



Xiox CommView Application Note For Version 1.0.2.3 – Document Revision 2/8/04

Cisco and Circle24 ODBC Polling/Processing Setup

Before you begin

This application note will assist with the installation and configuration of CommView to support CDR from the Cisco Call Manager and the Circle24 CallManager add-on application which supports Account Codes and Forced Account Codes (Authorization Codes). In order to complete the tasks identified in this guide, the CommView workstation will need to have LAN or WAN access to the Cisco Call Manager (or Circle24) database and the appropriate password permission to connect via ODBC.

Please complete the following for each Call Manager Publisher to be setup:

Site ID and Site Description	_____ (i.e., Site0)	_____ (i.e., Cisco)
SQL Server Name or IP Address	_____	
Network - User Name and Password	_____	_____
SQL Server - Login and Password	_____	_____

The overview of the install procedure is:

1. **Install and register CommView**
2. **Set up ODBC on CommView workstation for Cisco/Circle24 CDR database access**
3. **Configure the Cisco CDR database**
4. **Setup WCA.INI file of CommView workstation**
5. **Configure CommView Application**

If you are unable to obtain the required information or would like additional assistance, please contact @Comm Product Support at 603-628-3000 or support@atcomm.com.

1. Install and Register CommView

Review the CommView Installation Guide shipped with the software or online at the CommView documentation link at <http://www.atcomm.com/support> and follow the instructions to configure remote access, load the CommView application and register using the registration diskette provided.

Since the Cisco CDR database access is via ODBC, no call storage device, like a Xiox Intelligent Buffer, is required and all associated steps regarding buffer installation. The COM Port configuration for buffer setup may therefore be skipped.

Items to setup for each Cisco or Circle24 site:

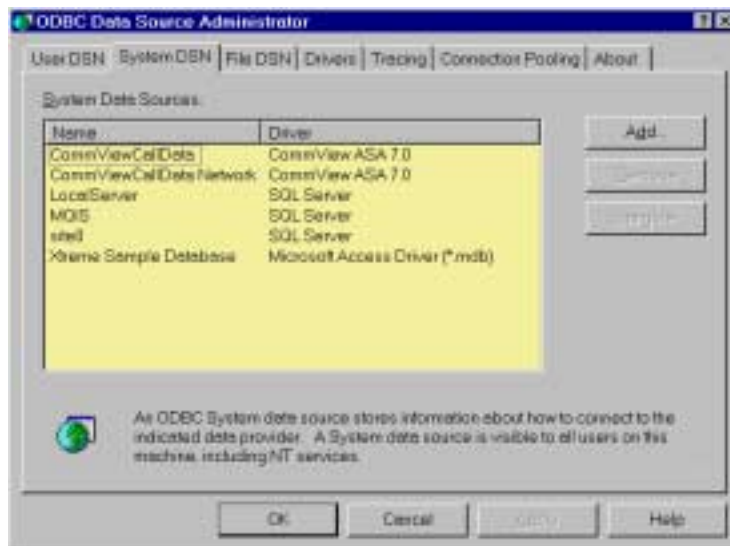
- Copy the correct **ciscoparevent.dat** file into **parevent.dat** in the site folder. For Circle24 installations, copy **circle24parevent.dat** to **parevent.dat** in the proper site folder. *This file may be unique to specific versions of CallManager and Circle24.*

- Copy the correct **control.txt** file into the proper site folder. *This file may be unique to specific versions of CallManager and Circle24.* The default Circle24 control file is named **c24control.txt**. The default Cisco CallManager control file is **ciscocontrol.txt**.

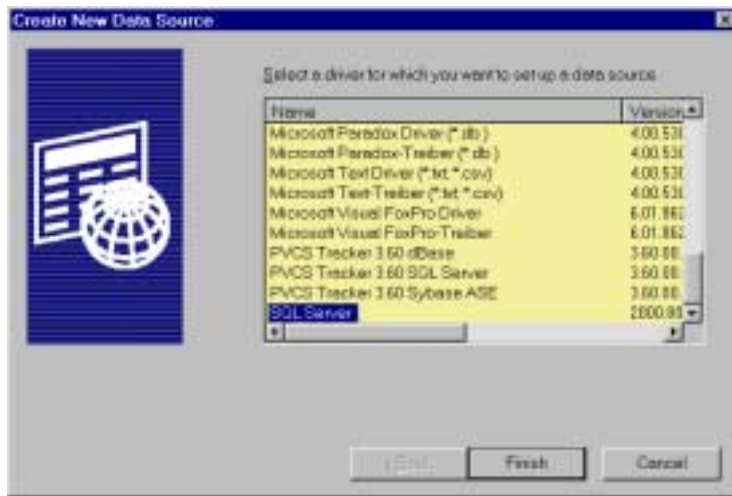
2. Setup ODBC

From the CommView workstation, browse the network to access the server on which the Cisco CDR database resides. **There is a database for each Cisco or Circle24 CallManager Publisher.** Each Publisher will have its own database, server, login and password and requires its own ODBC DSN to be setup for CommView to connect through. Resolve any network login errors with the local network administrator before proceeding. There are methods for having CallManager route SMDR through the WAN to a single Publisher. You may consult with the IT Manager to discuss the possibility of polling only a single CallManager Publisher on a multi-site WAN. Reasons for doing this include the situation where calls are being routed through a network hub (central) location. Call rating is then more accurate when it is identified from the location that dialed calls are actually being presented to the Public Switched Telephone Network (PSTN).

- From Control Panel, open up Data Sources (ODBC)
- Choose “**System DSN**” tab – Click “**Add...**” button



- Choose SQL Server as the driver type and Click “**Finish**”.



- Set the data source name and provide a description. The local site will always be “**Site0**” (For multi-site/multi-Publisher applications, use “**Site0**” for the local site, “**Site1**” for 1st remote site etc.)



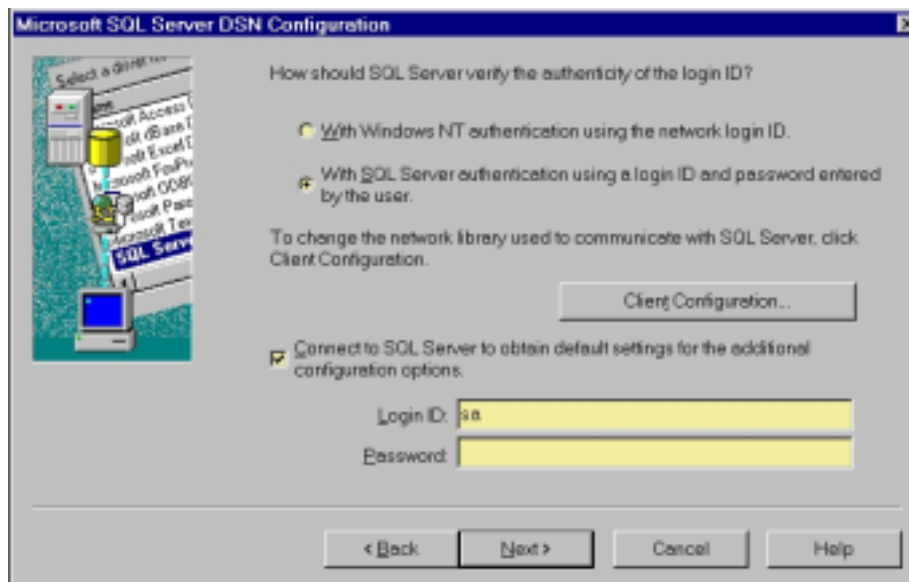
- Select or type in the SQL Server Description and Name or IP Address (this is the name of the machine the Cisco Call Manager or Circle24 service runs on, or the IP address) and click the “**Next>**” button. (The IP address or name you use will be different from the example below.)

- Use SQL server authentication and enter the user name and password (recorded above) – the login name you use will be different from the example below. *You must use a login ID with Administrative rights to the database.* If you are not sure, you can try the login name “sa” with no password – this is a default for system administrator.

For Cisco CallManager installations, the default user Login ID is “sa”. The password is left blank.

For Circle24 installations, the default user Login ID is “C24Services”. The password is also “C24Services”.

These are the default passwords. If they do not work for some reason, you will need to consult with the system database administrator.



- Click the “**Client Configuration...**” button to check the network library selected – make sure it’s **TCP/IP**. (The IP address or name you use will be different from the example below. You may also use the server name instead of the IP address.) Click “**OK**”.



- Click the “**Next>**” button to continue. Select the proper database.

For Cisco CallManager choose the database “**CDR**” and click “**Next>**”.

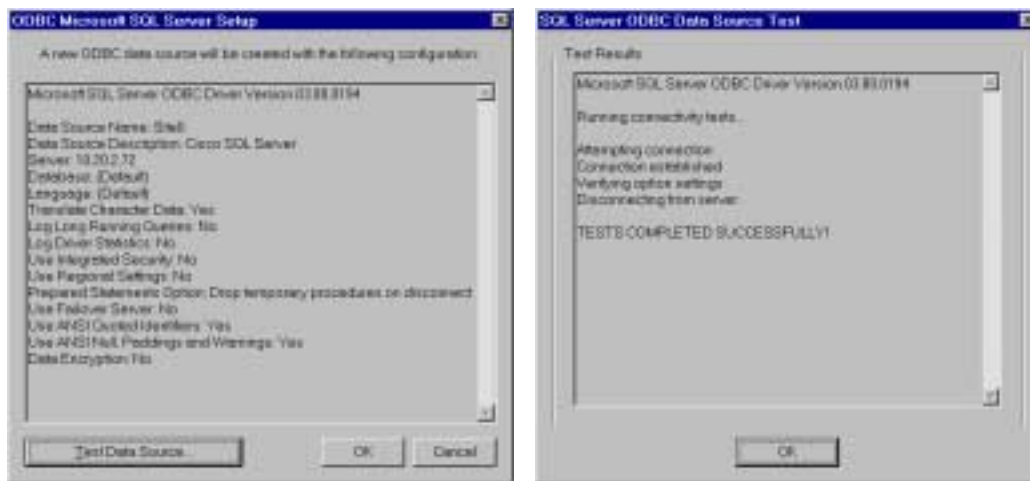
For Circle24 integrations, choose the database “**C24Services**” and click “**Next>**”.



- Click the “Finish” button.



- Click the “Test Data Source...” button, and wait for confirmation that - TESTS COMPLETED SUCCESSFULLY!

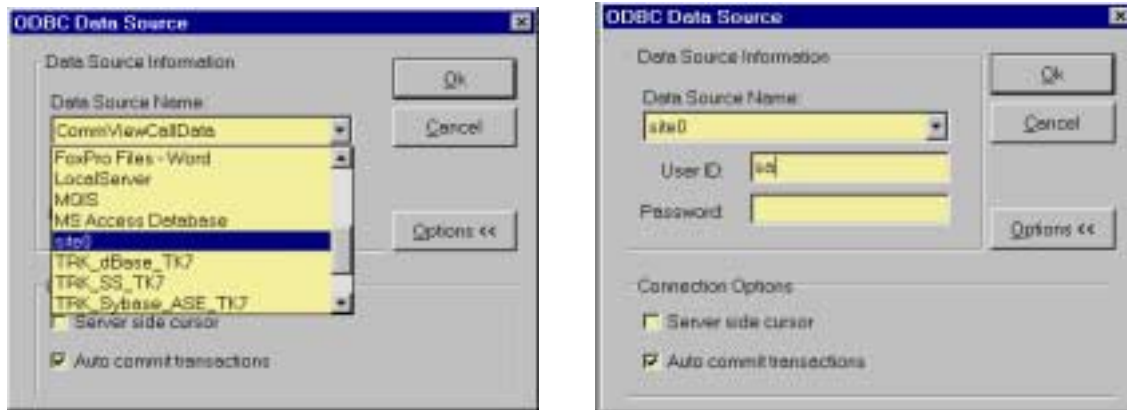


- If test fails, get the local network administrator to help troubleshoot the connection parameters.

Repeat for additional sites as required. Remember to use the DSN Name “SiteN” where ‘N’ is the site number. There must be a different DSN for each CallManager Publisher on the WAN.

3. Configure the Cisco or Circle24 Database

Start the program `c:\commview\WinSQL.exe` and attach to the Cisco database defined in step 2 above. You must enter the proper user ID and password for this database. For Cisco this is "sa" with no password. For Circle24 it is "C24Services" with the same password "C24Services". These are the default passwords. If they do not work for some reason, you will need to consult with the system database administrator.



- Click the Query Tab. Type the following commands, one at a time, executing each command by selecting the green arrow on the toolbar (or pressing Alt-X). *Be sure to type commands exactly as printed in the column below – quotes used are single-quotes not double-quotes.*

Type this Command and Execute It by clicking the Green Arrow Icon (or pressing Alt-X)	Response (appears in Response tab)
Create index disconnect on dbo.calldetailrecord (datetimeDisconnect asc) Note: For Circle24 installations use this command instead: Create index disconnect on C24Services.calldetailrecordc24 (datetimeDisconnect asc)	This command does not return data, and it does not return any rows

4. Setup the WCA.INI File for a CommView workstation

You must setup a different key for each site in CommView that will be connecting to a Cisco CallManager or Circle24 Publisher. Consult with the IT manager to understand how multiple CallManager Publishers have been setup. Each Publisher will have its own database server, login and password. It must have its own ODBC DSN setup as well (see Sections 2 and 3 above).

Open the `c:\commview\wca.ini` file with a text editor such as Notepad or Edit. **Do Not Use** Microsoft Word or a word processor. The INI file is in a pure text format which must be preserved.

4.1 Find the [ODBCDNS] section of the WCA.INI file.

Add the site for CallManager using the format **SiteN** (where N is the site number, 0 for **Site0** for example) equal to the ODBC name of generated in step 2.

Enter the site in WCA.INI as

Site0="Site0;UID=aaaaaaaa" where aaaaaaaaa is the user name (default for Cisco is "sa")

NOTE: In some systems, the full user name and password must need to be added to the login statement. Use the User name and password entered in Step 2 above. The format of this full login is used in the CallRecord entry on the same screen.

It will have the format:

Site0="Site0;UID=aaaaaaaa;PWD=bbbbbbb;" where aaaaaaaaa is the user name and bbbbbbb is the password.

You must use a login name that has administrator privileges to the database.

Repeat for additional sites as required.

The default UID for Cisco CallManager is "sa". There is no password. The string value is then **"Site0;UID=sa;"**

The default UID for Circle24 is "C24Services". The password is the same "C24Services". The string value is then **"Site0;UID=C24Services;PWD=C24Services;"**.

4.2 Set NewEventFile to zero.

Find the [Options] section of the WCA.INI file.

Add the line **NewEventFile=0** to this section

5. Configure the CommView Application

Open the CommView application.

- Select the appropriate site from the toolbar drop down menu.
- Select Tools > Site Definition. Make sure that the Site ID value assigned corresponds correctly to the SiteN setting defined for the ODBC connections above.
- Choose the correct polled device type of "Cisco Database Transfer" as the selectable option in the pulldown box. For Circle24 installations, select the "Circle24 Database Transfer" device type.

6. Troubleshooting

- ODBC Connection Problems when polling

Verify that the login information in the WCA.INI file is correct for the site (Site0, Site1,...SiteN). You may

be able to login with WINSQL and see the CallManager database but can't poll it. This could be due to a rights or role mismatch. You need administrator privileges for CommView to be able to access the tables.

If the WCA.INI file looks OK, check the ODBC DSN definition for the site (Site0, Site1,...SiteN). It also has a login ID and password that should agree with the Registry.

NOTE: The default for ciscosql.dll is to login as "sa" (system administrator) with no password for Site0. If you don't do anything in the WCA.INI file, these values are used.

- Processing is throwing out every call

Verify that you have added the "**NewEventFile=0**" line to the WCA.INI [Options] section. The value should be 0 so that the parevent.dat file is not overwritten from pbx.dat

Verify you have copied the proper source files to **control.txt** and **parevent.dat** in the site folder your are working on. The default source files for these are in the c:\commview folder and are named **ciscocontrol.txt / circle24control.txt** and **ciscoparevent.dat / circle24parevent.dat**

- Need to re-poll the Cisco CallManager or Circle24 database

If you need to request the same calls again, delete the file SQLLIST.DAT in the c:\commview directory. This binary file contains information about the last records that were polled from CallManager. When you delete that file, it re-polls the entire CallManager calldetailrecord table again. (You may need to erase all calls in CommView prior to this!)

- Understanding CallManager Publishers versus Subscribers

CallManager uses the Publisher to keep track of administrative things like CDR. The Subscriber is responsible for immediate call processing. One or more clusters are organized under a Publisher/Subscriber pair. The Publisher is also used as a backup to the subscriber for call processing. In the event that the Subscriber service fails, the Publisher takes over call processing with a minimum amount of service disruption.

CommView access the CallManager Publisher for CDR records. It will limit its access to the Publisher's database to a maximum of 5000 call records during any single session. This minimizes the impact CommView has on the CallManager server. Normally, these 5000 records are polled in a matter of seconds.

- Circle24 not in the Polled Device List

If you don't see Circle24 as a device option in the Polled Device list for a site definition in CommView, you can add it to WCA.INI using these steps:

- Open C:\COMMVIEW\WCA.INI with notepad.exe
- Find the section [PollDevices]
- Add the line to the bottom of the list

Item10 "Circle24 CallManager Database",U,ciscosql.dll

(Note: you may need to change “Item10” to some other number in sequence with your list.)

If you are running CommView 1.0.2.3, be sure the ciscosql.dll you are using is dated 4/16/03 or later. Versions of ciscosql.dll before this did not know about Circle24 device types. **If you are not running CommView version 1.0.2.3, you should upgrade to this version before proceeding.**

- Deleting CallManager CDR Records

Cisco does not currently advise the call accounting application (CommView) to delete records read from their database. Earlier documentation from Cisco suggested something to the contrary. In any event, it is possible for CommView to delete records it has read from the cisco database. *This is **not** recommended!*

To do this, add a line to the **[ODBCDNS]** options in WCA.INI

Add the line **DeleteFlag=1** under this section.

This will have the effect of deleting the call records from the Cisco CallManager database once they have been successfully polled.

Cisco / C24 Call Data File Generation

January 29, 2004

John Doehner

Summary

This document explains the method of call data file generation performed by the ciscosql DLL.

Operation

Call records are “polled” by using ODBC to transfer a number of records from the Cisco or C24 Call Manager database to a standard CommView ASC file. A control file named “control.txt” controls the transfer. The ASC file is then parsed and processed in the usual fashion.

Control File

Except for comment lines, which begin with the # character, each line is a pair of numbers separated by a comma. The first number is a key which identifies which field in the database is to be output, the second line is the size that field should take in the ASC file. Fields are ordered in the ASC file in the order in which they appear in the control file. Fields are separated by the pipe character, “|”. All the fields in the database are supported for transfer, but typically only a subset of them are actually output.

Example

Control File (partial):

Cisco Control.txt

10,15 The first field in the ASC file is the callingPartyNumber and it is 15 characters long.

14,6 The next is origMediaTransportAddress_Port and it is 6 characters long.

This continues until the end of the file is reached. The table lists all the fields currently in the control file and how it is used by the parent file.

Key Table:

Index	Field Name	Type	Application	Maps to Parevent	Size
1	cdrRecordType,	Integer	Both		
2	globalCallID_callManagerId,	Integer	Both		
3	globalCallID_callId,	Integer	Both	Used for Key	10
4	origLegCallIdentifier,	Integer	Both		
5	dateTimeOrigination,	Time	Both		
6	origNodeId,	Integer	Both		
7	origSpan,	Integer	Both		
8	origIpAddr,	IP Address	Both		
9	origIpPort,	Integer	Both		
10	callingPartyNumber,	String	Both	46 OG, 45 IC	15
11	origCause_location,	Integer	Both		
12	origCause_value,	Integer	Both	Used for Match	10
13	origMediaTransportAddress_IP,	IP Address	Both		
14	origMediaTransportAddress_Port,	Integer	Both		
15	origMediaCap_payloadCapability,	Integer	Both		
16	origMediaCap_maxFramesPerPacket,	Integer	Both		
17	origMediaCap_g723BitRate,	Integer	Both		
18	destLegIdentifier,	Integer	Both		
19	destNodeId,	Integer	Both		
20	destSpan,	Integer	Both		
21	destIpAddr,	IP Address	Both		
22	destIpPort,	Integer	Both		
23	originalCalledPartyNumber,	String	Both	44 Internal	30
24	finalCalledPartyNumber,	String	Both	43,44 Extern	1+29
25	destCause_location,	Integer	Both		
26	destCause_value,	Integer	Both	Used for Match	10
27	destMediaTransportAddress_IP,	IP Address	Both		
28	destMediaTransportAddress_Port,	Integer	Both		
29	destMediaCap_payloadCapability,	Integer	Both		
30	destMediaCap_maxFramesPerPacket,	Integer	Both		

Index	Field Name	Type	Application	Maps to Parent	Size
31	destMediaCap_g723BitRate,	Integer	Both		
32	dateTimeConnect,	Time	Both		
33	dateTimeDisconnect,	Time	Both	12 - 17	4,2,2,2,2,2
34	lastRedirectDn,	String	Both		
35	pkid,	String	Both		
36	originalCalledPartyNumberPartition,	String	Both	57 See Note 1	15
37	callingPartyNumberPartition,	String	Both	57 See Note 1	15
38	finalCalledPartyNumberPartition,	String	Both		
39	lastRedirectDnPartition,	String	Both		
40	duration,	Integer	Both	26	10
41	destCallTerminationOnBehalfOf,	Integer	Both	Used for Match	10
42	destConversationId,	Integer	Both		
43	destDeviceName,	String	Both	See Note 1	
44	globalCallId_ClusterID,	String	Both		
45	joinOnBehalfOf,	Integer	Both		
46	lastRedirectRedirectOnBehalfOf,	Integer	Both		
47	lastRedirectRedirectReason,	Integer	Both		
48	origCalledPartyRedirectOnBehalfOf,	Integer	Both		
49	origCalledPartyRedirectReason,	Integer	Both		
50	origCallTerminationOnBehalfOf,	Integer	Both	Used for Match	10
51	origDeviceName	String	Both	See Note 1	
52	C24CDR_Id, or callSetID	Integer	C24 Only	See Note 2	
53	origDevicetkClass,	Integer	C24 Only		
54	destDevicetkClass,	Integer	C24 Only		
55	CallingPartyCallingSearchSpace,	String	C24 Only		
56	FACPersonalCode,	String	C24 Only	42	8
57	TBProjectCode,	Integer	C24 Only	41	10
58	CompanyID,	Integer	C24 Only		
59	Flag,	Integer	C24 Only		

Note 1: Trunk Groups and Members

Unfortunately, definition of the trunk groups and trunk members is left to the individual installation. The fields identified are the ones specified in the Cisco Documentation as containing trunk information, but these must be examined and confirmed on an individual site basis.

Note 2: Change in Field Names

This field is called C24CDR_Id by C24 and called callSetID by Lightscape.

Parevent File

One of the acceptance requirements for Cisco certification was proper output of conference records. The ad hoc conference entries in the parevent file produce correct conference records matching the originator and terminators using the conference bridge as the key. At the time of certification, Cisco was not supporting incoming call records, they are now.

Transferred calls are matched using the Key field to tie the two call records together.