



Avaya Solution & Interoperability Test Lab

Application Notes for DATEL UCCS Standard Edition with Avaya IP Office 9.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for DATEL UCCS Standard Edition to interoperate with Avaya IP Office 9.0.

DATEL UCCS Standard Edition is a web-based call accounting solution. In the compliance testing, DATEL UCCS Standard Edition used the TFTP service and SMDR interface from Avaya IP Office to monitor and report on call records.

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 DATEL UCCS Standard Edition to interoperate with Avaya IP Office 9.0.

DATEL UCCS Standard Edition is a web-based call accounting solution. In the compliance testing, DATEL UCCS Standard Edition used the TFTP service and SMDR interface from Avaya IP Office to monitor and report on call records.

The TFTP service was used to obtain user data from Avaya IP Office, and the SMDR interface was used to obtain call records. The call records reports were accessed using the DATEL UCCS Standard Edition web-based interface.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the UCCS Standard Edition application, the application automatically sends TFTP request to obtain configured users from IP Office.

For the manual part of the testing, different types of calls were made along with different actions initiated from the user telephones, to verify proper parsing and displaying of received SMDR data by UCCS Standard Edition.

The serviceability test cases were performed manually by disconnecting and reconnecting the Ethernet connection to the UCCS Standard Edition server.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the proper parsing and displaying of SMDR data by UCCS Standard Edition for call scenarios including internal, voicemail, inbound PSTN, outbound PSTN, hold, reconnect, transfer, conference, park, forward, and account codes. The verification also included sanity check on the reports that can be generated from the received SMDR data.

The serviceability testing focused on verifying the ability of UCCS Standard Edition to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to the UCCS Standard Edition server.

2.2. Test Results

All test cases were executed and verified. The following were observations on UCCS Standard Edition from the compliance testing:

- For every call record involving two internal users, UCCS Standard Edition produced two entries in the Call Data View report by design. The two entries contained identical reported values except for direction.
- When the received Party2Name value contained a conference channel number, UCCS Standard Edition reported 0 for Trunk as opposed to the actual conference channel number.

2.3. Support

Technical support on UCCS Standard Edition can be obtained through the following:

- **Phone:** (724) 940-0400
- **Email:** support@datel-group.com

3. Reference Configuration

The configuration used for the compliance testing is shown below.

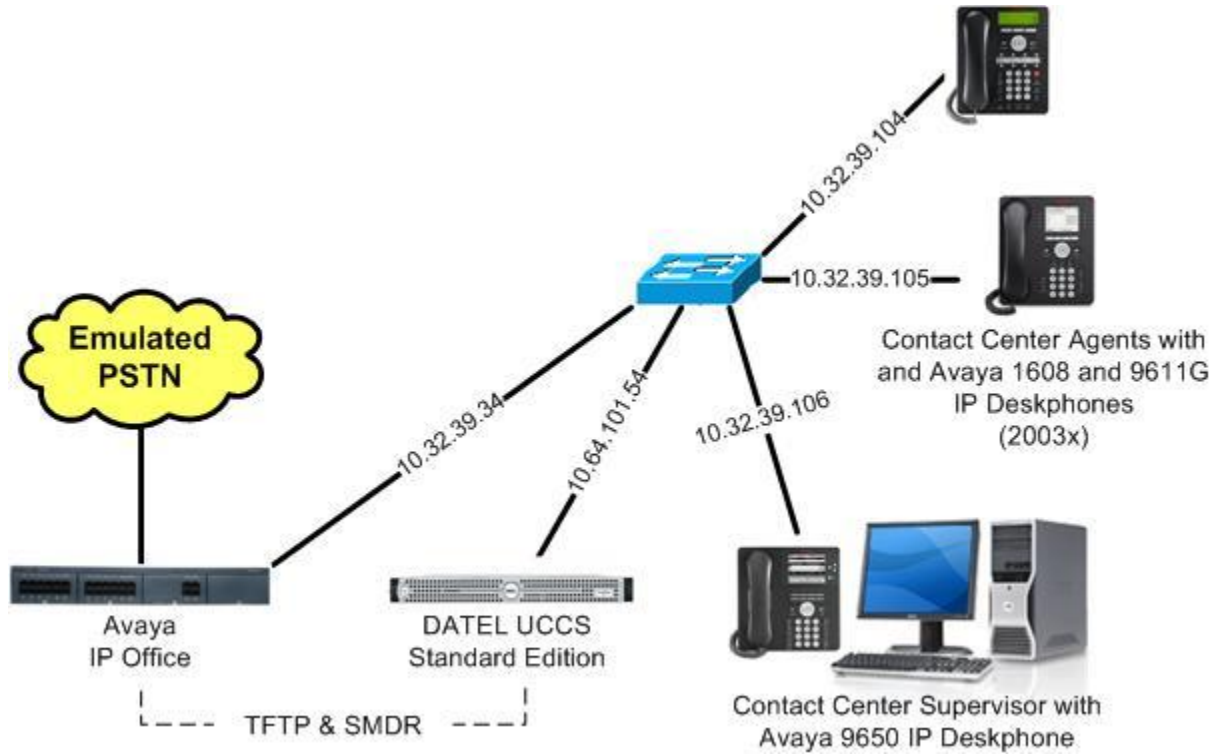


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya IP Office on IP500V2	9.0 (829)
Avaya 1608 IP Deskphone (H.323)	1.330D
Avaya 9611G IP Deskphone (H.323)	6.3037
Avaya 9650 IP Deskphone (H.323)	3.200
DATEL UCCS Standard Edition on Windows 2008 Server with Service Pack 2	7.10.62.219

Testing was performed with IP Office 500 V2 R9.0, but it also applies to IP Office Server Edition R9.0. Note that IP Office Server Edition requires an Expansion IP Office 500 V2 R9.0 to support analog or digital endpoints or trunks. IP Office Server Edition does not support TAPI Wave or Group Voicemail.

5. Configure Avaya IP Office

This section provides the procedures for configuring IP Office. The procedures include the following areas:

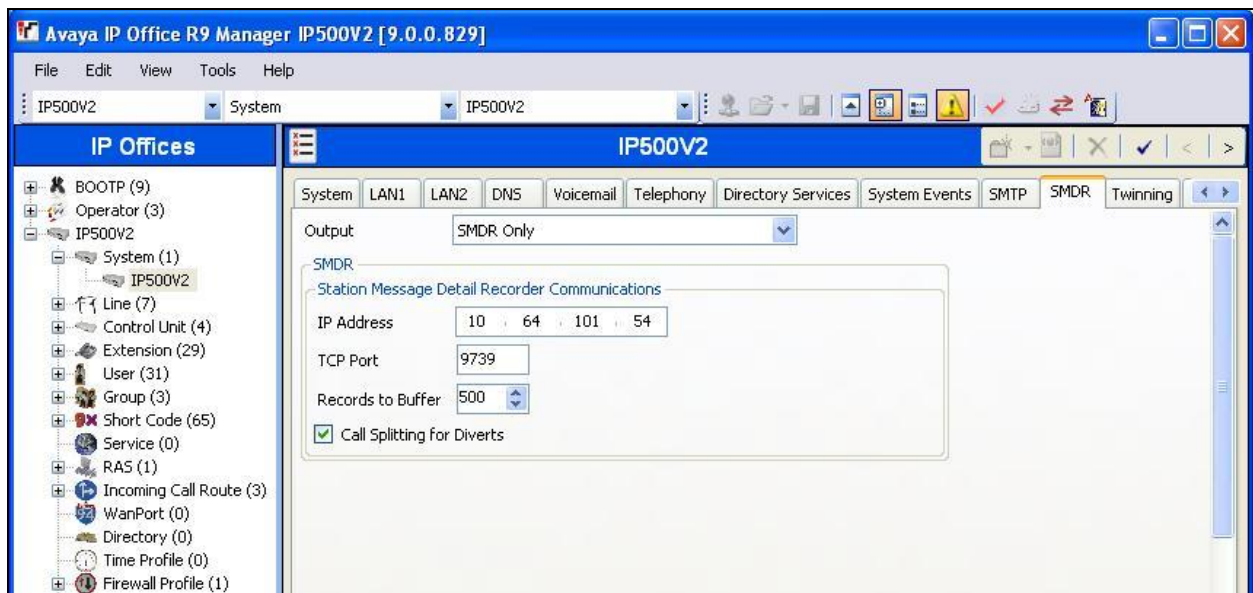
- Administer SMDR
- Obtain line number

5.1. Administer SMDR

From a PC running the IP Office Manager application, select **Start → Programs → IP Office → Manager** to launch the Manager application. Select the proper IP Office system, and log in using the appropriate credentials.

The **Avaya IP Office R9 Manager** screen is displayed. From the configuration tree in the left pane, select **System** to display the **IP500V2** screen in the right pane. Select the **SMDR** tab. Select “SMDR Only” from the **Output** drop-down list, to display the **SMDR** sub-section.

For **IP Address**, enter the IP address of the UCCS Standard Edition server. For **TCP Port**, enter a desired port, in this case “9739”. Modify **Records to Buffer** if desired, and check **Call Splitting for Diverts**. The record buffer is used by IP Office to cache SMDR records in case of communication failure with UCCS Standard Edition.



5.2. Obtain Line Number

From the configuration tree in the left pane, select the first line number used to reach the PSTN, in this case “9”. Make a note of the **Line Number** and **Line Sub-Type**, which will be used later to configure UCCS Standard Edition.

Repeat this section to note all line numbers used to reach the PSTN. In the compliance testing, line “9” was the only line used to interface with PSTN.

The screenshot displays the Avaya IP Office R9 Manager IP500V2 [9.0.0.829] interface. The left pane shows the configuration tree with 'IP500V2' selected, and 'Line (7)' expanded, showing line numbers 9 through 17. The main pane is titled 'PRI 24 (Universal) - Line 9' and shows the configuration for Line 9. The configuration is organized into two columns of fields.

Field	Value	Field	Value
Line Number	09	Line SubType	PRI
Card	3	Admin	In Service
Port	9	Provider	Local Telco
Switch Type	DMS 100		
Channel Allocation	1 -> 23		
Prefix			
Add 'Not end-to-end ISDN' Information Element	Always		
Send Redirecting Number	<input checked="" type="checkbox"/>	Send Names	<input checked="" type="checkbox"/>
Test Number	7328520000	Names Length	15
Clock Quality	Network	Framing	ESF
CRC Checking	<input checked="" type="checkbox"/>	Zero Suppression	B8ZS
CSU Operation	<input type="checkbox"/>	Line Signalling	CPE
Haul Length	0-115 ft	Incoming Routing Digits	5

6. Configure DATEL UCCS Standard Edition

This section provides the procedures for configuring UCCS Standard Edition. The procedures include the following areas:

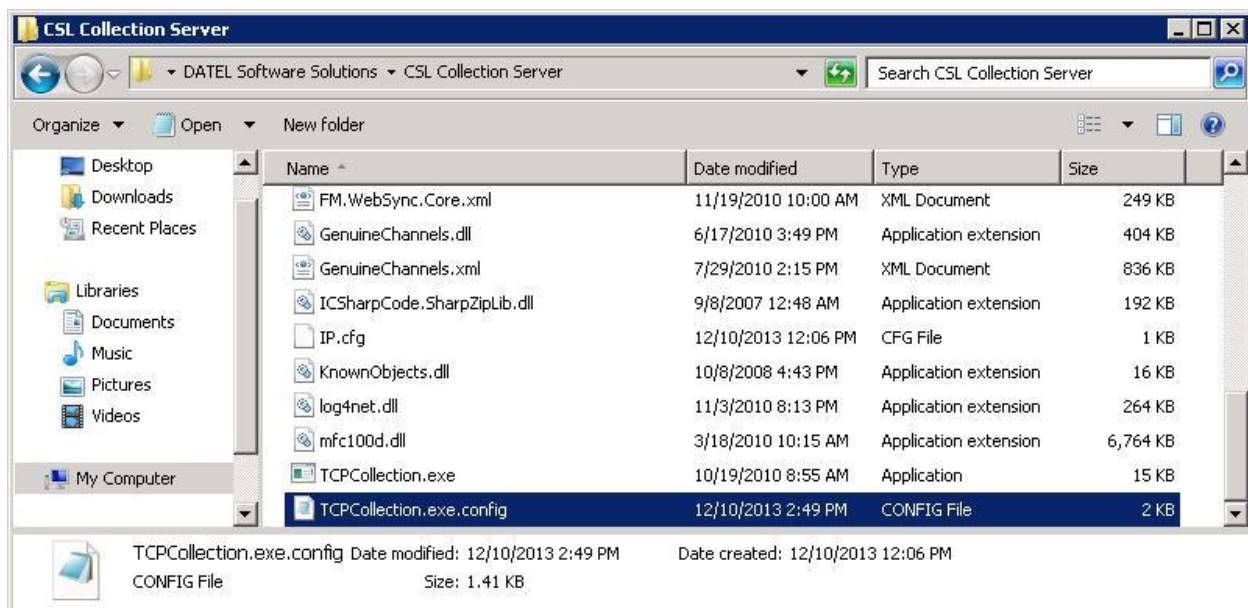
- Administer TCPCollection.exe.config
- Launch web interface
- Administer trunk groups

The configuration of UCCS Standard Edition is typically performed by DATEL support technicians. The procedural steps are presented in these Application Notes for informational purposes.

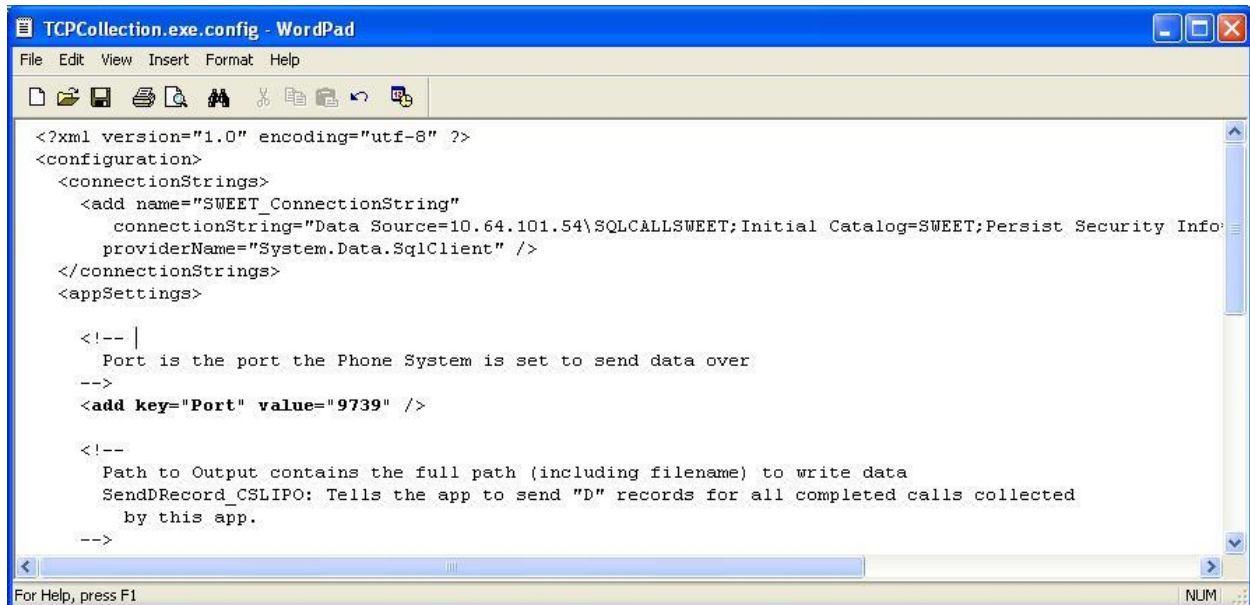
Note that the IP address of the IP Office server, and the password for the IP Office Monitor and Call Status application was entered as part of the UCCS Standard Edition installation procedure, used for connectivity to IP Office.

6.1. Administer TCPCollection.exe.config

From the UCCS Standard Edition server, navigate to the **C:\Program Files (x86)\DATEL Software Solutions\CSL Collection Server** directory to locate the **TCPCollection.exe.config** file shown below.

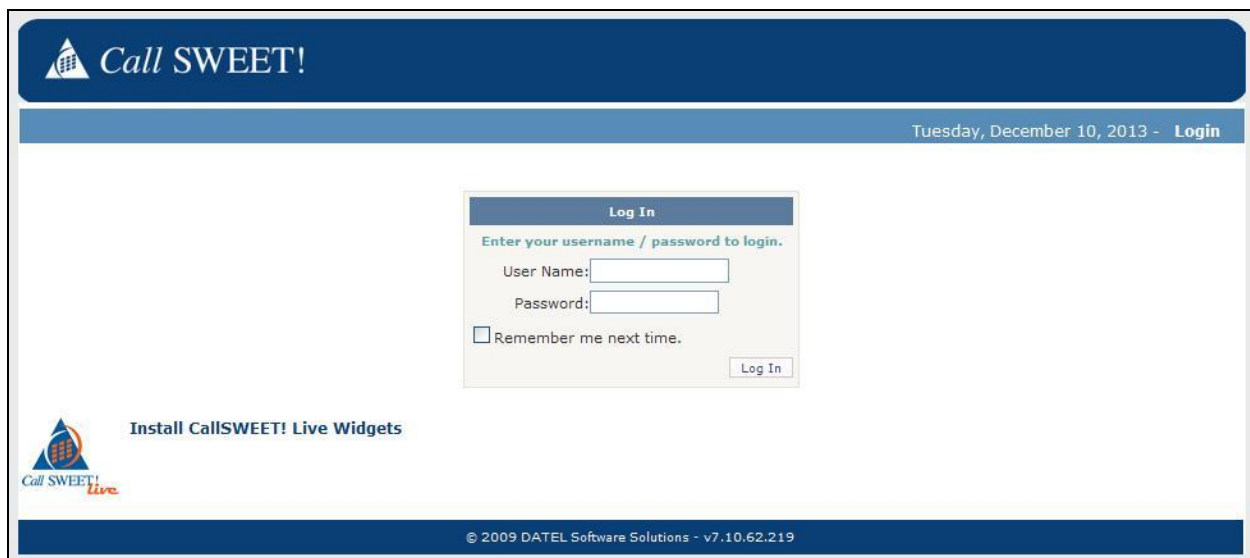


Open the **TCPCollection.exe.config** file with the WordPad application. Locate the entry with **add key="Port"**, and set **value** to the TCP port number from **Section 5.1**.



6.2. Launch Web Interface

Access the web-based interface by using the URL "http://ip-address/callsweet" in an Internet browser window, where "ip-address" is the IP address of the UCCS Business Edition server. The **Log In** screen is displayed as shown below. Log in using the appropriate credentials.



The screen below is displayed. Select **Home** → **Admin Section** → **Database Administration**.

Call SWEET!

Monday, December 23, 2013 - Administrator Logout

Your Digital Dashboard. You decide, You create.

Call SWEET!

- Home
- Admin Section
 - Configuration
 - Call SWEET! Config
 - No Data Alarm
 - Number Screening
 - Duration Alarm
 - Cost Alarm
 - Database Administration**
 - Reports
 - Schedule Reports
 - Report Collection
 - Report Repository

Quick Report:
<< Please Select >>

Call Dist. By Hour - Total Calls

There is no or empty series

DB Statistics

SiteCode:	1
Description:	Demo Corporation - 1
Last Update:	12/13/2013 9:13:13 AM
Total Calls:	130
Date First Call:	12/10/2013 1:54:37 PM
Date Last Call:	12/13/2013 11:05:35 AM

Total Calls: 130

6.3. Administer Trunk Groups

The **Database Administration** screen is displayed. Select the **Trunk Groups**, and click **Add new record** as shown below.

Call SWEET!

Home : Admin Section : Database Administration Monday, December 23, 2013 - Administrator Logout

Database Administration

Account Codes Disposition Codes Enhanced Hierarchy Extensions **Trunk Groups** Trunk Members Rate Plans Freq. Dialed Exclusion VDN

WARNING: Modifying your system Trunk Groups will affect the way calls are processed!

1 - Demo Corporation - 1

Drag a column header and drop it here to group by that column

Add new record

Trunk Group Number: Trunk Group Type: Description:

© 2009 DATEL Software Solutions - v7.10.62.219

The **Database Administration** screen is updated as shown below.

For **Trunk Group Number**, enter the result of $9000+x$, where “x” is the first line number used to interface with the PSTN from **Section 5.2**. For **Trunk Group Type**, select the applicable type to correspond to the first line number from **Section 5.2**.

Enter the desired **Description**, and applicable values for **Area Code (NPA)** and **Exchange (NXX)**.

Repeat this step for all line numbers used to interface with the PSTN from **Section 5.2**. In the compliance testing, one trunk group was configured.

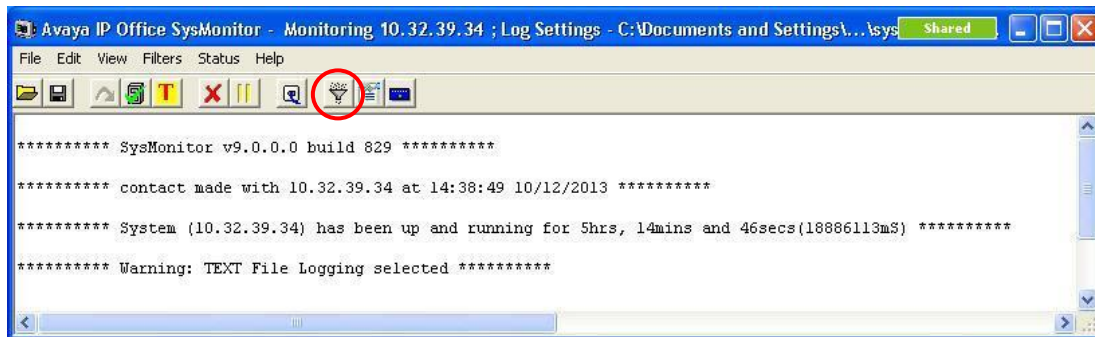
The screenshot displays the 'Call SWEET!' web application interface. At the top, a blue banner reads 'Call SWEET!'. Below it, a navigation bar shows 'Home : Admin Section : Database Administration' and the date 'Monday, December 23, 2013 - Administrator Logout'. The main heading is 'Database Administration'. A tabbed interface includes 'Account Codes', 'Disposition Codes', 'Enhanced Hierarchy', 'Extensions', 'Trunk Groups' (selected), 'Trunk Members', 'Rate Plans', 'Freq. Dialed Exclusion', and 'VDN'. A red warning message states: 'WARNING: Modifying your system Trunk Groups will affect the way calls are processed!'. Below this, a dropdown menu shows '1 - Demo Corporation - 1'. A table header area says 'Drag a column header and drop it here to group by that column'. An 'Add new record' button is present. The form fields are: 'Trunk Group Number:' (empty), 'Trunk Group Type:' (empty), and 'Description:' (empty). Below these, 'Current Mode:' is '[Item Insert]', 'Site Code:' is '1', 'Trunk Group Number:' is '9009', 'Trunk Group Type:' is 'PRI', 'Description:' is 'PSTN', and 'Rate Plan:' is '1 - Default'. At the bottom, 'Area Code (NPA):' is '732' and 'Exchange (NXX):' is '852'. There are 'Save' and 'Cancel' buttons. The footer reads '© 2009 DATEL Software Solutions - v7.10.62.219'.

7. Verification Steps

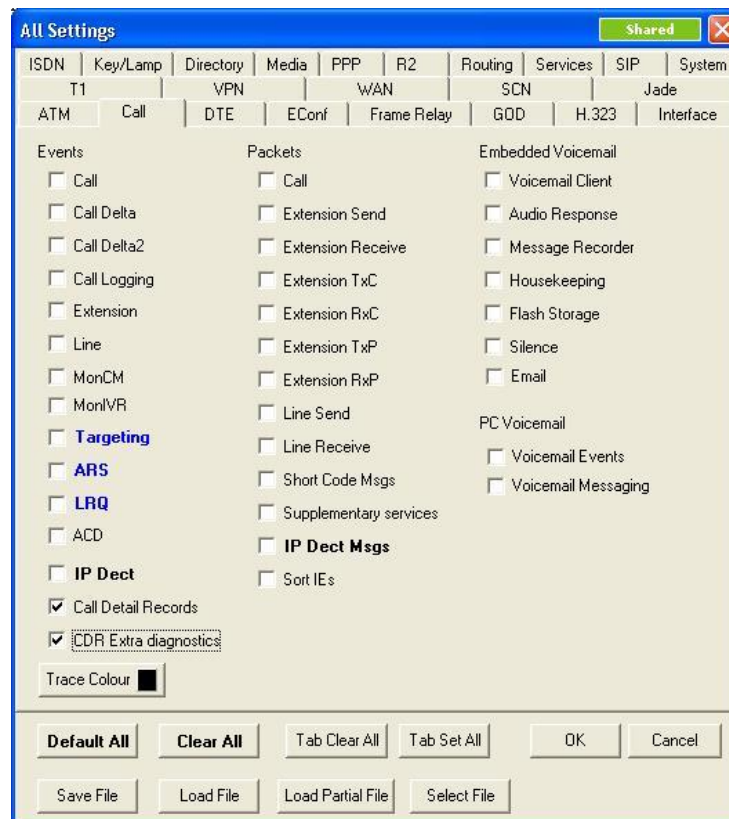
This section provides the test that can be performed to verify proper configuration of IP Office and UCCS Standard Edition.

7.1. Verify Avaya IP Office

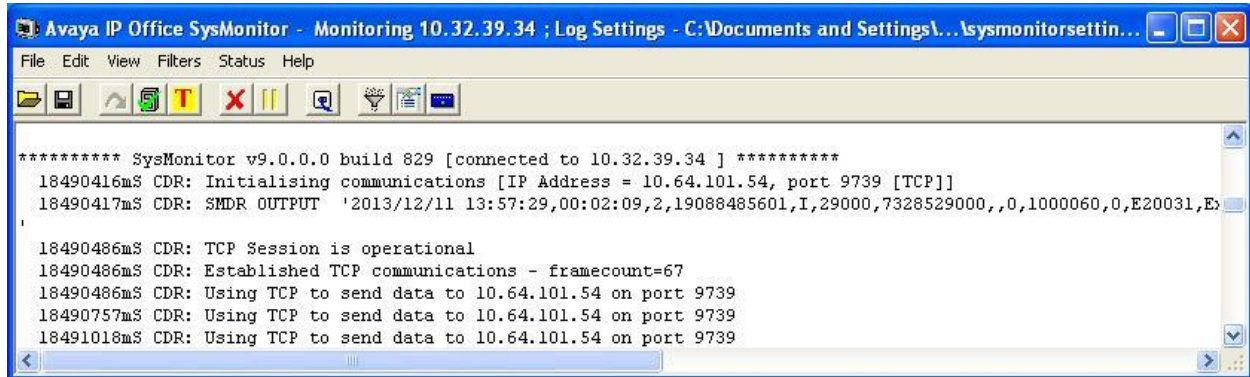
From a PC running the IP Office Monitor application, select **Start → Programs → IP Office → Monitor** to launch the application. The **Avaya IP Office SysMonitor** screen is displayed, as shown below. Click on the **Filter** icon.



The **All Settings** screen is displayed. Select the **Call** tab. Check **Call Detail Records** and **CDR Extra diagnostics**, as shown below.

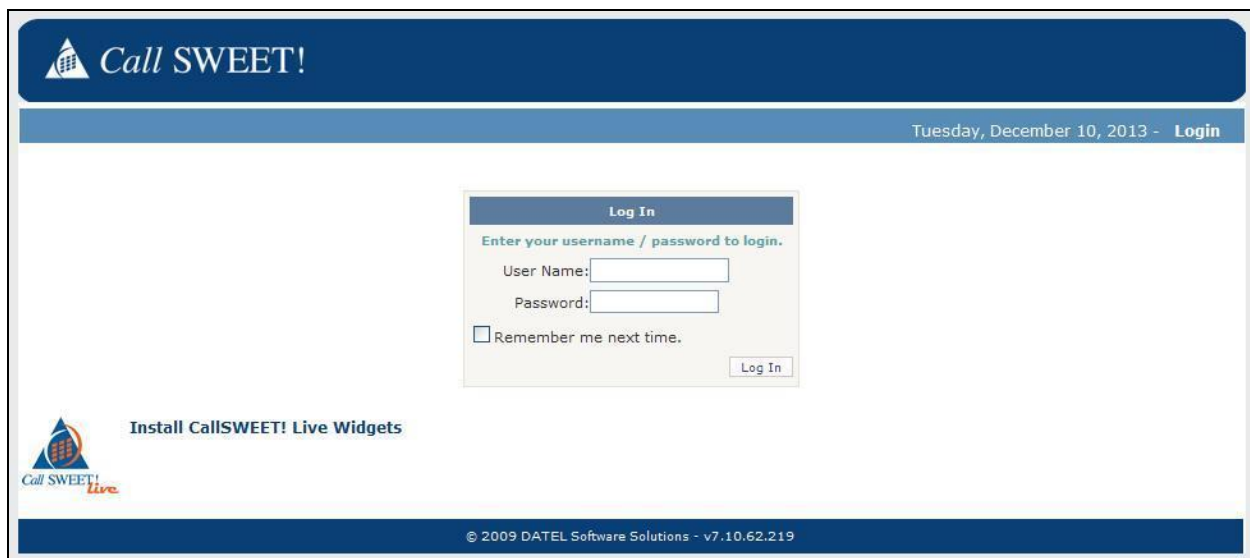


Make and complete an incoming trunk call from the PSTN to the ACD hunt group with an available agent. Verify that the raw SMDR data is displayed on the **Avaya IP Office SysMonitor** screen, as shown below.

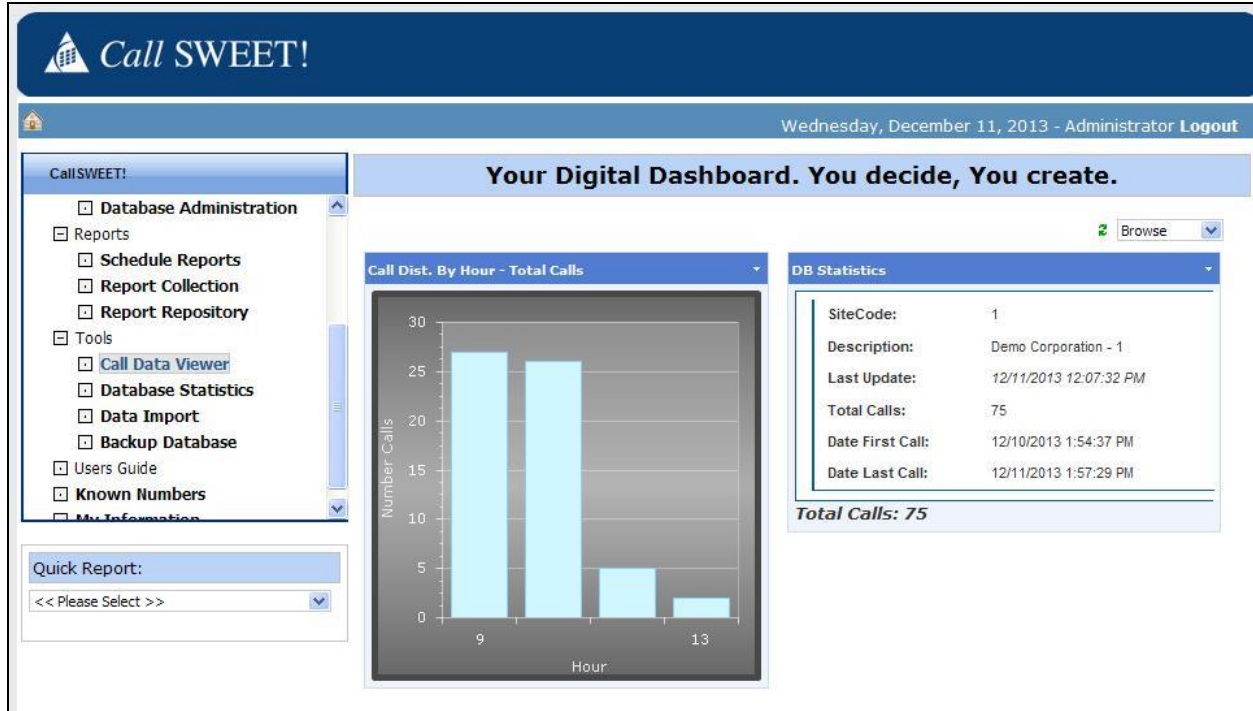


7.2. Verify DATEL UCCS Standard Edition

Access the UCCS Standard Edition web-based interface by using the URL “http://ip-address/callsweet” in an Internet browser window, where “ip-address” is the IP address of the UCCS Standard Edition server. The **Log In** screen is displayed as shown below. Log in using the appropriate credentials.



The screen below is displayed. Select **Home** → **Tools** → **Call Data Viewer** from the left pane.



The screen below is displayed next. Verify that there is an entry reflecting the last call, with proper values in the relevant fields.

The screenshot shows the Call SWEET! Call Data Viewer. The header includes the logo and the text "Call SWEET!". Below the header, there is a navigation pane on the left with a tree view containing categories like Database Administration, Reports, Tools, and Users Guide. The "Tools" category is expanded, showing "Call Data Viewer" as the selected option. The main content area displays a table of call records. The table has columns for Date Time, Call Type, Direction, Duration, Original Dialed, Calling Number, Called Number, and Extension. The first row shows a call made on 12/11/2013 at 12:00 PM, with a duration of 0.15 seconds, originating from (732) 852-9000 and being received at (908) 848-5601. The table also includes a "Show / Hide Columns:" section with checkboxes for various fields, and a "Change page:" section at the bottom.

Date Time	Call Type	Direction	Duration	Original Dialed	Calling Number	Called Number	Extension
12/11/2013 12:00 PM	Incoming	Incoming	0.15	(732) 852-9000	(908) 848-5601	29000	20031

8. Conclusion

These Application Notes describe the configuration steps required for DATEL UCCS Standard Edition to successfully interoperate with Avaya IP Office 9.0. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

9. Additional References

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

1. *Avaya IP Office Manager*, Release 9.0, Issue 9.01, September 2013, Document Number 15-601011, available at <http://support.avaya.com>.
2. *UCCS Standard Edition User's Guide*, available upon request to DATEL Support.

©2014 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.