



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Optimiser/Ringmaster from Soft-ex with Avaya Communication Server 1000E R7.5 to collect CDR records - Issue 1.0

Abstract

These Application Notes describe the configuration steps necessary for provisioning Soft-ex's product Optimiser/Ringmaster to successfully interoperate with Avaya Communication Server 1000E R7.5.

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

Optimiser/Ringmaster from Soft-ex is a telephone call accounting system that processes Call Detail Recording (CDR) information from the Avaya Communication Server 1000E (CS1000E) PBX and produces management reports. Ringmaster was the original product supplied by Soft-ex to process CDR records and Optimiser is an additional product/service built onto Ringmaster that functions as an alerting system for calls that meet specific requirements, for instance that may indicate telephone fraud.

2. General Test Approach and Test Results

The compliance testing is concerned with verifying that the addition of Soft-ex's Ringmaster/Optimiser does not interfere with the operation of the CS1000E. CDR information is transferred via a serial port (V24 or RS232), so Ringmaster/Optimiser is interfacing to the serial port on the switch allocated to CDR output. Ringmaster/Optimiser also operates in multisite environments, where CDR data from more than one site is collected and forwarded to a central site. In these cases the data is collected by buffering devices supplied by Soft-ex and transferred by a variety of methods such as via FTP or email. Essentially for each PBX the interface has the same characteristics: one way data flow from the PBX. The tests were conducted with the most recent generally available version of the software.

Note: In some Soft-ex literature the Optimiser/Ringmaster product is referred to as Call Management Software or just Optimiser. To avoid confusion the product name in this document is referred to as Optimiser/Ringmaster.

2.1. Interoperability Compliance Testing

The principle objective of Interoperability Compliance testing is to provide assurance to the potential customers that the tested products operate as specified and can interoperate in an environment similar to the one that will be deployed at a customer's premises. Performance and load testing is outside the scope of the compliance testing.

2.2. Test Cases

This section contains the test cases used to validate the various capabilities of the solution. The interoperability compliance testing includes the following cases.

- Real-Time connection to the serial port of the CS1000E
- A scheduled connection to an IP Buffer which was connected to the serial port of the CS1000E
- A scheduled connection to the Avaya Data Buffering and Access CDR Collector Toolkit (DBA CDR Collector) which has an FTP connection to the CS1000E

2.3. Test Results

All tests outlined in the Test Plan document passed successfully. No errors or performance issues were observed on the CS1000E.

2.4. Support

For more information on Soft-ex and product support visit <http://www.soft-ex.net>.

Below is the contact information for Soft-ex:

Soft-ex®
South County Business Park
Leopardstown Road
Dublin 18
Ireland
Tel: +353 1 241 6600
Fax: +353 1 295 6290
Email: sales@soft-ex.net

3. Reference Configuration

Figure 1 shows the network topology during compliance testing. The CS1000E has a serial connection to both the IP Buffer and the Ringmaster/Optimiser server. The Ringmaster/Optimiser has two connection types, Real-time direct connection in which case it is connected to the serial port of the CS1000E or a scheduled connection to the IP Buffer in which case an FTP session is opened to the IP Buffer on a scheduled basis. On the Ringmaster/Optimiser server, a network drive is mapped to the DBA CDR Collector to copy the information collected by the DBA CDR Collector to the Ringmaster/Optimiser server for processing and reporting. In all cases the CDR information coming from the CS1000E will be the same.

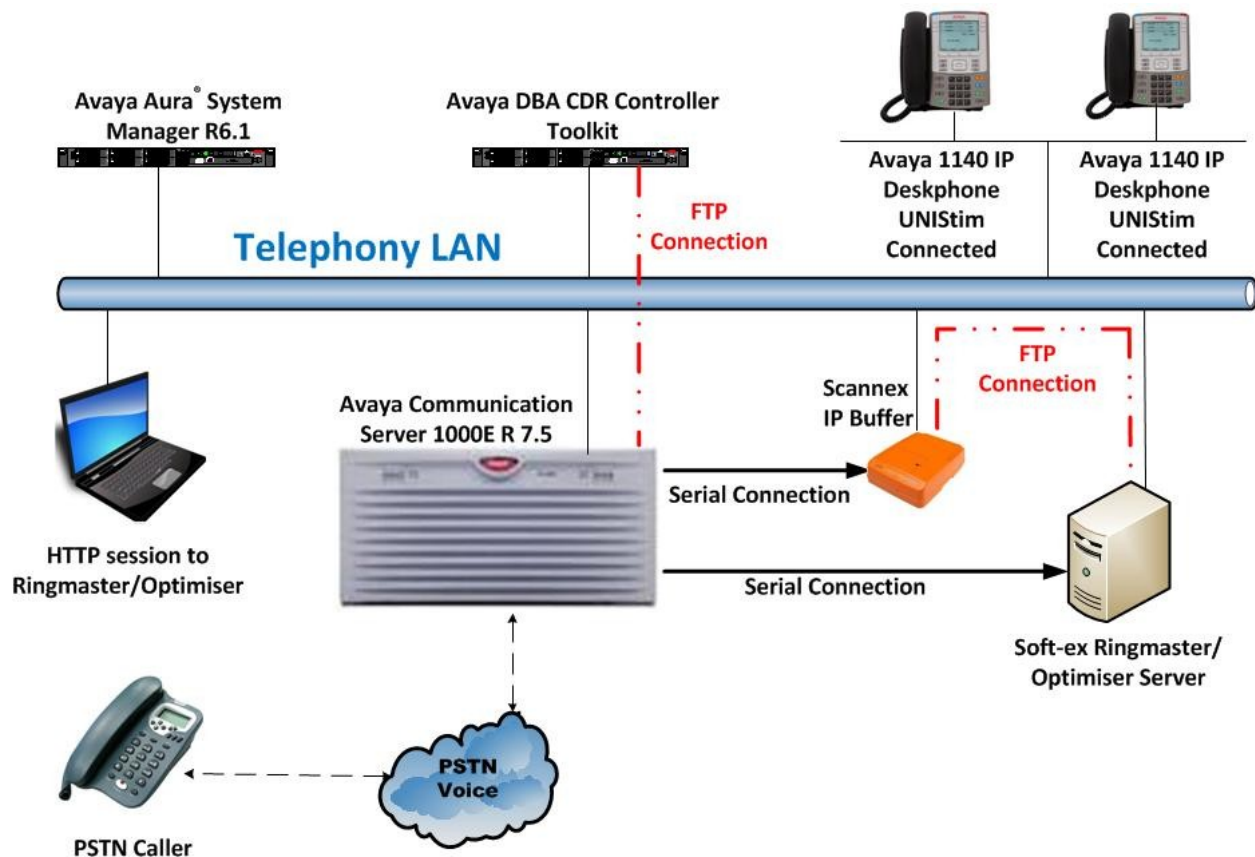


Figure 1: Connection of Soft-ex Ringmaster/Optimiser and IP Buffer to the Avaya Communication Manager 1000E and Avaya DBA CDR Collector Toolkit.

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment Description	Software Release
Avaya CS1000E CPPM	Avaya Communication Server Release 7.5
Avaya S8800 Media Server	Avaya Aura [®] System Manager R6.1 SP0
Avaya 1140E IP Deskphone	Avaya UNISim V0625C8D
Avaya PC running Windows XP	Avaya DBA CDR Collector Toolkit V1.0
Scannex IP Buffer	V2.7
PC Windows 7	Soft-ex Optimiser/Ringmaster V5.0

Notes: See **Appendix** for a list of Patches and Firmware versions.

5. Configuration of Avaya Communication Server 1000E

The configuration operations illustrated in this section were all performed using terminal access to the CS1000E over telnet session using the “putty” program. Enter Overlay 15 to make changes on the **CDR_DATA** in order to setup CDR records on the CS1000E. Type **LD 15** at the > prompt to enter the overlay as shown below.

Note: Changes made in the CDR_DATA and the RDB below again determine the format of the output of the CDR record and may not apply to all cases on connection to Ringmaster/Optimiser. The example below shows the setup used for this compliance testing but may be changed on a per site basis. Refer to the CDR fundamentals document referenced in **Section 11** for additional information.

Prompt	Response	Description
>	LD 15	Enter Overlay 15
REQ	CHG	Change
TYPE	CDR_DATA	Change Call Detail Recording Data
CUST	0	Customer Number
CDR	YES	Allow changes on CDR_DATA
IMPH	YES	CDR for Incoming Packet data call
OMPH	YES	CDR for Outgoing Packet data call
AXID	YES	Aux Identification output in CDR Record used in MARP
TRCR	YES	Carriage Return sent after each CDR Record
CDPR	YES	Insert Access code for Route ahead of a Distance Steering Code or Trunk Steering Code
ECDR	YES	Print End-to-End Signalling digits in CDR Record
BDI	YES	Buffer Data Interface for CDR Record
OTCR	YES	CDR provided based on originally Dialed Trunk Route
PORT	0-15	Ports that CDR records will be outputted on
CNI	DGTS	Calling Number Identification is recorded in the digits field
BCAP	NO	Bearer Capability in CDR

Enter Overlay 16 to make changes on the Route Data Block (**RDB**) in order to allow CDR records on the incoming and outgoing route. Type **LD 16** at the > prompt to enter the overlay as shown below.

Prompt	Response	Description
>	LD 16	Enter Overlay 16
REQ	CHG	Change
TYPE	RDB	Route Data Block
CUST	0	Customer Number
ROUT	x	x = Route Number to Change
..		
..		
CDR	YES	Allow changes to CDR for Route x
INC	YES	Allow CDR for Incoming Calls
TTA	YES	Time to Answer output in CDR
ABAN	YES	Abandoned calls record for this route
CDRB	YES	Abandoned calls on busy tone records allowed
QREC	YES	CDR ACD Q initial records can be generated
OAL	YES	CDR records allowed for outgoing calls
AIA	YES	Answered call Identification Allowed on CDR record
OAN	YES	CDR timing starts on Answer supervision of outgoing calls

Format of the CDR output is changed in the parameters section of overlay 17. Type **LD 17** to enter the overlay as shown below. **FCDR** is set to **NEW** or **OLD** depending on the output that is required. For this compliance testing the setting is set to **NEW**. With the new Format CDR (**FCDR = NEW**), CDR records are two lines if the Time to Answer (TTA) feature is not activated, or three lines if the TTA feature is activated.

Prompt	Response	Description
>	LD 17	Enter Overlay 17
REQ	CHG	Change
TYPE	PARM	Parameters
FCDR	NEW	Information fields locations are fixed

Configure the serial ports as CDR output ports. The port numbers were specified in the CDR_DATA changed previously in overlay 15. Type **LD 17** to enter the overlay as shown below.

Prompt	Response	Description
>	LD 17	Enter Overlay 17
REQ	CHG	Change
TYPE	ADAN	Parameters
REQ	CHG TTY x	Change TTY port x
DES	cdrport	Description
BPS	9600	Baud Rate for the Port
BITL	8	Data Bit Length
STOP	1	Number of Stop Bits
PARY	NONE	Parity Type
FLOW	NO	Flow Control
USER	CTY	Output Message Type

In order to collect CRD records into a buffer on the CS1000E for collection by the Avaya DBA CRD Collector Toolkit, the buffer must be enabled in overlay 117. Type **LD 117** to enter the overlay as shown below.

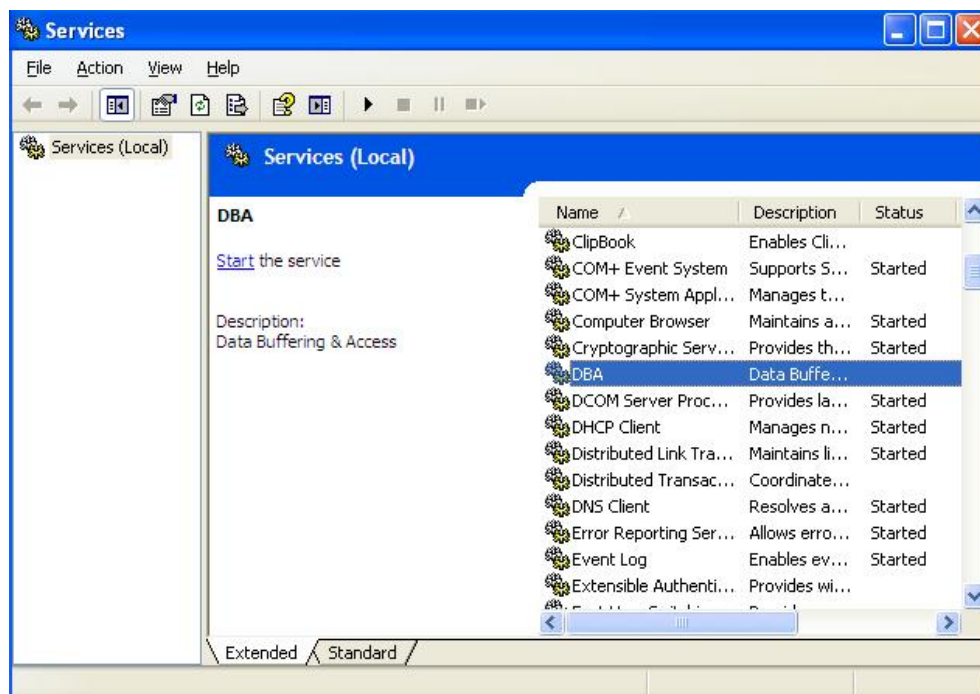
Prompt	Response	Description
>	LD 117	Enter Overlay 117
=>	ENL BUF CDR	Enable CDR Buffer

Changes are made on the Class of Service of each telephone set in order to allow or deny various CDR outputs on a per set basis. Type **LD 11** to enter overlay 11 to make the changes.

Prompt	Response	Description
>	LD 11	Enter Overlay 11
REQ	CHG	Change
TYPE	1140	Phoneset type to be changed
TN	L-S-C-U	Loop Shelf Card unit location of the Set to be changed
CLS	ABDA	Abandoned call record and Time to Answer Allowed
CLS	ICDA	Internal Call Detail Recording Allowed

6. Configure the Avaya Data Buffer and Access Call Detail Recording Collector Toolkit

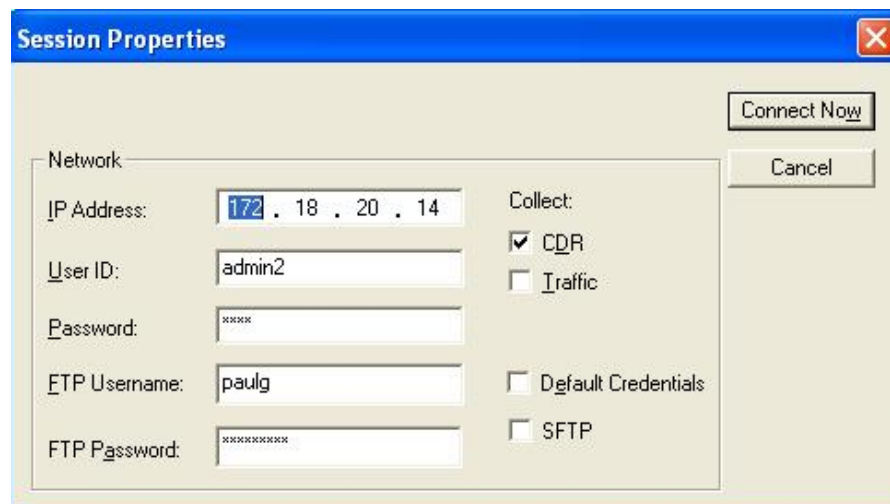
The DBA CDR Collector Toolkit collects the CDR information from the CS1000E via an FTP/SFTP connection to the CS1000E. Once the application is installed the configuration information for the PBX is entered as follows. The DBA program can be opened by starting the DBA service as shown below.



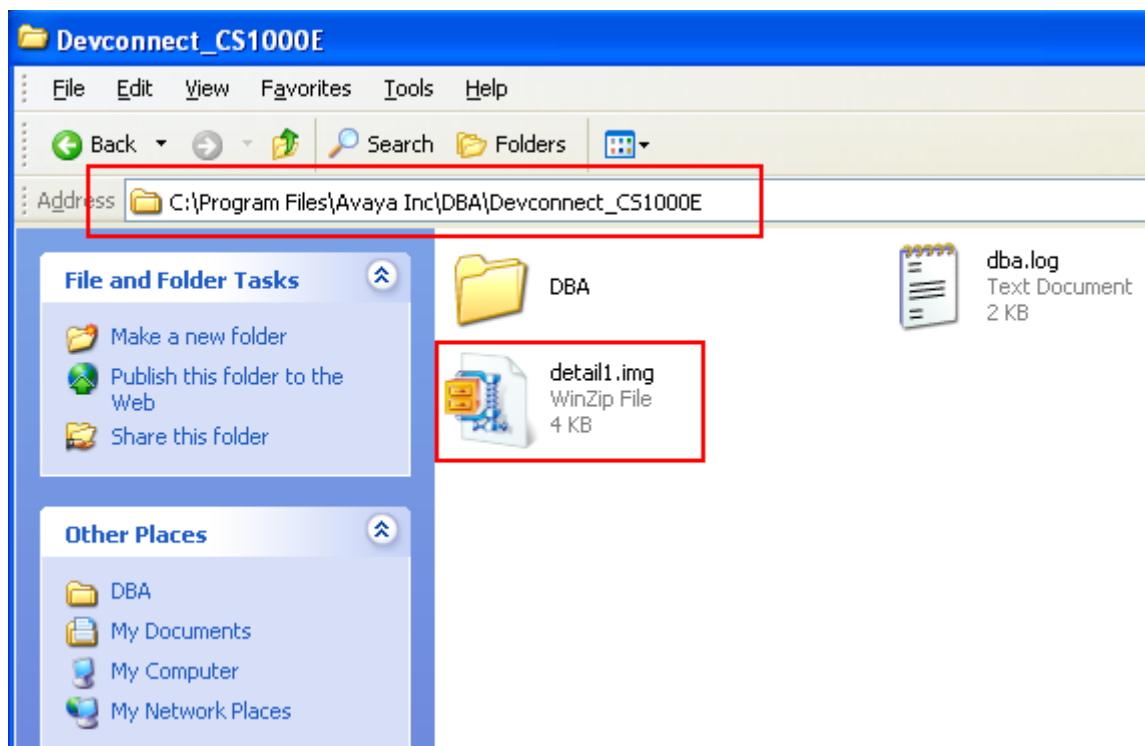
Select **New Session** as shown below.



Enter the **IP Address** of the CS1000E. Enter a **User ID** and **Password** of the CS1000E user that has rights to gain FTP/SFTP access. Tick the options on the information that is to be collected. In the example below **CDR** only is ticked.



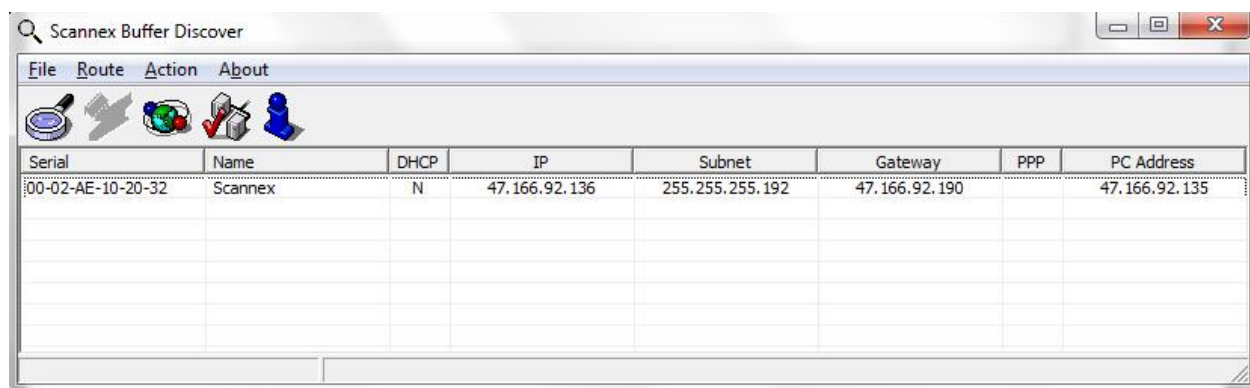
The CDR information from the PBX is collected into a file folder on the PC where the DBA was installed. A file folder is created for each new site. In the example below the site folder named Devconnect_CS1000E was created for the compliance testing. In this folder the filename labelled detail.img is stored and can be collected by the Optimiser/Ringmaster using a mapped drive from the Optimiser/Ringmaster server.



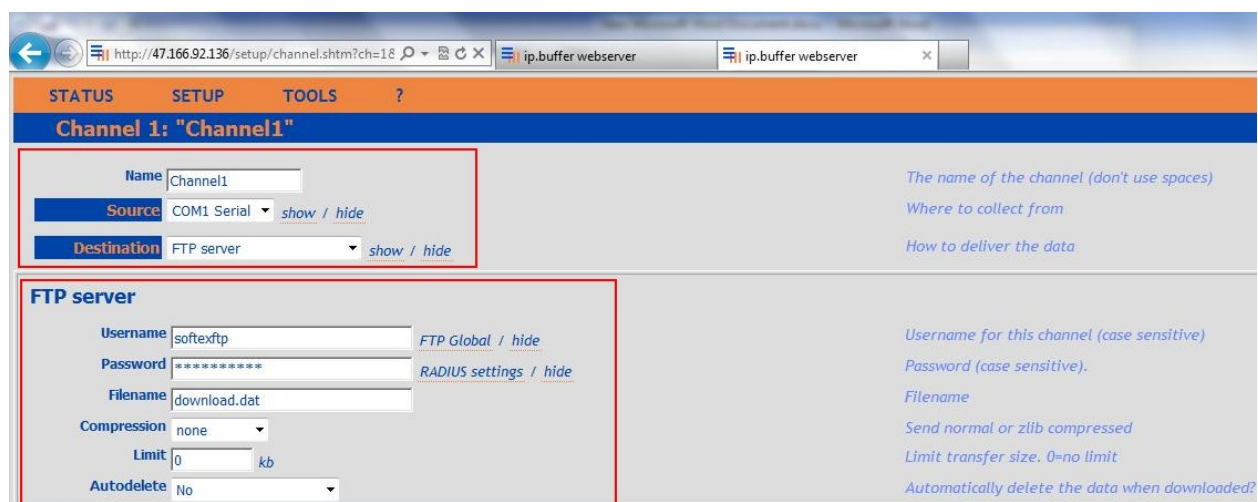
7. Configuration of Scannex IP Buffer for Collection by Softex Optimiser/Ringmaster

The IP Buffer is a product from Scannex and is supplied by Soft-ex as an option to use a CDR buffer to collect the CDR data from the CS1000E. Information on the installation and configuration of this can be found at <http://www.scannex.co.uk/>. Scannex Buffer Discover is used to configure the IP Buffer and this program can be downloaded from the Scannex website. Once installed it detects the device and a new IP address can be given to the IP Buffer to place this on the network.

Using **Scannex Buffer Discover** to change the **IP** address, **Subnet** mask and **Gateway** settings, as shown below.

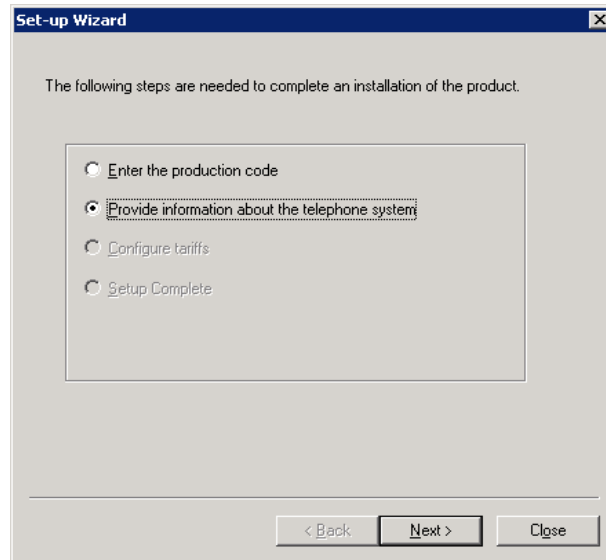


Upon changing the IP information a HTTP session can be opened to the IP address of the Buffer and the FTP information is filled out as shown below.

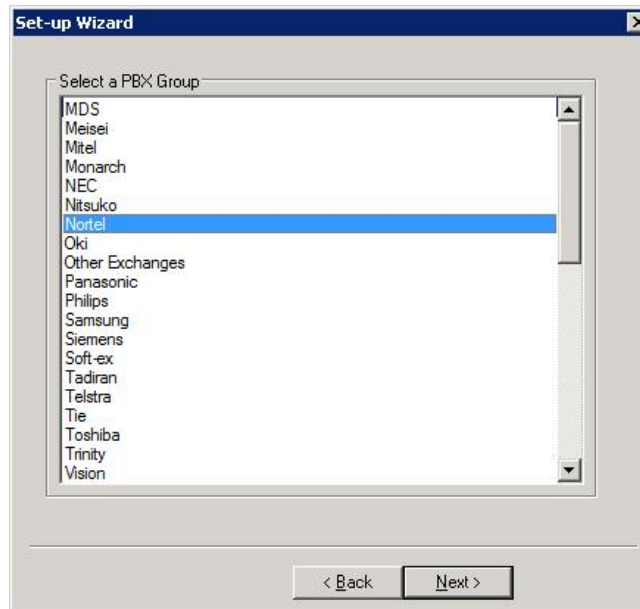


8. Configuration of Soft-ex Optimiser/Ringmaster

This section outlines the steps to configure the Optimiser/Ringmaster from Soft-ex in order to correctly collect and process CDR data from the CS1000E. The Optimiser/Ringmaster is installed on a server or PC from CD/DVD. Installation instructions, outside the scope of this document, can be found at <http://www.soft-ex.net> website as referenced in **Section 11**. Once the software is correctly installed it automatically prompts for some configuration details to complete the installation. This includes information on the PBX that it is connecting to.



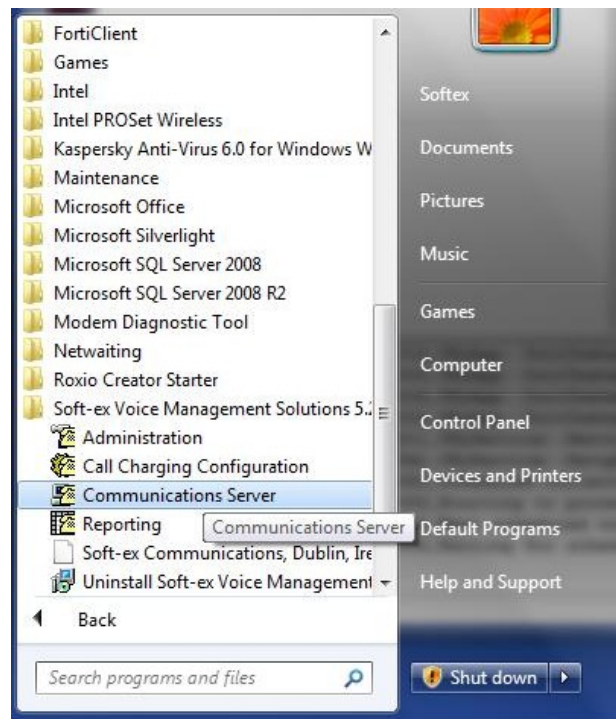
Select the PBX that is being connected to from the **PBX Group** as shown below. For a connection to an Avaya CS1000E choose Nortel from the list for PBX's.



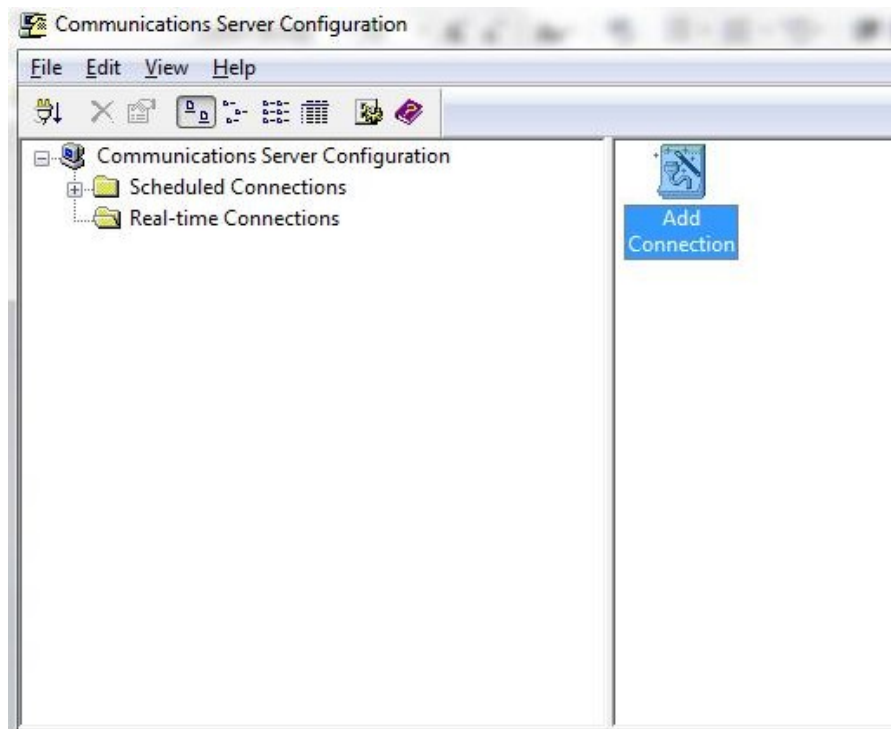
8.1. Configuration of Soft-ex Optimiser/Ringmaster for Direct Connection to CS1K (TTY Port)

Once the application is successfully installed a connection must be set up to collect CDR data. This section shows the setup of a real-time connection to the CS1000E. This is a serial type connection from the TTY port on the CS1000E to the Communication port on the Optimiser/Ringmaster PC.

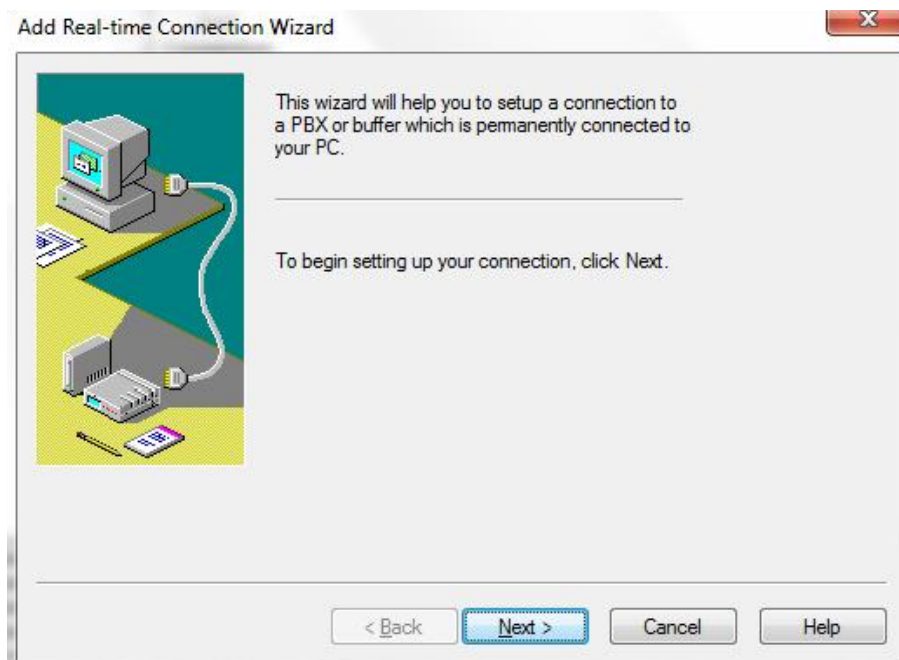
Open the Communication Server configuration in order to configure the new real-time connection by clicking on **Communications Server** as shown below.



Select the **Real-time Connections** folder in the left hand pane and double click on **Add Connection** as highlighted below.



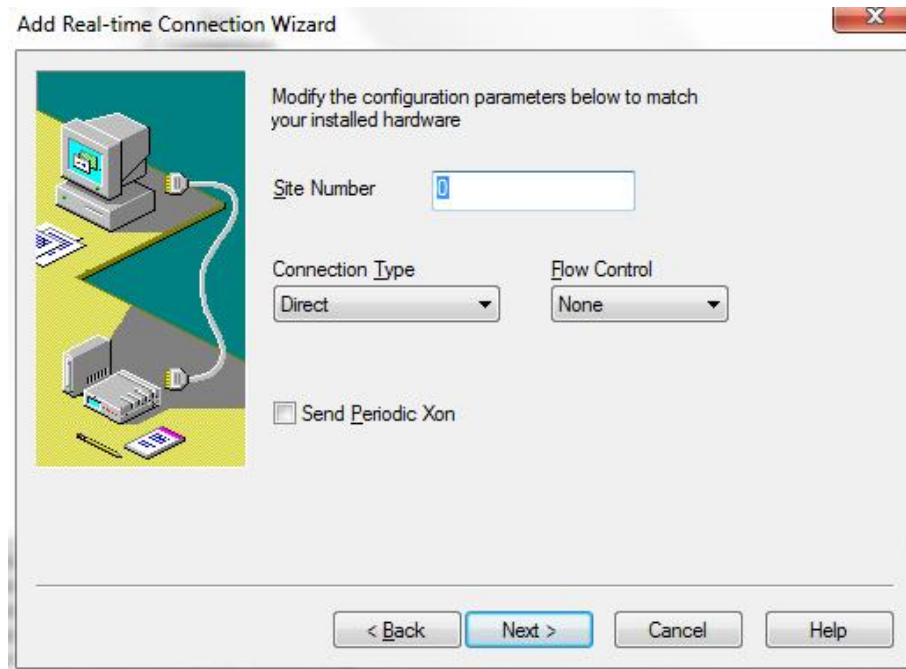
This opens the configuration wizard. Click **Next** to continue.



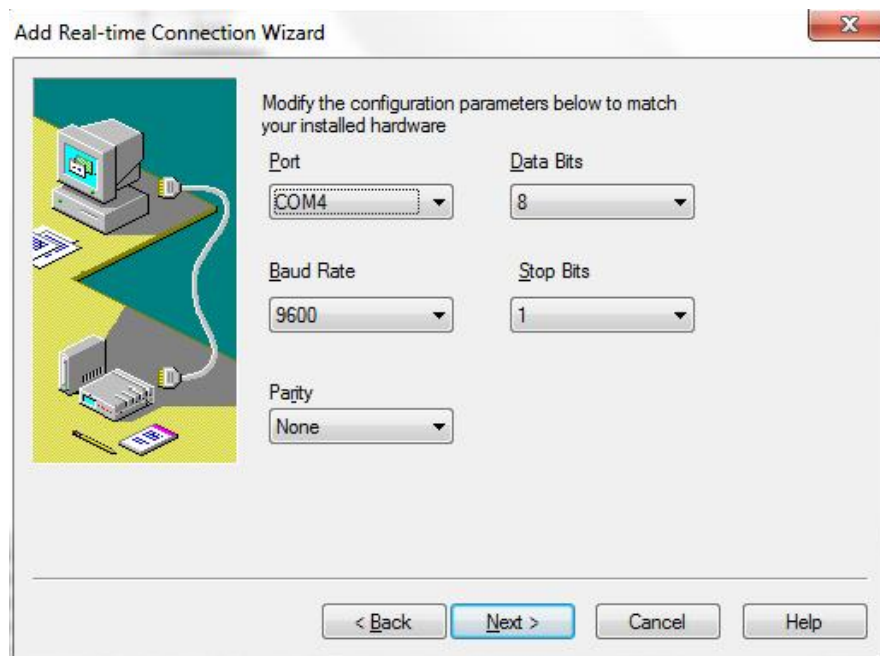
Select **Serial Port** for real-time connection to the CS1000E.



Enter the **Site Number**. When there is only one site the site number will always be **0**. The **Connection Type** is **Direct** for a real-time connection, and **Flow Control** is **None**.



The **Baud Rate** and **Port** number are chosen. Note that the information filled in here should match the information added in **Section 5** regarding the TTY port setup on the CS1000E (in overlay 17).

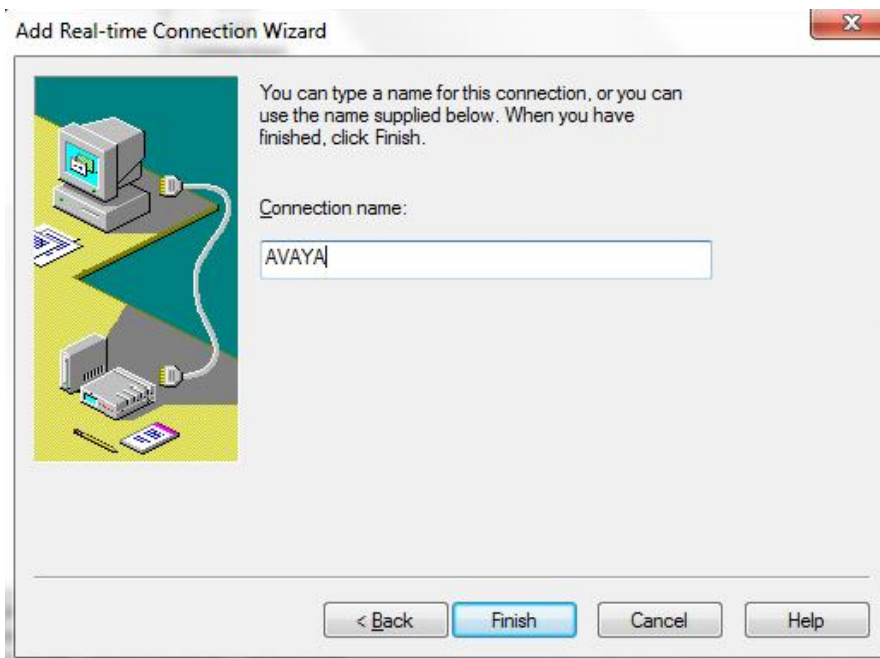


The screenshot shows the 'Add Real-time Connection Wizard' window. On the left is an illustration of a computer connected to a modem. The main area contains the following configuration options:

- Port:** COM4
- Data Bits:** 8
- Baud Rate:** 9600
- Stop Bits:** 1
- Parity:** None

At the bottom are four buttons: '< Back', 'Next >', 'Cancel', and 'Help'.

Enter a descriptive name for the new connection.



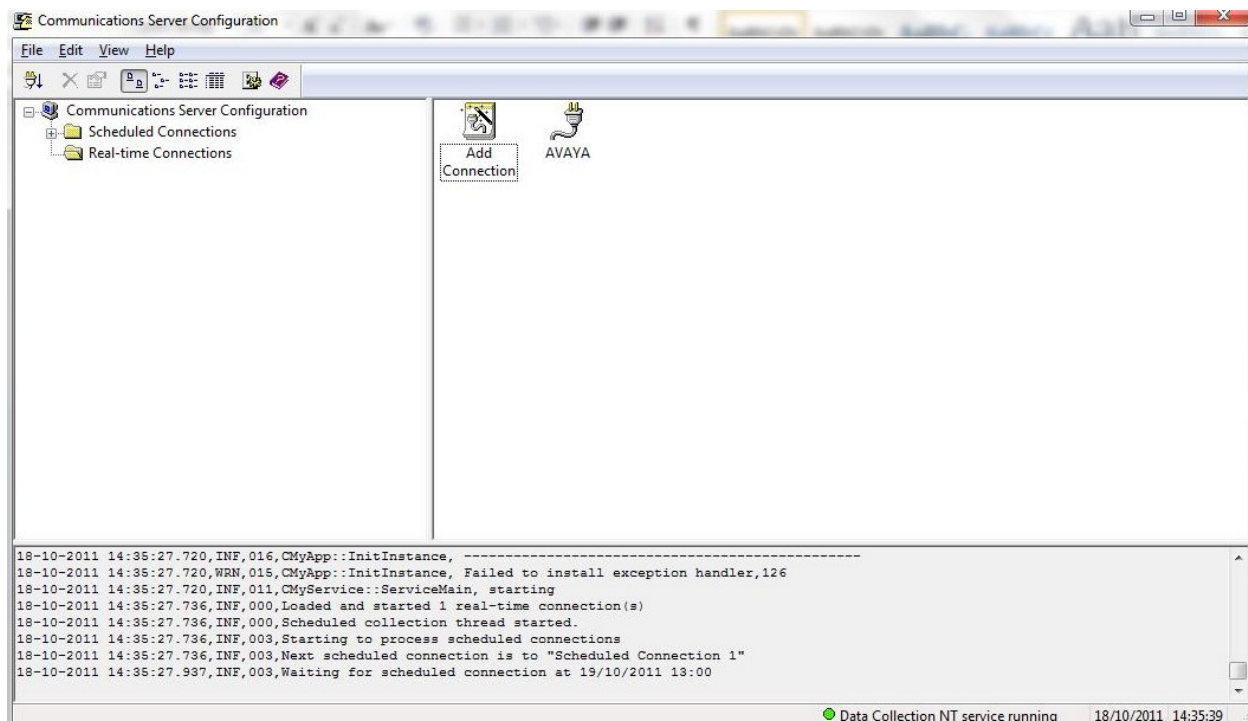
The screenshot shows the 'Add Real-time Connection Wizard' window at the naming step. On the left is the same illustration of a computer connected to a modem. The main area contains the following text and input field:

You can type a name for this connection, or you can use the name supplied below. When you have finished, click Finish.

Connection name:
AVAYA

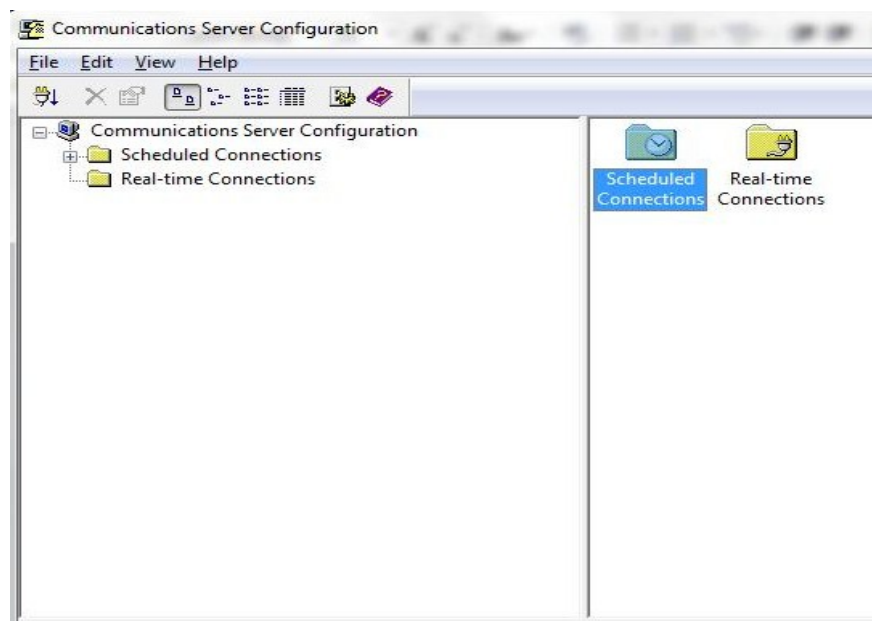
At the bottom are four buttons: '< Back', 'Finish', 'Cancel', and 'Help'.

This new connection is shown under **Real-time Connections**.

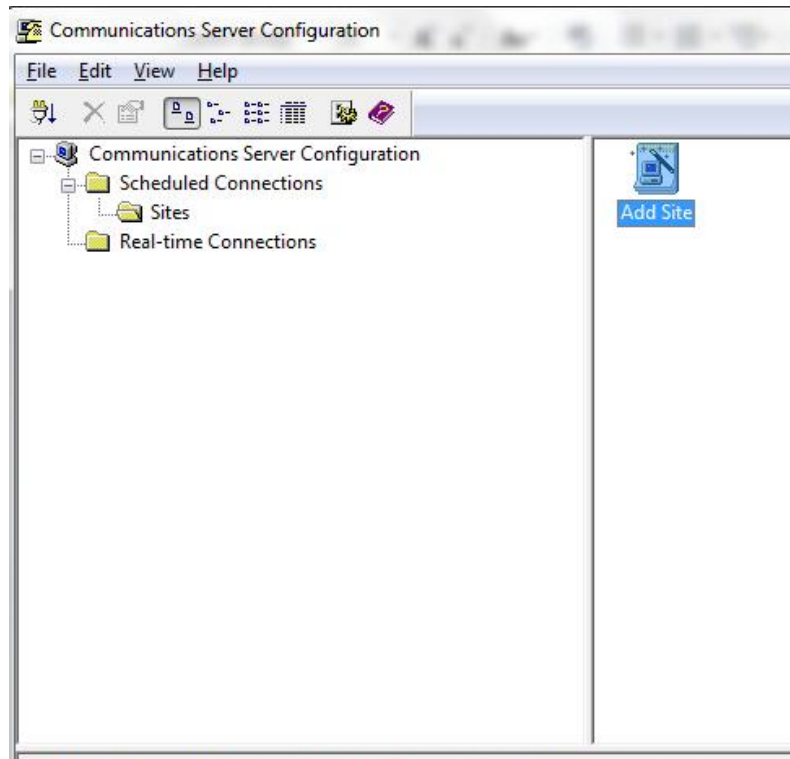


8.2. Configuration of the Soft-ex Optimiser/Ringmaster for Scheduled Connection to IP Buffer

Open the Communications Server Configuration as in Section 8.1. Select **Scheduled Connections** as shown below.



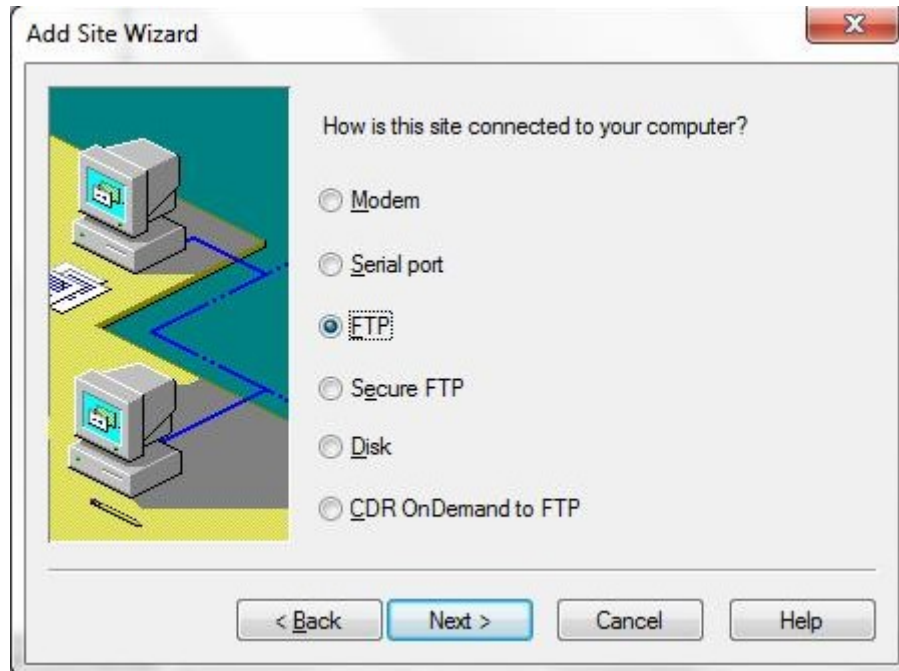
Under **Sites** double click on **Add Site** in order to create a new site for the connection.



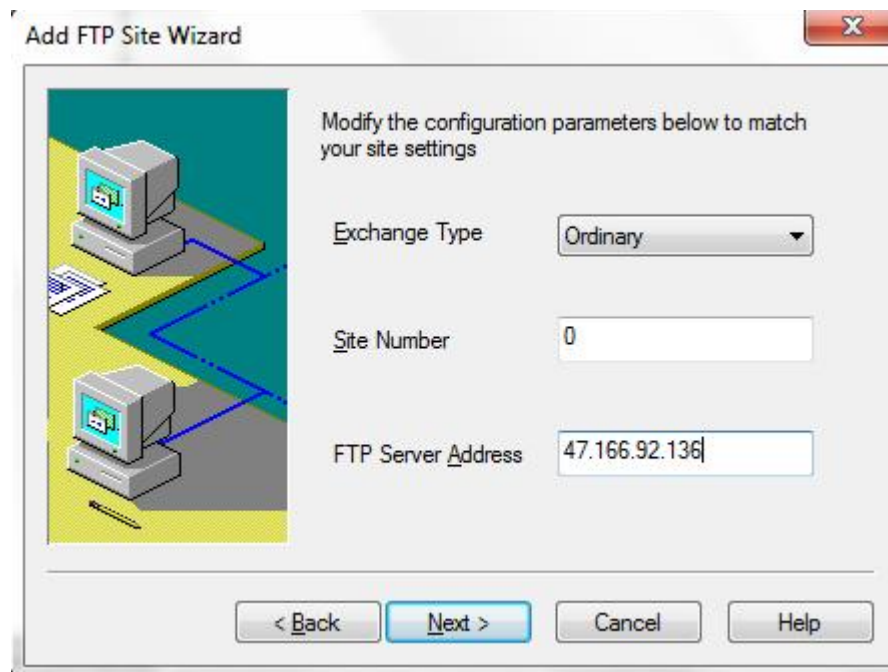
This opens the **Add Site Wizard**. Click **Next** to continue.



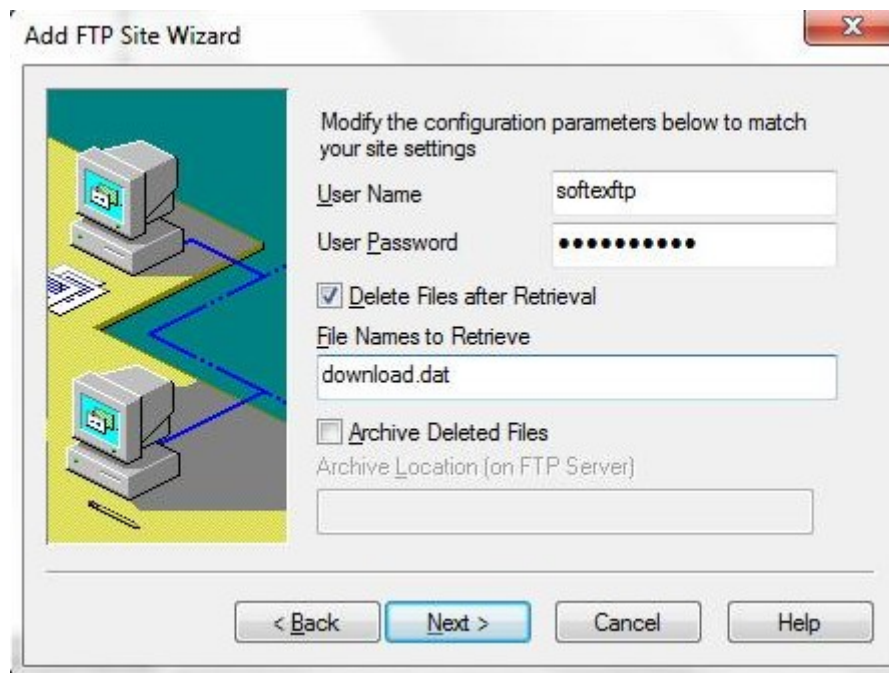
Choose **FTP** for the connection type to connect to the IP Buffer and click **Next** to continue.



Enter the **FTP Server Address**. This is the IP Address of the IP Buffer as configured in **Section 7**.



Enter the username and password and the name of the file that needs to be retrieved. Note that this is the information that was entered in **Section 7**.

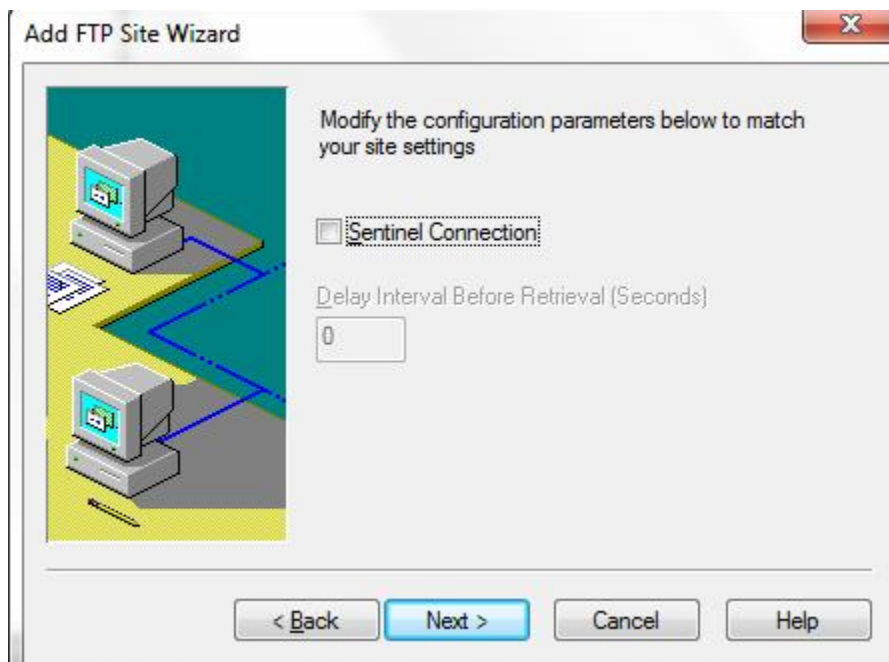


The 'Add FTP Site Wizard' dialog box, Step 1, is shown. It features a graphic on the left of two computers connected by a network line. The right side contains the following fields and options:

- Modify the configuration parameters below to match your site settings**
- User Name:** softxftp
- User Password:** [masked with dots]
- ☒ **Delete Files after Retrieval**
- File Names to Retrieve:** download.dat
- ☐ **Archive Deleted Files**
- Archive Location (on FTP Server):** [empty field]

At the bottom are buttons: < Back, Next > (highlighted), Cancel, and Help.

Click **Next** and then finish to complete the configuration.

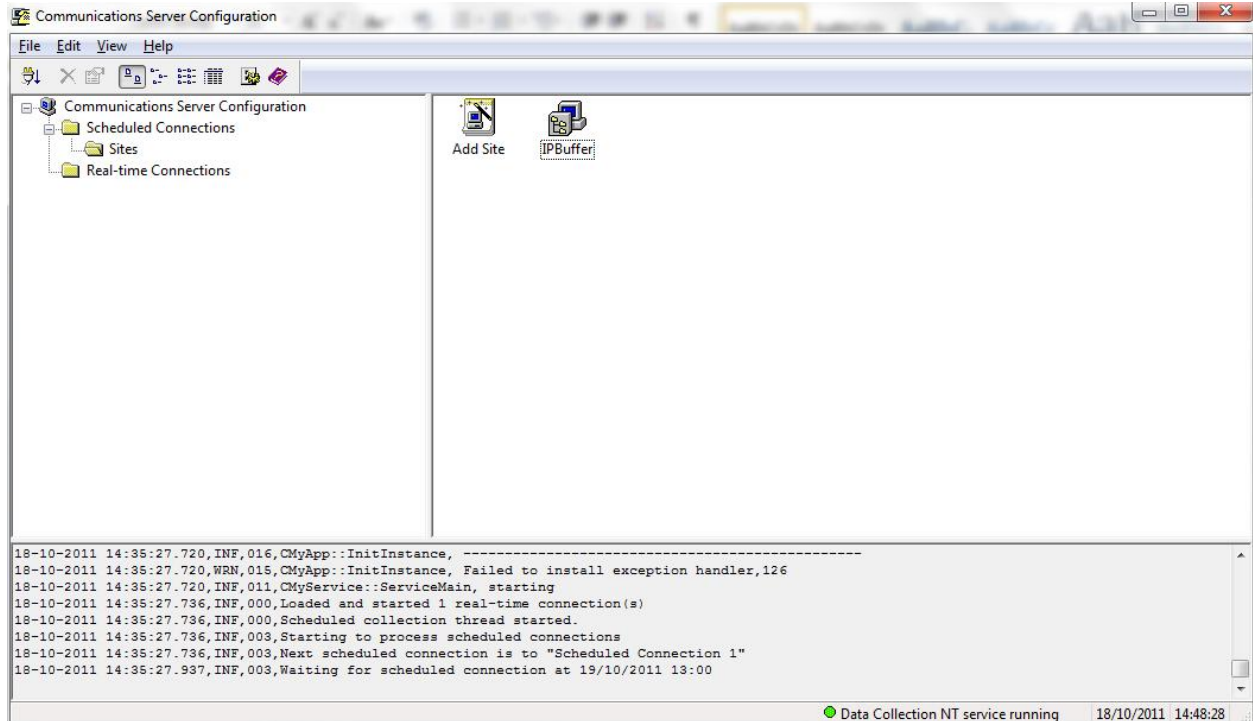


The 'Add FTP Site Wizard' dialog box, Step 2, is shown. It features the same graphic on the left. The right side contains the following fields and options:

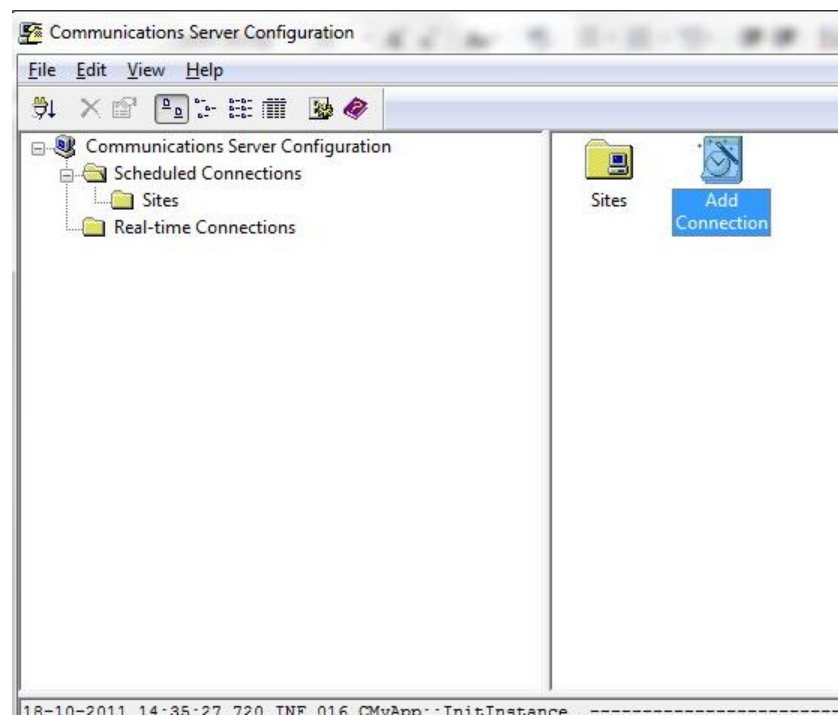
- Modify the configuration parameters below to match your site settings**
- ☐ **Sentinel Connection**
- Delay Interval Before Retrieval (Seconds):** 0

At the bottom are buttons: < Back, Next > (highlighted), Cancel, and Help.

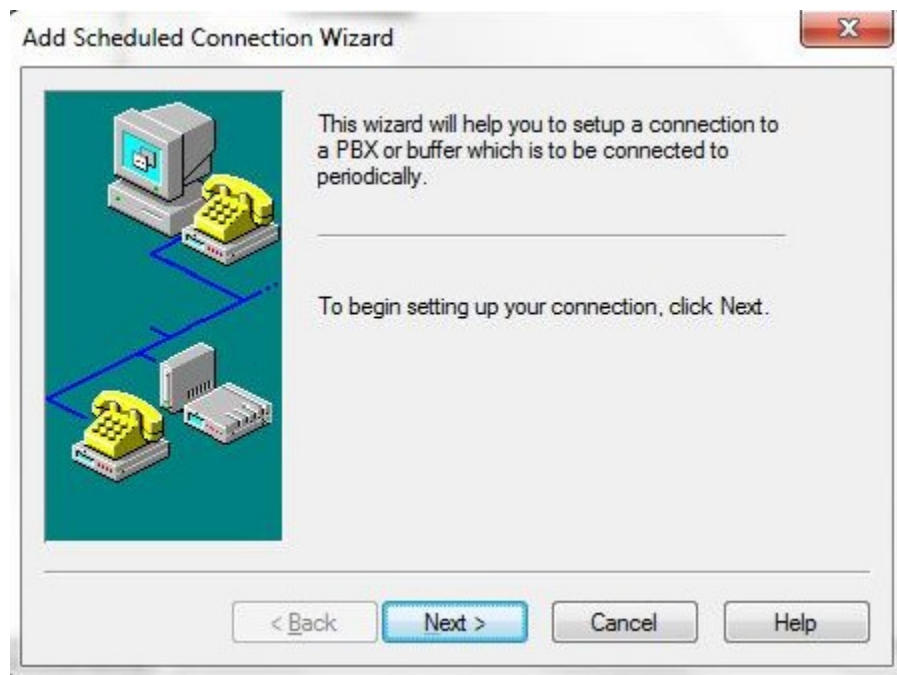
The new site is now shown under the **Scheduled Connections – Sites** folder.



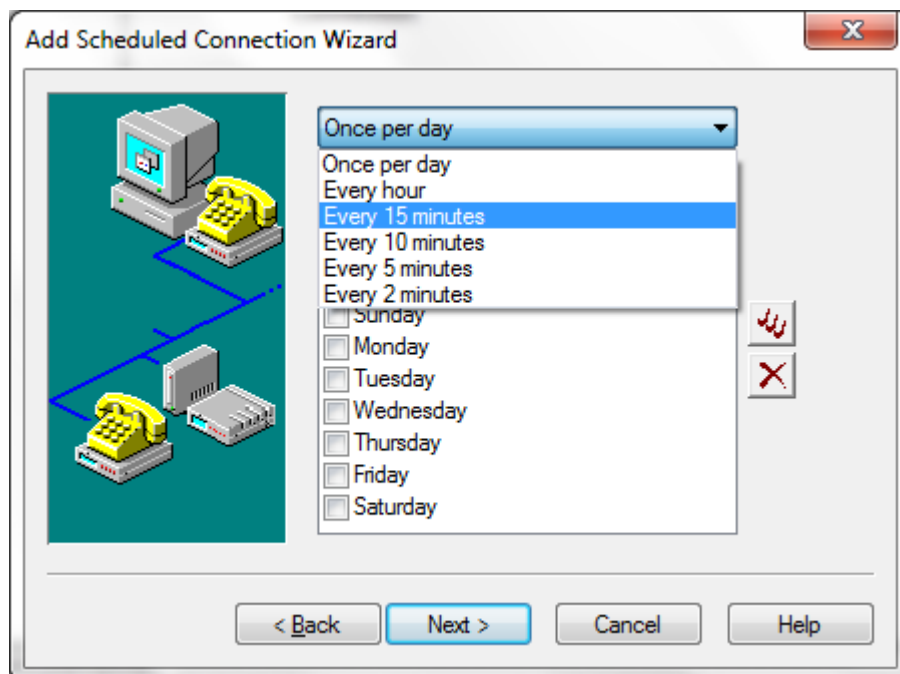
Once the site has been added, click on **Scheduled Connections** and double click **Add Connection** as shown below in order to set up the scheduled connection to retrieve the data.



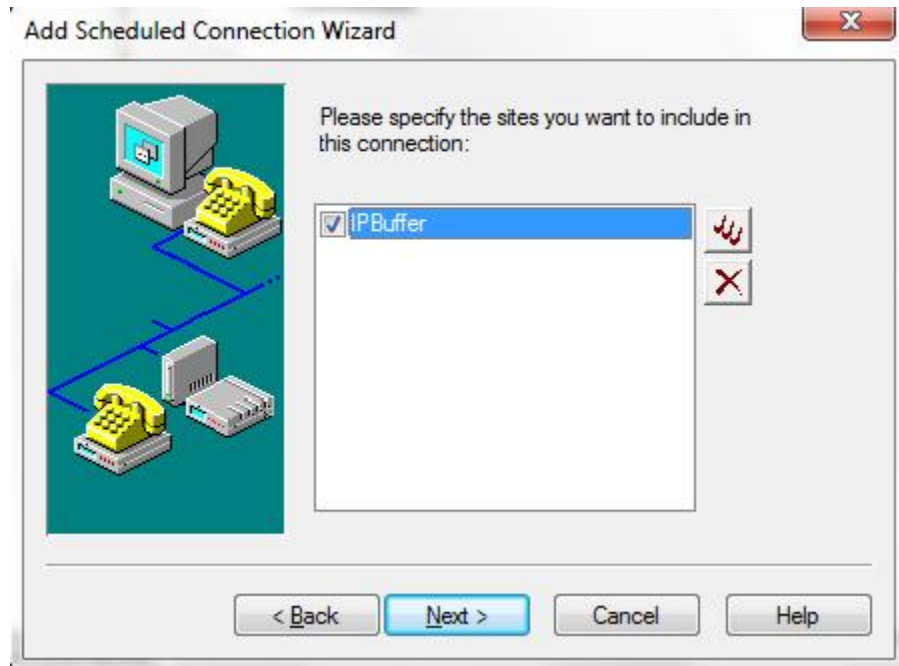
This opens up the **Add Scheduled Connection Wizard**. Click on **Next** to continue.



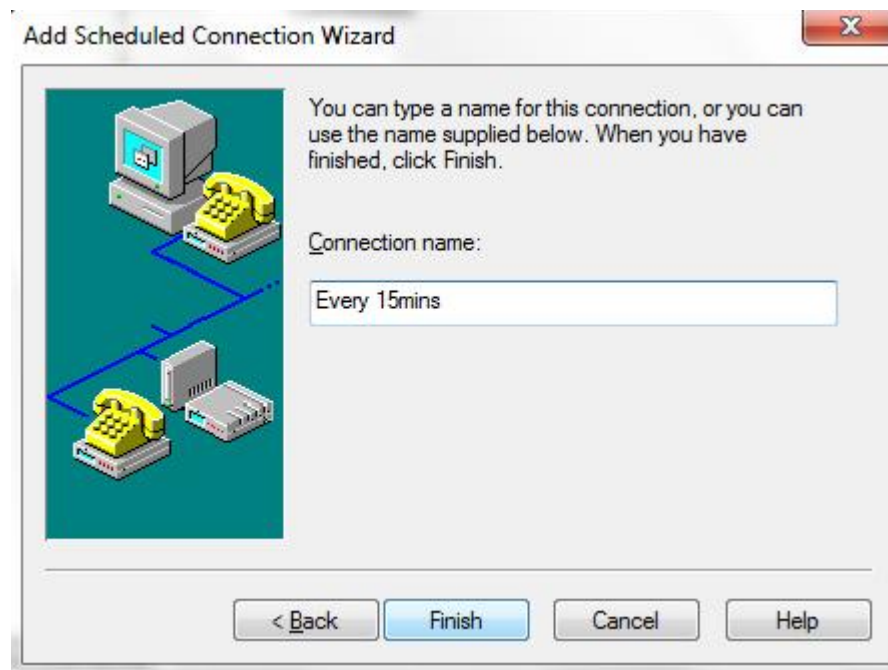
Select the frequency that the Optimiser/Ringmaster will FTP to the IP Buffer in order to parse the CDR Data.



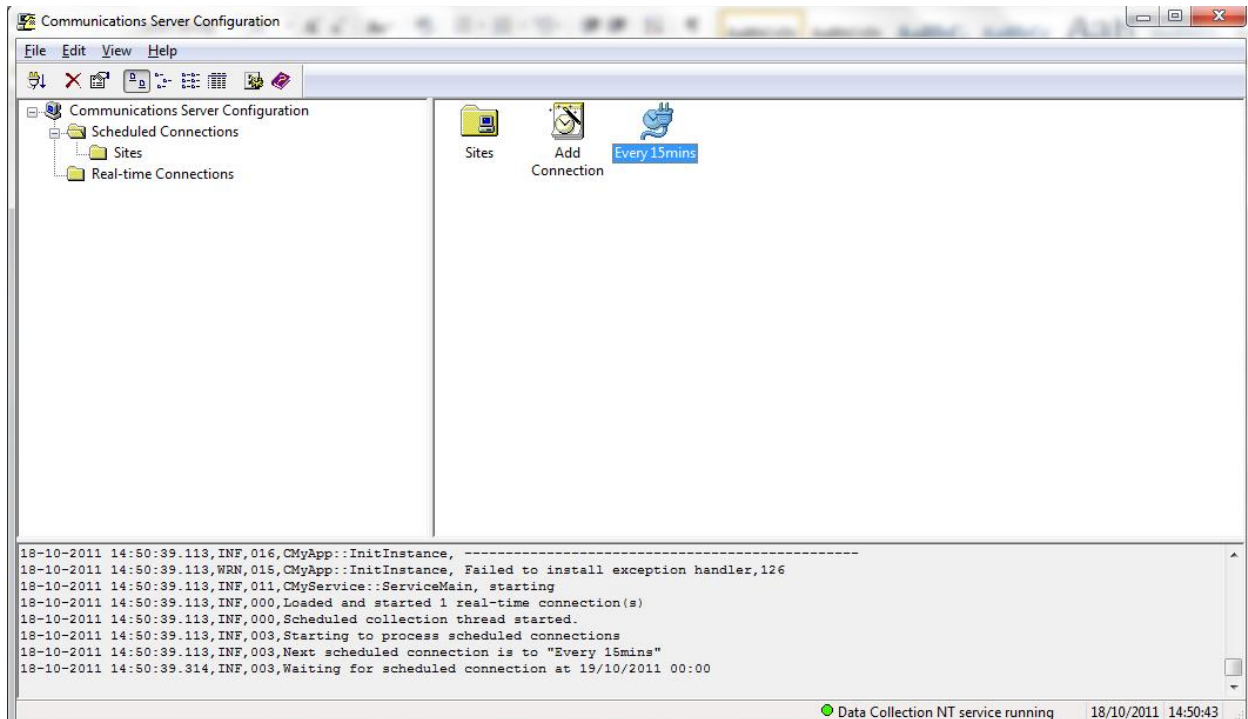
Select the site to be included in the scheduled connection. In this case the IPBuffer site that was set up previously was selected.



Select a suitable **Connection Name** and click **Finish** to complete.

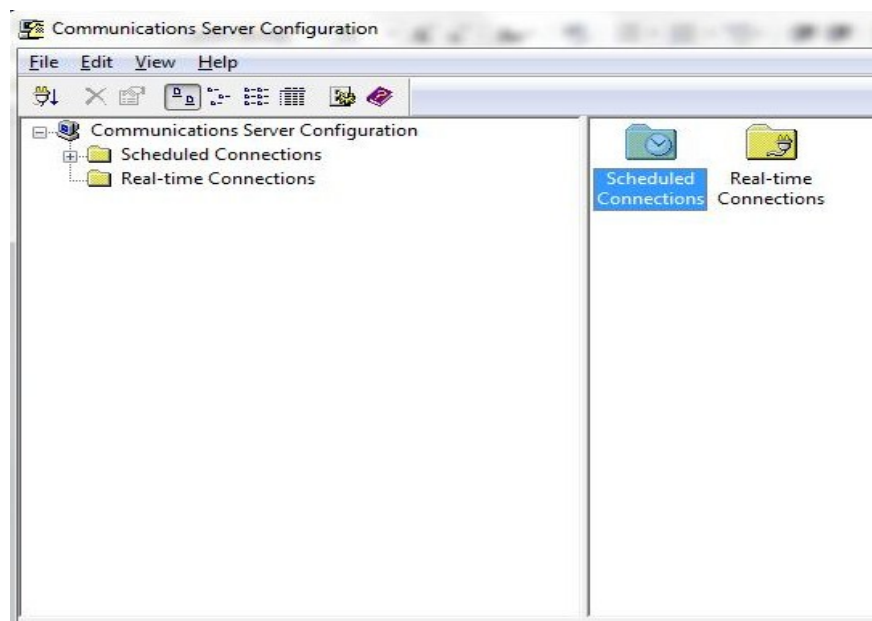


The new connection is now visible under **Scheduled Connections**.

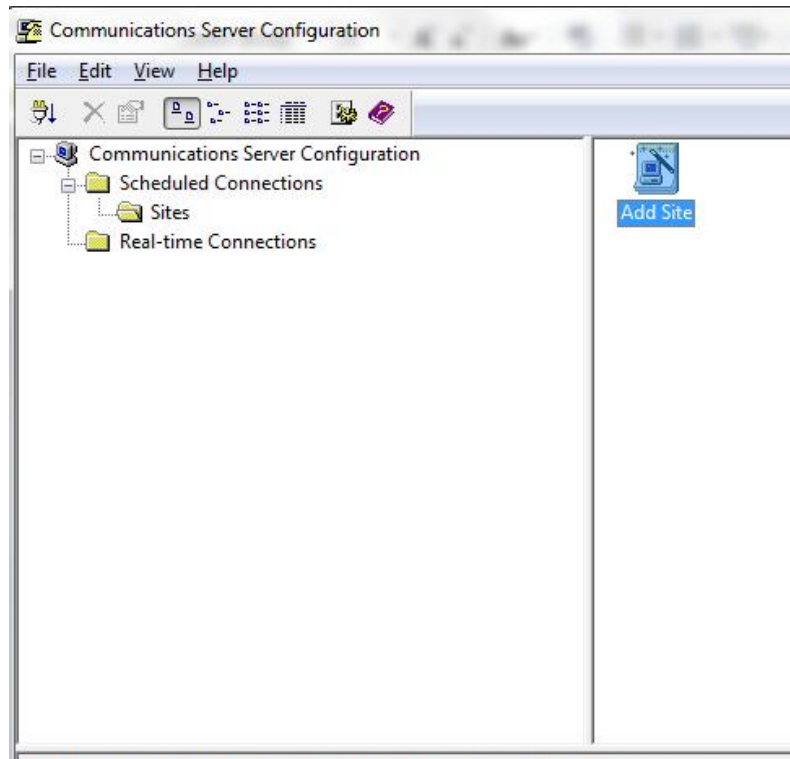


8.3. Configuration of Soft-ex Optimiser/Ringmaster for Scheduled Connection to Avaya DBA client

Open the Communications Server Configuration as in Section 8.1. Select **Scheduled Connections** as shown below.



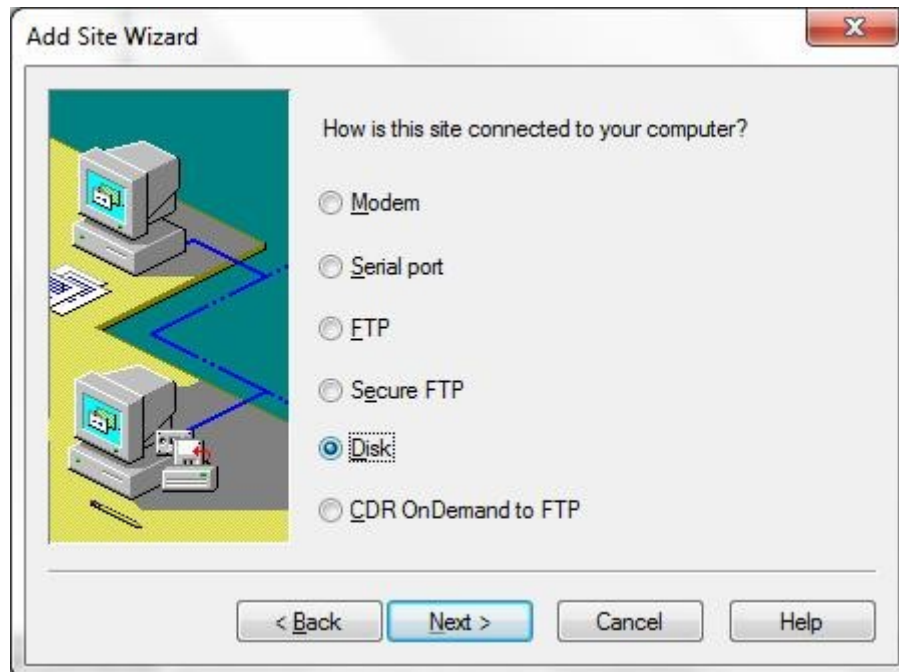
Double-click on **Sites** and **Add Site**.



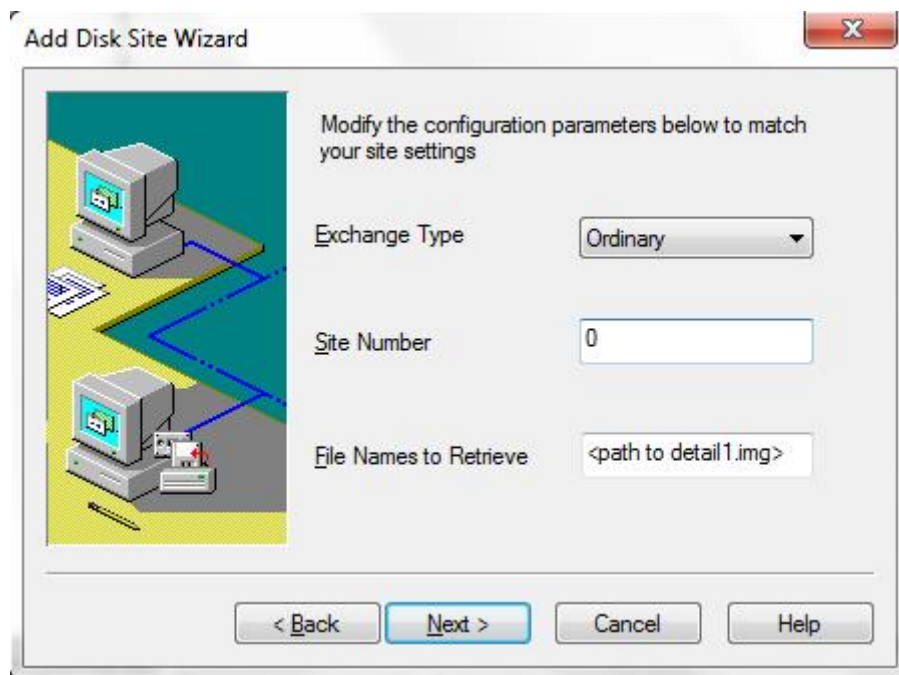
This opens the **Add Site Wizard**. Click **Next** to continue.



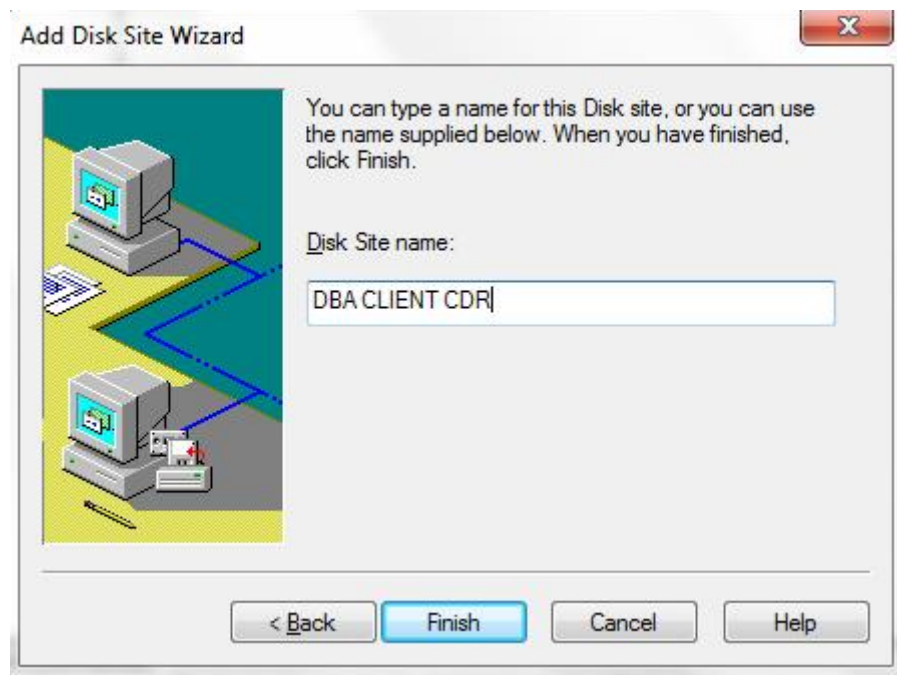
Choose **Disk** for the connection type to connect to the Avaya DBA Client and click **Next** to continue.



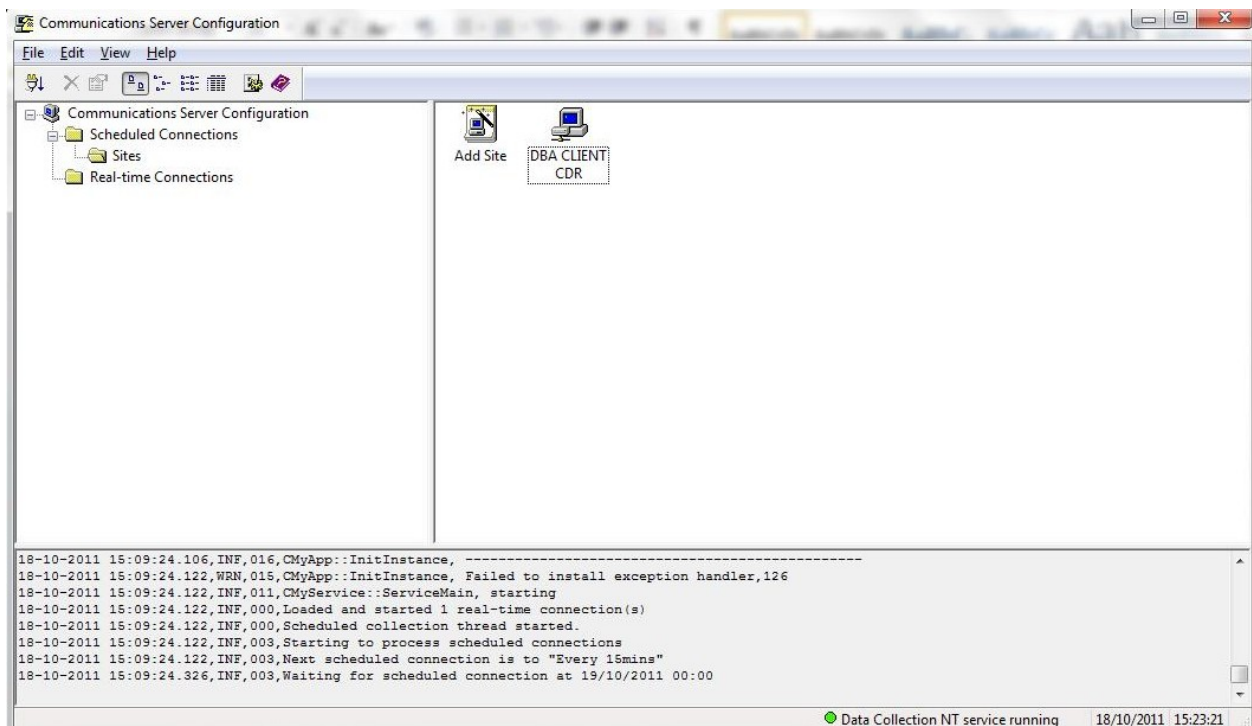
Enter the mapped network drive full path file name (consistent with configuration in **Section 6**) containing the CDR information in the **File Names to Retrieve** box.



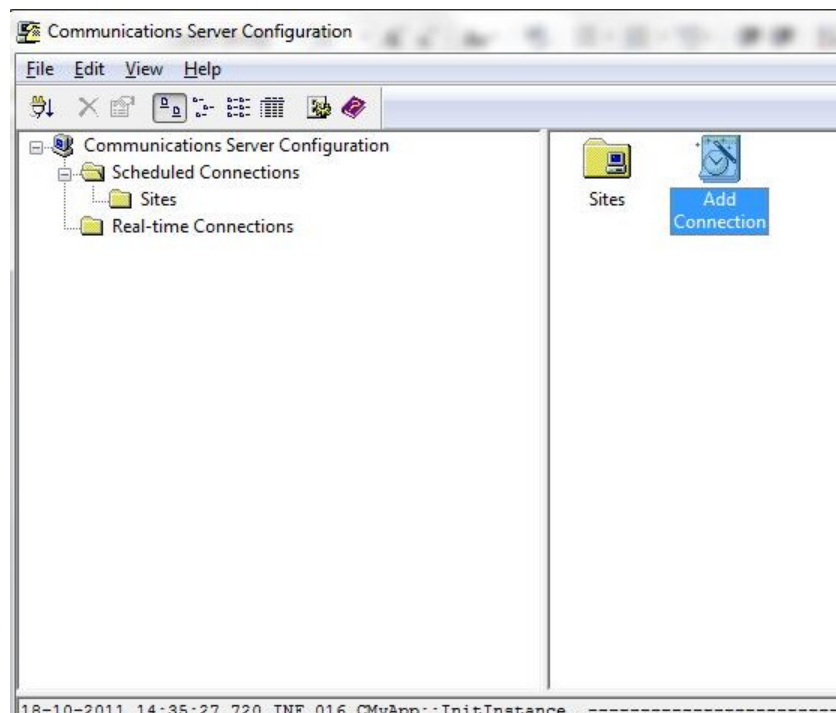
Enter a suitable name for the new site and click **Finish**.



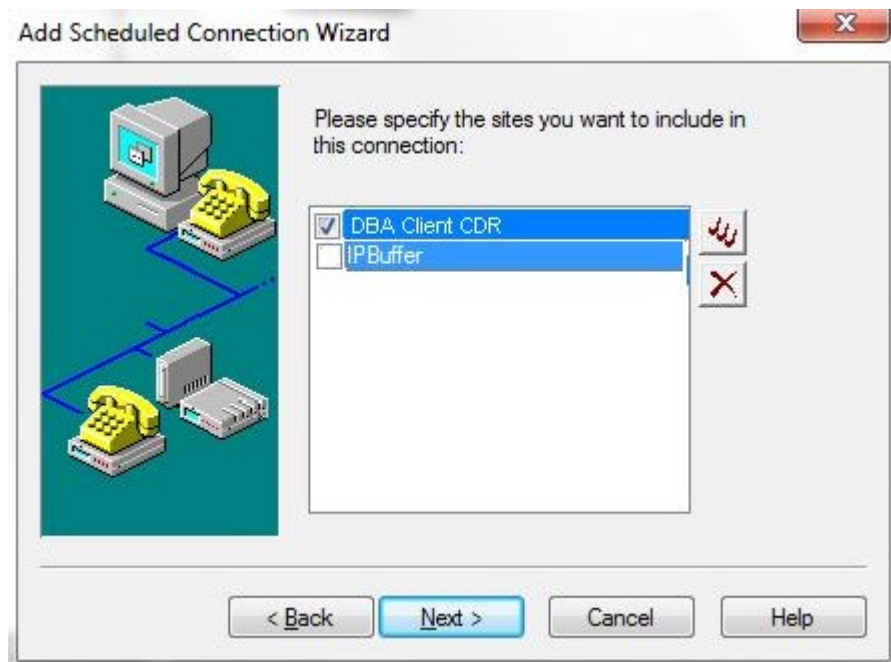
The new Site is now shown under **Sites** in **Scheduled Connections**.



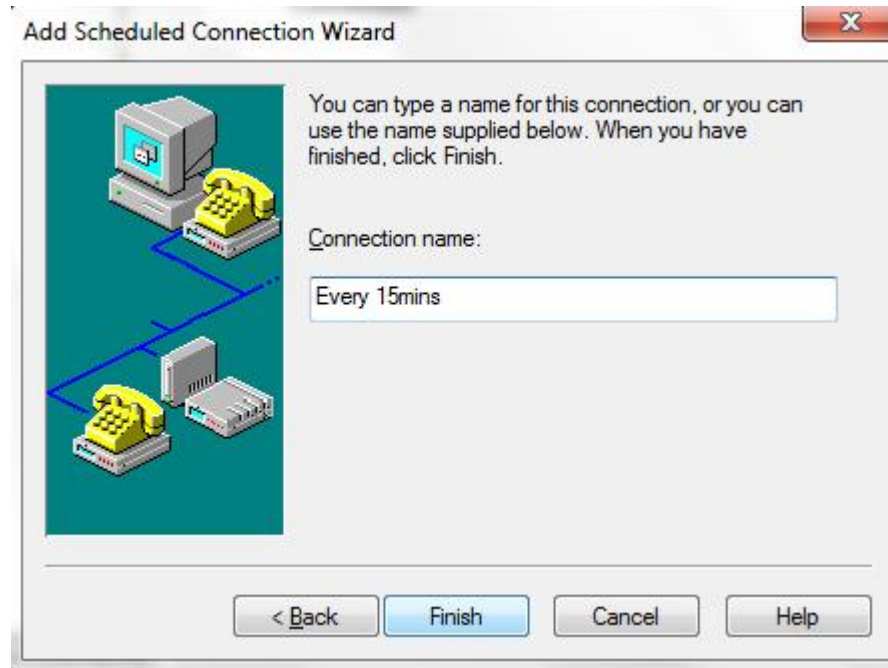
Once the site has been added click on **Scheduled Connections** and double click **Add Connection** as shown below in order to set up the scheduled connection to retrieve the data. This is done as per **Section 8.2** in adding a Scheduled Connection.



Select the newly added site **DBA Client CDR** as shown below.



Select a suitable **Connection Name** and click **Finish** to complete.

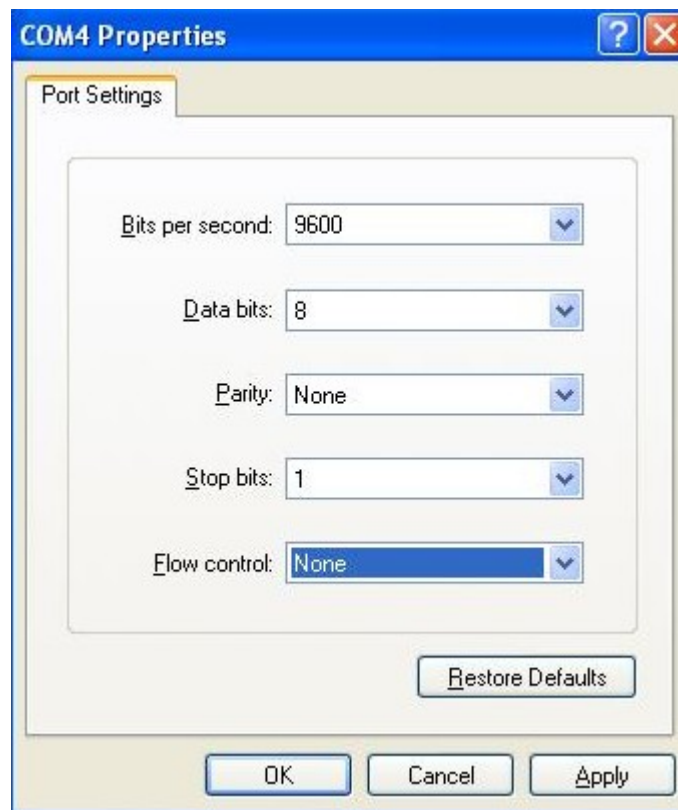


9. Verification Steps

Verification that CDR data is being produced and sent to the Optimiser/Ringmaster is done by first checking that CDR information is being sent from the PBX and second that this CDR information is being received by the Optimiser/Ringmaster.

9.1. CDR information Sent from CS1000E

Connect a PC/Laptop to the TTY port on CS1000E that is outputting the CDR information. This port was configured in **Section 5**. Using HyperTerminal, set up a serial connection with **Port Settings** as shown below.



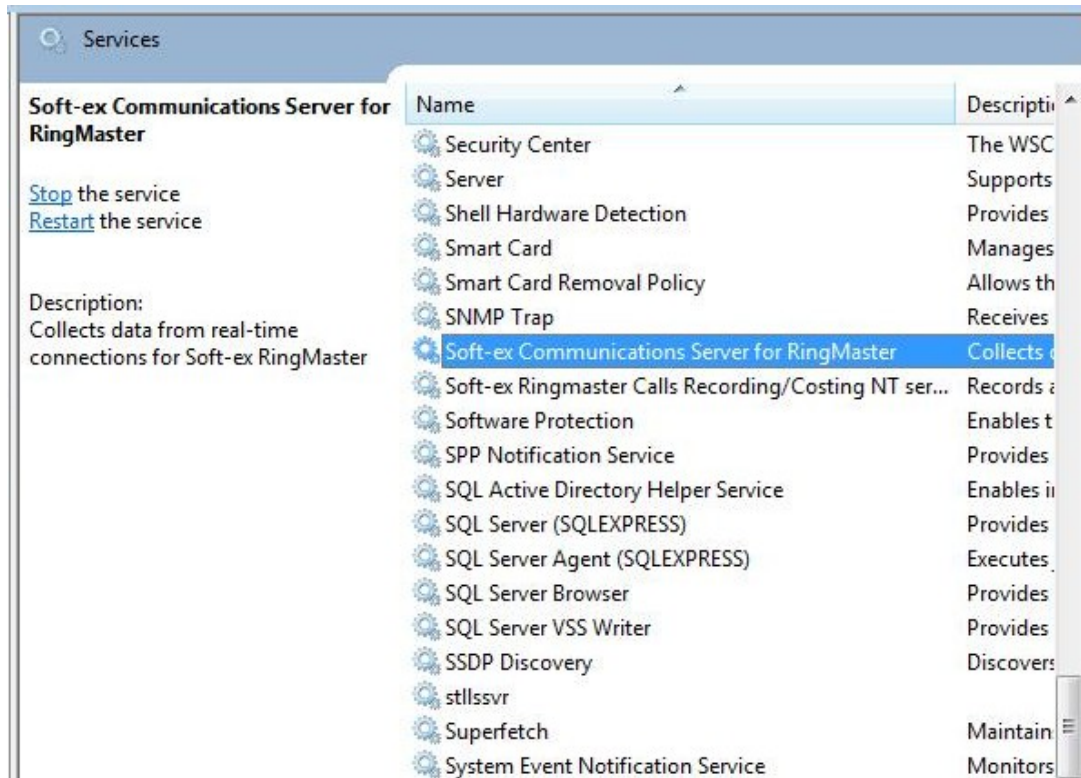
Once connected make an incoming and outgoing call and on completion of the calls CDR records should be visible on the HyperTerminal. An example is shown below.

```
N 107 00 5180      A042020 10/20 11:37:31 00:00:18.0 A423016
&
&                                000                                000 000

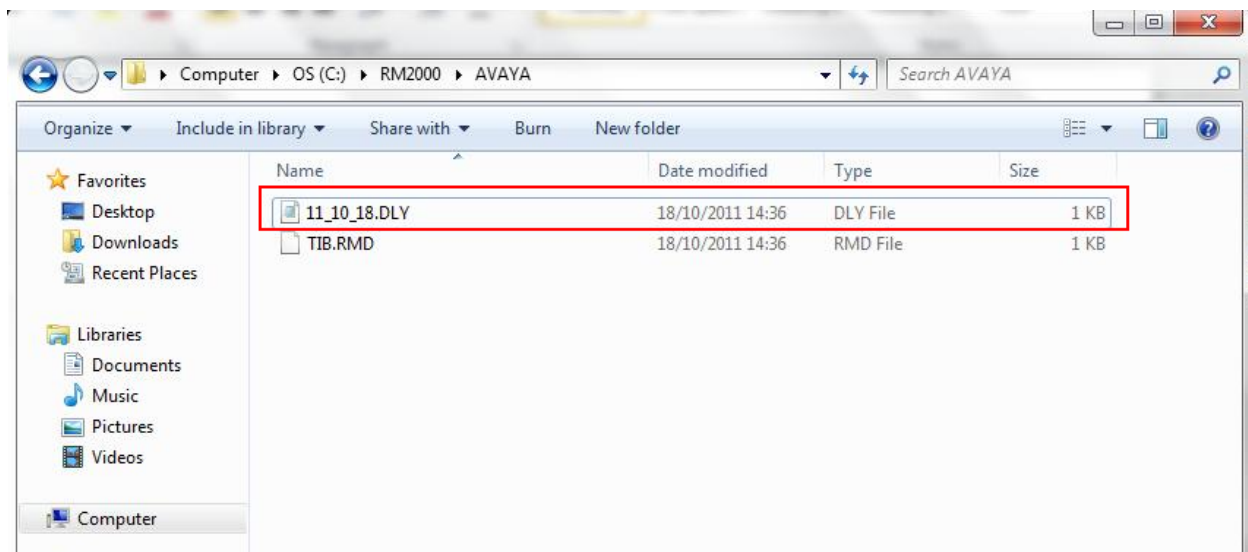
N 108 00 A042017 5013      10/20 11:37:45 00:00:14.0
&                                000                                000 000
&00:02                                000
```

9.2. CDR information Received by Soft-ex Optimiser/Ringmaster

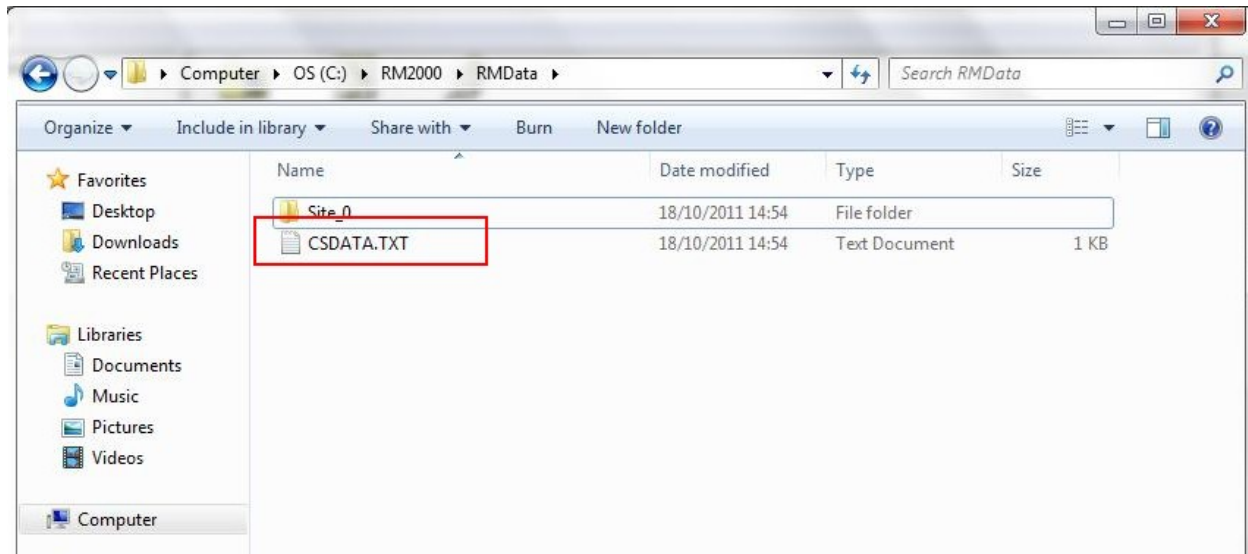
Check that the Soft-ex Communications Server for RingMaster service is running as shown below.



Check to see that a CDR file is created in the location C:/RM2000/<SiteName> as shown below.



Check the processed CDR Data in the CSDATA.TXT file in the location [\\RM2000\RMDATA](#).



This contents in the CSDATA.TXT file should show the CDR information as was sent from the CS1000E.

```
File Edit Format View Help
L 050 00 5181 5180 10/18 14:40:32 00:00:10.0
&
&00:01 000 000
TIM000 14:40 18/10/2011 CPU 0
Int. Extn:5180 Extn:5181 (Recorded)
5181, , 14:40, 00:00:10, Internal, 00:01, , , €0.0000, 5180, , , Standard, 18/10/2011, Tuesday
ERR4291 10 0 42 23
Last Line Unrecognised
L 051 00 5181 5180 10/18 14:40:53 00:00:00.0
&
&00:01 000 000
Int. Extn:5180 Extn:5181 (Recorded)
5181, , 14:40, 00:00:00, Internal, 00:01, , , €0.0000, 5180, , , Standard, 18/10/2011, Tuesday
S 052 00 A042023 5181 10/18 14:40:47 00:00:06.0
&
&00:02 000 000
Trnk:T042023 Extn:5181 Buffered.
E 053 00 A042023 5180 10/18 14:40:59 00:00:06.0
&
&00:01 000 000
Inc. Trnk:T042023 Extn:5181 Extn:5180
Portion 1 Recorded
5181, , 14:40, 00:00:06, Incoming, 00:02, , , €0.0000, T042023, , FREE, Standard, 18/10/2011, Tuesday
Portion 2 Recorded
5180, , 14:40, 00:00:06, Incoming, 00:01, , , €0.0000, T042023, , FREE, Standard, 18/10/2011, Tuesday
N 054 00 5013 A042024 10/18 14:40:30 00:00:30.0 A423016
&
& 000 000
Otg. Trnk:T042024 Extn:5013 (Recorded)
5013, , 14:40, 00:00:30, Outgoing, 00:00, Local, ER42+11142+3016, €0.0920, T042024, , L, Standard, 18/10/2011, Tuesday
```

10. Conclusion

The addition of the Optimiser/Ringmaster from Soft-ex and the IP Buffer from Scannex did not impact on the performance of the Avaya Communication Manager 1000E. CDR records were produced and reported on for all test calls as per **Section 2.2**.

11. Additional References

Additional Avaya product documentation is available at <http://support.avaya.com>.

- [1] *Call Detail Recording Fundamentals Avaya Communication Server 1000, R7.5 NN43001-550, 05.03 Sept 2011*
- [2] *Software Input Output Reference – Administration – Avaya Communication Server 1000, R7.5 NN43001-611, 05.09 Sept 2011*
- [3] *Unified Communications Management Common Services Fundamentals Avaya Communication Server 1000, R7.5 NN43001-116, 05.14 August 2011*

Information on the installation and configuration of Optimiser/Ringmaster can be found at <http://www.soft-ex.net>. Information on the installation and configuration of the IP Buffer from Scannex can be found at <http://www.scannex.co.uk>.

Appendix

Patch version

```
.mdp issp

VERSION 4121
RELEASE 7
ISSUE 50 Q +
DepList 1: core Issue: 01 (created: 2011-03-15 10:26:33 (est))

IN-SERVICE PEPs
PAT# CR #          PATCH REF #    NAME          DATE          FILENAME        SPECINS
000 wi00688505      ISS1:1OF1      p30595_1    06/10/2011    p30595_1.cpl    NO
001 wi00835294      ISS1:1OF1      p30565_1    06/10/2011    p30565_1.cpl    NO
002 wi00832106      ISS1:1OF1      p30550_1    06/10/2011    p30550_1.cpl    NO
003 wi00837618      ISS1:1OF1      p30594_1    06/10/2011    p30594_1.cpl    NO
004 wi00852365      ISS1:1OF1      p30707_1    06/10/2011    p30707_1.cpl    NO
005 wi00843623      ISS1:1OF1      p30731_1    06/10/2011    p30731_1.cpl    YES
006 wi00839255      ISS1:1OF1      p30591_1    06/10/2011    p30591_1.cpl    NO
007 wi00832626      ISS2:1OF1      p30560_2    06/10/2011    p30560_2.cpl    NO
008 wi00857566      ISS1:1OF1      p30766_1    06/10/2011    p30766_1.cpl    NO
009 wi00841980      ISS1:1OF1      p30618_1    06/10/2011    p30618_1.cpl    NO
010 wi00837461      ISS1:1OF1      p30597_1    06/10/2011    p30597_1.cpl    NO
011 wi00839821      ISS1:1OF1      p30619_1    06/10/2011    p30619_1.cpl    NO
012 wi00842409      ISS1:1OF1      p30621_1    06/10/2011    p30621_1.cpl    NO
013 wi00838073      ISS1:1OF1      p30588_1    06/10/2011    p30588_1.cpl    NO
014 wi00850521      ISS1:1OF1      p30709_1    06/10/2011    p30709_1.cpl    YES
015 wi00860722      ISS1:1OF1      p30784_1    06/10/2011    p30784_1.cpl    YES
016 wi00839134      ISS1:1OF1      p30698_1    06/10/2011    p30698_1.cpl    YES
017 wi00836981      ISS1:1OF1      p30613_1    06/10/2011    p30613_1.cpl    NO
MDP>LAST SUCCESSFUL MDP REFRESH :2011-03-31 08:42:22(Local Time)
MDP>USING DEPLIST ZIP FILE DOWNLOADED :2011-03-30 11:07:46(est)
```

Firmware Versions

```
REQ prt
TYPE pswv
PSWV VERSION: PSWV 100
LCRI:
  VERSION NUMBER: AA02
XNET:
  VERSION NUMBER: AC23
XPEC:
  VERSION NUMBER: AC43
FNET:
  VERSION NUMBER: AA07
FPEC:
  VERSION NUMBER: AA08
MSDL:
  VERSION NUMBER: AJ73
SDI:
  VERSION NUMBER: AH51
DCH:
  VERSION NUMBER: AA72
AML:
  VERSION NUMBER: AK81
```

BRIL:
VERSION NUMBER: AK83
BRIT:
VERSION NUMBER: AK82
MISP:
VERSION NUMBER: AJ71
MPH:
VERSION NUMBER: AH51
BRSC:
VERSION NUMBER: AJ71
BBRI:
VERSION NUMBER: AH54
PRIE:
VERSION NUMBER: AA87
BRIE:
VERSION NUMBER: AK89
ISIG:
VERSION NUMBER: AA33
SWEL:
VERSION NUMBER: BA53
UKG1:
VERSION NUMBER: BA51
AUS1:
VERSION NUMBER: BA49
DEN1:
VERSION NUMBER: BA48
FIN1:
VERSION NUMBER: BA49
GER1:
VERSION NUMBER: BA54
ITA1:
VERSION NUMBER: AA54
NOR1:
VERSION NUMBER: BA49
POR1:
VERSION NUMBER: BA49
DUT1:
VERSION NUMBER: BA50
EIR1:
VERSION NUMBER: BA49
SWI1:
VERSION NUMBER: BA53
BEL1:
VERSION NUMBER: BA49
SPA1:
VERSION NUMBER: BA51
NET1:
VERSION NUMBER: BA48
FRA1:
VERSION NUMBER: BA52
CIS1:
VERSION NUMBER: BA48
ETSI:
VERSION NUMBER: BA48
E403:
VERSION NUMBER: BA07
N403:
VERSION NUMBER: BA05
JTTC:
VERSION NUMBER: AC08
TCNZ:
VERSION NUMBER: AA13

AUBR:
VERSION NUMBER: AA14
AUPR:
VERSION NUMBER: AA04
HKBR:
VERSION NUMBER: AA06
HKPR:
VERSION NUMBER: AA08
SING:
VERSION NUMBER: AA15
THAI:
VERSION NUMBER: AA07
NI02:
VERSION NUMBER: AA26
T1IS:
VERSION NUMBER: AA10
T1ES:
VERSION NUMBER: AA09
ESGF:
VERSION NUMBER: AC30
ISGF:
VERSION NUMBER: AC31
ESGFTI:
VERSION NUMBER: AC29
ISGFTI:
VERSION NUMBER: AC31
INDO:
VERSION NUMBER: AA06
JAPN:
VERSION NUMBER: AA16
MSIA:
VERSION NUMBER: AA04
CHNA:
VERSION NUMBER: AA04
INDI:
VERSION NUMBER: AA03
PHLP:
VERSION NUMBER: AA02
TAIW:
VERSION NUMBER: AA03
EAUS:
VERSION NUMBER: AA02
EGF4:
VERSION NUMBER: AC14
DCH3:
VERSION NUMBER: AA10
PUP3:
VERSION NUMBER: AA14
T1E1:
VERSION NUMBER: AA19
DITI:
VERSION NUMBER: AA40
CLKC:
VERSION NUMBER: AA20
3902:
VERSION NUMBER: AA84
3903:
VERSION NUMBER: AA91
3904:
VERSION NUMBER: AA94
3905:
VERSION NUMBER: AA94

MGC, MGX and MGS:

CSP VERSION: MGCC CD01
MSP VERSION: MGCM AB01
APP VERSION: MGCA BA07
FPGA VERSION: MGCF AA18
BOOT VERSION: MGCB BA07
DSP1 VERSION: DSP1 AB03
DSP2 VERSION: DSP2 AB03
DSP3 VERSION: DSP3 AB03
DSP4 VERSION: DSP4 AB01
DSP5 VERSION: DSP5 AA01
UDT VERSION NUMBER: AA42

©2011 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.