



Avaya Solution & Interoperability Test Lab

Application Notes for Teleopti CCC with Avaya Call Management System - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Teleopti CCC to successfully interoperate with Avaya Call Management System (CMS).

Teleopti CCC is a workforce management solution for contact centres and uses the Open Database Connectivity (ODBC) protocol to access information held in the Avaya CMS database.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

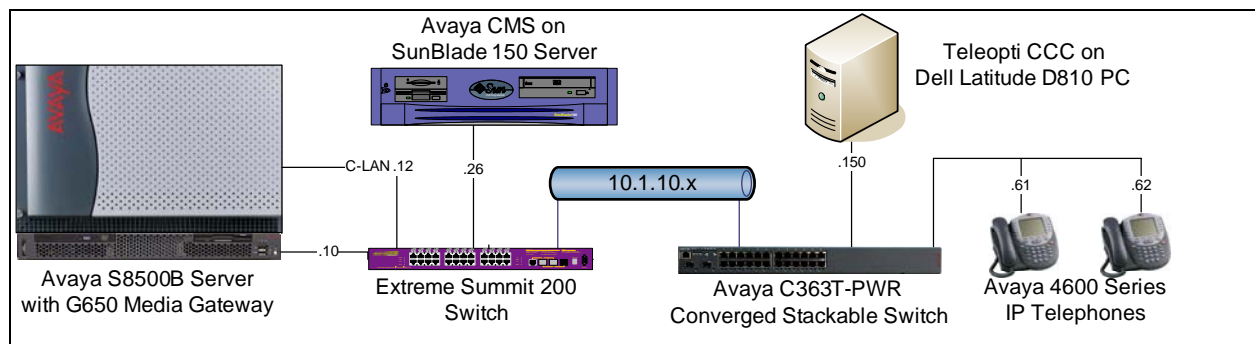
These Application Notes describe the configuration steps required for Teleopti CCC to successfully interoperate with Avaya Call Management System (CMS) using the Open Database Connectivity (ODBC) protocol.

Teleopti CCC is a Workforce Management application suite. It is designed to help plan customer contact centres in optimising customer satisfaction, profitability, and employee satisfaction.

Teleopti CCC uses Structured Query Language (SQL) over the ODBC protocol to access information in the Avaya CMS database and normalises this information into its own database structure. This information is then used to create forecasts and plan agent schedules over the next few days and further ahead.

To allow communication via ODBC between Avaya CMS and Teleopti CCC, OpenLink Multi-Tier ODBC software was installed on both servers. OpenLink Multi-Tier ODBC is 3rd party software delivered with Avaya CMS to allow client/server database access via ODBC. These Application Notes focus on the installation and configuration of the OpenLink software on Avaya CMS and the Teleopti CCC server.

The configuration shown in the diagram below shows the compliance-tested configuration.



2. Equipment and Software Validated

The following equipment and software were used in the compliance-tested configuration.

Equipment	Software
Avaya S8500B Server	Avaya Communication Manager 4.0.1
Avaya G650 Media Gateway C-LAN TN799DP	N/A HW1 FW24
Sun Blade 150	Sun Solaris 9.0 Avaya CMSr14aa.h OpenLink Multi Tier ODBC Driver 5.2
Avaya 4610SW IP Telephones (H.323)	2.8
Avaya 4602SW IP Telephones (H.323)	2.3
Avaya 9620SW IP Telephones (H.323)	1.5
Dell Latitude D810	Microsoft Windows XP, Service Pack 2 Teleopti CCC 6.6 OpenLink Multi Tier ODBC Driver 5.2 Microsoft SQL Server 2000

3. Configure Avaya CMS

This section provides the procedures for installing and configuring the OpenLink Multi-Tier ODBC driver on Avaya CMS.

Please note that it is expected that the installer is familiar with configuring the switch integration, storage intervals, etc. on the Avaya CMS as the focus of these Application Notes is on the configuration of the ODBC interface only. For all other provisioning information, such as software installation, installation of optional components, basic configuration of Avaya CMS, etc., refer to the Avaya CMS product documentation in reference [1].

3.1. Install and Configure OpenLink ODBC Driver on Avaya CMS

Insert the OpenLink CD. Log into the Avaya CMS as root. Use the following procedures to install, configure and initialise the OpenLink ODBC driver. Typed commands are in **bold** text, comments are in *italic* text, # indicates the Solaris shell prompt.

```
# mkdir /usr/openlink This command creates the installation directory (/usr/openlink).
# cd /usr/openlink This command changes to the /usr/openlink directory.
# cp /cdrom/cdrom0/server/cmsr14/* /usr/openlink This command copies the CMS R14
                                                    installation files to /usr/openlink.
```

```
# ./install.sh This command starts the installation of OpenLink.
```

The installation process will start and will continue until the following prompt appears.

```
Enter the port number the broker will listen on for
client connections [ENTER=Default] : Press the Enter key to accept the default.
```

```
TCP/IP Port to use? [ENTER=8000] : Press the Enter key to accept the default.
```

```
Log File? [ENTER=www_sv.log] : Press the Enter key to accept the default.
```

```
Log all requests (y/n)? [ENTER=n] : Press the Enter key to accept the default.
```

```
Administrator account? [ENTER=admin] : Press the Enter key to accept the default.
```

```
Administrator's password? [ENTER=admin] : Press the Enter key to accept the default.
```

The installation will continue until the following prompt appears.

End of installation

```
# cd /usr/openlink/bin This command changes to the /usr/openlink/bin directory.
```

```
# ./oplrqb -v This command starts the OpenLink Request Broker. The following
                information will appear.
```

```
OpenLink Request Broker
Version 2.41 as of Wed Feb 02 2005 (Release 5.2 cvsid 00076).
Compiled for Solaris 5.8 (sparc-sun-solaris2.8-32)
Copyright (C) OpenLink Software.
```

```
Registered to Avaya, Inc
with product serial number UDA52-OEM-Avaya, Inc-02/02/07
This is a 10 concurrent users license
restricted to 10 concurrent connections
Issued by OpenLink Software
```

*Press the **Delete** key to acknowledge.*

/cms/dc/odbc/odbc_init

This command initializes the OpenLink ODBC driver. The following confirmation message will appear.

ODBC Driver initialization complete.

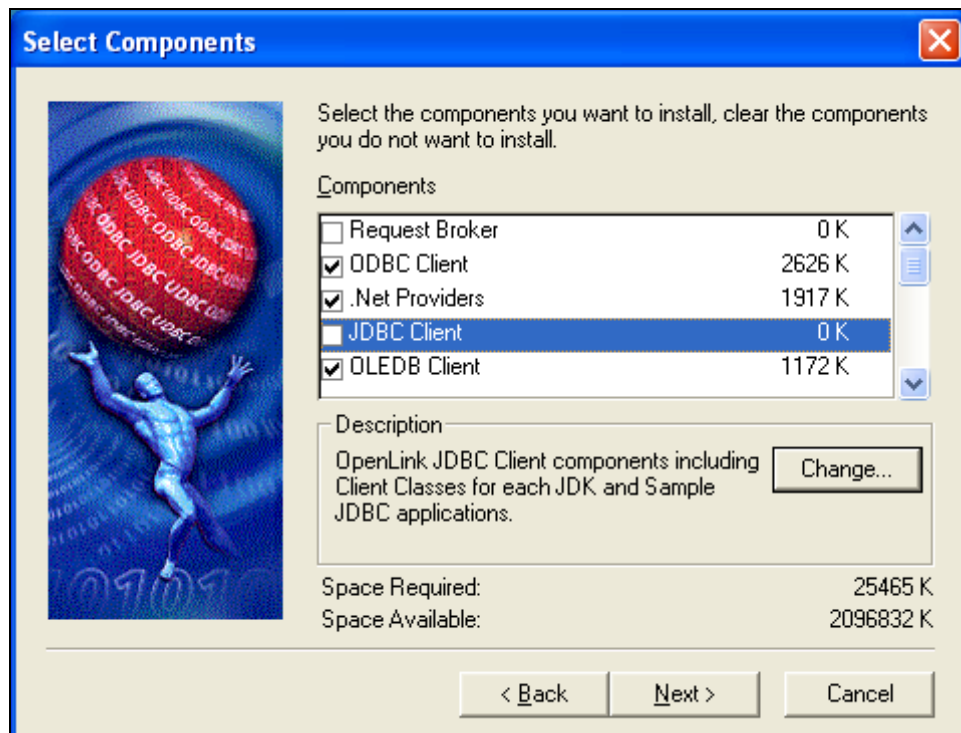
4. Configure Teleopti CCC

This section provides the procedures for installing and configuring the OpenLink Multi-Tier ODBC driver on the Windows XP server used by Teleopti CCC.

Please note that it is expected that the installer is familiar with configuring the database mappings, data collection intervals, etc. on the Teleopti CCC server as the focus of these Application Notes is on the configuration of the ODBC interface only. For all other provisioning information, such as software installation, installation of optional components, basic configuration of Teleopti CCC, etc., refer to the Teleopti CCC product documentation in reference [3].

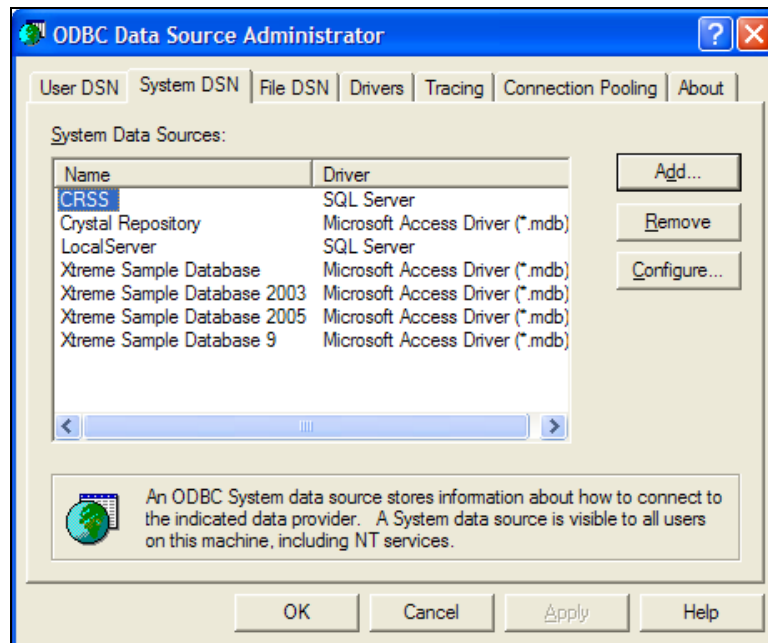
4.1. Install and Configure OpenLink ODBC Driver on Teleopti CCC

Insert the OpenLink CD. Open the CD drive within Windows Explorer and run the `/client/win32/setup.exe` program. Accept the defaults on the first three screens of the OpenLink installation program (not shown). On the Select Components screen, deselect **JDBC Client** and select **Next**.

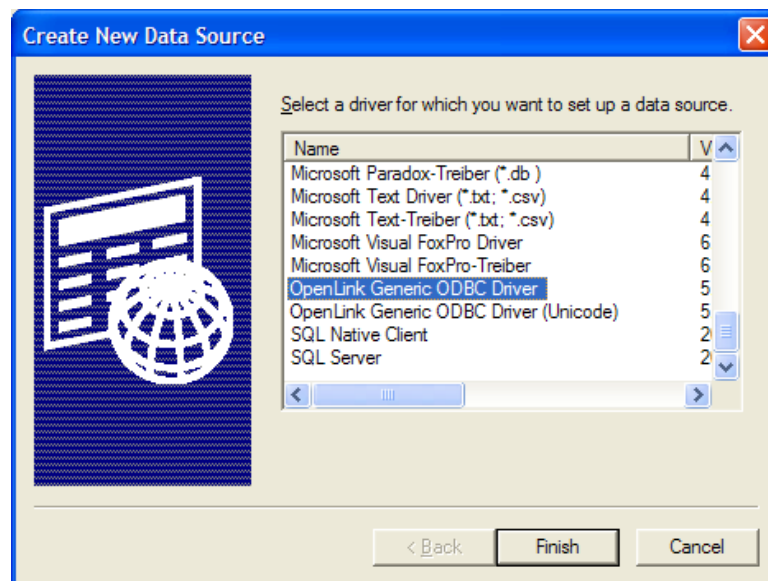


Accept the defaults on the rest of the screens of the OpenLink installation program (not shown).

Select **Start > Settings > Control Panel > Administrative Tools > Data Sources (ODBC)**.
Select the **System DSN** tab and select **Add**.



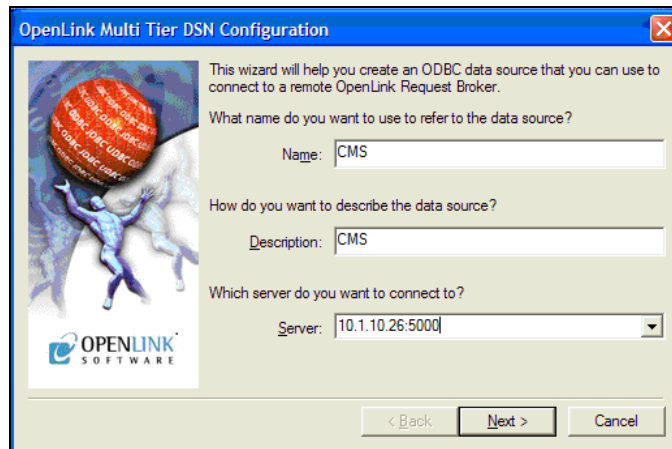
Select **OpenLink Generic ODBC Driver**. Select **Finish**.



Configure the fields on the first page of the OpenLink Multi Tier DSN Configuration wizard as follows.

- **Name:** Enter a descriptive name for the data source.
- **Description:** Enter a description for the data source.
- **Server:** Enter “x.x.x.x:5000” where “x.x.x.x” is the IP address of the Avaya CMS.

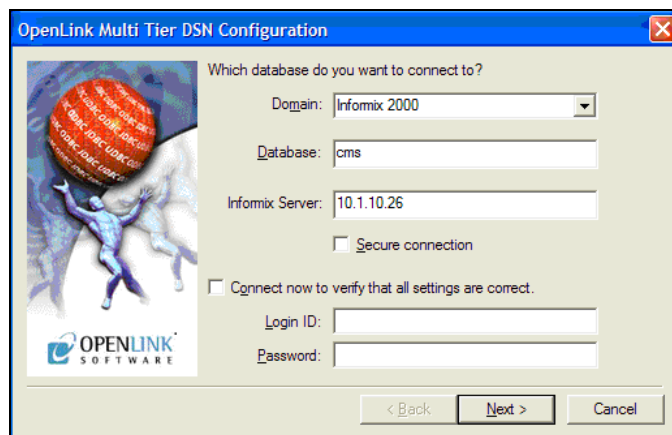
Select **Next**.



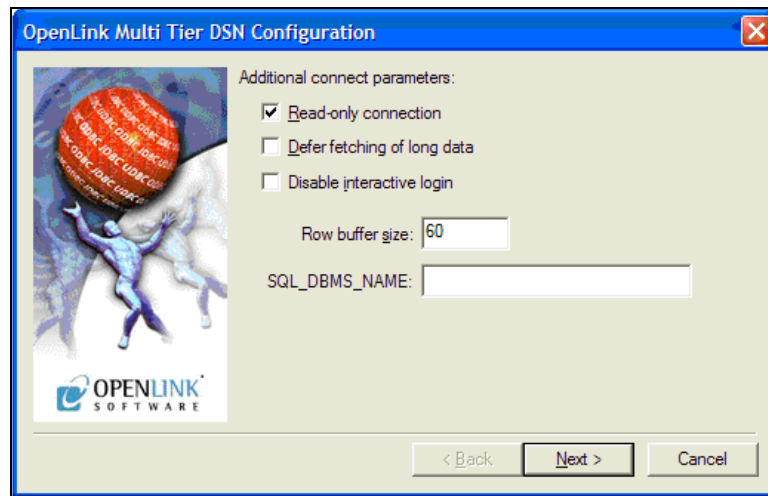
Configure the fields on the second page of the OpenLink Multi Tier DSN Configuration wizard as follows.

- **Domain:** Select “Informix 2000” from the drop down box.
- **Database:** “cms”.
- **Informix Server:** Enter the IP address of the Avaya CMS.
- **Login ID:** Enter the Avaya CMS login. This can be any valid Avaya CMS login, but it is recommended that a unique login be created for Teleopti CCC.
- **Password:** Enter the password for the Avaya CMS login specified above.

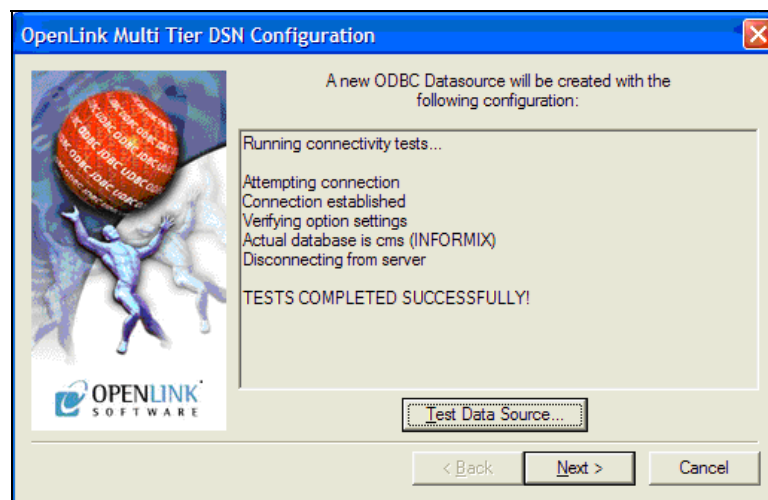
Select **Next**.



On the third page of the OpenLink Multi Tier DSN Configuration wizard, check the **Read-only connection** checkbox and enter “60” in the **Row buffer size** field. The remaining fields may be left at their default values. Select **Next**.



On the last page of the OpenLink Multi Tier DSN Configuration wizard, select **Test Data Source** and ensure “TESTS COMPLETED SUCCESSFULLY” is displayed on the screen. Select **Next** to complete the wizard.



5. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying Teleopti CCC's ability to read and store data from Avaya CMS using ODBC. A small call centre was set up in Avaya Communication Manager and various tests were executed including.

- Agent in various states, e.g. Available, Aux Work, After Call Work, etc.
- Agent on ACD calls.
- Agent on non-ACD calls.

The serviceability testing focused on verifying Teleopti CCC's ability to recover from outages between itself and Avaya CMS.

5.1. General Test Approach

All feature and serviceability tests were performed manually. The verification included checking the agent and skill data in the Teleopti CCC database and comparing it with reports on the Avaya CMS.

5.2. Test Results

All test cases were executed and passed.

6. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Avaya CMS and Teleopti CCC.

6.1. Verify Avaya CMS

Verify that the ODBC Request Broker is active on the server by entering the command

```
# ps -ef | grep oplrqb
```

The result should show the oplrqb process running from the **/usr/openlink/bin** directory similar to the following.

```
root 4795 4793 0 Sep 17 ?    0:06 /usr/openlink/bin/oplrqb -f +conf  
igfile /cms/dc/odbc/cmsrqb5.2_init +loglevel 5
```

6.2. Verify Teleopti CCC

Verify the ODBC link from the Teleopti CCC server is working by running the OpenLink Multi Tier DSN Configuration wizard (see **Section 4.1**). Use the Test Connection utility on the final page of the wizard (as shown in **Section 4.1**).

7. Support

For technical support on Teleopti CCC, use the following information.

- Email: support@teleopti.com
- Phone: +46 8 544 90 550

8. Conclusion

These Application Notes describe the configuration steps required for Teleopti CCC to successfully interoperate with Avaya Call Management System (CMS) using the Open Database Connectivity (ODBC) protocol. All tests were executed and passed successfully.

9. Additional References

This section references the product documentation that is relevant to these Application Notes.

- [1] *Avaya Call Management System, Release 14, Software Installation, Maintenance, and Troubleshooting Guide*, Document ID 07-601578, February 2007, available at: <http://support.avaya.com>.
- [2] *Avaya Call Management System, Open Database Connectivity, Release 5.2*, Document ID 07-601580, February 2007, available at: <http://support.avaya.com>.
- [3] Teleopti CCC product documentation is available, on request, from <http://www.teleopti.com>

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