX. It is important however to understand how statistics for these groups are derived and it is important for the user of the system to understand these reporting structures. These are defined below

**Call Totals and average durations** for Groups are calculated by totalling the statistics for the members of group. Should an agent or group be a member of multiple groups, their call totals will appear in multiple groups.

**Lost Calls** are only attributed to the initial target agent group i.e. Initial INDeX ring group. Lost calls are also attributed to Trunk Lines, Trunk Groups and Pilot Numbers.

**Agent Status** Information for a group shows the number of agents or trunks within a given group, which are in each state.

#### **Agent Statistics for:**

**Calls Waiting, PCA, GOS, Longest Wait, LWait (Ans), L Wait (Lost), Overflowed to/From** statistics are only incremented for calls which are directly presented to that agent group. That is they only increment where the agent group is used for Call routing purposes.

**Trunk Statistics for:**

**Calls waiting** and **Lost** are calculated by totalling the statistics for the members of the trunk group.

**PCA** and **GOS** are calculated for each trunk group after totaling answered calls (plus lost for GOS) for the members of the trunk group.

**LWait (Lost)** and **LWait (Ans)** reflect the longest wait of all those logged against any member of the trunk group.

**INDeX Report Manager**

The INDeX CCM has two concepts for historic reporting that cater for different views a supervisor may require of their contact centre. One type of report referred to as 'Target' reports, provides analysis based on where the call was presented and relates closely to the manner in which the INDeX call routing has been configured. The second type of report, referred to as 'collective' reports, is based on arbitrary sets of agents and need not necessarily correspond to the manner in which switch call routing is programmed.

**INDeX CCM Reporting characteristics associated with INDeX Voice Manager**

The following conditions apply to the initial answer/ lost segment of calls which were first presented to the Voice Manager (VM) (e.g. Voice Mail front ended systems):

1. Trunk/DDI – Call remains unanswered until answered by non-Voice Manager device or if terminated within 3<sup>rd</sup> party Voice Mail, or encountered an "Answered" flag in INDeX Voice Manager.
2. 3<sup>rd</sup> Party Voice Mail – Answered if Voice Mail connects, lost by Voice Mail if caller hangs up before Voice Mail can answer.
3. INDeX Voice Manager – Calls will only be registered as answered when the INDeX Voice Manager has successfully processed the call (passed an "Answered" flag in Call Flow)

**Note**

***A call, which is first connected to INDeX Voice Manager but not deemed answered by VM, will be considered lost, but not refused if terminated during first connection to IVM.***

4. Agent/Agent Group – Designation of answered and lost calls is directly dependent upon clause 1.
5. If a call was lost whilst being transferred by Voice Manager, the lost call statistics will be designated to the transfer target. Calls lost whilst alerting or connected to Voice Manager will be deemed lost by the Voice Manager device or group.
6. A call successfully transferred by Voice Manager will be treated as a new incoming call by trunks, DDI and Agents, but transferred by Voice Manager devices.

## Tie Line Statistics

Tie Line Statistics are presented from the perspective of the INDeX Telephone System to which Access Manager/Delta Server is connected.

Statistics for Tie Lines and groups of Tie Line reflect traffic across respective directory numbers (trunk and trunk groups).

Each of the following tables represent a different call category as indicated in top left hand corner (e.g. Internal Answered, Incoming Answered, etc.).

The information in all boxes reflects the effect of the relevant call category on the statistics in each of columns for the call party represented in the rows.

### Internal Tie Line

The relevant rows (i.e. Source or Recipient) are dependent upon the direction of the call.

Internal Answered	Status	Presented	Answered	Avg I/C	Lost	Refused	Outgoing	Avg O/G	Internal
Source Agent	Outgoing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	From(+1)
Source Tie Line	Outgoing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Recipient Tie Line	Incoming	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Recipient Agent	Incoming	N/A	N/A	N/A	N/A	N/A	N/A	N/A	To(+1)

Internal Unanswered	Status	Presented	Answered	Avg I/C	Lost	Refused	Outgoing	Avg O/G	Internal
Source Agent	Outgoing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Source Tie Line	Outgoing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Recipient Tie Line	Busy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Recipient Agent	Ringing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A – Not Applicable;

+1 – Incremented by 1;

**External Calls To/From Remote Tie Line**

Switch 'A' refers to the INDeX Telephone System directly connected to the PSTN.  
Switch 'B' refers to any INDeX Telephone System indirectly (i.e. via Switch 'A') connected to PSTN via Tie Line.

PSTN Trunks and Switch 'A' statistics are relevant where Access Manager/Delta Server are connected to Switch 'A'.

Switch 'B' and Agents statistics are relevant where Access Manager/Delta Server are connected to Switch 'B'.

(gps) – signifies that the relevant agent statistics only affects agent groups.

Incoming Answered	Status	Presented	Answered	Avg I/C	Lost	Refused	Outgoing	Avg O/G
PSTN Trunks	Incoming	+1	+1	N/A	N/A	N/A	N/A	N/A
Switch 'A' Tie Line	Outgoing	N/A	N/A	N/A	N/A	N/A	+1	Calculated
Switch 'B' Tie Line	Incoming	+1	+1	Calculated	N/A	N/A	N/A	N/A
Agent	Incoming	+1(gps)	+1	Calculated	N/A	N/A	N/A	N/A

Incoming Unanswered	Status	Presented	Answered	Avg I/C	Lost	Refused	Outgoing	Avg O/G
PSTN Trunks	Incoming	+1	N/A	N/A	+1	N/A	N/A	N/A
Switch 'A' Tie Line	Outgoing	N/A	N/A	N/A	N/A	N/A	+1	N/A
Switch 'B' Tie Line	Busy	+1	N/A	N/A	+1	N/A	N/A	N/A
Agent	Ringing	+1(gps)	N/A	N/A	+1	+1	N/A	N/A

Outgoing Connected	Status	Presented	Answered	Avg I/C	Lost	Refused	Outgoing	Avg O/G
Agent	Outgoing	N/A	N/A	N/A	N/A	N/A	+1	Calculated
Switch 'B' Tie Line	Outgoing	N/A	N/A	N/A	N/A	N/A	+1	N/A
Switch 'A' Tie Line	Incoming	+1	N/A	N/A	N/A	N/A	N/A	N/A
PSTN Trunks	Outgoing	N/A	N/A	N/A	N/A	N/A	+1	Calculated

Outgoing Failed	Status	Presented	Answered	Avg I/C	Lost	Refused	Outgoing	Avg O/G
Agent	Outgoing	N/A	N/A	N/A	N/A	N/A	+1	Calculated
Switch 'B' Tie Line	Outgoing	N/A	N/A	N/A	N/A	N/A	+1	N/A
Switch 'A' Tie Line	Incoming	+1	N/A	N/A	N/A	N/A	N/A	N/A
PSTN Trunks	Outgoing	N/A	N/A	N/A	N/A	N/A	+1	N/A

N/A – Not Applicable;

+1 – Incremented by 1;

Calculated – Average value re-evaluated

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# Wallboard Installation and Maintenance

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## INDeX Wallboard 22

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### **Introduction**

The INDeX Wallboard 22 is a two line by 22-character tri-colour Wallboard. It connects via a multi-drop circuit to the host PC running the INDeX Wallboard Server application.

The display wallboard consists of the following assemblies.

#### **Housing**

A housing which is manufactured from an aluminum extrusion with anti reflective polycarbonate screen and removable plastic end caps.

#### **Power Supply**

9V DC switch mode power supply assembly incorporating an RJ45 chassis mounted data connector. The power supply is configurable for use from either 120V AC or 240V AC (NOMINAL VOLTAGES) supplies.

#### **Logic Control Board**

Logic control board that receives RS485 serial data from the data RJ45 connector.

#### **Display Board Assembly**

Tri-colour display board assembly which consists of three display boards which are connected one to the other by a fibre optic link. The left-hand display board receives display data from the logic control board, via a fibre optic link and it outputs data to the next display board etc.

Each display board consists of decoding and LED row and column circuitry which drives the LED matrix consisting of 18 5x8 LED blocks.

---

### **Installation**

Before commencing installation, please check from the packing list that all parts are included.

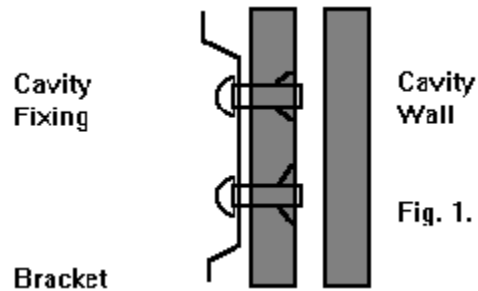
#### **Packing List**

- 1 x INDeX Wallboard 22
- 2 x Wall mount brackets
- 2 x Spun hanging wires
- 4 x Cavity rawl plugs
- 4 x Screws
- 2 x Eyehole bolts
- 2 x Masonry rawl plugs
- 2 x Housing clamps
- 1 x RJ45 Terminal Box
- 1 x IEC Power lead

Before commencing installation, please take a couple of minutes ensuring that the final location of the display will be both safe and practical for the customer. Also check that the power socket provided is suitable for this type of display.

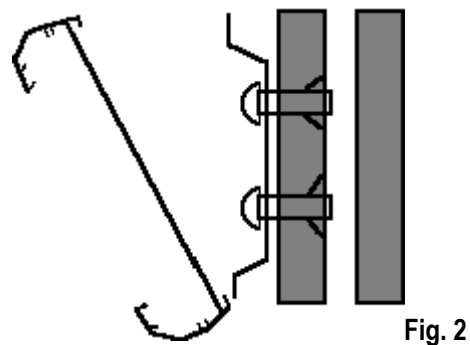
### Wall Mounting

Once a location has been decided upon, a pencil may be used through the two holes in the brackets to mark its location onto the wall. Before drilling holes, a suitable utility detector should be used. Once done, the holes may be drilled and the brackets mounted using the relevant fixings provided.



Before mounting the display onto the brackets, the network address should be assigned. The power lead should also be attached prior to mounting.

To mount the display, first hook the bottom of the two brackets into the bottom rear recess channel of the display. See Fig.2.



Push the wallboard flat against the wall and push upwards to fully locate the bottom half into the recess. Now allow the display to fall approximately one inch. The display should now be safely located onto the two brackets.

To remove a wall mounted display then reverse the above paragraph.

**Note**

*The wallboard position can be adjusted by sliding sideways in either direction.*

### Ceiling Mounting

Using the mounting kit provided, firstly, drill the 6-mm holes for the eyehole bolts and secure them into the ceiling. Pass the spun wire chain through the eyeholes and through the housing clamps and tighten at the required height.

Remove the right hand end cheek of the wallboard by unscrewing the two fixing screws.

Slide the two nipples on the end of the spun wire chain into the middle groove of the display housing and replace the end cheek. Centre the display on the hanging wires. Adjustments can be made by sliding the display to achieve the final level.

**Warning**

*Ensure the ceiling can support the weight of the wallboard prior to fixing.*



### RS485 Serial Connection

The RJ45, RS485 flying lead is one metre long. It cannot be removed from the Wallboard; therefore, this must be taken into consideration for the location of the RJ45 terminal box.

Fit the RJ45 terminal box within one metre of the centre of the Wallboard.

The Wallboard should be connected to the host system by utilising a drop off wiring configuration (See Figure 3 below).

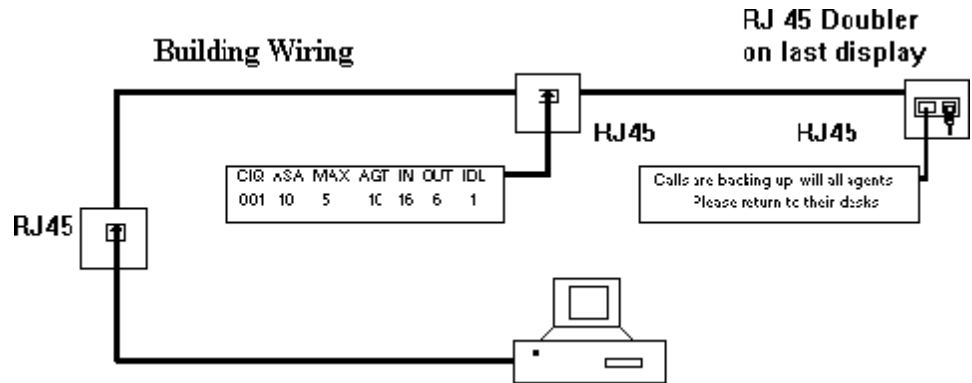


Fig. 3

All RJ45 sockets should be wired identically with the terminated RJ45 plug on the final socket with the supplied RJ45 doubler.

### Network Addressing

Each display can be configured to display different messages. This is achieved by allocating each display its own network address. Within each display, there is a board containing eight dip switches. "Serial Connection & Dip-Switch Details" on page 99.

## Additional Equipment

**External Alarm Device** for connection to INDeX Wallboard 22 only.

An external alarm device is available to supplement the in-built buzzer. This interface allows a DC powered device to be attached to a couple of pins provided by a 6-pin DIN connector, which is mounted on the rear of the display. This 6-pin DIN port provides the ability to connect the additional device in addition to the internal buzzer.

### Connection Details

The external 6-pin DIN connector is located adjacent to the Mains Power Lead (IEC Connector). The pins are numbered on the connector from 1-6. Port 1 will replicate the internal buzzer, and should be used for buzzers. Ports 2 and 3 are not used at this point.

### Socket View

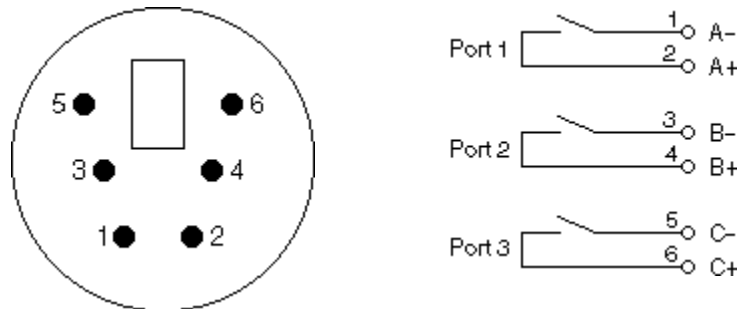


Fig. 4

### 6 Pin Mini-DIN

The overall connection schematic looks like this:

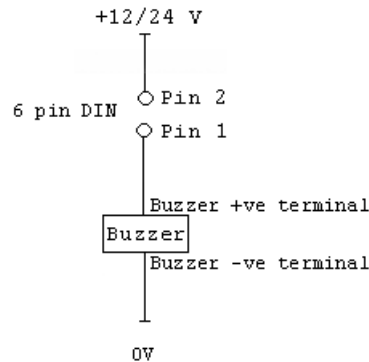


Fig. 5

### Compatible external devices

All of the devices below are available from the Farnell Electronics Catalogue, and have been tested by Ferrograph and are recommended as suitable for connection to the external interface.

**Note**

*This external interface has been designed for connection of DC Voltage devices ONLY.*

**Continuous/Pulsed Single Tone Sounders – 12V & 24V DC**

Farnell Reference:      FEC143-400  
                                   FEC143-402  
                                   FEC143-403

## Periodic Maintenance and Inspection

### Cleaning Display Screen

Time periods between cleaning depend upon local conditions and are at the discretion of the operator. This routine cleaning can be carried out in the normal way using a damp and/or dry cloth.

*Note: This screen is specially coated to reduce reflections and although this coating is very durable misuse or incorrect cleaning procedures can damage it.*

### LED Illumination Test Inspection

The purpose of this test is to ensure no LED fails to illuminate and should be checked annually.

Remove the left-hand end cheek and carefully slide out the logic control board so that the dip-switches are accessible. Set switch 8 to ON, inspect the LED display that will run blocks of Green, Red and Yellow across the display. Look for any LEDs that fail to illuminate.

Return switch 8 to the OFF position to stop this test.

### LED Matrix Scanning Inspection

The purpose of this inspection is to ensure the LED matrix is being scanned correctly. Remove the left-hand end cheek and carefully slide out the logic control board so that the dip-switches are accessible.

Set switch 7 to ON, Yellow diagonal stripes will run across the display. Check that these stripes are straight and that Yellow is the only colour displayed. Having completed this visual inspection return switch 7 to OFF and ensure that all switch settings comply with system requirements for baud rate and wallboard network address number. See Section D for dip-switch details.

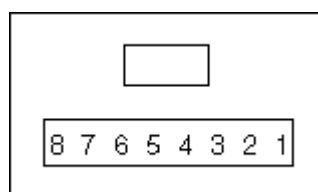
## Serial Connection & Dip-Switch Details

### Wallboard Terminal Box RJ45 Connector Pin Out Details

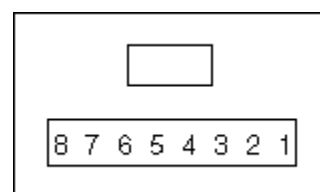
Pin	
2	Signal Ground
3	Sign Rx+ Input
4	Sign Tx+ Output
5	Sign Tx- Output
6	Sign Rx- Input
7	-

### Pin out Connections

Wallboard x RJ45 Socket



Wallboard x+1 RJ45 Socket



Pins from 2 to 7 should be connected identically from all RJ45 boxes to all others.

### Dip-Switch Details

**Network Address**

OFF Position Represents 0

ON Position Represents 1

SW4	SW3	SW2	SW1	ADDRESS
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	0	0	0	8
1	0	0	1	9
1	0	1	0	10
1	0	1	1	11
1	1	0	0	12
1	1	0	1	13
1	1	1	0	14
1	1	1	1	15

**Baud Rate**

Dip Switch Settings are:

SW5	SW6	DATA BIT/SEC
OFF	OFF	19200
ON	OFF	9600
OFF	ON	2400
ON	ON	1200

Ensure the Baud rate is set to 9600.

**Test Functions**

SW7	SW8	FUNCTION
OFF	OFF	Normal Running
ON	OFF	Diagonal Stripe Test
OFF	ON	Full Screen LED Test
ON	ON	Information Screen (Only on power up)

The information screen shows three pages where the following text is displayed. The dip switches must be set with the display powered down, then switch power on to achieve information screen.

Yellow Text	Software Version Sign Type
Green Text	Network Number
Red Text	Baud Rate

---

## RS485 Communication Systems

This standard officially allows 30 wallboards to be connected via a RS485 transmission cable of up to 1200 metres to a PC RS485 port.

The PC TX+ is connected to the wallboard RX+; similarly, the PC TX- is connected to the wallboard RX-. The recommended technique is to run a cable from the PC to the nearest wallboard then from this wallboard to the next nearest wallboard etc.

At the last wallboard on the bus it is necessary to connect a 120Ω terminating resistor between the wallboard RX+ and RX- connections using the supplied terminated RJ45 Plug and the RJ45 doubler.

The cable specification must include a twisted pair with an overall screen and characteristic impedance of 100 ohms.

---

### **Ground Loops**

Proper operation of RS485 requires a signal return path. A third wire should connect all the system signal grounds together and is most often an additional shield conductor.

Distributed power systems in industrial applications may have differences in the AC power line grounds of several volts as measured from location to location. Ground differences that are greater than 5V RMS can destroy the RS485 transceivers. Loop currents can exist within the shield conductor because of these voltage potentials, causing data errors. Loop currents can be minimised by installing 100 ohm resistor in series with the cable shield and the RS485 Line Driver ground connection or by ensuring that the screen of the cable does not make contact with the wallboard frame earth. Spurs, which lead off from the main RS485 cable to a wallboard, should be kept to less than one metre long.

# INDeX Wallboard 10

---

## Introduction

The INDeX Wallboard 10 is a single line display consisting of 10 tri-colour characters. It connects via a multi-drop circuit to the host PC running the INDeX Wallboard Server application.

The display wallboard consists of the following assemblies.

### Housing

A housing which is manufactured from an aluminum extrusion with anti reflective polycarbonate screen and removable aluminum end caps.

### Power Supply

This display has an in-built DC power. This power supply has been set to the required AC voltage for the country of use.

### Logic Control Board

Logic control board that receives RS485 serial data from the data RJ45 connector.

---

## Installation

The display is supplied with 2 wall mounting brackets, ceiling mounting kit, PC connection plugs and wall fixings.

The INDeX Wallboard 10 displays all come with a 2-metre power cable provided for mains supply. Ensure the voltage requirement is compatible with the intended mains supply, and that the supply rating is greater than 5 Amp.

There are two methods of hanging the displays.

---

### *Wall Mounting*

Fix the 2 wall mounting brackets using the cavity fixings provided. The bracket is angled to allow a 10 degree downward tilt to the display. Please ensure the brackets are the correct way up. See Figure 6.

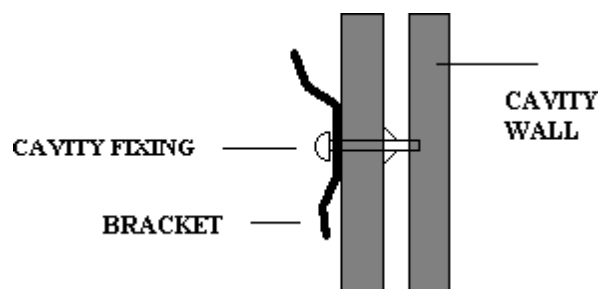


Fig. 6

To mount the display, first hook the bottom of the two wall brackets into the bottom rear channel recess of the display. See Figure 2

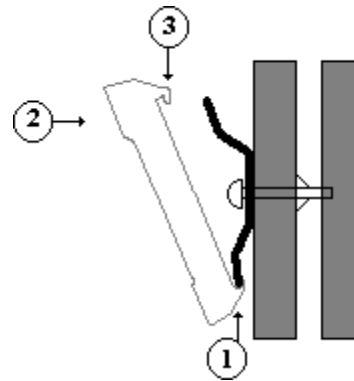


Fig. 7

Push display flat against the wall and upwards to fully locate the bottom half of the bracket. Allow display to then drop down onto the top edge of the 2 brackets to obtain a locked fixing. To remove, reverse the above procedure.

**Note:** The display can be adjusted by sliding sideways in both directions.

### Ceiling Mounting

From the mounting kit provided, fix the ceiling hanging wires and adjust to the height required. See Figure 8.

**Warning**  
Ensure the ceiling can support the weight of the wallboard prior to fixing.

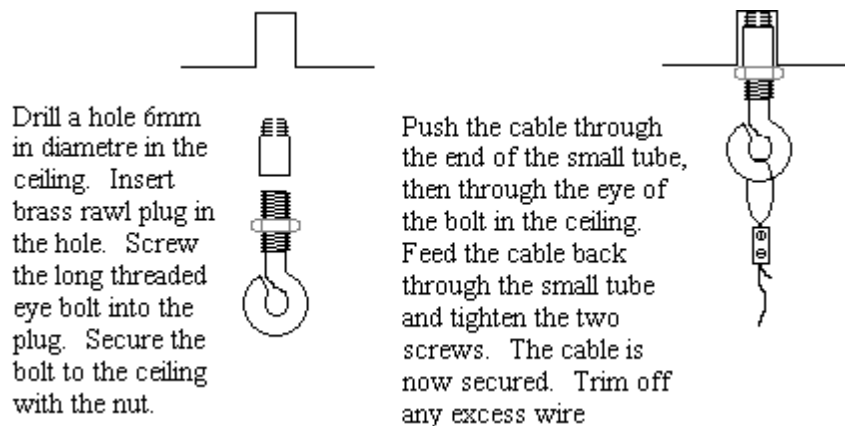


Fig. 8

Slide in the 2 ends of the hanging wires into the top groove of the display housing through the pre-drilled centre hole. Centre the display on the hanging wires. See Figure 9.

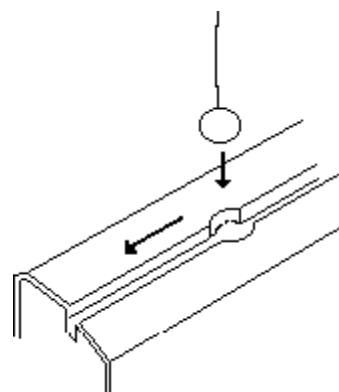


Fig. 9

### Serial Connection and Configuration

An RJ45 junction box is provided as standard, alternatively if required an RJ45 coupler and 2 way adapter can be used. The serial cable is normally connected to the logic board for RS485 operation, check label on rear of display for specific configuration. The serial communications lead from the PC is connected to the junction box as shown later in this manual. Modifications to the network numbers and baud rates can be done by following section 2.3 below, but changing the dip-switch settings as per Figure 5.

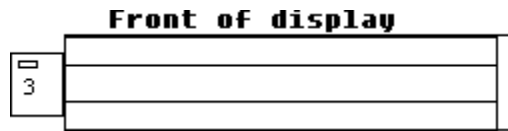


Fig. 10

- 1. RS232 Connection
- 2. RS485 Connection
- 3. Dip-Switches

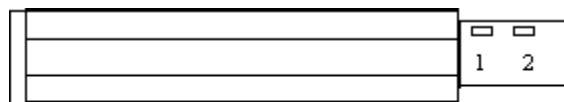


Fig. 11

To set the network number requires access to the INDeX Wallboard 10 logic board as explained above and Fig 5.

To address individual displays in a network, a network number can be set on the dip-switch on the logic board. Network 0 is a general address and will accept all data from the host system. The network number is set using switches 1,2,3 and 4.

#### Dip-switch Number

1	2	3	4	Network
OFF	OFF	OFF	OFF	0
ON	OFF	OFF	OFF	1
OFF	ON	OFF	OFF	2
ON	ON	OFF	OFF	3
OFF	OFF	ON	OFF	4
ON	OFF	ON	OFF	5
OFF	ON	ON	OFF	6
ON	ON	ON	OFF	7
OFF	OFF	OFF	ON	8
ON	OFF	OFF	ON	9
				ETC....



**Baud Rate**

The Baud Rate can be changed to 1200, 2400, 9600 or 19200 using the dip-switch. The Baud Rate is set using switches 5 and 6.

5	6	Baud Rate
ON	ON	1200
OFF	ON	2400
ON	OFF	9600
OFF	OFF	19200

Ensure the Baud rate is set to 9600.

**Test Functions**

Test functions are provided to assist installation engineers. These are selected on the dips-witches. Test functions are selected using switches 7 and 8.

If switch 7 and 8 are **OFF** at power reset:

7	8	
ON	ON	Freeze Display
OFF	ON	Alternating ON/OFF Blocks of LED's
ON	OFF	Stripes
OFF	OFF	Normal Operation

If switch 7 and 8 are **ON** at a power reset:

7	8	
ON	ON	Information Screen
OFF	ON	Stripes
ON	OFF	Alternating ON/OFF Blocks of LED's
OFF	OFF	Freeze Display

### System Wiring

The principle for wiring up your display wallboards is that the PC output port is connected to the input of each wallboard. See Figure 7.

The connection is RS485 and the screen of the cable is connected to the wallboard signal ground, which is floating.

The wallboard housing frame ground is connected to earth by the power cable

#### RS485

This standard officially allows 30 wallboards to be connected via a RS485 transmission cable of up to 1200 Metres to a PC RS485 port.

The PC TX+ is connected to the wallboard RX+; similarly, the PC TX- is connected to the wallboard RX-. The recommended technique is to run a screened cable from the PC to the nearest wallboard, then from this wallboard to the next nearest wallboard etc. At the last wallboard on the bus, it is necessary to connect a 120Ω terminating resistor between the wallboard RX+ and RX- connections within the RJ45 connection box. See Figure 8.

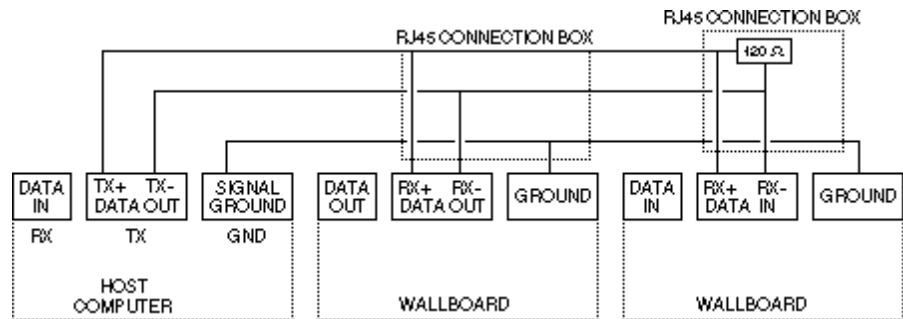


Fig. 12

The installation technique is that data input of each display is electronically connected to the transmit output of the PC.

## **Periodic Maintenance & Inspection**

### **Cleaning Display Screen**

Time periods between cleaning depend upon local conditions and are at the discretion of the operator. This routine cleaning can be carried out in the normal way using a damp and/or dry cloth.

**Note:**

*This screen is specially coated to reduce reflections and although this coating is very durable misuse or incorrect cleaning procedures can damage it.*

### **Led Illumination Test Inspection**

The purpose of this test is to ensure no LED fails to illuminate and should be checked annually.

Remove the right hand end cheek and carefully slide out the logic control board so that the dip-switches are accessible. Set switch 8 to ON, inspect the LED display that will run blocks of Green, Red and Yellow across the display. Look for any LEDs that fail to illuminate.

Return switch 8 to the OFF position to stop this test.

### **Led Matrix Scanning Inspection**

The purpose of this inspection is to ensure the LED matrix is being scanned correctly. Remove the right hand end cheek and carefully slide out the logic control board so that the dip-switches are accessible.

Set switch 7 to ON, Yellow diagonal stripes will run across the display. Check that these stripes are straight and that Yellow is the only colour displayed. Having completed this visual inspection return switch 7 to OFF and ensure that all switch settings comply with system requirements for baud rate and wallboard network address number.

---

# Remote Connection Access

---

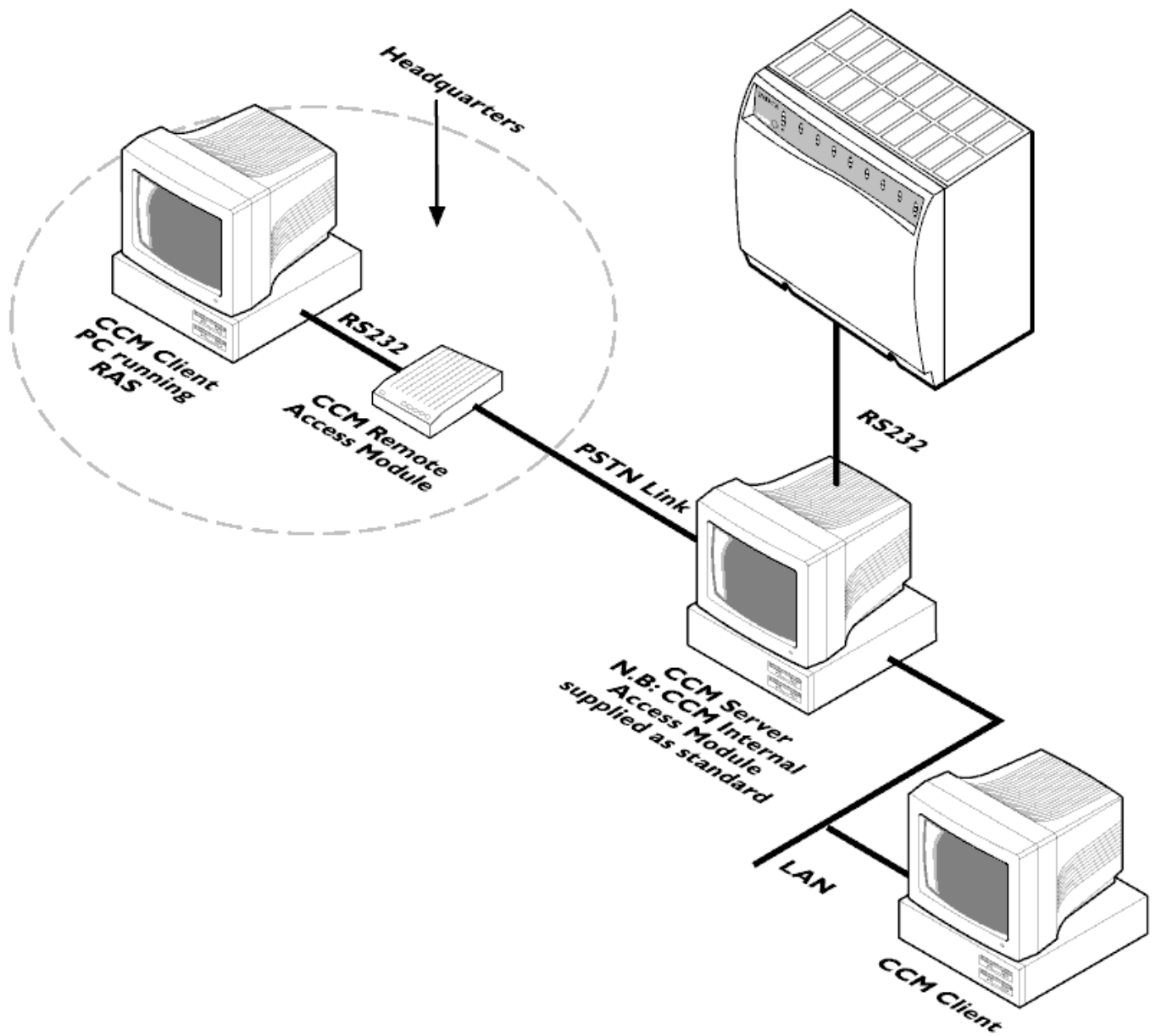
## Overview

Remote Access is available for Contact Centre Modules as an application, giving customers and maintainers the ability to diagnose faults and configure the Contact Centre Modules, INDeX and Voice applications remotely. There are two Remote Access Module options, one is an internal remote access modem which comes preinstalled and preconfigured with both options of CCM Server PC. The other option is an external modem ready for connection to the INDeX CT Server Cassette.

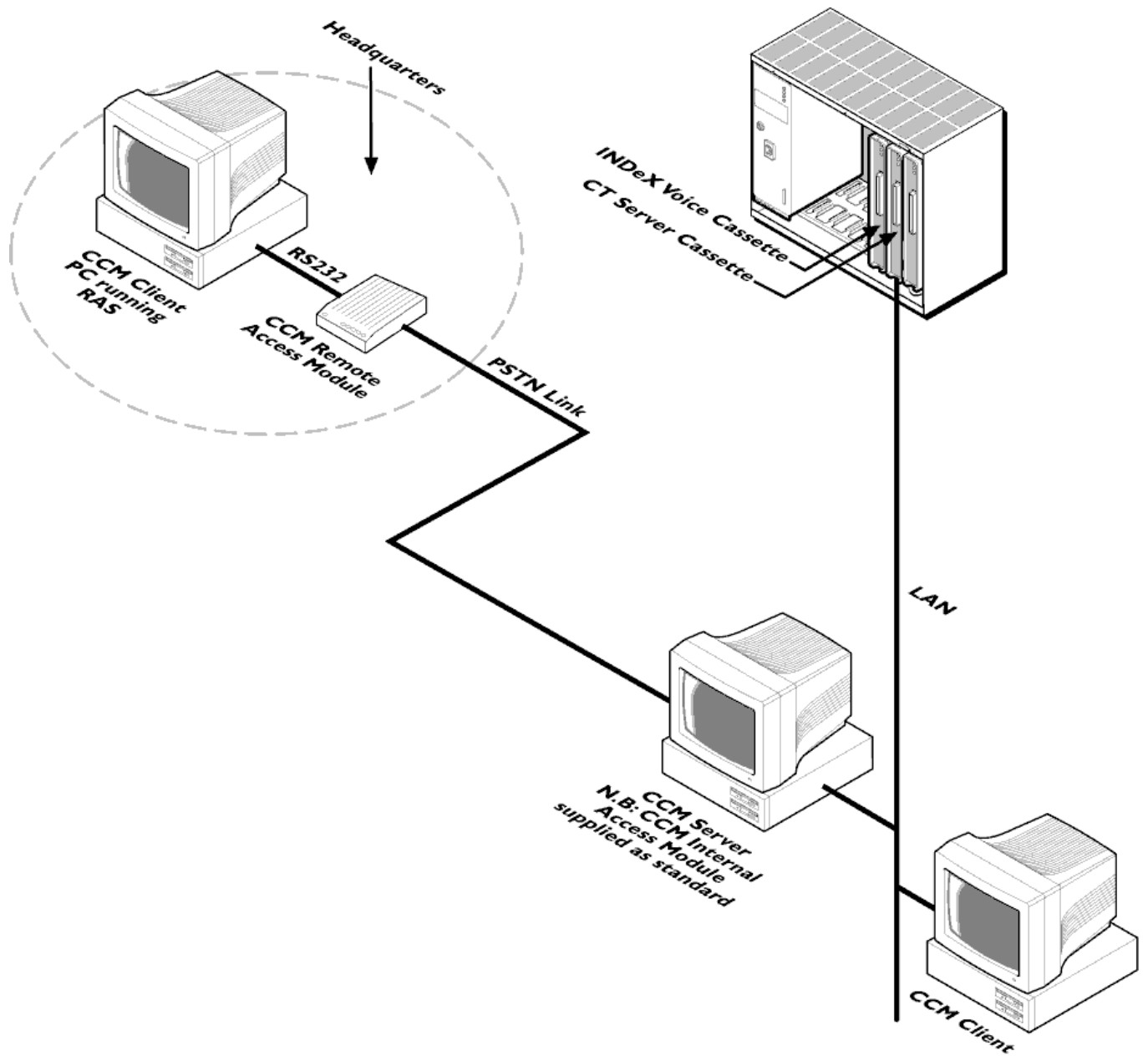
Avaya utilise Microsoft's RAS (Remote Access Software) to connect to the remote PC, making a virtual network connection between the headquarters' PC and the remote site. This allows the Client applications to be run at the headquarters site as if they were on the LAN. (Response may be slower due to the reduced bandwidth of the connection). In addition, files may be copied to and from the host PC.

The headquarters' PC may be any Windows 95 or Windows NT 4.0 PC configured to run RAS with a Remote Access Module connected, or suitable equivalent modem.

The following diagram shows the INDeX Contact Centre Manager connected to a headquarters via remote access where an INDeX Voice Manager is not present.



The following diagram shows the INDeX CCM connected to a headquarters via remote access where an INDeX Voice Manager is present:



## Configuring RAS On Server PC

This section details the procedures required to configure RAS when using either Windows NT Workstation or Windows NT Server 4.0 Operating Systems.

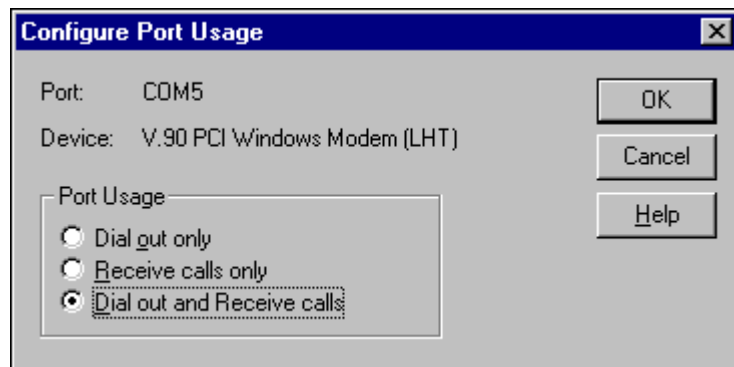
Install the modem on to the INDeX CCM **Server** PC, according to the manufacturer's instructions.

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel options open, **Network** and click the Services tab.
3. Click *Add*, select **Remote Access Service** and then click *OK*.
4. Insert Windows NT CD in the CD-ROM Drive; close the Window NT Setup screen.
5. Enter the file location as X:\i386 (X is the letter associated with the CD-ROM Drive), click *Continue*.

**Note**

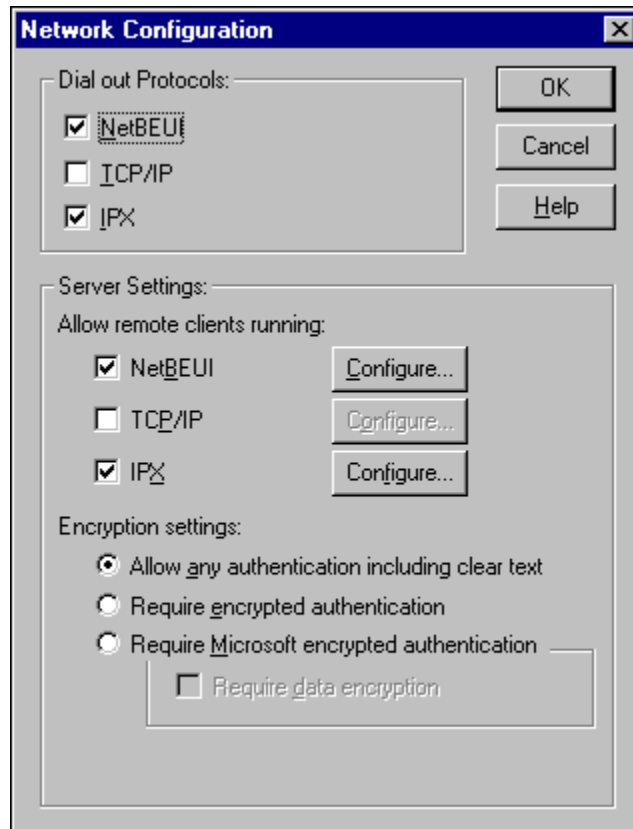
*There will usually be only one RAS Capable device.*

6. With the device selected, click *OK*.
7. Select the modem, click *Configure*.
8. From the Configure Port Usage screen, click to select **Dial out and Receive calls** as shown in the following screen:

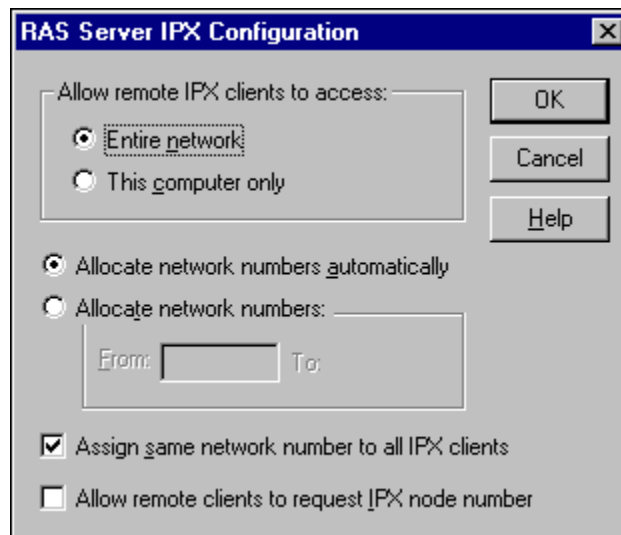


9. Click *OK*.
10. From the Remote Access Setup screen, click *Network*.

11. From the Network Configuration screen, select the following options as displayed in the Network Configuration screen:
- Dial out Protocols:  
**NetBEUI and IPX**
  - Allow remote clients running:  
**NetBEUI and IPX**
  - Encryption settings:  
**Allow any authentication including clear text**

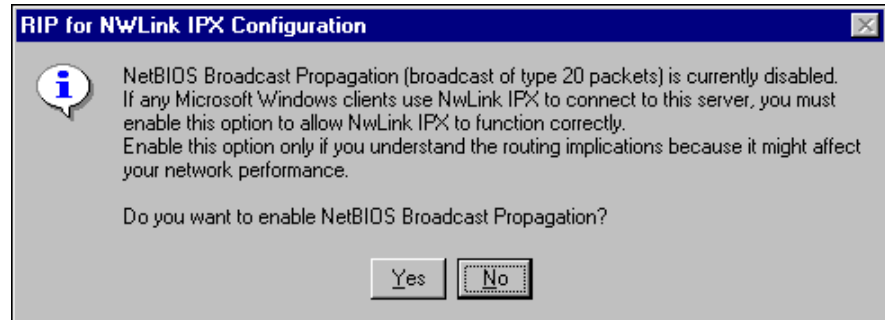


12. Click *Configure* associated with NetBEUI; ensure **Entire Network** is selected. Click *OK*.
13. Click *Configure* associated with IPX, the following screen appears:

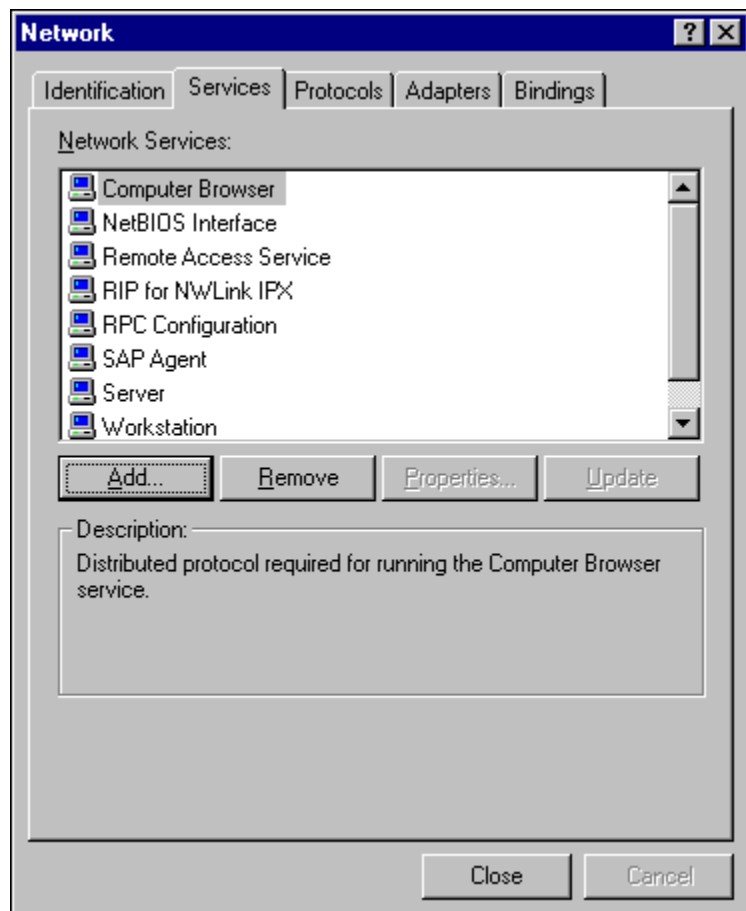




14. Uncheck **Assign network number to all IPX clients**, click *OK*.
15. From the Network Configuration screen click *OK*.
16. From the Remote Access Setup screen, click *Continue*, the following screen appears:



17. Click **No**, and from the Setup Message screen click *OK*, the following screen appears:

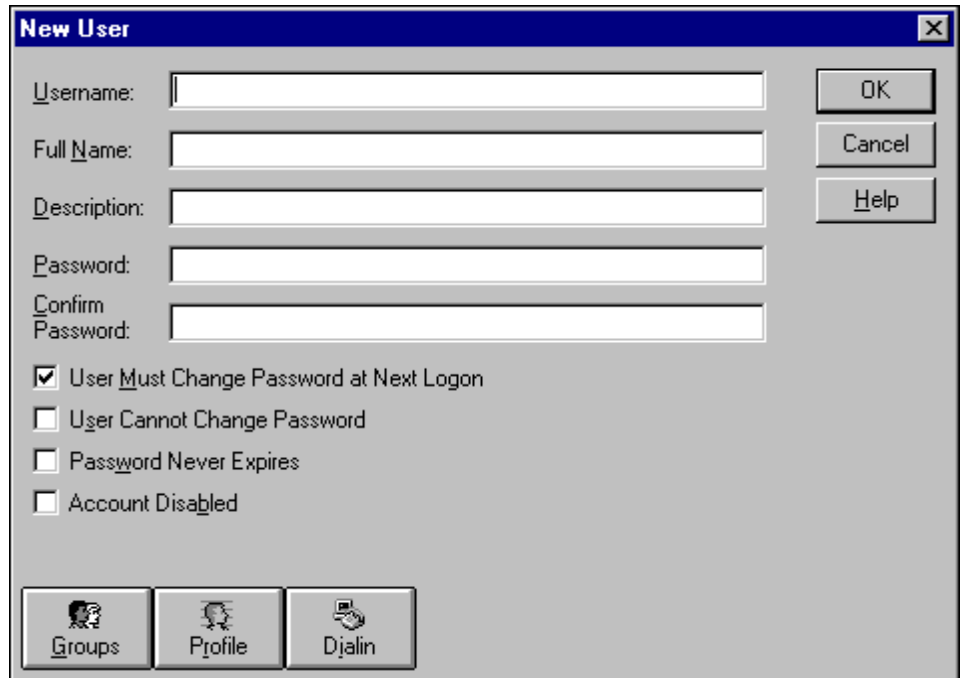


18. Click *Close*, and then click *Yes* to restart the PC.

## Create a RAS User

User Manager enables you to manage security for a computer running Windows NT Workstation. With User Manager, you can create and manage user accounts, create and manager groups and manage the workstation's accounts (passwords), user rights and auditing policies.

1. From the Windows taskbar, click Start, point to Programs and from Administrative Tools (Common), select **User Manager**.
2. From the **User** menu, select **New User**, the following screen appears:



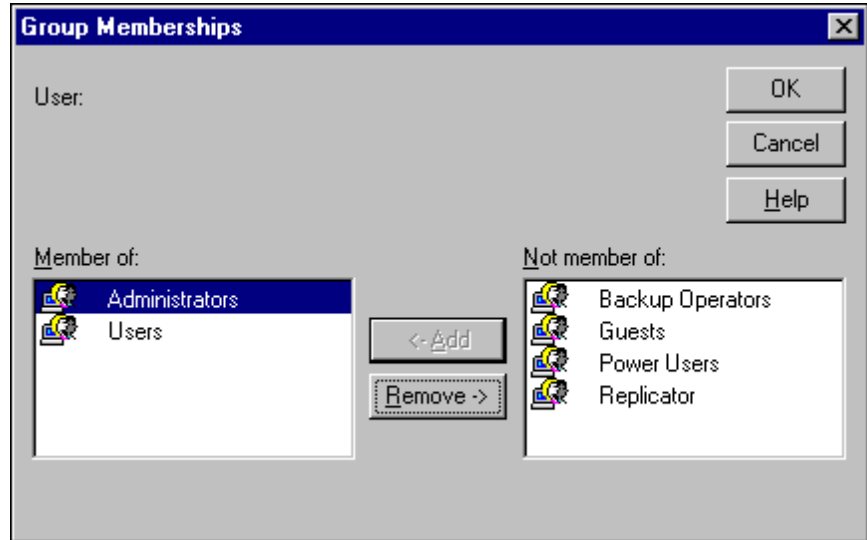
3. Type the appropriate information:
  - In **Username**, type a user name;
  - In **Full Name**, type the user's complete name;
  - In **Description**, type a description of the user or the user account;
  - In both **Password** and **Confirm Password**, type a password of up to 14 characters;

**Note**

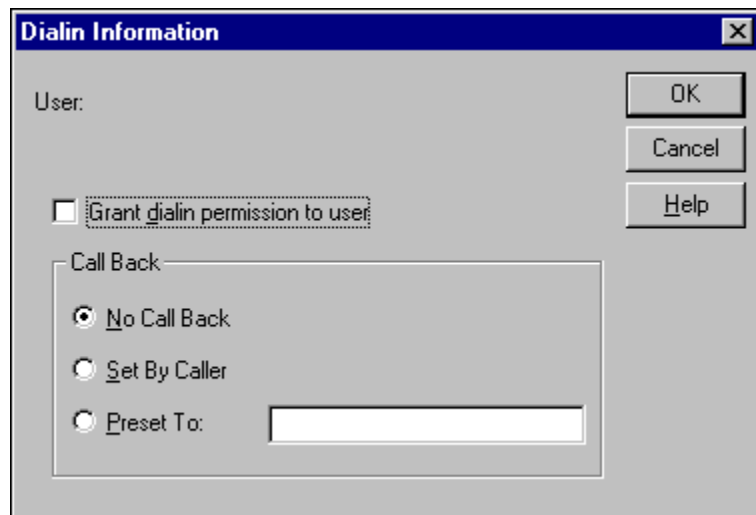
*A user name cannot be identical to any other user or group name of the computer being administered.*

4. Click to clear **User Must Change Password at Next Login**.
5. Click to select **User Cannot Change Password** and **Password Never Expires**.
6. Click **Groups**.

7. From the Group Memberships screen, select **Administrator** and click *Add* as displayed in the following screen:



8. Click *OK*.
9. From the New User screen, click *Dialin*, the following screen appears:



10. Click to select **Grant dialin permission to user** and **Set By Caller**.
11. Click *OK*.
12. From New User screen, click *OK*.
13. From the User menu, select *Exit* to close the User Manager application.

---

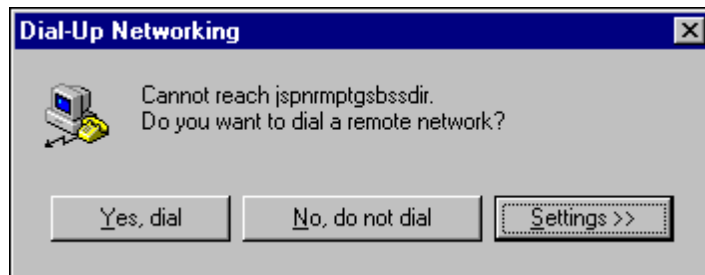
## Install Windows NT Service Pack 6a

To ensure that all the files copied to Windows NT are up to the Service Pack 6a level, install Service Pack 6a **again** as detailed in "Install Windows NT Server Service Pack 6a" on page 17.

---

## Enabling RAS at Startup

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel options open **Services**, select **Remote Access Server**, and click *Startup*.
3. Click to select *Automatic* as the Startup Type and then click *OK*.
4. From the Services screen click *Close*.
6. Restart the PC.
7. Once the PC is running, the following screen may appear:



8. Click *Settings*. Click to clear "**Disable auto-dial for this logon session**".
9. Click *No, do not dial*.

---

## Disabling RAS at Startup

1. From the Windows taskbar, click Start, point to Settings and select Control Panel.
2. From the Control Panel options open, **Services**, select **Remote Access Server**, click *Startup*,
3. Click to select *Disabled* and then click *OK*.
4. From the Services screen click *Close*.
5. Restart the PC.

**Note**

*If it is necessary to have the RAS Service always available, click to select *Automatic* to run automatically in the services screen.*

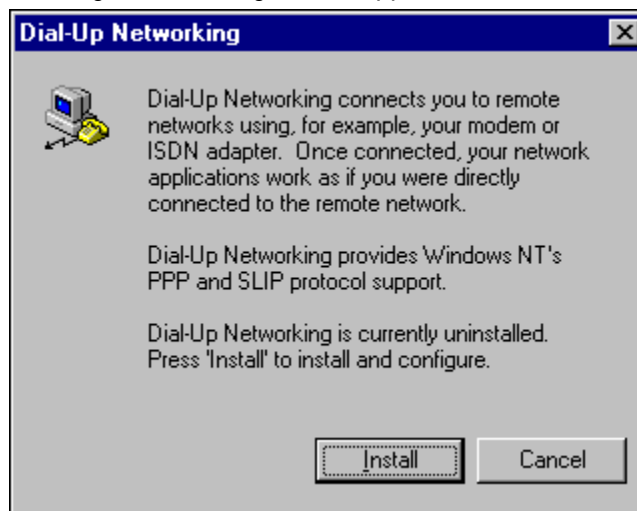
## Configuring Dial Up Networking On Client PC (Windows NT Workstation)

Follow the Modem manufacturer's instruction when installing the modem to the INDeX CCM **Client** PC with Windows NT Operating System.

Dial-Up Networking is the Client version of Windows NT Remote Access Service (RAS). Dial-Up Networking lets you connect to your office network from a remote site; anywhere there is an outlet for your computer and phone jack for your modem. Dial-Up Networking works by calling the dial-up server and establishing a telephone connection with the network. Once you have connected, you work with all your applications as though you were physically in the office, directly connected to the network or local database.

Before commencing with the installation process, ensure no other applications are currently running, as the Windows NT requires a reboot of the PC at the end of this installation.

1. Insert the Windows NT Workstation CD in the CD-ROM drive, close the Windows NT CD-ROM screen.
2. From the Windows NT desktop, double click My Computer and then double click Dial-up Networking, the following screen appears:

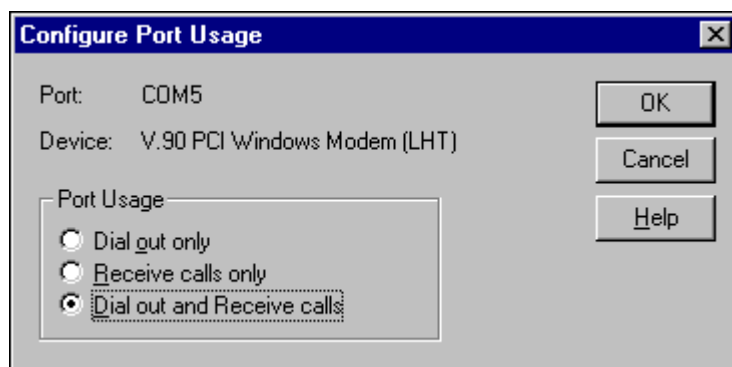


3. Click *Install*. Enter the file location as **X:\i386** (X is the letter associated with the CD ROM drive).
4. Click *OK* to add a RAS device.

**Note**

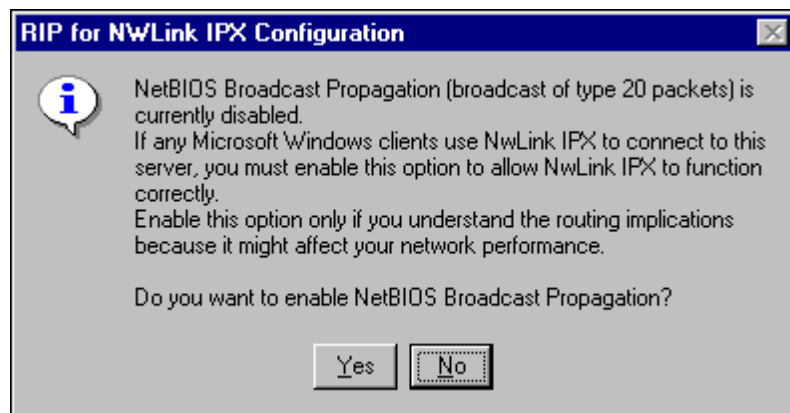
*There will usually be only one RAS Capable device.*

5. With the device selected, click *OK*, the following screen appears, from which click to select **Dial out and Receive call** as shown:

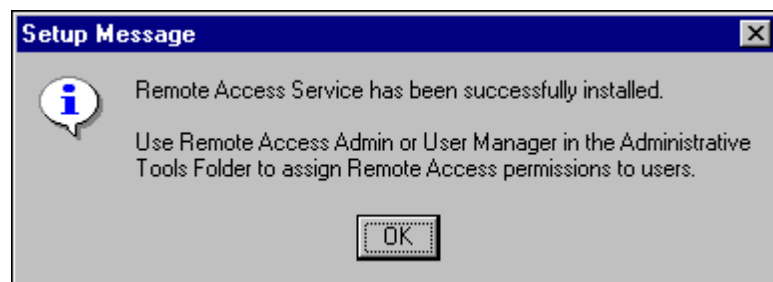


6. Click *OK* to proceed.

7. From the Network Configuration screen, select the following options:
  - Dial out Protocols:  
**NetBEUI and IPX**
  - Allow remote clients running:  
**NetBEUI and IPX**
  - Encryption settings:  
**Allow any authentication including clear text**
8. Click *Configure* associated with NetBEUI; ensure **Entire Network** is selected. Click *OK*.
9. Click *Configure* associated with IPX, the following screen appears:
10. Uncheck **Assign network number to all IPX clients**, click *OK*.
11. From the **Network Configuration** screen, click *OK*, Remote Access Setup screen appears:
12. Click *Continue*, the following screen appears:



13. Click **No** to proceed to the following screen:



14. Click *OK*, the Dial-Up Networking screen appears, from which Click *Restart* to reboot the PC.

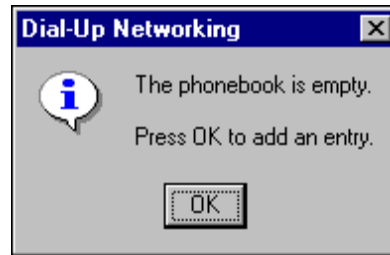
---

## Install Windows NT Service Pack 6a

To ensure that all the files copied to Windows NT are up to the Service Pack 6a level, install Service Pack 6a **again** as detailed in "Install Windows NT Server Service Pack 6a" on page 17.

## Adding Phone Number

1. From the Windows NT desktop, double click My Computer and then double click Dial-up Networking, the following screen appears:

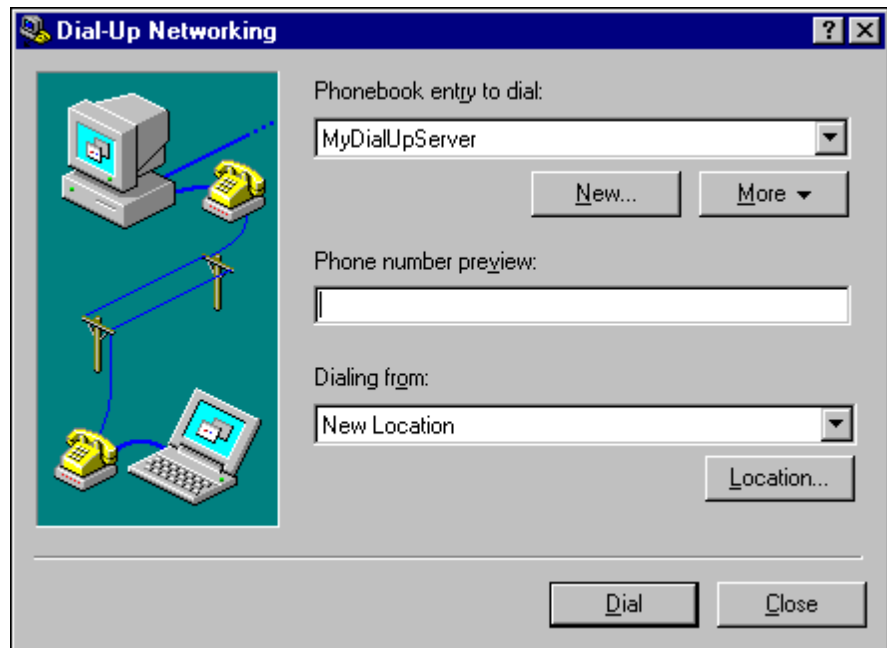


2. Initially the phonebook will be empty, an entry is required, click *OK* New Phonebook Entry Wizard appears.
3. Enter the Name of the new phonebook, which is appropriate for the site being dialled, click *Next* to proceed to the Server screen:
4. Click to select "Send my plain text password if that's the only way to connect", as shown in the Server screen, click *Next* to proceed.
5. Enter the phone number of the dial-up server you are calling, click *Next* to proceed to the following screen:
6. Click *Finish*.

## Using Dial-Up Networking

You are now ready to use the Dial-Up Networking.

1. From the Windows NT desktop, double click My Computer and then double click Dial-up Networking, the following screen appears:



2. Ensure the Phone Number is correct, click *Dial*.
3. To disconnect a Dial-Up Networking connection, right-click the icon on the Windows NT Taskbar, and then select Disconnect.

---

## Configuring Dial-Up Networking On Client PC (Windows 98)

Follow the Modem manufacturer's instruction when installing the modem to the INDeX CCM **Client** PC with Windows 98 Operating System.

With Dial-Up Networking, you can gain access to shared information on another computer, even if your computer is not on a network. The computer you are dialing in to must be set up as a network server for you to use its shared resources.

For example, if you have a computer at home, you can dial in and connect to your work computer and network through a network server. Both your home computer and the network server must have modems installed.

Before commencing with the installation process, ensure no other applications are currently running, as the Windows 98 requires a reboot of the PC at the end of this installation.

1. Insert the Windows 98 CD in the CD-ROM drive.
2. From the Windows 98 Automenu, click Add/Remove Software.
3. With **Communications** highlighted, click *Details*.
4. In the list of Components, tick Dial-Up Networking.
5. Click *OK*.
6. From the Add/Remove Programs Properties screen, click *Apply*, and then click *OK*.

---

### Adding a New Connection

If you have already set up one or more Dial-Up connections, you can double-click Make New Connection to create a new connection. To dial a connection that you have already set up, double-click its icon in the Dial-Up Networking window.

After you have connected to another computer, you can see files and folders on that computer only if they are shared.

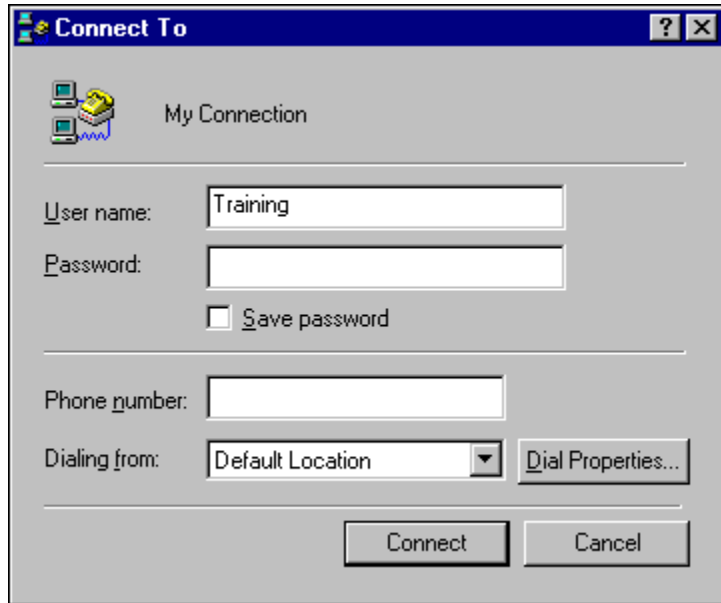
If you do not see a Dial-Up Networking folder in My Computer, then it is not installed. To find out how to install it, see "Configuring Dial-Up Networking On Client PC (Windows 98)" on page 120.

1. From the Windows 98 desktop, double click My Computer and then double click Dial-up Networking,
2. Click *Next*, and follow the instructions to install the new connection.



## Using the Dial-Up Networking

1. From the Windows 98 desktop, double click My Computer and then double click Dial-up Networking.
2. Double click the connection that you require, the following screen appears:



3. Ensure User Name and Password and the Phone Number are correct, click *Connect*.  
If you are asked for a callback number, you may enter the number where you wish to be called back or click *Cancel* if you do not require a callback.
4. To disconnect a Dial-Up Networking connection, Right-click the icon on the Windows 98 taskbar and then click *Disconnect*.

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