Dialect
Call Manager
User's Guide

Communications Solutions

User's Guide

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This version of this product guide supercedes all previous versions. The electronic version of this product documentation is intended to be an exact duplicate of the hard copy documentation shipped with the product. If differences exist, the hard copy documentation takes precedence.

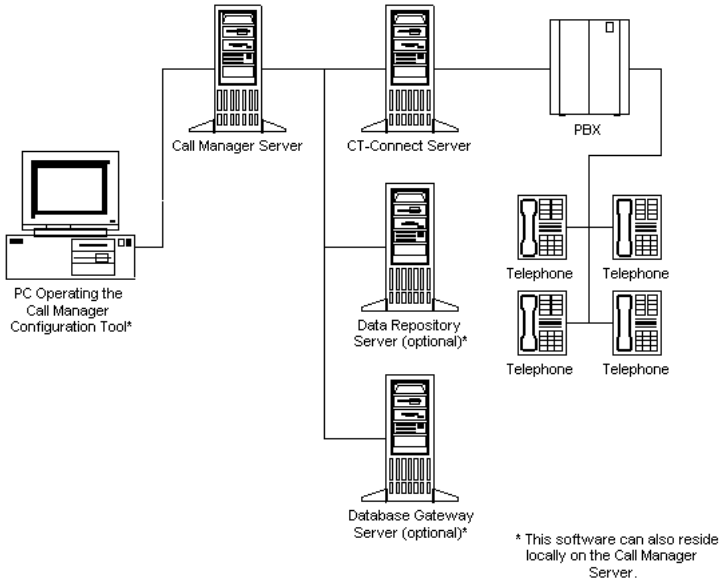
Table of Contents

Introduction

Understanding Call Manager

Dialect Call Manager is software that uses ANI, DNIS, and information from remote databases to make intelligent call handling decisions. It shares call data with other applications and makes it easy to route calls with call data — even through the public telephone network.

The following diagram illustrates one way to add Call Manager to your call center:



Call Manager consists of the following components:

- The Call Manager Service (VULCAN.EXE):

  VULCAN.EXE monitors activity on the PBX, queries remote databases, and creates Reference Data Objects (RDOs) that applications can use to exchange information. In this document, a computer that operates VULCAN.EXE is called a "Call Manager server."

- The Extended Scripting Language Editor:

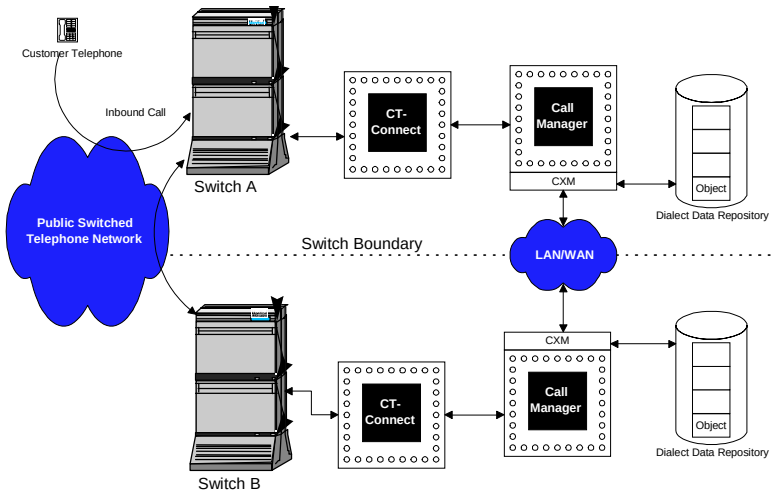
  Fully compatible with Visual Basic for Applications (VBA), the Dialect Extended Scripting Language (ESL) contains special objects and methods created especially for CTI integration. A companion script editor lets you create, open and edit scripts, save scripts as files, and add scripts to your server's registry. A special wizard even streamlines the process of creating scripts for Monitored DNs and Routepoints.

- The Call Manager Configuration Tool (VULCFG.EXE):

  The configuration tool is the subject of this document. System administrators can use VULCFG.EXE to assign call handling instructions to Routepoints, identify Directory Numbers (DNs) to monitor for call activity, and supervise Call Manager's overall operation. The Configuration Tool can operate co-residently with Call Manager or on a different computer connected to the Call Manager server.

  The Configuration Tool saves all of the data to Call Manager Server's system Registry, which contains information about how your computer runs.

How the System Works: Cross-Switch Management



CXM is the Call Manager component that manages call routing between switches.

Routing calls has always been simple, even between dissimilar PBX systems. Routing calls with data, however, is more challenging without CXM. Depending on the capabilities of your telephone network provider and your switch's manufacturer, you might be able to bundle ANI and DNIS information with calls, but probably not account numbers or notes.

CXM handles the details of routing calls with data. When routing to a PBX on your network, CXM uses optional Dialect Data Repository software to replicate data on the remote server. When routing through the public telephone network, CXM takes a more active approach and coordinates the transfer of data through a process of handshaking that's transparent to callers and system administrators alike.

How the System Works: Routepoints

You use the Configuration Tool to associate individual CDNs with call handling parameters and scripts. For some PBX systems, you can also provide instructions to perform in case your primary parameters fail.

Software on the server continuously monitors the PBX for activity. When a call arrives at one of the CDNs (Routepoints) you've profiled, the server executes your series of instructions.

For example, if you have optional Dialect Data Repository software installed, Call Manager can start by creating a Reference Data Object (RDO) to store ANI and DNIS information and any additional information you choose to associate with the call.

Next, Call Manager can execute any single Extension DLL associated with the Routepoint.

If you have the optional Dialect Database Gateway software, Call Manager can now execute SQL statements; for example, to query a database for information about the caller and the type of service the caller dialed. You can also configure Call Manager to query a database for the extension of an agent or ACD queue to serve as the call's target.

Call Manager can then add any custom RDO items defined for the RDO, perform any CXM tasks, and finally execute any single custom script associated with the Routepoint.

How the System Works: Monitored DNs

Call Manager monitors DNs as part of a "public service" that helps applications identify incoming calls and access their RDOs. Call centers typically use Monitored DNs in conjunction with IVR and CTI applications that need Call Reference ID (CallID) numbers but can't receive these numbers from the PBX directly. By monitoring DNs, call

centers can also accumulate a wealth of information for reporting.

Each time a call arrives at a monitored DN, Call Manager stores its CallID in an RDO. Other applications can access this RDO by name and use the CallID in contains to find any RDO previously created for the call.

For example, consider an IVR application that offers options based on ANI and DNIS information: You configure Call Manager to monitor each port on the IVR system, and you use associate each port with a unique RDO name in Call Manager's Monitored DNs tab. You associate these names with these ports in your IVR application as well.

When a call arrives at one of the monitored ports, Call Manager uses CT-Connect to determine the CallID, and it uses Dialect Data Repository software to store the CallID in an RDO. The IVR application, recognizing that a port has become active, retrieves the CallID from the new RDO.

Once in possession of the Call Reference ID, the application can infer the call's RDO name and access the data it contains.

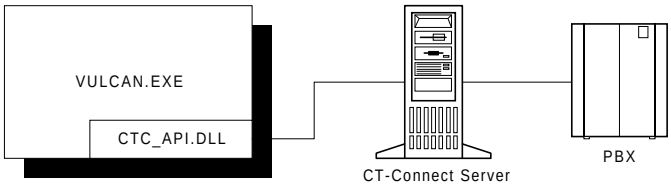
System Requirements

Hardware

- A Pentium-class computer with at least 32 MB RAM.
- Windows NT 4.0 with Service Pack 3 and above.
- 20 MB of disk space.
- At least one of the following network protocols installed: TCP/IP, IPX/SPX, or NetBEUI.

CT-Connect

Call Manager relies on Dialogic Corporation's CT-Connect software to monitor activity on a PBX.



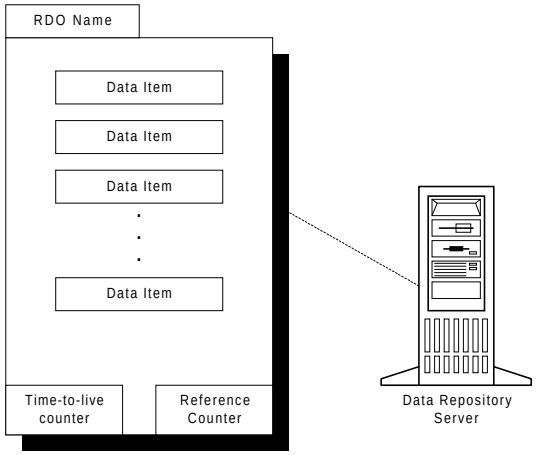
CT-Connect resides on a Windows NT server and facilitates communication between software applications and CSTA-compatible PBX systems. Call Manager works with versions 1.0, 2.0, and 3.0 of CT-Connect.

System Options

Dialect Data Repository

Dialect Data Repository is a high-speed data storage and retrieval system that facilitates the sharing of information.

On a server, Data Repository maintains transitory Reference Data Objects (RDOs) that other applications can access and modify.



RDOs store information about calls to Routepoints and DNs that Call Manager monitors. You don't need to install Data Repository if you don't want Call Manager to share information about calls with other applications.

On a server, Data Repository operates as a Windows NT service. For clients, Data Repository software is available for 16-bit and 32-bit Windows, OS/2, and UNIX systems that support UNIX Berkeley sockets (BSD).

For more information about Data Repository, read the *Dialect Data Repository System Guide*, available from your Williams representative.

Dialect Database Gateway

Database Gateway software acts as an intermediary between applications and SQL Relational databases to provide software-independent access to data. Database Gateway uses logical connections called "pipes" to communicate with databases. Pipes distribute and channel queries and modifications.

Call Manager uses Database Gateway to query databases for information to add to a call's RDO and for target extensions to dial while routing callers.

You don't need to install Database Gateway if don't want Call Manager to access databases for information.

For more information about Database Gateway, contact your Williams representative.

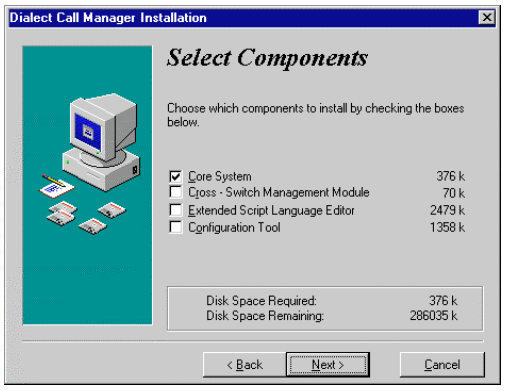
Modem for Dialup Management

Remote dialup management requires a modem connected to a Direct Inward Dial (DID) line. Be sure to provide your Williams support representative with dial-up access and an administrator-level login.

Installing Call Manager

Call Manager requires Windows NT Version 4.0 with Service Pack 3 and above. Follow these instructions to install the various Call Manager components and make default registry entries.

1. Insert the installation CD into the computer you want to use to configure Call Manager.
2. Follow the installation instructions that appear.
3. When the Select Components screen appears, select the components you want to install and click **Next >** to continue.



> **Note**: At the end of the installation procedure, your computer activates the Call Manager service automatically. The server also reloads the Call Manager service automatically after any reboot.

Removing Call Manager

Follow these instructions to completely remove Call Manager components from your system:

1. From the Control Panel, double-click **Add/Remove Programs**.
2. Click the **Install/Uninstall** folder.
3. Highlight **Call Manager** and click the **Add/Remove** button.

How to Use This Book

The instructions that follow are written for system administrators who maintain the Call Manager system.

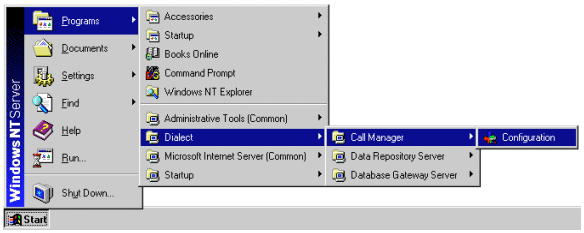
Although this document contains instructions for using the Call Manager Configuration Tool (VULCFG.EXE), it is not a Programmer's Reference Guide. For information about APIs and help developing extension .DLL files to enhance call routing, please contact your Williams Communications representative.

Getting Started

STEP 1: Start the Call Manager Configuration Tool

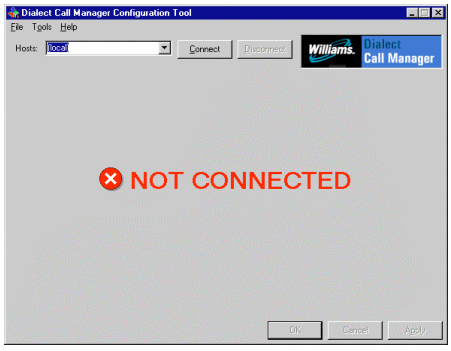
Before you can begin using the Call Manager Configuration Tool, you must start software on your PC:

1. Click the Windows **Start** button and choose **Programs | Dialect | Call Manager | Configuration**.



Alternatively, you can double-click a shortcut to the Configuration Tool if you've already added one to your desktop.

Call Manager's user interface appears.



STEP 2: Connect to a Server

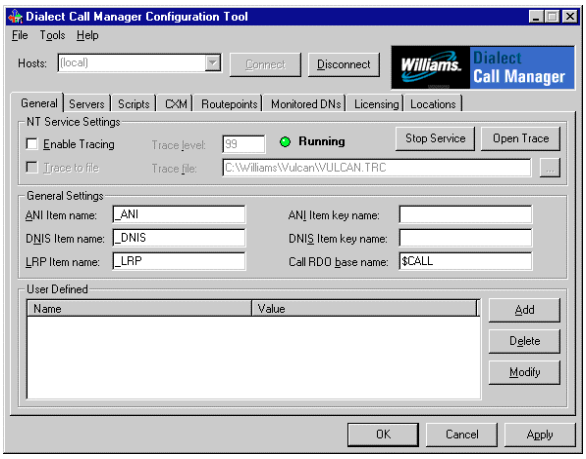
Use the user interface to identify the Call Manager server you want to configure.

1. Enter the name of the Call Manager server in the **Hosts** field. For the names of servers you used in the past, click the drop-down arrow. If you're currently using the Configuration Tool on the same computer you want to configure as a server, choose the default value, "(local)."

> **Note**: There is no preset limit to the number of connections a single server can maintain to Configuration Tools, but too many concurrent connections can degrade a server's performance.
>
> Whenever you apply configuration settings, you overwrite any settings previously applied by other Configuration Tools. Therefore, it's best to maintain only one connection at a time.

2. Click **Connect**.

   General settings appear and the "NOT CONNECTED" message is replaced with the Host's Call Manager configuration data.



3. Refer to the rest of this book for information about the following tabs:
    - General
    - Servers
    - Scripts
    - CXM
    - Routepoints
    - Monitored DNs
    - Licensing
    - Locations

Using the Configuration Tool

How the Configuration Tool Applies Your Changes

The Configuration Tool stores all of your changes locally until you choose to apply your new configuration to the Call Manager service. Depending on the nature of your changes, you may need to stop and restart the server, reconfigure particular Routepoints and Monitored DNs, or simply click **Apply** to copy your settings to the server's registry.

Instructions for updating the server follow every procedure in this Guide. Below, you'll find an overview of the commands to use.

Using the Apply Feature

Clicking **Apply** at the bottom of the Configuration Tool's interface instantly copies your settings to the Windows registry on the Call Manager server. You can apply changes in this way anytime without disrupting call handling.

You can also apply changes by choosing **File | Apply** from the menu bar.

> **Note**: After changing parameters related to Licensing, Scripts, CXM, the Server, and Locations, you must also stop and restart the Vulcan service.

Reconfiguring Routepoints and Monitored DNs

After making any changes or modifications to either the Routepoint or Monitored DN list, you must first click **Apply**

and then right-click the line item and choose **Reconfigure** from the options list that appears.

Choosing to reconfigure a Routepoint or Monitored DN stops the selected item's operation, deletes it from the server's memory, replaces it with the new version from the Configuration Tool, and then restarts its operation. You can perform these tasks individually by right-clicking and choosing **Stop**, **Unload**, **Load**, and **Start**.

You can also reconfigure all Routepoints or Monitored DNs in one step by choosing either **Tools | Reconfigure | Routepoints** or **Tools | Reconfigure | MonitoredDNs** from the menu bar.

> **Note**: Call Manager takes Routepoints or Monitored DNs off-line during reconfiguration.

Stopping and Starting the Service

The General Preferences tab, described in the next section, contains a single button you can press to alternately stop and restart the server's operation. Because stopping the server interrupts call processing, this step is necessary only after you change parameters related to Licensing, Scripts, CXM, the Server, and Locations.

You can also stop and start the Call Manager service by choosing **Tools | Start Service** or **Tools | Stop Service** from the menu bar.

The Menu Bar

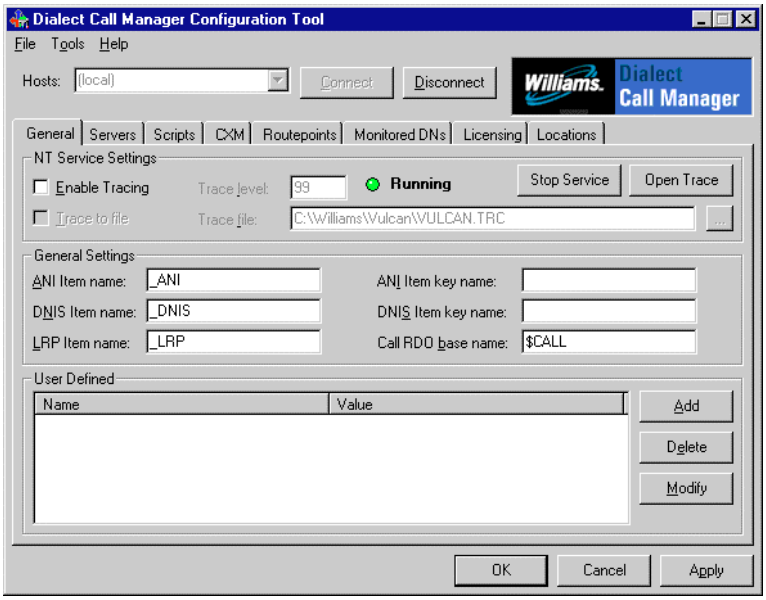
Some functions are also available from the menu bar at the top of Call Manager's interface:

Menu bar options

Menu	Available Options	For more information, refer to:
File	Connect	page 12
	Disconnect	page 72
	Apply	page 15
	Exit	page 72
Tools	Start Service / Stop Service	page 19
	Open Trace	page 19
	Reconfigure | Routepoints	page 15
	Reconfigure | MonitoredDNs	page 15
Help	About	N/A

General Preferences

Settings in the General tab govern how Call Manager monitors the server for errors and how it stores ANI, DNIS, and information from remote databases. You can also stop the Call Manager service from this tab.



To access General Preferences, click the **General** tab.

> **Note**: Screens in this document contain sample data; actual settings vary.

NT Service Settings

These settings control how Call Manager handles errors and informational messages.

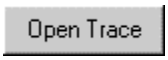
Enable Tracing: Enable this option to monitor the Call Manager service.

> **Note**: Because tracing can degrade system performance, disable tracing when you're not troubleshooting.

Trace Level: The level of detail to use in the trace file. Call Manager uses five trace levels to decide which events to display and commit to disk:

	Error Messages	Warning Messages	Info Messages	Standard Debugging Messages	CXM Debugging Messages
Trace Level 0*					
Trace Level 1	✓				
Trace Level 2	✓	✓			
Trace Level 3	✓	✓	✓		
Trace Level 4	✓	✓	✓	✓	

*Only vital trace messages appear (e.g., "system started," "system stopped")



Open Trace: Click the **Open Trace** button to initiate a trace and display trace messages on screen. Click the same button, now labeled **Close Trace**, to close the trace window.

Trace to File: Select this option and specify the name of a trace file to use (see below) to store any error and informational messages Call Manager generates during its operation. If you don't specify a file name for your trace, Call Manager creates a file named VULCAN.TRC in the user's home directory.

Trace File: The name (and path) of the file to use to store any error and informational messages Call Manager generates while operating. Call Manager creates this file if it doesn't already exist.

> **WARNING**: Delete the trace file periodically to keep hard disk space free for other applications. Before you can delete the trace file, however, you must *de-select* the **Trace to File** option and click **Apply**.

Start Service / Stop Service: Click the **Stop Service** button to interrupt the server's operation. Click the same button, now labeled **Start Service**, to restart the server.

An indicator lamp to the left of this button shows the current state of the Call Manager server.

Refer to page 16 for more information about starting and stopping the Call Manager service.

To put your changes into effect, click **Apply**:

General Settings

These settings dictate how Call Manager stores information about the call. Settings here don't apply unless optional Data Repository software is installed.

ANI Item Name: The variable to represent the call's ANI value. ANI (Automatic Number Identification) provides the telephone number from which the call was placed. Call Manager can use this information to determine the caller's identity.

Call Manager adds the ANI Item Name and its value to the RDO it creates for the call.

ANI Item Key Name: The variable to represent customer information retrieved from a remote database, through a query based on ANI. Refer to page 43 for more information about using SQL commands to gather information from databases.

Call Manager adds the ANI Item Key Name and its value to the RDO it creates for the call.

DNIS Item Name: The variable to represent the call's DNIS value. DNIS (Dialed Number Identification Service) provides the telephone number being called. Call Manager can use this information to determine which service the caller dialed.

Call Manager adds the DNIS Item Name and its value to the RDO it creates for the call.

DNIS Item Key Name: The variable to represent type-of-service information retrieved from a remote database, through a query based on DNIS. Refer to page 43 for more information about using SQL commands to gather information from databases.

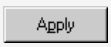
Call Manager adds the DNIS Item Key Name and its value to the RDO it creates for the call.

LRP Item Name: The variable to represent the last Routepoint to encounter the call.

Call Manager adds the LRP Item Name and its value to the RDO it creates for the call.

Call RDO Base name: The prefix to use when naming RDOs created for calls to monitored Routepoints. For each call to a Routepoint in its list, Call Manager creates an RDO named <Call RDO Base Name><Call ID>, where <Call RDO Base Name> is the value specified here and <Call ID> is the reference number that the PBX assigns to the call automatically.

To put your changes into effect, click **Apply**:



User Defined

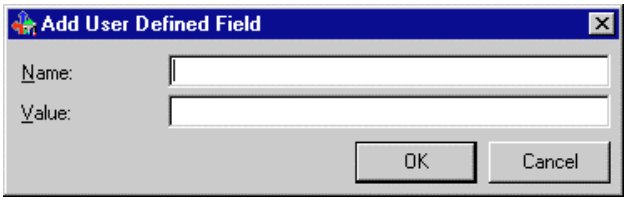
These settings customize the server's registry. Advanced users can use .DLL extensions to customize call handing.

Dialect Call Manager Server doesn't access or use any of the name-value combinations you define in this area; instead, it adds your entries for 'Value name' and 'Value data' to the registry under the HKEY_LOCAL_MACHINE\SOFTWARE\Williams Telecommunications\Vulcan\General\UserDef key.

Adding Item Names to the List

1. Click **Add**.

The following box appears.

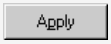


2. Enter the following values and click **OK**:

   Name: The name of the registry entry you want to add.

   Value: The value for your registry entry.

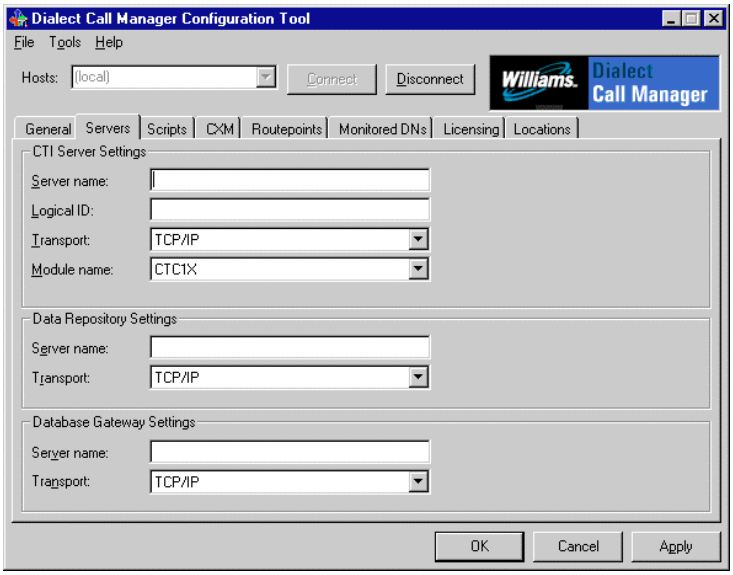
To put your changes into effect, click **Apply**:



Server Preferences

Server settings dictate how Call Manager connects with Data Repository and Database Gateway software that may be operating co-residently with Call Manager on the same server or in tandem with Call Manager on different computers.

To access Server settings, click the **Servers** tab.



CTI Server Settings

These settings control how Call Manager uses Dialogic's CT-Connect software to exchange data with the PBX.

> **Note**: Call Manager requires full-time access to a CT-Connect server. The Configuration Tool doesn't present an error message if it can't connect to the server; therefore, be sure that the information you enter is valid.

Server Name: The name of the server that hosts the CT-Connect Server software.

Logical ID: The name of CT-Connect's link to the PBX.

This setting identifies the switch Call Manager must control through CT-Connect. It must match the Logical ID for the PBX on the CT-Connect Server. Specifying Logical ID values is especially important if the same CT-Connect server connects to different switches.

Transport: The transfer protocol for communication between the Call Manager server and the CTI Server running CT-Connect. Valid choices include Local RPC (if both Call Manager and the CTI Server reside on the same computer), TCP/IP, Named Pipes, IPX, and SPX.

Module Name: The DLL to use to communicate with CT-Connect server. Click the drop-down arrow to the right of this field and select the module corresponding to the version of the CTI Server you use.

CTI Server	Module Name
CT-Connect 1.0	CTC1X
CT-Connect 2.0/3.0	CTC20

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

Data Repository Settings

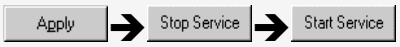
These settings influence how Call Manager interacts with optional Data Repository software. Developed by Williams Communications Group, Data Repository is a high-speed data storage and retrieval system that facilitates the sharing of information about callers. On a server, Data Repository maintains transitory Reference Data Objects (RDOs); applications can access and modify data in RDOs remotely. Data Repository is required for CXM functionality.

> **Note**: The Configuration Tool doesn't present an error message if it can't connect to the server; therefore, be sure that the information you enter is valid.

Server Name: The name of the server that hosts the Data Repository Server software.

Transport: The transfer protocol required for communication between the Call Manager server and the Data Repository server. Valid choices include Local RPC (if both Call Manager and Data Repository reside on the same computer), TCP/IP, Named Pipes, IPX, and SPX.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:



Database Gateway Settings

These settings influence how Call Manager interacts with optional Database Gateway software. Developed by Williams Communications, Database Gateway acts as an intermediary between applications and SQL Relational databases to provide software-independent access to data.

Call Manager relies on Database Gateway to make SQL calls to remote databases. For more information about Database Gateway, contact your Williams Communications representative.

> **Note**: The Configuration Tool doesn't present an error message if it can't connect to the server; therefore, be sure that the information you enter is valid.

Server Name: The name of the server where the Database Gateway software resides.

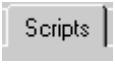
Transport: The transfer protocol required for communication between the Call Manager server and the Database Gateway server. Valid choices include Local RPC (if both Call Manager and Database Gateway reside on the same computer), TCP/IP, Named Pipes, IPX, and SPX.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

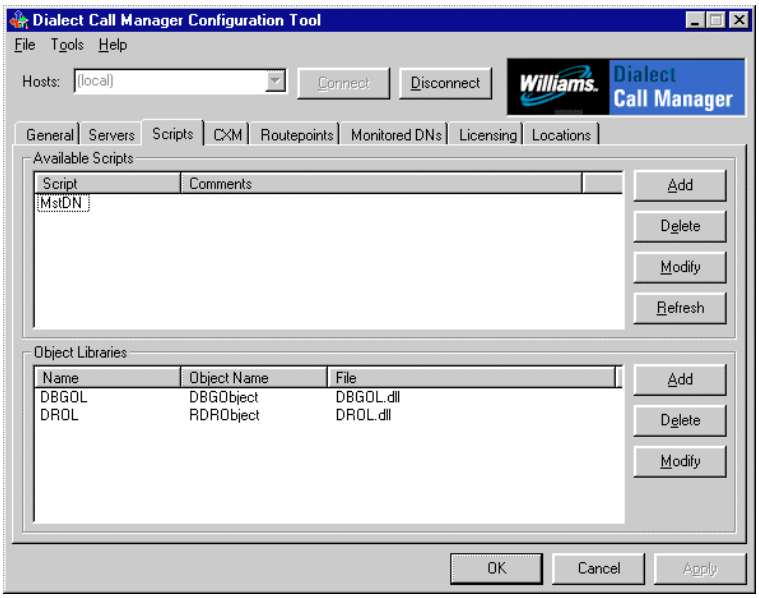
Scripts

Use this tab to list, add, delete, and annotate scripts developed and compiled with Call Manager's script editor.

Fully compatible with Visual Basic for Applications (VBA), the Dialect Extended Scripting Language (ESL) includes special objects and methods especially for CTI integration. The companion script editor lets you create, open and edit scripts, save scripts as files, and add scripts to the server's registry. A special wizard even streamlines the process of creating scripts for Monitored DNs and Routepoints.



To access Scripts settings, click the **Scripts** tab:



Available Scripts & Object Libraries

These areas list your ESL scripts and Object Libraries. To sort a list in ascending or descending order, click the column heading you want to use as the key for the sort.

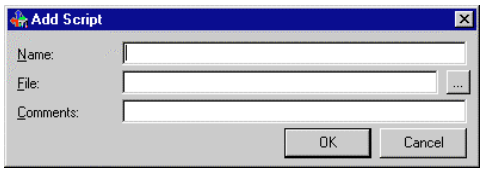
> **Note**: These lists may include names of scripts and object libraries not yet added to the server's registry.

Adding a Script

To add a new script file to the list:

1. Click **Add**.

   The following box appears.



2. Enter the following values and click **OK**:

   Name: The name you want to assign to the script.

   File: The name (and path) of the existing script file to add. If you don't specify a path, Call Manager looks for the script in the current directory.

   > **Note**: You can specify only source code scripts (.cms files).

   Comments: Optional notes to associate with this script.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

> **Note**: Stopping the service takes Call Manager off-line.

Deleting a Script

To remove a script from the list:

1. Highlight the name of the script you want to remove and click **Delete**. To select more than one script, use the Ctrl key in combination with your mouse.
2. Click **Yes** to confirm your choice; otherwise, click **No**.

> **Note**: Deleting a script from the list does not actually remove the script file from your hard disk.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

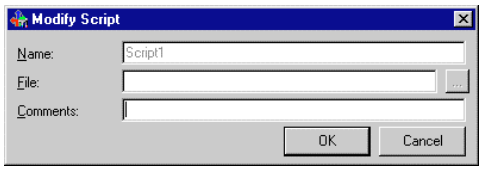
> **Note**: Stopping the service takes Call Manager off-line.

Modifying Script Settings

To change the optional notes associated with a script:

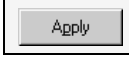
1. Highlight the script and click **Modify**.

   The following box appears.



2. Make any necessary changes and click **OK**.

To put your changes into effect, click **Apply**:



Refreshing the Script List

Click **Refresh** to update the list by including scripts added outside the Configuration Tool (from Call Manager's script editor).

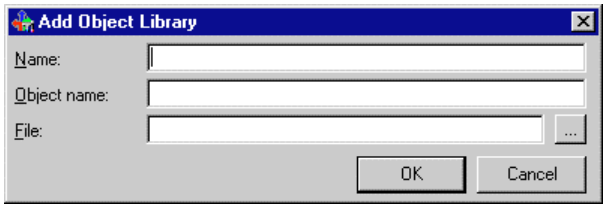
> **Note**: If Call Manager detects any unapplied changes to scripts, it prompts you to apply these changes before it updates the list.

Adding an Object Library

To add a new object library to the list:

1. Click **Add**.

   The following box appears.



2. Enter the following values and click **OK**:

   Name: The name you want to assign to the script.

   Object Name: The name (and path) of the object library to add. If you don't specify a path, Call Manager looks for the object library in the current directory.

   Comments: Optional notes to associate with this object library.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

Deleting an Object Library

To remove an object library from the list:

1. Highlight the name of the object library you want to remove and click **Delete**. To select more than one object library, use the Ctrl key in combination with your mouse.
2. Click **Yes** to confirm your choice; otherwise, click **No**.

> **Note**: Deleting an object library from the list does not actually remove the object library file from your hard disk drive.

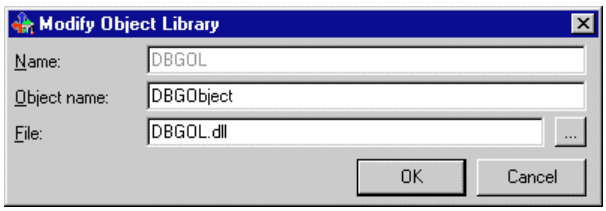
To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

Modifying Object Library Settings

To change the optional notes associated with an object library:

1. Highlight the object library and click **Modify**.

   The following box appears.



2. Make any necessary changes and click **OK**.

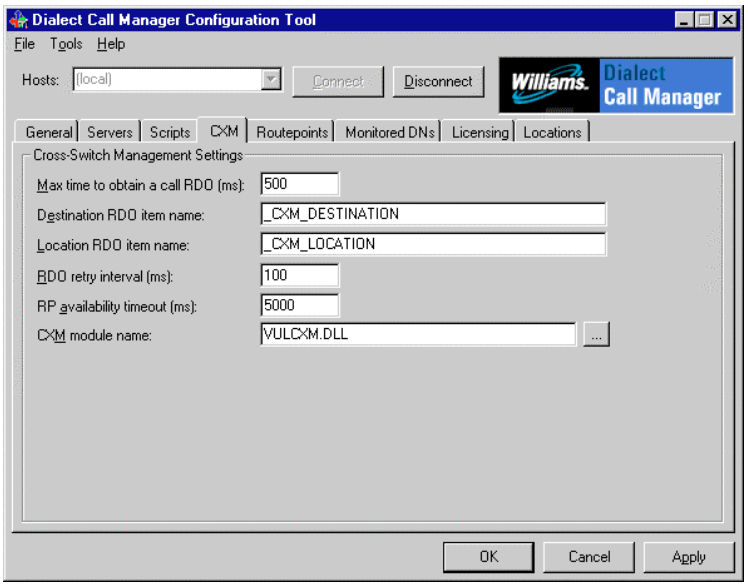
To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

CXM (Cross-Switch Management)

CXM settings dictate how Call Manager routes calls and associated call data to remote PBX systems. Both the source and destination call environment must be equipped with CT-Connect Server, Data Repository Server, and Call Manager server with the CXM extension.

> **Note**: Scripting and Target SQL operations are inactive for CXM-enabled Routepoints.

To access CXM settings, click the **CXM** tab.



Cross Switch Management Settings

These settings control how Call Manager routes calls with data to remote call center environments.

Max time to obtain a call RDO (ms): The maximum amount of time, in milliseconds, to continue searching for

the remote RDO associated with a CXM-enabled Route Point or Monitored DN.

> **Note:** Changing this setting's default value may degrade performance.

Destination RDO item name: The variable that your custom scripts, extensions, or IVR functions use to store the call's target DN. This DN typically corresponds to the remote "skill set" queue best qualified to receive the call. Call Manager adds the Destination RDO item name to the RDO named <Call RDO Base Name><Call ID>, where <Call RDO Base Name> is the Call RDO Base Name value specified in the General settings tab and <Call ID> is the reference number that the PBX assigns to the call automatically. Refer to page 20 for more information about the Call RDO Base Name and other General settings.

Location RDO item name: The variable that your custom scripts, extensions, or IVR functions use to store the call's destination location. This location typically corresponds to the city of the call center best qualified to receive the call (e.g. Dallas, Chicago, etc.). The Source Call Manager Server uses the location value to retrieve the name of the destination Data Repository Server and Call Manager Server from its registry. Source Call Manager Servers needs this information to communicate call data to Destination Call Manager Servers.

For help creating Locations and associating them with servers, refer to page 69.

Call Manager adds the Location RDO item name to the RDO named <Call RDO Base Name><Call ID>, where <Call RDO Base Name> is the Call RDO Base Name value specified in the General settings tab and <Call ID> is the reference number that the PBX assigns to the call automatically. Refer to page 20 for more information about the Call RDO Base Name and other General settings.

RDO retry interval: The duration in milliseconds between attempts to connect to the remote Data Repository server.

> **Note:** Changing this setting's default value may degrade performance.

RP availability timeout (ms): The maximum amount of time, in milliseconds, to wait for an available Route Point from the Destination Server.

> **Note:** Changing this setting's default value may degrade performance.

CXM module name: Use the default, VULCXM, to indicate the name of the CXM DLL.

For the current release, this is the only standard DLL module available for Cross-Switch Management. Contact your Williams representative for information about creating custom extensions for your enterprise.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

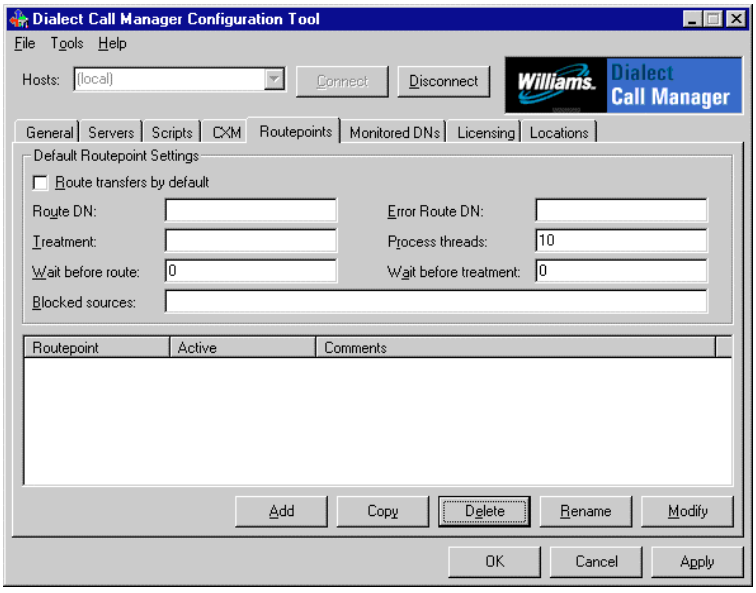
> **Note**: Stopping the service takes Call Manager off-line.

Routepoints

Use this tab to associate Routepoints with destinations.

You can assign specific DNs to Routepoints, or you can use the optional Database Gateway interface to query remote databases for target extensions and other data to use. If the optional Data Repository interface is installed, you can also add data to the call's RDO.

To access Routepoint settings, click the **Routepoints** tab:



How Call Manager Executes your Instructions

Software on the server continuously monitors the PBX for activity. When a call arrives at one of the CDNs (Routepoints) you've profiled, the server executes your series of instructions.

For example, if you have optional Dialect Data Repository software installed, Call Manager can start by creating a Reference Data Object (RDO) to store ANI and DNIS information and any additional information you choose to associate with the call.

Next, Call Manager can execute any single Extension DLL associated with the Routepoint.

If you have the optional Dialect Database Gateway software, Call Manager can now execute SQL statements; for example, to query a database for information about the caller and the type of service the caller dialed. You can also configure Call Manager to query a database for the extension of an agent or ACD queue to serve as the call's target.

Call Manager can then add any custom RDO items defined for the RDO, perform any CXM tasks, and finally execute any single custom script associated with the Routepoint.

Default Routepoint Settings

Call Manager uses these defaults whenever you choose to add new Routepoints.

Route Transfers by Default: Choose this option to allow supervised transfers by default; de-select this option to allow only unsupervised or "blind" transfers by default.

> **Note**: If you choose to "Route Transfers by Default," Call Manager will choose the option **"Allow the initiation portion of transfers and conferences to be routed"** for each new Routepoint you create. For more information about this setting for new Routepoints, refer to page 38.

Route DN: The destination DN to use when Call Manager cannot deliver a call to either the Default DN or Error DN in the Routepoint's General tab. Although typically an integer, this value may be PBX-specific (e.g., L1, L2, etc.).

> See "General Routepoint Preferences" on page 37 for more information about assigning instructions to Routepoints.

Treatment: The default call treatment. Use the default, ##R, to provide ringback to the caller; to provide music instead, enter the switch-specific address of a PBX channel configured to provide music.

> **Note**: Silence is not a valid treatment option when a call first reaches a Routepoint. To provide silence, enter the hexadecimal address of a channel not actually connected to a sound source. Use caution when providing silence to callers, however, because longer periods of silence resulting from complex routing operations can persuade callers to disconnect prematurely.

Wait Before Route (0-4294967295): The default time to wait, in milliseconds, before initiating the transfer. Call Manager adjusts this wait time slightly to distribute the PBX's workload.

Blocked sources: DNs from which Call Manager should not transfer calls by default. Anytime the "Route Transfers" option is active, Call Manager routes transfers from all sources except for those you specify here. Use commas to separate DNs in a list.

Error Route DN: The destination DN to use when Call Manager cannot deliver a call to the Default DN or Error DN in the Routepoint's General tab, or to the Route DN described earlier.

> **Note**: This Setting does not apply to Meridian switches.

Process Threads (default=10): The resources available to each Routepoint's call processing logic by default. The default value, 10, allows Call Manager to handle approximately 500 calls per second.

> **Note**: Higher values increase call handling capacity but can degrade performance. Consult your Williams representative before changing this value.

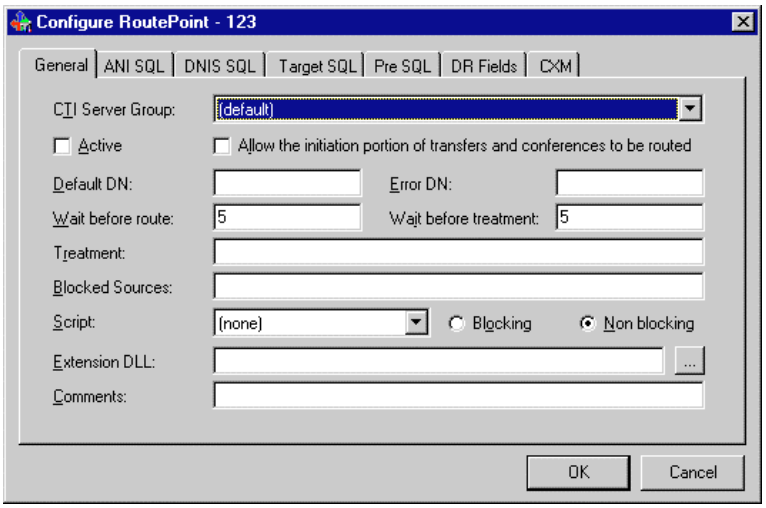
Wait Before Treatment (0-4294967295): The default time to wait, in milliseconds, before responding with the call treatment described earlier. Call Manager adjusts this wait time slightly to distribute the PBX's workload.

Routepoint List

The list provides an at-a-glance summary of Call Manager Routepoint profiles. To sort this list in ascending or descending order, click the column heading you want to use as the key for the sort.

General Routepoint Preferences

Each time you choose to add or modify a Routepoint, the General tab appears by default. To access it from another tab in its family, click the **General** tab.



> **Note**: Call Manager executes Routepoint instructions in a specific order. Read "How the System Works: Routepoints" on page 4 for more information.

CTI Server Group: [Not functional in this release.]

Active: Check this box to monitor this Routepoint for calls and respond by executing your instructions. This value appears in the list of Routepoints in the Routepoints tab.

Allow the initiation portion of transfers and conferences to be routed: Check this box to allow supervised transfers; de-select this option to allow only unsupervised or "blind" transfers.

If you don't select this option, Call Manager will not forward a call until the agent or device completes the transfer to the Routepoint.

> **WARNING**: A switch begins each transfer by putting its call on hold and placing a new call to the object of the transfer. Choosing to "Allow the initiation portion of transfers and conferences to be routed" creates a risk that the target of the transfer will answer the transitory call placed at the beginning of the transfer attempt, not the original call. This can delay delivery of the original CallID that many applications, such as Computer-Telephony Integration (CTI) applications, need to access information about the caller.

Default DN: The destination DN for calls to this Routepoint.

> **Note**: To query a remote database for a destination DN instead, specify settings in the Target SQL tab described on page 46. If you choose to associate a Routepoint with Target SQL settings, Call Manager uses your Default DN value only when the Target SQL operations fail.

Error DN: The destination DN for calls to this Routepoint, if the transfer to the Default DN fails.

Wait Before Route (0-4294967295): The approximate time to wait, in milliseconds, before initiating the transfer. Call Manager adjusts this wait time slightly to distribute the PBX's workload.

Wait Before Treatment (0-4294967295): The approximate time to wait, in milliseconds, before responding with the call treatment above. Call Manager adjusts this wait time slightly to distribute the PBX's workload.

Treatment: The call treatment to provide. Enter ##R to provide ringback to the calling party; to provide music, enter the hexadecimal address of a channel configured on the PBX to provide music.

> **Note**: Silence is not a valid treatment option when a call first reaches a Routepoint. To provide silence, enter the hexadecimal address of a channel not actually connected to a sound source. Use caution when providing silence to callers, however, because longer periods of silence resulting from complex routing operations can persuade callers to disconnect prematurely.

Blocked sources: DNs from which Call Manager should not transfer calls. Anytime the "Allow the initiation portion of transfers and conferences to be routed" option is active, Call Manager routes transfers from all sources except for those you specify here. Use commas to separate DNs in a list.

Script: An optional script to associate with the Route Point.

Choose "Blocking" to suspend operations for this Routepoint until the script has finished executing; choose "Non-Blocking" to launch the script and immediately return control to Call Manager.

Extension DLL: The name of any optional .DLL you developed for Call Manager's API. An Extension .DLL can supplement or replace a Routepoint's current routing logic and even take over the routing function. Advanced users can use Extension .DLL files and custom registry settings to enhance call handling.

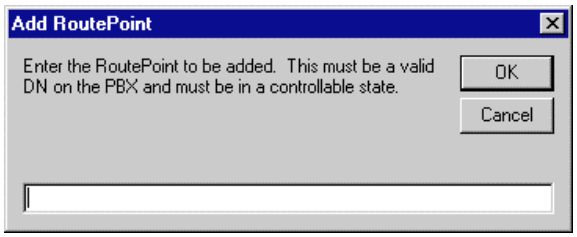
Comments: Optional notes to associate with this Routepoint's configuration here and in the list of Routepoints in the General tab. Comments appear in the list of Routepoints in the Routepoint tab.

Adding Routepoint Profiles

To add a new Routepoint to the list:

1. Click **Add**.

   The following box appears.



2. Enter the number of the CDN you want to use as a Routepoint and click **OK**.

   General settings for this Routepoint appear. Other settings you can modify include:

   - ANI SQL
   - DNIS SQL
   - Target SQL
   - User Values
   - DR Fields

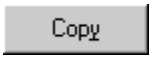
   For help with these settings, read "SQL Database Operations" on page 43.

   Note: Settings in these tabs apply only to the current Routepoint.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

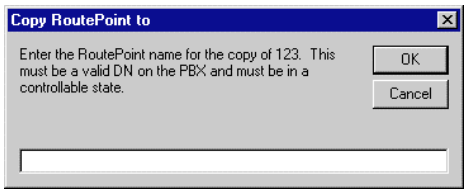
Copying a Routepoint

To create a new Routepoint based on an existing Routepoint profile:



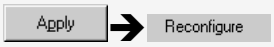
1. Click **Copy**.

   The following box appears.



2. Enter the number of the new Routepoint you want to create and click **OK**. Call Manager updates the list of Routepoints automatically.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.



Deleting a Routepoint

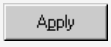
To remove a Routepoint from the list:

1. Right-click the Routepoint you want to delete and choose **Unload**.

2. Highlight the Routepoint and click **Delete**.
3. Click **Yes** to confirm your choice; otherwise, click **No**.

> **WARNING**: Unless you unload a Routepoint before you delete it, you don't delete it from the server. Although it no longer appears in the Configuration Tool's list of Routepoints, it nevertheless remains active (and inaccessible).

To put your changes into effect, click **Apply**:

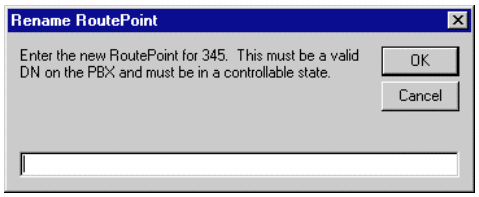


Renaming a Routepoint

To change a Routepoint's number but retain its settings:

1. Right-click the Routepoint you want to rename and choose **Unload**.

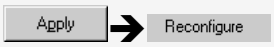
2. Click **Rename**.



3. Enter the new DN for this Routepoint and click **OK**. Call Manager updates the Routepoint list automatically.

> **WARNING**: Unless you unload a Routepoint before you rename it, you don't delete the original from the server. Although it no longer appears in the Configuration Tool's list of Routepoints, it nevertheless remains active (and inaccessible).

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.



Modifying an Existing Routepoint

To change settings for a Routepoint in the list:

1. Double-click the Routepoint you want to change or highlight its number and click **Modify**.
2. Make any necessary changes and click **OK**.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

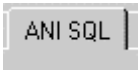
SQL Database Operations

With optional Database Gateway (DBG) software, you can use the ANI SQL, DNIS SQL, and Target SQL tabs to retrieve information from remote ODBC-compliant databases. Call Manager can use this information to update RDOs and make intelligent call handling decisions.

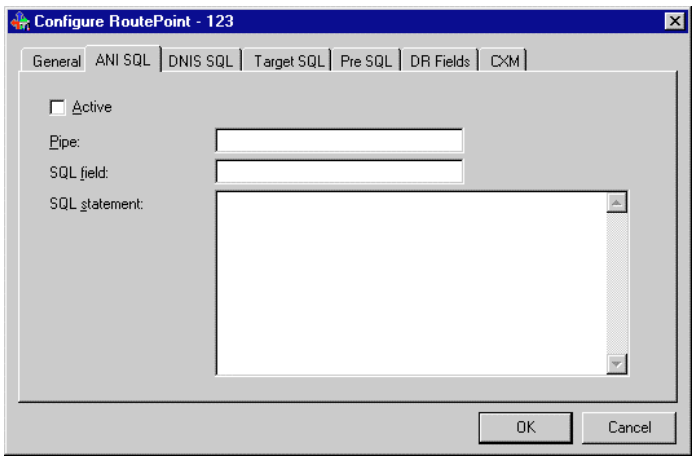
Each time you choose to add or modify a Routepoint, the General tab appears by default. You can access the SQL settings described in this section by simply by clicking on the appropriate tabs.

ANI SQL

To perform a query based on ANI information collected from the call:



1. Click the **ANI SQL** tab.



Enter the following settings:

Active: Check this box to perform your query after every call to the Routepoint.

Pipe: The logical pathway to the database you want to access.

Database Gateway uses logical connections called "pipes" to communicate with databases. The name you enter must match the name of the pipe already assigned to the database on the Database Gateway Server. Pipe names are particularly important if the same Database Gateway Server connects to different databases.

SQL Field: The column name you use in your SQL Statement (below) to retrieve a value from the database. If Data Repository software is installed, Call Manager will add the value to the call's RDO and assign it the "ANI Item Key Name" you specified in the General tab described on page 17.

SQL Statement: The precise SQL statement to submit to the database through the Database Gateway pipe. This statement must return a value for the SQL Field (above). Consider the following example:

```
select acc_num from cust_master where
   tel_num = '@ANI@'
```

This statement searches the "cust_master" table for a record that contains the call's ANI value in its "tel_num" column. Upon finding a match, it returns the value in the record's "acc_num" column. This type of operation is often used to identify the caller by returning information such as the caller's customer account number.

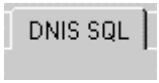
> **Note:** If the SQL statement returns more than one row, Call Manager uses the data value from the first row. Design your SQL statements to return only one row or use the "ORDER BY" function to return the pertinent row first. Refer to your SQL reference manual for more information.

2. Click **OK** to return to the Routepoints tab. To abandon your changes, click **Cancel**.

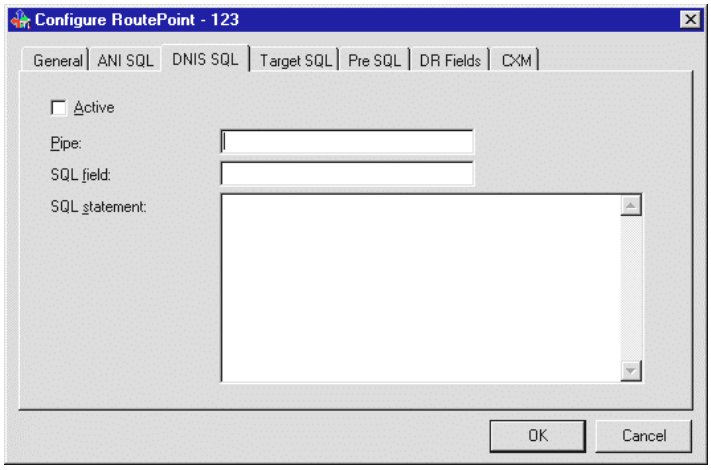
To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

DNIS SQL

To perform a query based on DNIS information collected from the call:



1. Click the **DNIS SQL** tab.



Enter the following settings:

Active: Check this box to perform your query after every call to the Routepoint.

Pipe: The logical pathway to the database you want to access.

Database Gateway uses logical connections called "pipes" to communicate with databases. The name you enter must match the name of the pipe already assigned to the database on the Database Gateway Server. Pipe names are particularly important if the same Database Gateway Server connects to different databases.

SQL Field: The column name you use in your SQL Statement (below) to retrieve a value from the database. If Data Repository software is installed, Call Manager will add the value to the call's RDO and assign it the "DNIS Item Key Name" you specified in the General tab described on page 17.

SQL Statement: The precise SQL statement to submit to the database through the Database Gateway pipe. This statement must return a value for the SQL Field (above). Consider the following example:

```
select dnis_desc from dnis_map where dnis
   = '@DNIS@'
```

This statement searches the "dnis_map" table for a record that contains the call's DNIS value in its "dnis" column. Upon finding a match, it returns the value in the record's "dnis_desc" column. This type of operation is often used to return the type of service the caller dialed; "new equipment sales," for example.

> **Note:** If the SQL statement returns more than one row, Call Manager uses the data value from the first row. Design your SQL statements to return only one row or use the "ORDER BY" function to return the pertinent row first. Refer to your SQL reference manual for more information.

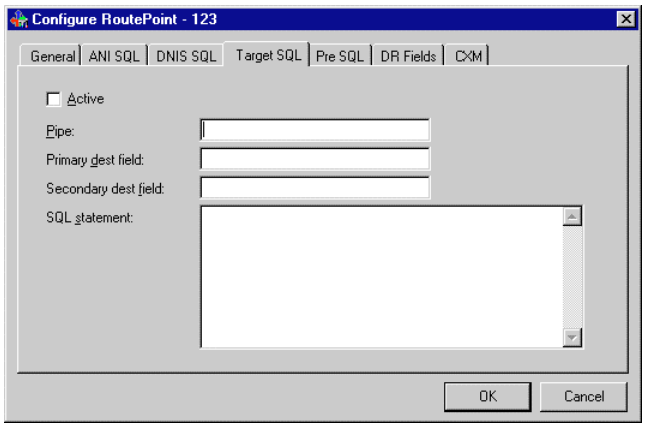
2. Click **OK** to return to the Routepoints tab. To abandon your changes, click **Cancel**.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

Target SQL

To extract destination DNs from a database, based on ANI and DNIS information collected from the call:

1. Click the **Target SQL** tab.



Enter the following settings:

Active: Check this box to perform your query after every call to the Routepoint.

Pipe: The logical pathway to the database you want to access.

Database Gateway uses logical connections called "pipes" to communicate with databases. The name you enter must match the name of the pipe already assigned to the database on the DBG Server. Pipe names are particularly important if the same DBG Server connects to different databases.

Primary Dest Field: The column name you use in your SQL Statement (below the Secondary Dest Field) to retrieve a primary destination for calls to this Routepoint. Call Manager routes the call to this DN automatically. If the query does not return a value for this field, or if the transfer attempt fails, Call Manager uses the Secondary Dest Field instead.

Secondary Dest Field: The column name you use in your SQL Statement (below) to retrieve an alternate destination for calls to this Routepoint. Call Manager routes the call to this DN automatically if it cannot route to the DN in the Primary Dest Field. If the query does not return a value for the Secondary Dest Field, or if the

route attempt fails, Call Manager uses the Default DN in the Routepoint's General tab instead.

> **Note**: This setting does not apply to Meridian switches.

SQL Statement: The precise SQL statement to submit to the database through the DBG pipe. This statement must return a value for both the Primary Dest Field and the Secondary Dest Field. Consider the following example:

```
select last_agent, backup_dest from
   cust_master where tel_num = '@ANI@'
```

This statement searches the "cust_master" table for a record that contains the call's ANI value in its "tel_num" column. Upon finding a match, it returns the value in the record's "last_agent" column and the value in its "backup_dest" column. This type of operation is often used to return the extension of the last agent who spoke with the caller.

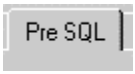
> **Note:** If the SQL statement returns more than one row, Call Manager uses the data value from the first row. Design your SQL statements to return only one row or use the "ORDER BY" function to return the pertinent row first. Refer to your SQL reference manual for more information.

2. Click **OK** to return to the Routepoints tab. To abandon your changes, click **Cancel**.

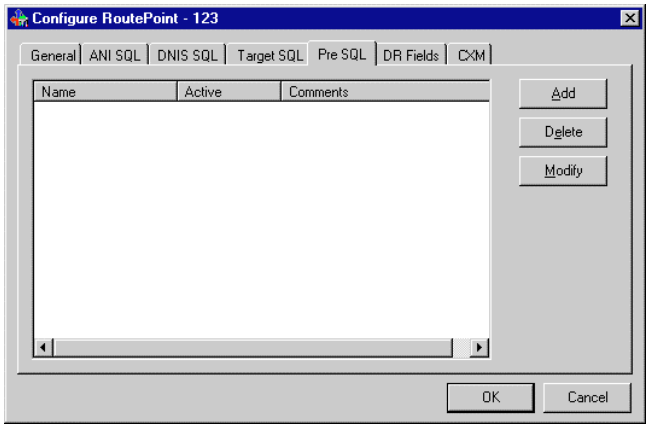
To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

Pre SQL

To execute SQL operations before any operations specified in the ANI SQL, DNIS SQL, or Target SQL tabs:



1. Click the **Pre SQL** tab.

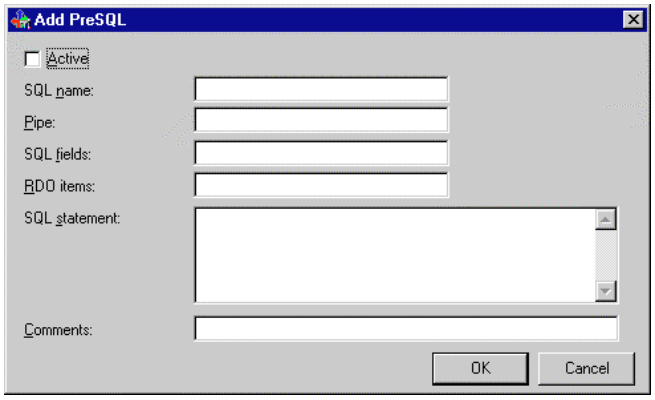


Adding Pre SQL Operations

To add a new Pre SQL operation to the list:

1. Click **Add**.

   The following box appears.



2. Enter the following values and click **OK**:

Active: Check this box to perform your query after every call to the Routepoint.

Pipe: The logical pathway to the database you want to access.

Database Gateway uses logical connections called "pipes" to communicate with databases. The name you enter must match the name of the pipe already assigned to the database on the DBG Server. Pipe names are particularly important if the same DBG Server connects to different databases.

SQL fields: The name of each database column containing a value you want to retrieve. Use spaces to separate multiple entries.

RDO items: The RDO item names you want to associate with the SQL fields above. Call Manager creates RDO items with these names to store the values returned by the database.

RDO item names you enter here correspond, in order, to the SQL fields you specified before; therefore, be sure to enter the same number of SQL fields and RDO items. Use spaces to separate multiple entries.

SQL Statement: The precise SQL statement to submit to the database through the Database Gateway pipe. This statement must return a value for each SQL Field (above). Consider the following example:

```
select name, acc_status from cust_master
   where tel_num='@ANI@'
```

This statement searches the "cust_master" table for a record that contains the call's ANI value in its "tel_num" column. Upon finding a match, it returns the values in the record's "name" and "acc_status" columns.

> **Note:** If the SQL statement returns more than one row, Call Manager uses the data value from the first row. Design your SQL statements to return only one row or use the "ORDER BY" function to return the pertinent row first. Refer to your SQL reference manual for more information.

Comments: Optional notes to associate with this operation.

3. Click **OK** to return to the Pre SQL tab. To abandon your changes, click **Cancel**.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

Deleting a Pre SQL Operation

To remove a Pre SQL operation from the list:

1. Highlight the name of the operation you want to remove and click **Delete**. To select more than one script, use the Ctrl key in combination with your mouse.
2. Click **Yes** to confirm your choice; otherwise, click **No**.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

Modifying a Pre SQL Operation

To change settings for a Pre SQL operation in the list:

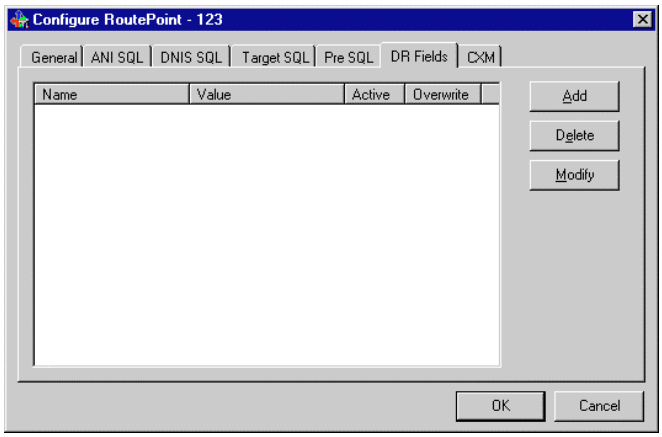
1. Double-click the operation or highlight its name and click **Modify**.
2. Make any necessary changes and click **OK**.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

DR Fields

To manage fields in the RDO that Call Manager creates automatically after each call to the Routepoint:

1. Click the **DR Fields** tab.

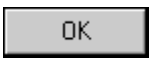


Adding a DR Field

To add a new Data Repository field to the list:

1. Click **Add**.

   The following box appears.



2. Enter the following values and click **OK**:

   Name: the name of the item you want to add to the RDO.

Value: the value you want to assign to the new RDO item.

Active: Select this box to apply your settings to each RDO Call Manager creates for the Routepoint.

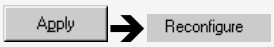
Overwrite: By default, Call Manager will not add an item name and value to an RDO that contains an item with the same name. Select this box to overwrite any duplicate item Call Manager encounters.

Deleting a DR Field

To remove a data repository field from the list:

1. Highlight the field you want to remove and click **Delete**.
2. Click **Yes** to confirm your choice; otherwise, click **No**.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

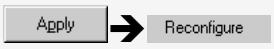


Modifying an Existing DR Field

To change settings for a data repository item in the list:

1. Double-click the field you want to change or highlight its name and click **Modify**.
2. Make any necessary changes and click **OK**.

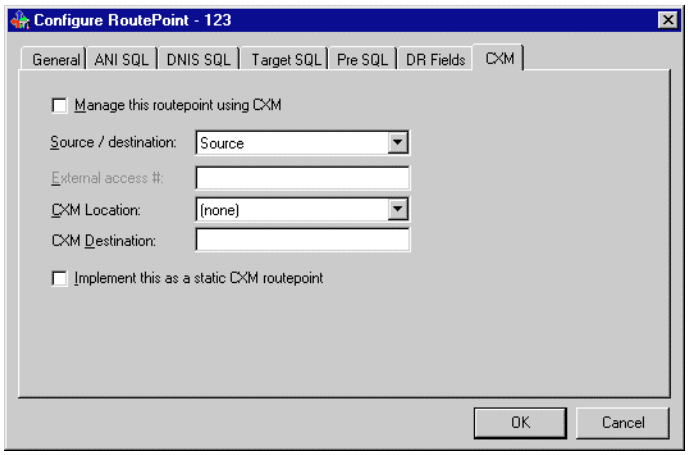
To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.



CXM

To use this Routepoint either as a source or destination DN for calls routed between different PBX systems:

1. Click the **CXM** tab.



2. Enter the following values and click **OK**:

   Manage this routepoint using CXM: Select this box to apply your settings to every call to this Routepoint.

   Source / destination: Use the default value, "Source," if you intend to route all calls to a remote PBX system. Click the drop-down arrow and choose "Destination" if this Routepoint will only be accepting calls from a remote PBX.

   External access #: The telephone number that others must dial to reach this Routepoint.

   CXM Location: The destination for all calls to this Routepoint (for source Routepoints only). This location typically corresponds to the city of the call center best qualified to receive the call (e.g. Dallas, Chicago, etc.). The Source Call Manager Server uses the location value to retrieve the name of the destination Data Repository Server and Call Manager Server from its registry. Source Call Manager Servers need this information to

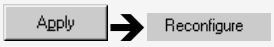
communicate call data to Destination Call Manager Servers.

For help creating Locations and associating them with servers, refer to page 69.

CXM Destination: The call's target DN (for source Routepoints only). This DN typically corresponds to the remote "skill set" queue best qualified to receive the call.

Implement this as a static CXM routepoint: Choose this option to always use the default Location and Destination in this tab, instead of any Location and Destination from an RDO, to route calls to this Routepoint.

To put your changes into effect, click **Apply** and then right-click the Routepoint and click **Reconfigure**.

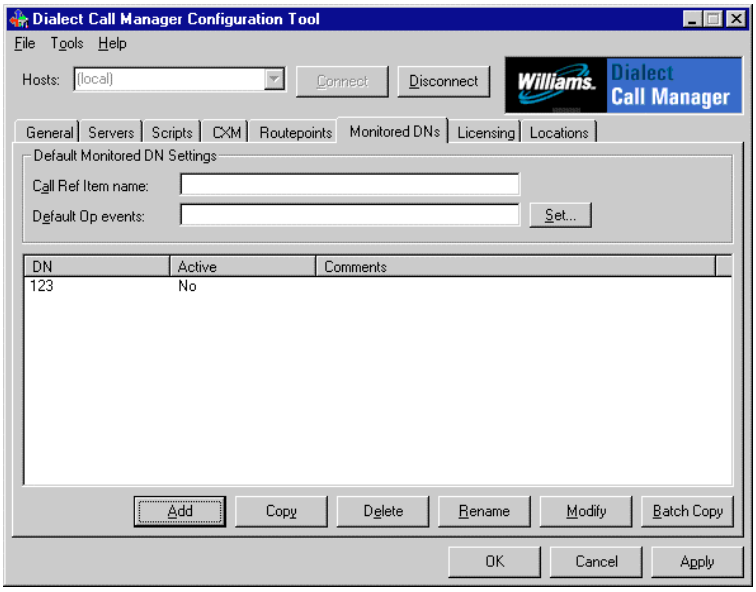


Monitored DNs

Use this tab to associate the DN numbers of agents, Interactive Voice Response (IVR) ports, and other destinations with codes for events like "ringing" and "established" and the name of an RDO to create when any of these events occurs.

Software on the server continuously monitors the PBX for activity. When a call arrives at one of the DNs you profiled, Call Manager creates an RDO to store the call's Call Reference ID (CallID).

To access the Monitored DN tab, click the **Monitored DNs** tab.



Default Monitored DN Settings

Call Manager uses these defaults whenever you choose to add new Monitored DNs.

Call Ref Item name: The default name of the variable to use in the RDO to represent the call's CallID.

Call Manager adds the Call Ref item name to the RDO named <RDO name>, where <RDO name> is the RDO name specified in the General settings tab. Refer to page 59 for more information about the RDO name and other General settings.

Default Op events: The default Op Events to use for each new Monitored DN. Use Spaces to separate multiple events. For more information about Op events, refer to page 59.

Click **Set** to choose from the following Op Events.

Event	**Event Code**
MonitorEnabled	0
Offhook	1
DestSeized	2
OpAnswered	3
TpDisconnected	4
OpDisconnected	5
InboundCall	6
TpAnswered	7
DestBusy	8
DestInvalid	9
DestNotObtainable	10
Error	11
Unavailable	12
TpConferenced	13
OpConferenced	14
TpRetrieved	15
OpRetrieved	16
TpSuspended	17
OpHeld	18
PassiveDisconnected	19
Swapped	20
Diverted	21
DestChanged	22
Transferred	23
Other	24

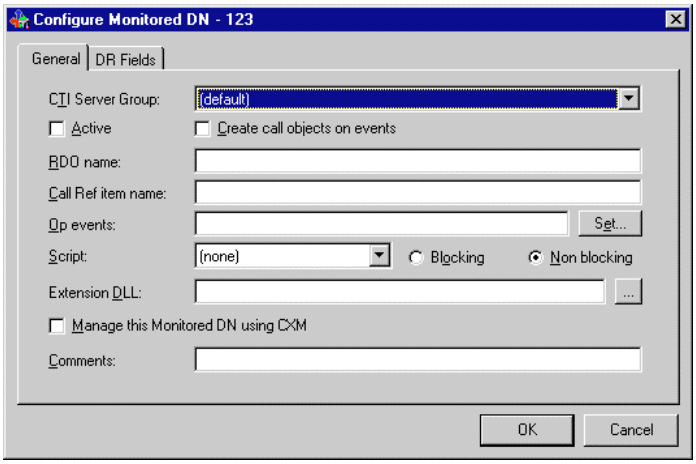
Event	Event Code
OffhookPrompt	25
AgentLoggedOn	26
AgentLoggedOff	27
AgentModeChange	28
MlpEndOfPlay	29
MlpDigitsCollected	30
BackInService	31
OutOfService	32
Private	33
CallInformation	34

DN List

The DN list provides an at-a-glance list of active and inactive Monitored DNs. To sort this list in ascending or descending order, click the name of the column you want to use as a sort key.

General Monitored DN Preferences

Each time you choose to add or modify a Monitored DN, the General tab appears by default. To access it from another tab in its family, click the **General** tab.



CTI Server Group: [Not functional in this release.]

Active: Check this box to monitor this DN for activity and respond by executing your instructions.

Create call objects on events: Check this box to create a new RDO for the call, in response to any of the "Op events" listed elsewhere in this tab. If an RDO already exists for the DN, Call Manager updates it with the new CallID.

RDO name: The name of the RDO to create in response to "Op events" such as "ringing" and "established." Use the "Op events" field described later to specify which events to use.

Call Manager uses this RDO to store the call's Call Reference ID Number (CallID). You can program other applications to access this RDO after calls arrive at this DN.

Call Ref item name: The name of the variable to use in the RDO to represent the call's CallID.

Op Events: The types of events to trigger creation of an RDO. Upon encountering an Op Event specified here, Call Manager creates an RDO for the call, if one does not already exist. If an RDO already exists for the DN, Call Manager updates it with the new CallID. For the Meridian PBX, valid events include 6 (ringing) and 7 (established).

Click **Set** to choose from the following Op Events.

Event	**Event Code**
MonitorEnabled	0
Offhook	1
DestSeized	2
OpAnswered	3
TpDisconnected	4
OpDisconnected	5
InboundCall	6
TpAnswered	7
DestBusy	8
DestInvalid	9
DestNotObtainable	10
Error	11
Unavailable	12
TpConferenced	13
OpConferenced	14
TpRetrieved	15
OpRetrieved	16
TpSuspended	17
OpHeld	18
PassiveDisconnected	19
Swapped	20
Diverted	21
DestChanged	22
Transferred	23

Event	Event Code
Other	24
OffhookPrompt	25
AgentLoggedOn	26
AgentLoggedOff	27
AgentModeChange	28
MlpEndOfPlay	29
MlpDigitsCollected	30
BackInService	31
OutOfService	32
Private	33
CallInformation	34

Script: An optional script to associate with the Monitored DN. Call Manager executes scripts after executing any Extension DLLs specified below, and after adding any custom RDO items specified in the DR Fields tab described in step 3.

Choose "Blocking" to suspend operations for this Routepoint until the script has finished executing; choose "Non-Blocking" to launch the script and immediately return control to Call Manager.

Extension DLL: The name of any optional .DLL you developed for Call Manager's API. An Extension .DLL can supplement or replace the logic for a monitored DN.

Manage this Monitored DN using CXM: Choose this option to configure Call Manager to pass call information to the CXM module for processing.

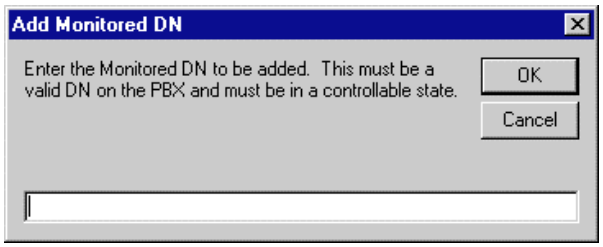
Comments: Notes to associate with the Monitored DN here and in the DN List.

Adding a Monitored DN

To add a Monitored DN to the list:

1. Click the **Add** button.

   The following box appears:

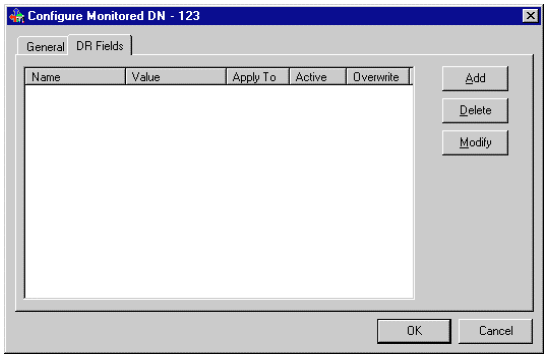


2. Enter the number of the DN you want to monitor and click **OK**.

   General settings for this Monitored DN appear. For help with these settings, refer to "General Monitored DN Preferences" on page 58.

> **Note**: Settings in these tabs apply only to the current Monitored DN.

3. To manage fields in the RDO that Call Manager creates automatically after each call to the Routepoint, click the **DR Fields** tab and follow the instructions below.

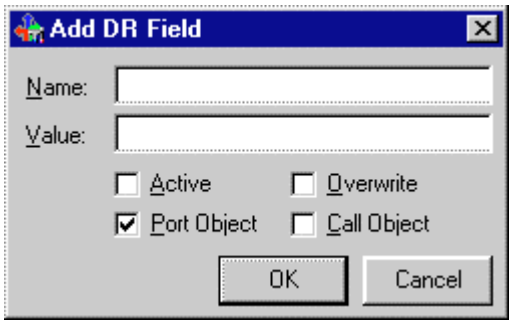


Adding a DR Field

To add a new Data Repository field to the list:

1. Click **Add**.

   The following box appears.



2. Enter the following values and click **OK**:

   Name: the name of the item you want to add to the RDO.

   Value: the value you want to assign to the new RDO item.

   Active: Select this box to apply your settings to each RDO Call Manager creates for the Routepoint.

   Overwrite: By default, Call Manager will not add an item name and value to an RDO that contains an item with the same name. Select this box to overwrite any duplicate item Call Manager encounters.

   Port Object: Select this box to create an RDO using the RDO Name in the Monitored DN's General tab. Refer to page 59 for more about RDO names for Monitored DNs.

   Call Object: Select this box to create an RDO using the Call RDO Base Name in the General tab. Refer to page 20 for more information about the Call RDO Base Name and other General settings.

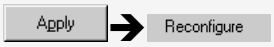
To put your changes into effect, click **Apply** and then right-click the Monitored DN and click **Reconfigure**.

Deleting a DR Field

To remove a data repository field from the list:

1. Highlight the field you want to remove and click **Delete**.
2. Click **Yes** to confirm your choice; otherwise, click **No**.

To put your changes into effect, click **Apply** and then right-click the Monotored DN and click **Reconfigure**.



Modifying an Existing DR Field

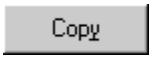
To change settings for a data repository item in the list:

1. Double-click the Routepoint you want to change or highlight its number and click **Modify**.
2. Make any necessary changes and click **OK**.

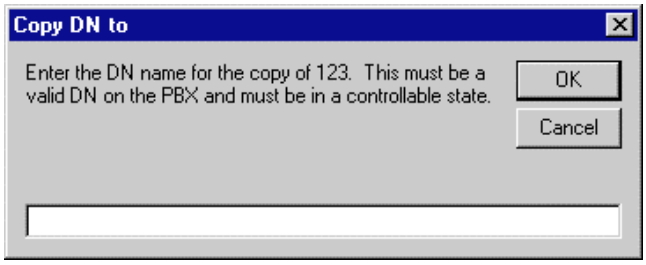
To put your changes into effect, click **Apply** and then right-click the Monotored DN and click **Reconfigure**.

Copying a Monitored DN

To create a new Monitored DN based on an existing Monitored DN profile:

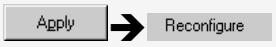


1. Click **Copy**.



2. Enter the number of the new DN you want to monitor and click **OK**. Call Manager updates the list of Monitored DNs automatically.

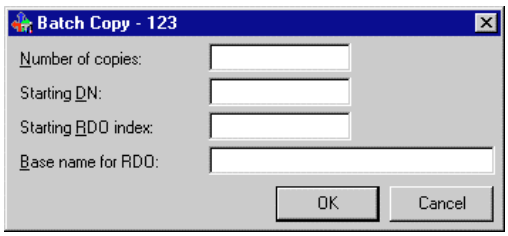
To put your changes into effect, click **Apply** and then right-click the Monitored DN and click **Reconfigure**.



Using Batch Copy

To create a series of new Monitored DNs based on an existing Monitored DN's settings:

1. Click **Batch Copy**.



2. Enter the following values and click **OK**:

   Number of copies: the number of new Monitored DN profiles you want to create.

   Starting DN: The first DN to use in your series.

   > **Note**: Call Manager does not check for duplicate Location ID numbers; be sure to enter a unique number in this field.

   Starting RDO index: The first in the series of numbers to use after the "Base name for RDO," below, to create complete RDO names for your new Monitored DNs. Refer to page 59 for more about RDO names for Monitored DNs.

   Base name for RDO: The base name to use, in combination with an index number, to create complete

RDO names for your new Monitored DNs. Refer to page 59 for more about RDO names for Monitored DNs.

To put your changes into effect, click **Apply** and then right-click the Monitored DN and click **Reconfigure**.

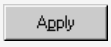
Removing a Monitored DN

To remove a Monitored DN from the list:

1. Right-click the Monitored DN you want to delete and choose **Unload**.
2. Highlight the Monitored DN and click **Delete**.
3. Click **Yes** to confirm your choice; otherwise, click **No**.

> **WARNING**: Unless you unload a Monitored DN before you delete it, you don't delete it from the server. Although it no longer appears in the Configuration Tool's list of Monitored DNs, it nevertheless remains active (and inaccessible).

To put your changes into effect, click **Apply**:

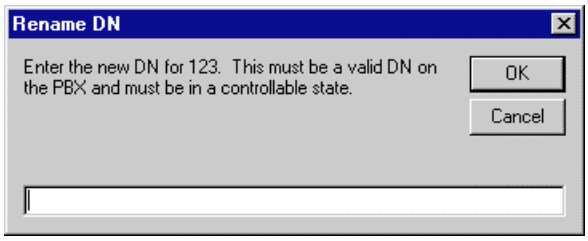


Renaming a Monitored DN

To change a monitored DN's number but retain its settings:

1. Right-click the Monitored DN you want to rename and choose **Unload**.

2. Click **Rename**.



3. Enter the new DN to monitor and click **OK**. Call Manager updates the DN List automatically.

> **WARNING**: Unless you unload a Monitored DN before you rename it, you don't delete the original from the server. Although it no longer appears in the Configuration Tool's list of Monitored DNs, it nevertheless remains active (and inaccessible).

To put your changes into effect, click **Apply** and then right-click the Monitored DN and click **Reconfigure**.

Modifying a Monitored DN

To change settings for a monitored DN in the list:

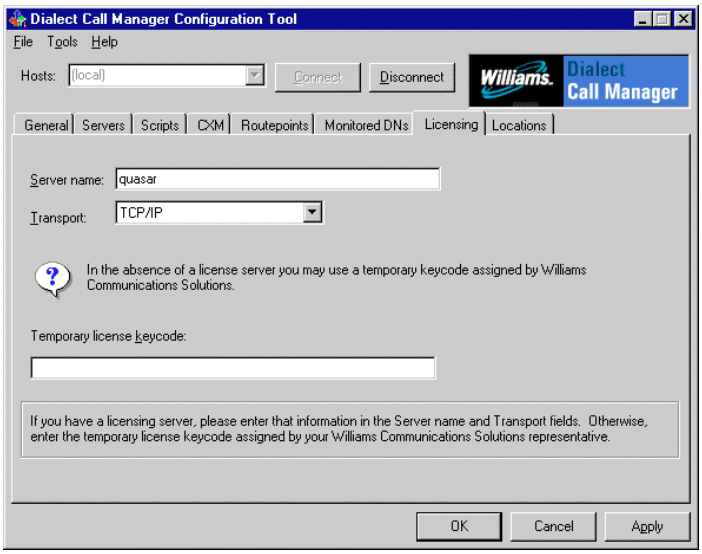
1. Double-click the DN you want to change or highlight its number and click **Modify**. Your original settings appear.
2. Make any necessary changes and click **OK**.

To put your changes into effect, click **Apply** and then right-click the Monitored DN and click **Reconfigure**.

Licensing

Licensing settings authorize you to use the Call Manager configuration tool.

To access Licensing settings, click the **Licensing** tab.

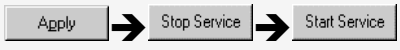


Server: The name of the server that hosts the Licensing software.

Transport: The transfer protocol for communication between the Call Manager server and the Licensing server. Valid choices include Local RPC (if both Call Manager and the Licensing application reside on the same computer), TCP/IP, Named Pipes, IPX, and SPX.

Temporary license keycode: A temporary keycode to use in the absence of a licensing server. Contact your Williams representative for more information.

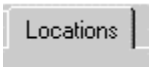
To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:



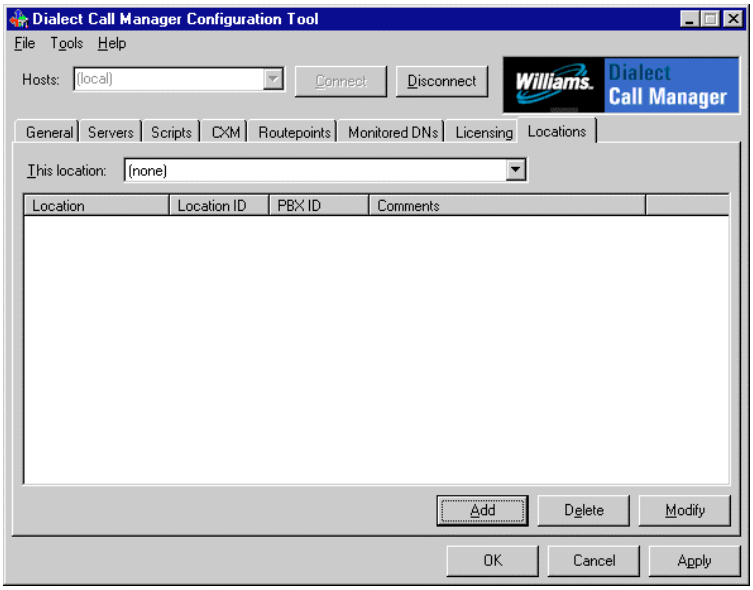
> **Note**: Stopping the service takes Call Manager off-line.

Location Preferences

Use this tab to profile locations you use as "sources" and "destinations" for calls routed using CXM.



To access Locations settings, click the **Locations** tab.



Specifying "This Location"

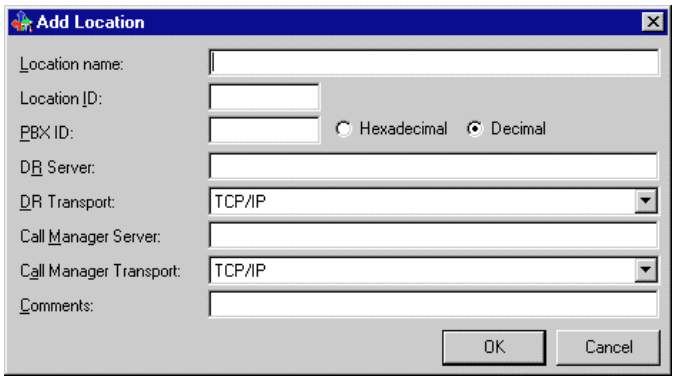
After following the instructions below to add locations to the list, click the drop-down arrow to the right of the **This Location** field and choose the location profile you created for the Call Manager server.

Adding a Location

To add a new location name to the list:

1. Click **Add**.

   The following box appears.



2. Enter the following values and click **OK**:

   Location: the name of the location you want to add to the list.

   Location ID: A unique number to identify this location.

   > **Note**: Call Manager does not check for duplicate Location ID numbers; be sure to enter a unique number in this field.

   PBX ID: The PBX system's identification number, also known as its Home Location Code. The PBX ID is typically encountered during network call transfers. Click the accompanying Decimal radio button to enter an ID in decimal format; click Hexadecimal for a hexadecimal entry.

   DR Server: The name of the server that hosts the Data Repository Server software.

   DR Transport: The transfer protocol required for communication between the Call Manager server and the Data Repository server. Valid choices include Local

RPC (if both Call Manager and Data Repository reside on the same computer), TCP/IP, Named Pipes, IPX, and SPX.

Call Manager Server: The name of the server that hosts the Call Manager Server software.

Call Manager Transport: The transfer protocol required for communication with the Call Manager server. Valid choices include Local RPC, TCP/IP, Named Pipes, IPX, and SPX.

Comments: Notes to associate with the location in the locations list.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

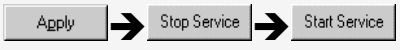
> **Note**: Stopping the service takes Call Manager off-line.

Deleting a Location

To remove a location from the list:

1. Highlight the field you want to remove and click **Delete**.
2. Click **Yes** to confirm your choice; otherwise, click **No**.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:



> **Note**: Stopping the service takes Call Manager off-line.

Modifying an Existing Location

To change settings for a location item in the list:

1. Double-click the location you want to change or highlight its name and click **Modify**.
2. Make any necessary changes and click **OK**.

To put your changes into effect, click **Apply** and then stop and restart the Call Manager service:

> **Note**: Stopping the service takes Call Manager off-line.

Disconnecting from the Host

Click the **Disconnect** button or choose **File | Disconnect** to close the connection to the Call Manager server. The Configuration Tool prompts you to save or abandon any changes you made to Call Manager settings.

Exiting the Configuration Tool

Choose **File | Exit** from the menu bar to close the connection to the Call Manager server and exit the Configuration Tool in one step. The Configuration Tool prompts you to save or abandon any changes you made to Call Manager settings.