



Avaya Solution & Interoperability Test Lab

Application Notes for Fresche N-Focus Plus 3.8 with Avaya Call Management System 19.2 Using ODBC – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Fresche N-Focus Plus 3.8 to interoperate with Avaya Call Management System 19.2 via the standard Open Database Connectivity interface. Fresche N-Focus Plus is a web-based analysis and reporting application.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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 Fresche N-Focus Plus 3.8 to interoperate with Avaya Call Management System 19.2 via the standard Open Database Connectivity (ODBC) interface. N-Focus Plus is a web-based analysis and reporting application.

In the compliance testing, N-Focus Plus used the ODBC interface from Call Management System to query dictionary names and obtain historical data for call center devices such as trunks, VDNs, splits/skills, and agents. The obtained historical data are analyzed by N-Focus Plus to produce various historical reports.

The N-Focus Plus server included the MariaDB Connector/J component, which is a Java Database Connectivity (JDBC) driver utilized by N-Focus Plus for ODBC connectivity with Call Management System.

At start of the N-Focus Plus application and subsequently at regular scheduled intervals, N-Focus Plus obtains the dictionary names from Call Management System and provides these values to customers for configuring customized reports. In addition, N-Focus Plus queries Call Management System to obtain historical data from the following ODBC-accessible tables:

- **htkgrp:** Intra-hour data for trunk groups.
- **hvdn:** Intra-hour data for VDNs.
- **hsplit:** Intra-hour data for splits/skills.
- **hagent:** Intra-hour data for agents.
- **haglog:** Intra-hour data for agent logins and logouts.

The intra-hour interval is a configurable parameter on Call Management System, which can contain the value of 15 minutes, 30 minutes, or 60 minutes.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. N-Focus Plus automatically queries for dictionary names and obtains historical data from Call Management System at scheduled intervals.

For manual part of testing, calls were launched and handled manually on the originating calling party and/or on the terminating agent stations to generate data for various table parameters such as hold and abandon call counts.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to N-Focus Plus.

The verification of test cases included comparison of historical reports generated by N-Focus Plus with historical reports from Call Management System.

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.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For testing associated with these Application Notes, the ODBC interface between Avaya systems and N-Focus Plus did not include use of any specific encryption features as requested by Fresche.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on N-Focus Plus:

- Proper obtainment of dictionary names at scheduled intervals for switches/ACDs, trunk groups, VDNs, splits/skills, and agent logins/logouts.
- Proper obtainment of historical data at scheduled intervals for trunk groups, VDNs, splits/skills, agents, and agent logins/logouts.
- Proper reporting of historical data for agents, agent logins/logouts, splits/skills, VDNs, and trunk groups. The call scenarios included inbound, outbound, ACD, non-ACD, hold, abandon, queued, forced busy, forced disconnect, and various agent work modes.

The serviceability testing focused on verifying the ability of N-Focus Plus to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to N-Focus Plus.

2.2. Test Results

All test cases were executed and verified.

2.3. Support

Technical support on N-Focus Plus can be obtained through the following:

- **Phone:** (828) 418-0023
- **Email:** netlertsupport@freschesolutions.com

3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**. The detailed administration of connectivity between Communication Manager, Call Management System, and of call center devices are not the focus of these Application Notes and will not be described.

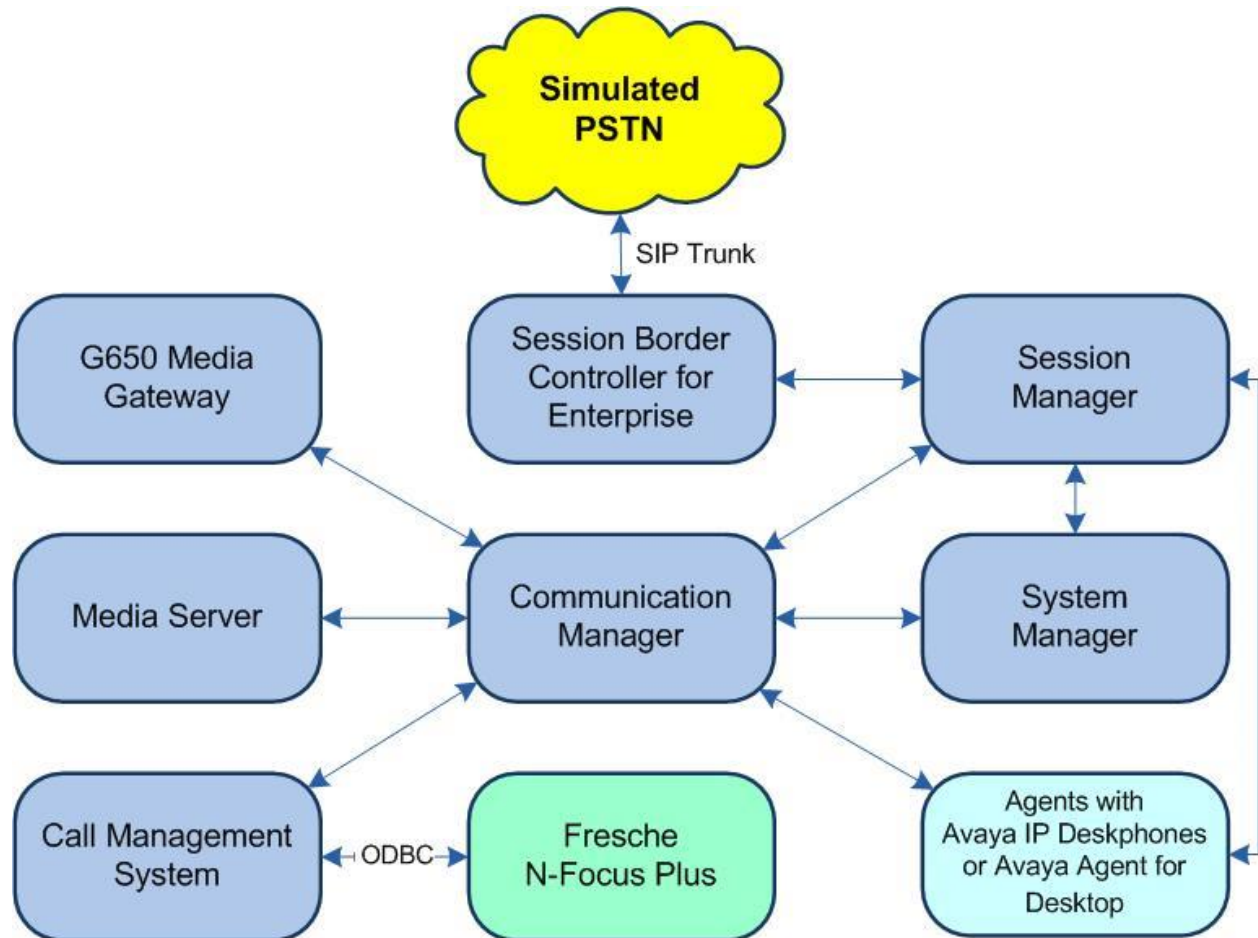


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Call Management System in Virtual Environment	19.2 (19.2.0.1)
Avaya Aura® Communication Manager in Virtual Environment	8.1.3 (8.1.3.0.1.890.26685)
Avaya G650 Media Gateway	NA
Avaya Aura® Media Server in Virtual Environment	8.0.2.138
Avaya Aura® Session Manager in Virtual Environment	8.1.3 (8.1.3.0.813014)
Avaya Aura® System Manager in Virtual Environment	8.1.3 (8.1.3.0.1012091)
Avaya Session Border Controller for Enterprise in Virtual Environment	8.1.2 (8.1.2.0-31-19809)
Avaya Agent for Desktop (H.323 and SIP)	2.0.6.0.10
Avaya 9611G IP Deskphone (H.323)	6.8502
Avaya J169 IP Deskphone (SIP)	4.0.7.1.5
Fresche N-Focus Plus on Microsoft Windows Server 2019 <ul style="list-style-type: none">• MariaDB Connector/J	3.8 Standard 2.6.0

5. Configure Avaya Aura® Communication Manager

This section provides the procedures for configuring Communication Manager. The procedures include the following areas:

- Administer measured trunk groups
- Administer measured VDNs
- Administer measured splits/skills
- Obtain associated agent login IDs

5.1. Administer Measured Trunk Groups

Log in to the System Access Terminal of Communication Manager. Use the “**change trunk n**” command, where “**n**” is the number of a trunk group to be measured by Call Management System.

Navigate to **Page 3** and set **Measured** to “**external**” to enable measurement data on the trunk group to be sent to Call Management System.

```
change trunk-group 13                                     Page 3 of 21
TRUNK FEATURES
    ACA Assignment? n                                     Measured: external Wideband Support? n
                                                         Maintenance Tests? y
    Data Restriction? n                                   NCA-TSC Trunk Member: 1
    Send Name: y                                         Send Calling Number: y
    Used for DCS? n                                     Send EMU Visitor CPN? n
    Suppress # Outpulsing? n                             Format: natl-pub
    Outgoing Channel ID Encoding: preferred              UII IE Treatment: service-provider
```

Repeat this section for all trunk groups that will be measured by Call Management System. In the compliance testing, two trunk groups with **Grp No** of “**13**” and “**212**” were configured to be measured as shown below.

```
list trunk-group                                           Page 1
                                                         TRUNK GROUPS

Grp
No.  TAC  Group Type  Group Name  No.  Mem  TN  COR  CDR  Meas  Out  Que
                                     Dsp  Len
13   1013  isdn        PRI PSTN Trunk  23   1    1    y    ext  n    0
66   1066  sip        SIP Trunks to SM7  10   1    1    n    none n    0
212  1012  sip        SIP Trunk to SBCE  10   1    1    y    ext  n    0
```

5.2. Administer Measured VDNs

Use the “**change vdn n**” command, where “**n**” is the extension of a VDN to be measured by Call Management System.

Set **Measured** to “**external**” to enable measurement data on the VDN to be sent to Call Management System.

```
change vdn 60001                                     Page 1 of 3
                                         VECTOR DIRECTORY NUMBER

      Extension: 60001                                Unicode Name? n
      Name*: CM Sales
      Destination: Vector Number 1
      Attendant Vectoring? n
      Meet-me Conferencing? n
      Allow VDN Override? y
      COR: 1
      TN*: 1
      Measured: external Report Adjunct Calls as ACD*? y

      VDN of Origin Annc. Extension*:
      1st Skill*:
      2nd Skill*:
      3rd Skill*:

SIP URI:

* Follows VDN Override Rules
```

Repeat this section for all VDNs that will be measured by Call Management System. In the compliance testing, two VDNs with **Ext** of “**60001**” and “**60002**” were configured to be measured as shown below.

```
list vdn                                             Page 1
                                         VECTOR DIRECTORY NUMBERS

Name (22 characters)  Ext/Skills  VDN      Vec      Orig      Evt
Ovr COR  TN PRT Num  Meas  Annc      Noti
Adj

CM Sales             60001      y 1      1  V  1      ext
CM Support           60002      y 1      1  V  2      ext
```


5.3. Administer Measured Splits/Skills

Use the “**change hunt-group n**” command, where “**n**” is the number of a split/skill group to be measured by Call Management System.

Navigate to **Page 2** and set **Measured** to “**external**” to enable measurement data on the split/skill group and associated agents to be sent to Call Management System.

change hunt-group 1		Page 2 of 4	
HUNT GROUP			
Skill?	y	Expected Call Handling Time (sec):	30
AAS?	n	Service Level Target (% in sec):	80 in 20
Measured: external			
Supervisor Extension:			

Repeat this section for all split/skill groups that will be measured by Call Management System. In the compliance testing, two split/skill groups with **Grp No** of “**1**” and “**2**” were configured to be measured as shown below.

list hunt-group												Page	1
HUNT GROUPS													
Grp	Grp												
No.	Name/	Grp	ACD/				No.	Cov	Notif/	Dom	Message		
	Ext	Type	MEAS	Vec	MCH	Que	Mem	Path	Ctg	Adj	Ctrl	Center	
1	CM Sales Skill												
	61001	ucd-mia	y/E	SK	none	y	0		n			n	
2	CM Support Skill												
	61002	ucd-mia	y/E	SK	none	y	0		n			n	

5.4. Obtain Associated Agent Login IDs

Use the “**list agent-loginID**” command to display a list of administered agent IDs.

Make a note of the agent login IDs that are associated with the measured split/skill groups from **Section 5.3**. In the compliance testing, two entries with **Login ID** of “**65881**” and “**65882**” were associated with the measured split/skill groups as shown below.

list agent-loginID								Page 1	
AGENT LOGINID									
Login ID	Name	Extension		Dir	Agt	AAS/AUD	COR	AgPr	SO
	Skil/Lv	Skil/Lv	Skil/Lv	Skil/Lv	Skil/Lv	Skil/Lv	Skil/Lv	Skil/Lv	
65881	CM Agent 1						1	lv1	
	1/01	2/01	/	/	/	/	/	/	
65882	CM Agent 2						1	lv1	
	1/01	2/01	/	/	/	/	/	/	

6. Configure Avaya Call Management System

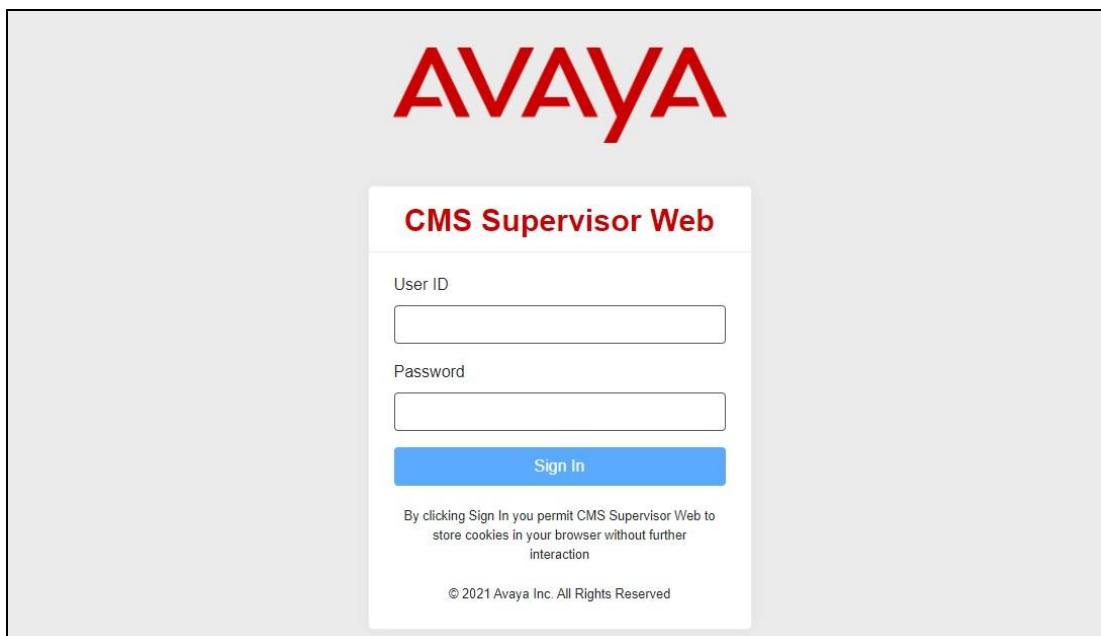
This section provides the procedures for configuring Call Management System. The procedures include the following areas:

- Launch CMS Supervisor Web interface
- Administer dictionary names
- Administer intra-hour interval
- Administer ODBC user
- Assign ODBC user to group

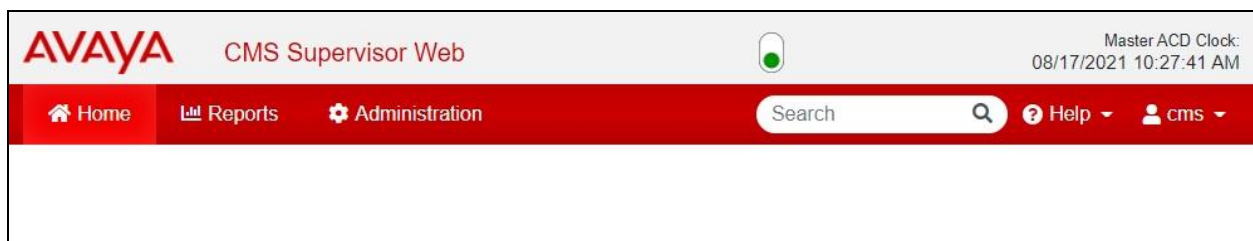
6.1. Launch CMS Supervisor Web Interface

Access the CMS Supervisor Web interface by using the URL “**https://ip-address:8443/CMSWeb**” in an Internet browser window, where “**ip-address**” is the IP address of the Call Management System server.

The **CMS Supervisor Web** screen is displayed. Log in using the appropriate credentials.



The **CMS Supervisor Web** screen below is displayed, as shown below.



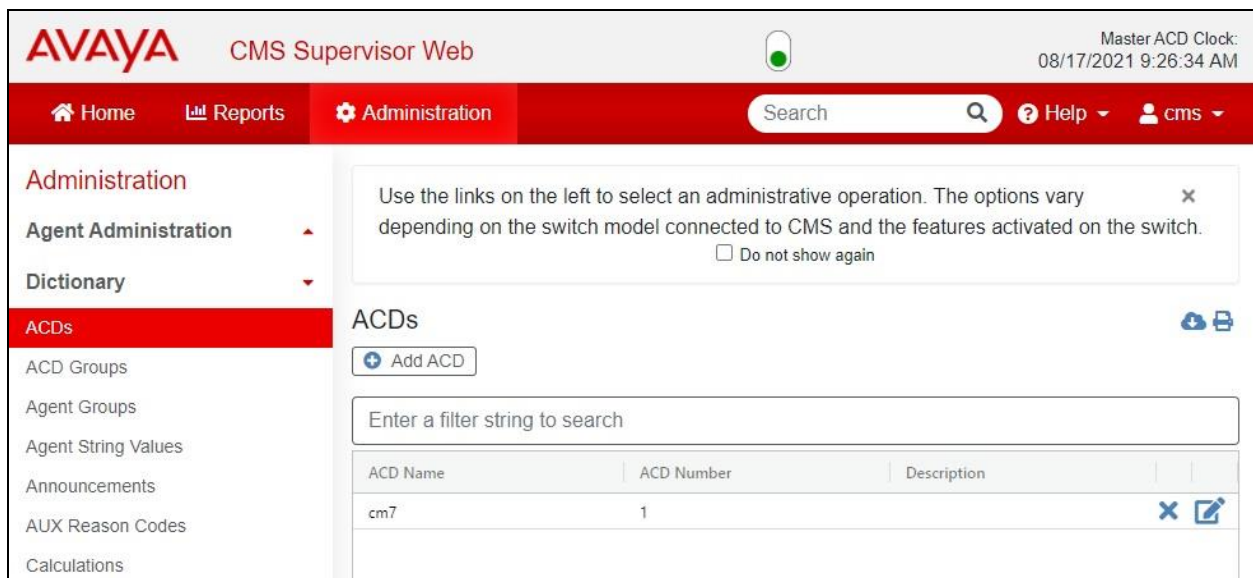
6.2. Administer Dictionary Names

Dictionary names need to be configured for the relevant switch/ACD and for all measured trunk groups, VDNs, splits/skills, and associated agent login IDs from **Section 5**.

6.2.1. ACDs

Select **Administration** from the top menu, followed by **Dictionary** → **ACDs** in the left pane to display the **ACDs** screen in the right pane.

Click on **Add ACD** and add an entry for each pertinent switch/ACD pre-configured on Call Management System. In the compliance testing, dictionary name for one switch/ACD was added as shown below.



The screenshot displays the AVAYA CMS Supervisor Web interface. The top navigation bar includes the AVAYA logo, 'CMS Supervisor Web', a status indicator, and the 'Master ACD Clock: 08/17/2021 9:26:34 AM'. The main navigation menu has 'Home', 'Reports', and 'Administration' (selected). A search bar and 'Help' link are also present. The left sidebar shows the 'Administration' menu expanded, with 'ACDs' selected under the 'Dictionary' category. The main content area shows the 'ACDs' screen with an 'Add ACD' button, a search filter input, and a table with one entry: 'cm7' with 'ACD Number' 1. A tooltip message is visible at the top of the main content area.

AVAYA CMS Supervisor Web

Master ACD Clock: 08/17/2021 9:26:34 AM

Home Reports Administration Search Help cms

Administration

Agent Administration

Dictionary

ACDs

ACD Groups

Agent Groups

Agent String Values

Announcements

AUX Reason Codes

Calculations

Use the links on the left to select an administrative operation. The options vary depending on the switch model connected to CMS and the features activated on the switch. ☐ Do not show again

ACDs

+ Add ACD

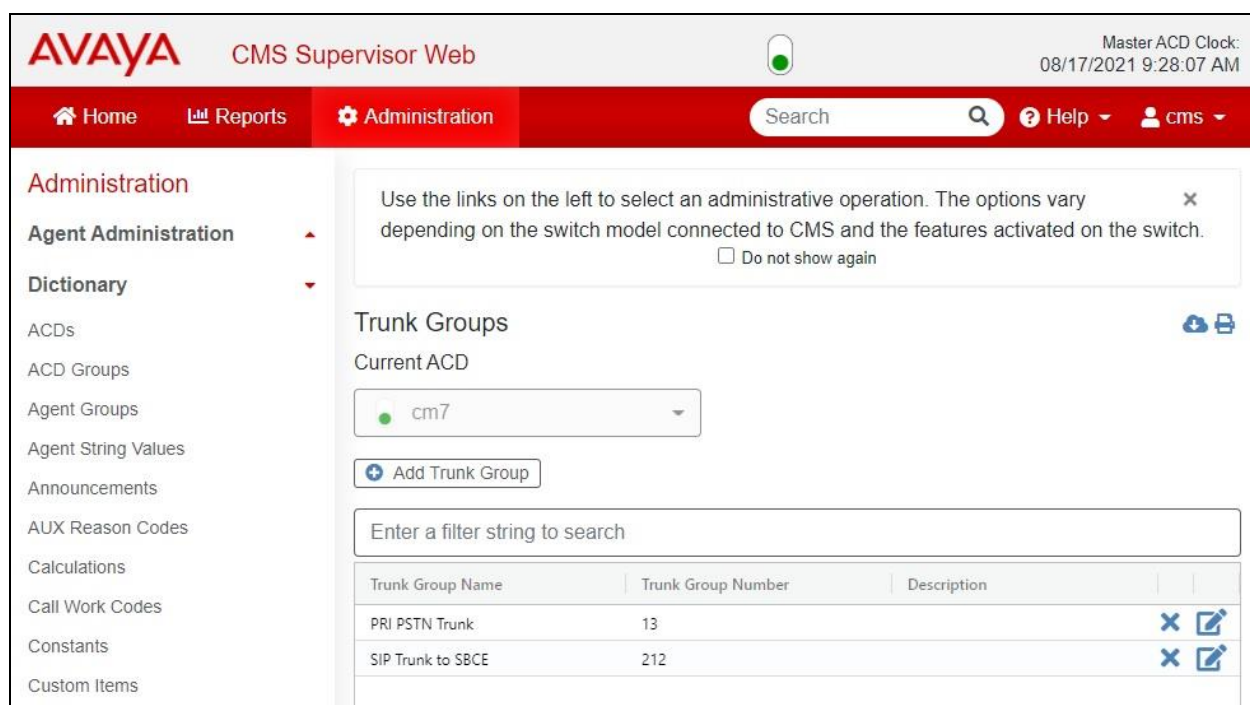
Enter a filter string to search

ACD Name	ACD Number	Description
cm7	1	





6.2.2. Trunk Groups

Select **Dictionary** → **Trunk Groups** (not shown) from the left pane to display the **Trunk Groups** screen in the right pane.

Click on **Add Trunk Group** and add an entry for each measured trunk group from **Section 5.1**. In the compliance testing, dictionary names for two trunk groups were added as shown below.



The screenshot displays the Avaya CMS Supervisor Web interface. The top navigation bar includes the Avaya logo, 'CMS Supervisor Web', a status indicator, and the 'Master ACD Clock: 08/17/2021 9:28:07 AM'. The main navigation menu has 'Home', 'Reports', and 'Administration' (selected). A search bar and 'Help' link are also present. The left sidebar shows the 'Administration' section expanded, with 'Agent Administration' and 'Dictionary' visible. Under 'Dictionary', 'ACDs' is selected. The main content area shows the 'Trunk Groups' configuration page. It includes a message box about administrative operations, a 'Current ACD' dropdown set to 'cm7', and an 'Add Trunk Group' button. Below this is a search filter and a table of existing trunk groups.

Trunk Group Name	Trunk Group Number	Description	
PRI PSTN Trunk	13		 
SIP Trunk to SBCE	212		 

6.2.3. VDNs

Select **Dictionary** → **VDNs** (not shown) from the left pane to display the **VDNs** screen in the right pane.

Click on **Add VDN** and add an entry for each measured VDN from **Section 5.2**. In the compliance testing, dictionary names for two VDNs were added as shown below.

The screenshot shows the Avaya CMS Supervisor Web interface. The top navigation bar includes the Avaya logo, 'CMS Supervisor Web', a status indicator, and a 'Master ACD Clock' showing '08/17/2021 9:29:46 AM'. The main navigation menu has 'Home', 'Reports', and 'Administration'. The 'Administration' menu is expanded, showing 'Agent Administration' and 'Dictionary'. The 'Dictionary' menu is further expanded, showing 'ACDs', 'ACD Groups', 'Agent Groups', 'Agent String Values', 'Announcements', 'AUX Reason Codes', 'Calculations', 'Call Work Codes', 'Constants', 'Custom Items', and 'Generic String Values'. The 'VDNs' screen is displayed in the main content area. It includes a message box with instructions, a 'Current ACD' dropdown menu set to 'cm7', an 'Add VDN' button, a search input field, and a table of VDNs.

VDN Name	VDN	Description
CM Sales	60001	
CM Support	60002	

6.2.4. Splits/Skills

Select **Dictionary** → **Splits/Skills** (not shown) in the left pane to display the **Splits/Skills** screen in the right pane.

Click on **Add Skill** and add an entry for each measured split/skill from **Section 5.3**. In the compliance testing, dictionary names for two splits/skills were added as shown below.

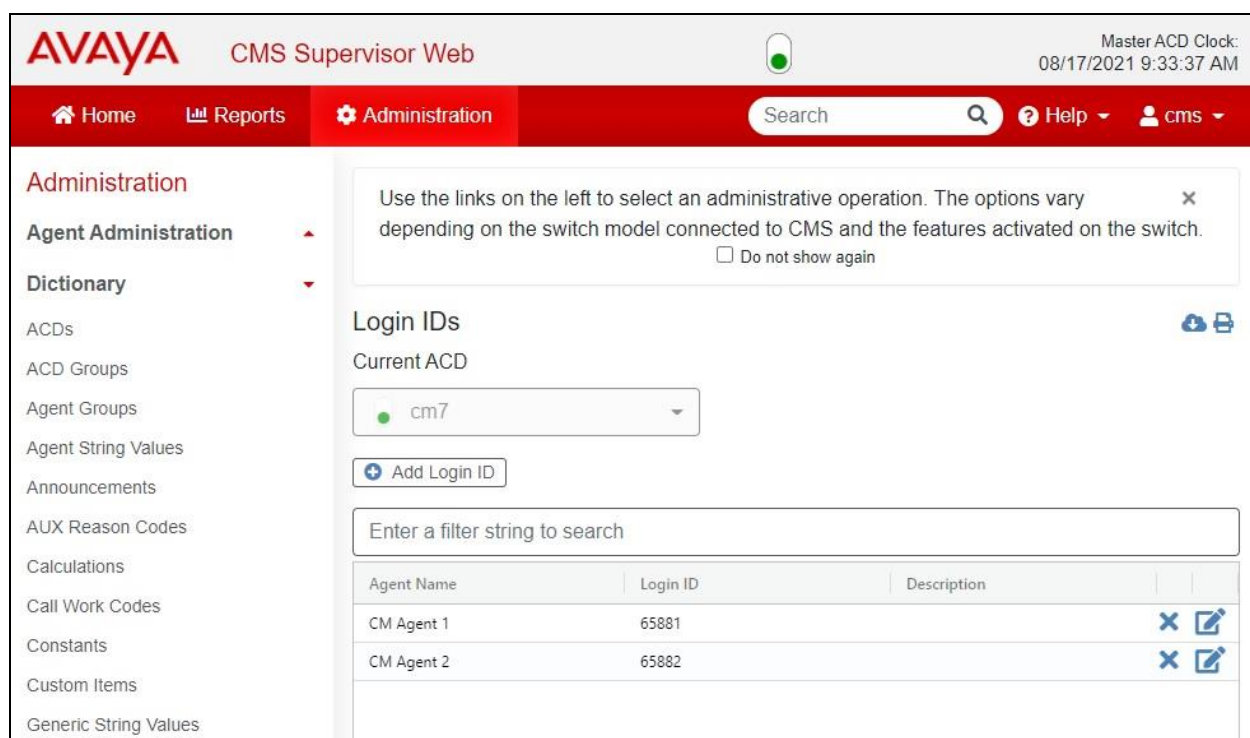
The screenshot displays the AVAYA CMS Supervisor Web interface. The top navigation bar includes the AVAYA logo, 'CMS Supervisor Web', a status indicator, and the 'Master ACD Clock: 08/17/2021 9:31:23 AM'. The main navigation menu on the left lists various administrative functions, with 'Dictionary' expanded to show 'Splits/Skills'. The right pane shows the 'Splits/Skills' configuration page for 'Current ACD' 'cm7'. It includes an 'Add Skill' button and a table of existing skills.

Split/Skill Name	Split/Skill Number	Description
CM Sales Skill	1	
CM Support Skill	2	

6.2.5. Agent Login IDs

Select **Dictionary** → **Login IDs** (not shown) in the left pane to display the **Login IDs** screen in the right pane.

Click on **Add Login ID** and add an entry for each associated agent login ID from **Section 5.4**. In the compliance testing, dictionary names for two login IDs were added as shown below.



The screenshot displays the AVAYA CMS Supervisor Web interface. The top navigation bar includes the AVAYA logo, the title "CMS Supervisor Web", a status indicator (green circle), and the "Master ACD Clock: 08/17/2021 9:33:37 AM". The main navigation menu on the left lists various administrative functions: Home, Reports, Administration (selected), Dictionary, ACDs, ACD Groups, Agent Groups, Agent String Values, Announcements, AUX Reason Codes, Calculations, Call Work Codes, Constants, Custom Items, and Generic String Values. The "Administration" menu is expanded, showing "Agent Administration" and "Dictionary". The "Dictionary" menu is further expanded, showing "Login IDs". The "Login IDs" screen displays a "Current ACD" dropdown menu set to "cm7", an "Add Login ID" button, and a table of login IDs. The table has columns for "Agent Name", "Login ID", and "Description". Two entries are listed: "CM Agent 1" with "65881" and "CM Agent 2" with "65882". Each entry has a delete icon (X) and an edit icon (pencil).

AVAYA CMS Supervisor Web

Master ACD Clock: 08/17/2021 9:33:37 AM

Home Reports Administration Search Help cms

Administration

Agent Administration

Dictionary

ACDs

ACD Groups

Agent Groups

Agent String Values

Announcements

AUX Reason Codes

Calculations

Call Work Codes

Constants

Custom Items

Generic String Values

Use the links on the left to select an administrative operation. The options vary depending on the switch model connected to CMS and the features activated on the switch.

☐ Do not show again

Login IDs

Current ACD

cm7

+ Add Login ID

Enter a filter string to search

Agent Name	Login ID	Description		
CM Agent 1	65881		X	
CM Agent 2	65882		X	

6.3. Administer Intra-Hour Interval

Select **System Setup** → **Storage Intervals** from the left pane to display the **Storage Intervals** screen in the right pane.

Make certain that the **Intrahour Interval** is set to the desired interval, in this case “**30 minutes**”. In the event that the interval needs to be changed, then follow reference [2] to switch to single user mode and to disable ACD data collection prior to updating the interval.

The screenshot displays the AVAYA CMS Supervisor Web interface. The top navigation bar includes the AVAYA logo, 'CMS Supervisor Web', a notification bell with '1', a status indicator, and the 'Master ACD Clock: 08/17/2021 11:19:49 AM'. The main navigation menu on the left lists: Home, Reports, Administration (selected), Search, Help, and cms. Under 'Administration', the sub-menu includes: Agent Administration, Dictionary, Exceptions, Call Center Administration, User Permissions, System Setup (expanded), Switch Setup, Pseudo-ACD Setup, Load Pseudo-ACD Data, Data Storage Allocation, Free Space Allocation, Storage Intervals (highlighted), Main Menu Addition, CMS State, Data Collection, Data Summarizing, and Migrate Data.

The 'Storage Intervals' page contains the following configuration options:

- Current ACD:** A dropdown menu showing 'cm7'.
- Intrahour Interval:** Radio buttons for 15 minutes, 30 minutes (selected), and 60 minutes.
- Data Summarizing Time:** Time selection fields showing 12:35 AM.
- Switch time zone offset (-23 to +23):** A numeric input field showing 0.
- Week Start Day:** A dropdown menu showing Sunday.
- Week Stop Day:** A dropdown menu showing Saturday.
- Daily Start Time:** Time selection fields showing 12:00 AM.
- Daily Stop Time:** Time selection fields showing 11:59 PM.
- Buttons:** 'Modify' and 'Reset' buttons at the bottom.

Two red warning messages are displayed at the top of the configuration area:

- To change these settings, CMS must be in single user mode
- To change these settings, all ACD data collection must be disabled

6.4. Administer ODBC User

Select **User Permissions** → **User Data** from the left pane to display the **User Data** screen in the right pane. Click on **Add User** and add a user for N-Focus Plus for ODBC access, in this case “**odbcusr1**” as shown below.

The screenshot shows the AVAYA CMS Supervisor Web interface. The top navigation bar includes the AVAYA logo, 'CMS Supervisor Web', a status indicator, and a 'Master ACD Clock' showing '08/17/2021 11:36:02 AM'. The main navigation menu has 'Home', 'Reports', 'Administration', and a search bar. The left sidebar lists 'Administration' (expanded), 'Agent Administration', 'Dictionary', 'Exceptions', 'Call Center Administration', 'User Permissions', and 'User Data' (selected). The right pane displays the 'User Data' screen with an 'Add User' button, a search filter input, and a table of users.

User ID	User Name	Room Number	Phone Number
odbcusr1	N-Focus Plus		

Select **Other** → **Change User Password** (not shown) from the left pane to display the **Change User Password** screen in the right pane.

For **User ID**, enter the newly created user ID from above, in this case “**odbcusr1**”. Enter the desired password for **New password** and **Confirm new password** as shown below.

The screenshot shows the AVAYA CMS Supervisor Web interface with the 'Change User Password' screen displayed. The top navigation bar and left sidebar are the same as in the previous screenshot. The right pane shows the 'Change User Password' form with fields for 'User ID' (containing 'odbcusr1'), 'New password', and 'Confirm new password'. The 'New password' and 'Confirm new password' fields are masked with dots. There are 'Apply' and 'Reset' buttons at the bottom.

6.5. Assign ODBC User to Group

Log in to the Linux shell of Call Management System. Enter the command “**su – xxx**” where “**xxx**” is the super user ID and enter the appropriate credentials.

Next, enter the command “**usermod –G dbaccess odbcusr1**” where “**odbcusr1**” is the newly created user ID from above. This will add the user to the **dbaccess** group, which is a required membership for ODBC access.

```
$ su - xxx
Password:
(dr-cms) - (xxx) =# usermod -G dbaccess odbcusr1
```

7. Configure Fresche N-Focus Plus

This section provides the procedures for configuring N-Focus Plus. The procedures include the following areas:

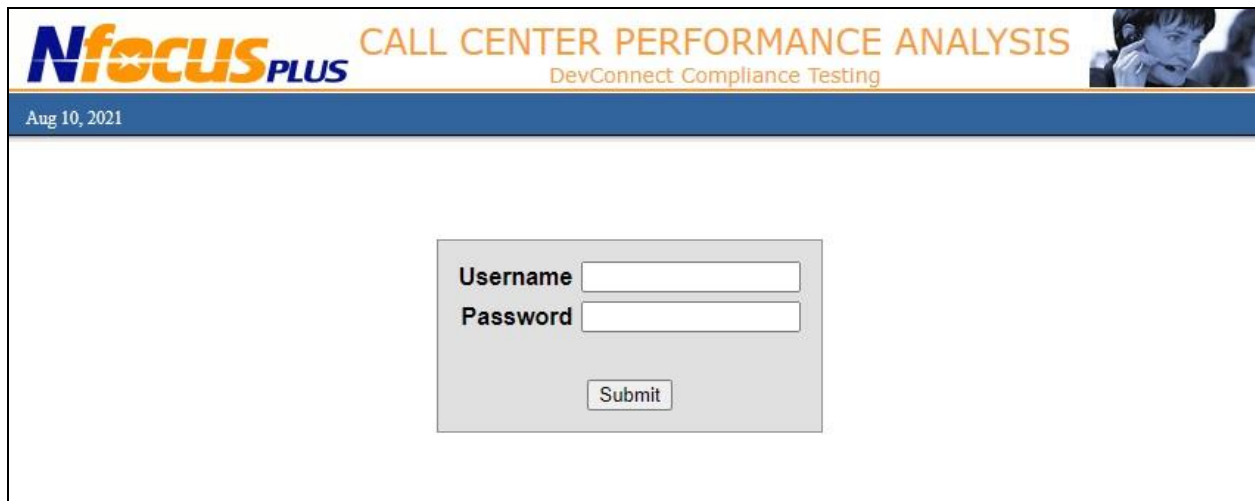
- Launch web interface
- Administer PBX
- Administer DB connection
- Administer reports
- Administer report data

The configuration of N-Focus Plus is performed by the Fresche Support team. The procedural steps are presented in these Application Notes for informational purposes.

7.1. Launch Web Interface

Access the N-Focus Plus web interface by using the URL “**http://ip-address:8080**” in an Internet browser window, where “**ip-address**” is the IP address of the N-Focus Plus server.

The screen below is displayed, where “**DevConnect Compliance Testing**” is the company name picked up from the N-Focus Plus license key. Log in using the appropriate credentials.



The screenshot shows the N-Focus Plus web interface. At the top, there is a header bar with the N-Focus Plus logo on the left, the text "CALL CENTER PERFORMANCE ANALYSIS" in the center, and a small image of a person on the right. Below the header bar, there is a blue banner with the date "Aug 10, 2021" on the left and the text "DevConnect Compliance Testing" in the center. The main content area is white and contains a login form with two input fields labeled "Username" and "Password", and a "Submit" button below them.

7.2. Administer PBX

The **Messages** screen below is displayed. Click on **PBX / Add a PBX** in the right pane upon initial access.



NfocusPLUS CALL CENTER PERFORMANCE ANALYSIS
DevConnect Compliance Testing

Aug 10, 2021 Admin Advanced User: admin Help Logout

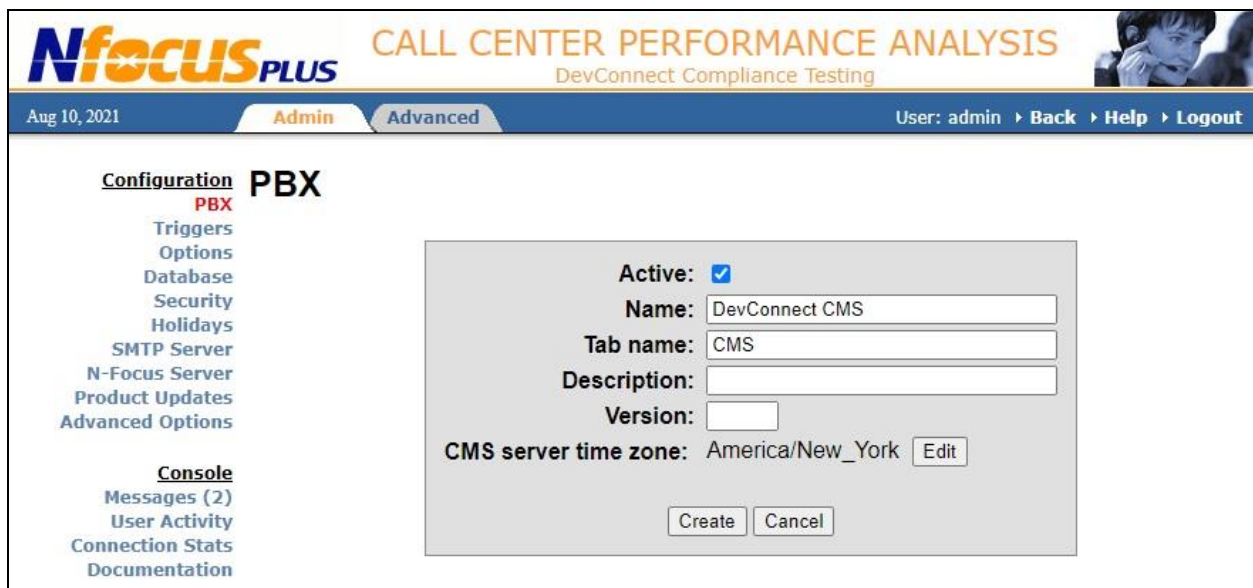
Configuration **Messages** (2 visible, 0 hidden)

- PBX
- Triggers
- Options
- Database
- Security
- Holidays
- SMTP Server
- N-Focus Server
- Product Updates
- Advanced Options

Messages

- Message 1:** You need to configure a PBX. Go to [PBX / Add a PBX](#).
- Message 2:** The SMTP server is not set

The **PBX** screen is displayed next. Check **Active** and enter desired values for **Name** and **Tab name** as shown below.



NfocusPLUS CALL CENTER PERFORMANCE ANALYSIS
DevConnect Compliance Testing

Aug 10, 2021 Admin Advanced User: admin Back Help Logout

Configuration **PBX**

- PBX
- Triggers
- Options
- Database
- Security
- Holidays
- SMTP Server
- N-Focus Server
- Product Updates
- Advanced Options

Console

- Messages (2)
- User Activity
- Connection Stats
- Documentation

PBX Configuration Form:

- Active:** ☒
- Name:** DevConnect CMS
- Tab name:** CMS
- Description:**
- Version:**
- CMS server time zone:** America/New_York [Edit](#)

[Create](#) [Cancel](#)

7.3. Administer DB Connection

The **PBX List** screen below is displayed. Click **DB Connection** in the right pane.

Configuration **PBX List**

PBX

Triggers
Options
Database
Security
Holidays
SMTP Server
N-Focus Server
Product Updates
Advanced Options

► Add a PBX

Name	Tab Name
DevConnect CMS	CMS

Edit Delete DB Connection Real-time connections Reports

The **Database Connection to CMS(r) Server** screen is displayed next. For **Database URL**, replace the “CmsServerIpAddressHere” (not shown) string with the IP address of the Call Management System server as shown below, in this case “10.64.101.229”.

For **Login** and **Password**, enter the ODBC user credentials from **Section 6.4**.

For **Max. number of connections**, enter the appropriate number of connections. Note that the number of connections is determined by Fresche and is based on the size of the customer call center.

Configuration **Database Connection to CMS(r) Server**

PBX

Triggers
Options
Database
Security
Holidays
SMTP Server
N-Focus Server
Product Updates
Advanced Options

Profile: Profile 0

Profile name: 0

Driver class: com.informix.jdbc.IfxDriver

Database URL: jdbc:informix-sqli://10.64.101.229:50000/cms:INFOR

Login: odbcsr1

Password:

Max. number of connections: 2

Submit Cancel Test

7.4. Administer Reports

The **PBX List** screen is displayed again. Click **Reports** in the right pane.

NfocusPLUS CALL CENTER PERFORMANCE ANALYSIS
DevConnect Compliance Testing

Aug 10, 2021 Admin Advanced CMS User: admin Help Logout

Configuration **PBX List**

PBX

Triggers
Options
Database
Security
Holidays
SMTP Server
N-Focus Server
Product Updates
Advanced Options

Console
Messages (3)
User Activity

① The configuration has been saved
① Connection succeeded!

▸ Add a PBX

Name	Tab Name
DevConnect CMS	CMS

Edit Delete DB Connection Real-time connections Reports

The **Reports for PBX DevConnect CMS** screen is displayed next, where “**DevConnect CMS**” is the PBX name from **Section 7.2**. Under **Historical reports**, check the desired reports. In the compliance testing, all historical reports were selected.

NfocusPLUS CALL CENTER PERFORMANCE ANALYSIS
DevConnect Compliance Testing

Aug 17, 2021 Admin Advanced CMS User: admin Back Help Logout

Configuration **Reports for PBX DevConnect CMS**

PBX

Triggers
Options
Database
Security
Holidays
SMTP Server
N-Focus Server
Product Updates
Advanced Options

Console
Messages (5)
User Activity
Connection Stats
Documentation

① The configuration has been saved

ACD: cm7

Real-time reports

System: ☐
Splits: ☐
Agents: ☐
VDNs: ☐
Split Stats: ☐ no login: ☐
Historical fields in real-time reports: ☐ Use user's time zone: ☐

Historical reports

Agents: ☒
Agent Login/Logout: ☒
Splits: ☒
VDNs: ☒
Trunk Groups: ☒

Submit Cancel Refresh ACD list

7.5. Administer Report Data

The **Reports for PBX DevConnect CMS** screen is updated with **Set data** or **Edit** next to each selected historical report as shown below. Click on the value associated with the first historical report, in this case **Set data** next to **Agents**.

The **Set Data** screen below is displayed next. Set each screen parameter as desired. The screen below shows the settings used in the compliance testing with all parameters checked and with **Run command every** set to the same intra-hour interval from **Section 6.3**.

Repeat this section to administer report data for all remaining historical reports.

8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, Call Management System, and N-Focus Plus.

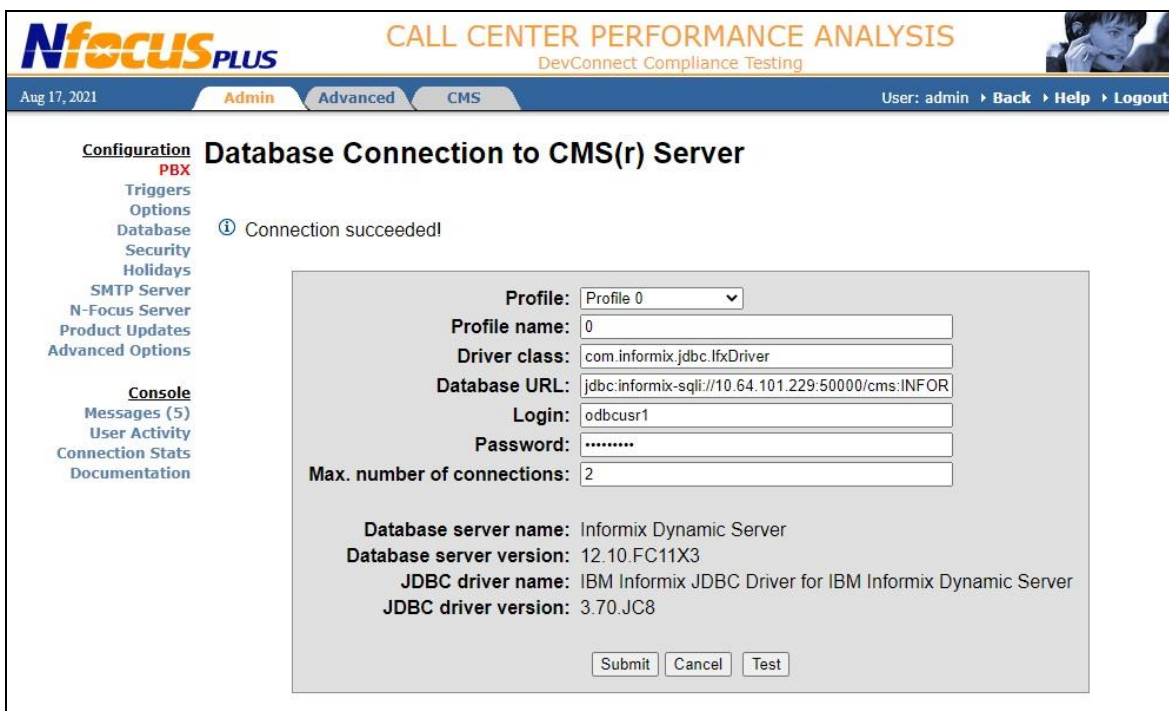
Prior to verifying N-Focus Plus historical reports, make several calls to measured devices on Communication Manager to enable measurement data to be created.

8.1. Verify ODBC Connection

From the N-Focus Plus web interface, select **PBX** from the left pane to display the **PBX List** screen. Click **DB Connection** in the right pane.



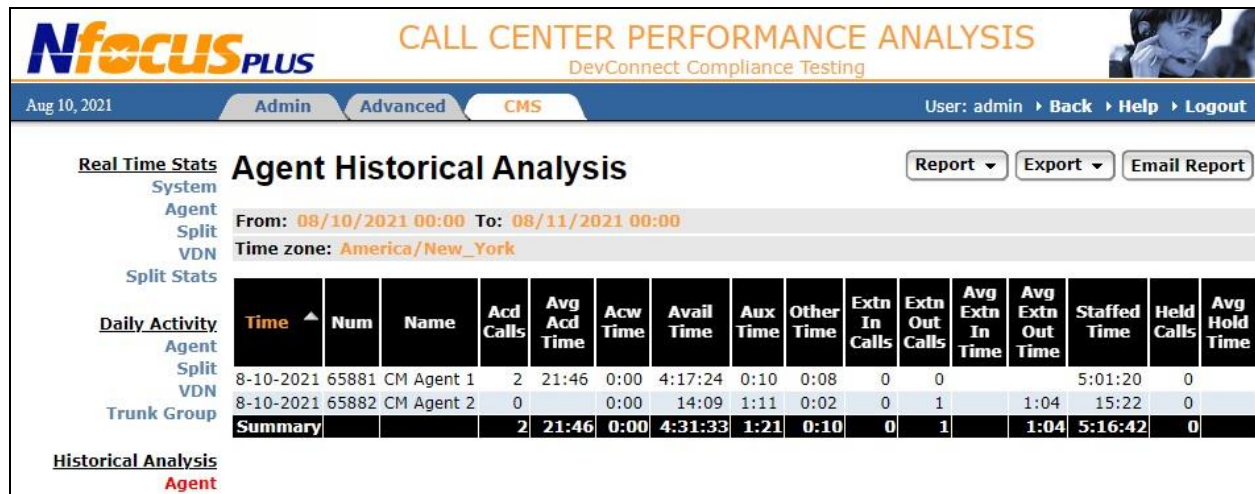
In the subsequent screen, click **Test** toward the bottom of the screen. Verify that the screen is updated with result of “**Connection succeeded!**” as shown below.



8.2. Verify Historical Agent

From the N-Focus Plus web interface, select the **CMS** tab, where “CMS” is the PBX tab name from **Section 7.2**.

Select **Historical Analysis** → **Agent** from the left pane and verify that the **Agent Historical Analysis** report displays the agent historical measurement data as shown below.

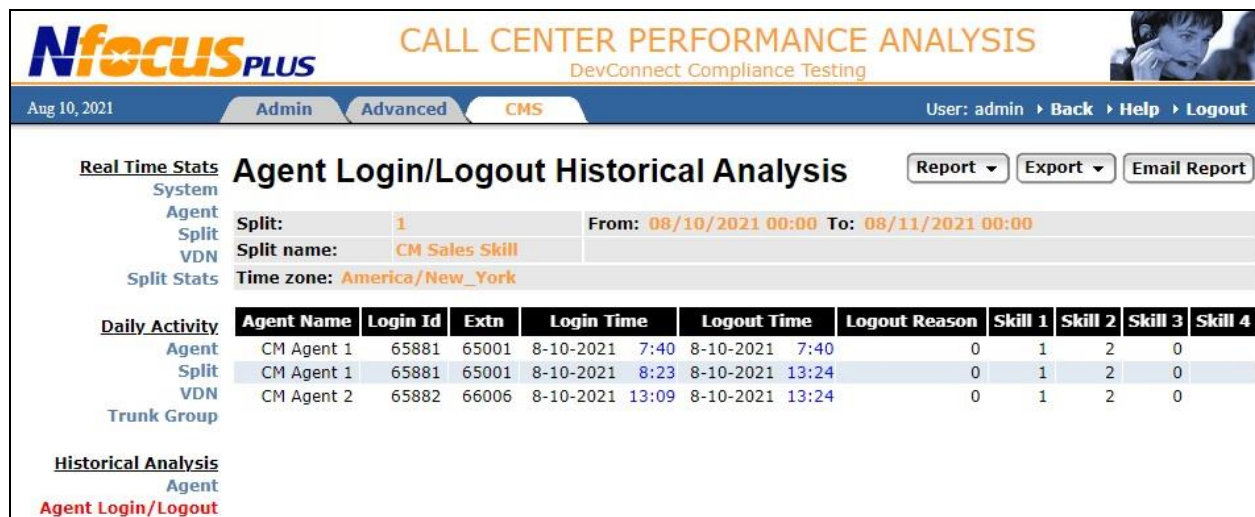


The screenshot shows the Nfocus Plus web interface for the 'Agent Historical Analysis' report. The header includes the Nfocus Plus logo, 'CALL CENTER PERFORMANCE ANALYSIS', and 'DevConnect Compliance Testing'. The navigation bar shows 'Admin', 'Advanced', and 'CMS' tabs, with 'CMS' selected. The user is 'admin' with links for 'Back', 'Help', and 'Logout'. The report title is 'Agent Historical Analysis' with buttons for 'Report', 'Export', and 'Email Report'. The date is 'Aug 10, 2021'. The report filters are 'From: 08/10/2021 00:00 To: 08/11/2021 00:00' and 'Time zone: America/New_York'. The left sidebar shows a tree view with 'Real Time Stats' expanded, including 'System', 'Agent', 'Split', 'VDN', 'Split Stats', 'Daily Activity', 'Agent', 'Split', 'VDN', and 'Trunk Group'. The main table displays agent performance data for two agents: CM Agent 1 and CM Agent 2. The table has columns for Time, Num, Name, Acd Calls, Avg Acd Time, Acw Time, Avail Time, Aux Time, Other Time, Extn In Calls, Extn Out Calls, Avg Extn In Time, Avg Extn Out Time, Staffed Time, Held Calls, and Avg Hold Time. The data shows that CM Agent 1 handled 2 calls with an average hold time of 21:46, while CM Agent 2 handled 0 calls.

Time	Num	Name	Acd Calls	Avg Acd Time	Acw Time	Avail Time	Aux Time	Other Time	Extn In Calls	Extn Out Calls	Avg Extn In Time	Avg Extn Out Time	Staffed Time	Held Calls	Avg Hold Time
8-10-2021	65881	CM Agent 1	2	21:46	0:00	4:17:24	0:10	0:08	0	0			5:01:20	0	
8-10-2021	65882	CM Agent 2	0		0:00	14:09	1:11	0:02	0	1		1:04	15:22	0	
Summary			2	21:46	0:00	4:31:33	1:21	0:10	0	1		1:04	5:16:42	0	

8.3. Verify Historical Agent Login/Logout

Select **Historical Analysis** → **Agent Login/Logout** from the left pane and verify that the **Agent Login/Logout Historical Analysis** report displays the agent historical login and logout measurement data as shown below.



The screenshot shows the Nfocus Plus web interface for the 'Agent Login/Logout Historical Analysis' report. The header is identical to the previous screenshot. The navigation bar shows 'Admin', 'Advanced', and 'CMS' tabs, with 'CMS' selected. The user is 'admin' with links for 'Back', 'Help', and 'Logout'. The report title is 'Agent Login/Logout Historical Analysis' with buttons for 'Report', 'Export', and 'Email Report'. The date is 'Aug 10, 2021'. The report filters are 'Split: 1', 'Split name: CM Sales Skill', 'From: 08/10/2021 00:00 To: 08/11/2021 00:00', and 'Time zone: America/New_York'. The left sidebar shows a tree view with 'Real Time Stats' expanded, including 'System', 'Agent', 'Split', 'VDN', 'Split Stats', 'Daily Activity', 'Agent', 'Split', 'VDN', and 'Trunk Group'. The main table displays agent login and logout data for three agents: CM Agent 1, CM Agent 1, and CM Agent 2. The table has columns for Agent Name, Login Id, Extn, Login Time, Logout Time, Logout Reason, Skill 1, Skill 2, Skill 3, and Skill 4. The data shows that CM Agent 1 logged in at 7:40 and logged out at 7:40, while CM Agent 2 logged in at 13:09 and logged out at 13:24.

Agent Name	Login Id	Extn	Login Time	Logout Time	Logout Reason	Skill 1	Skill 2	Skill 3	Skill 4
CM Agent 1	65881	65001	8-10-2021 7:40	8-10-2021 7:40	0	1	2	0	
CM Agent 1	65881	65001	8-10-2021 8:23	8-10-2021 13:24	0	1	2	0	
CM Agent 2	65882	66006	8-10-2021 13:09	8-10-2021 13:24	0	1	2	0	

8.4. Verify Historical Split

Select **Historical Analysis** → **Split** from the left pane and verify that the **Split Historical Analysis** report displays the split/skill historical measurement data as shown below.

The screenshot shows the NfocusPLUS interface for the 'Split Historical Analysis' report. The left sidebar contains a tree view with 'Real Time Stats' expanded, showing 'System', 'Agent', 'Split', and 'VDN'. Under 'Split Stats', 'Daily Activity' is selected, showing 'Agent', 'Split', 'VDN', and 'Trunk Group'. The main content area displays the report title 'Split Historical Analysis' with buttons for 'Report', 'Export', and 'Email Report'. The report parameters are 'From: 08/10/2021 00:00 To: 08/11/2021 00:00' and 'Time zone: America/New_York'. The data table has 16 columns: Time, Num, Name, Acd Calls, Avg Speed Ans, Aband Calls, Avg Aband Time, Avg Acd Time, Avg Acw Time, Other Time, Aux Time, Flow In, Flow Out, Avg Pos Staff, and % In Svc Lvl. The data shows two rows for '8-10-2021' and a summary row.

Time	Num	Name	Acd Calls	Avg Speed Ans	Aband Calls	Avg Aband Time	Avg Acd Time	Avg Acw Time	Other Time	Aux Time	Flow In	Flow Out	Avg Pos Staff	% In Svc Lvl
8-10-2021 1	1	CM Sales Skill	2	0:04	0		21:46	0:00	0:10	1:21	0	0	0.4	0
8-10-2021 2	2	CM Support Skill	0		0				43:48	1:21	0	0	0.4	
Summary			2	0:04	0		21:46	0:00	43:58	2:42	0	0	0.4	0

8.5. Verify Historical VDN

Select **Historical Analysis** → **VDN** from the left pane and verify that the **VDN Historical Analysis** report displays the VDN historical measurement data as shown below.

The screenshot shows the NfocusPLUS interface for the 'VDN Historical Analysis' report. The left sidebar contains a tree view with 'Real Time Stats' expanded, showing 'System', 'Agent', 'Split', and 'VDN'. Under 'VDN', 'Daily Activity' is selected, showing 'Agent', 'Split', 'VDN', and 'Trunk Group'. The main content area displays the report title 'VDN Historical Analysis' with a 'Report' dropdown set to 'Standard' and a 'Filter' input field. The report parameters are 'From: 08/16/2021 00:00 To: 08/17/2021 00:00' and 'Time zone: America/New_York'. The data table has 14 columns: Num, Name, In Calls, Acd Calls, Avg Speed Ans, Aband Calls, Avg Aband Time, Avg Acd Time, Connect Calls, Flow Out, Forced Busy Calls, Forced Disc Calls, and % In Svc Lvl. The data shows two rows for '60001 CM Sales' and '60002 CM Support'.

Num	Name	In Calls	Acd Calls	Avg Speed Ans	Aband Calls	Avg Aband Time	Avg Acd Time	Connect Calls	Flow Out	Forced Busy Calls	Forced Disc Calls	% In Svc Lvl
60001	CM Sales	11	9	0:03	2	0:21	13:36	0	0	0	0	82
60002	CM Support	10	1	0:01	5	0:12	0:21	1	0	0	3	20

8.6. Verify Historical Trunk Group

Select **Historical Analysis** → **Trunk Group** from the left pane and verify that the **Trunk Group Historical Analysis** report displays the trunk group historical measurement data as shown below.

The screenshot displays the NfocusPLUS CALL CENTER PERFORMANCE ANALYSIS interface. The top navigation bar includes the date 'Aug 17, 2021', tabs for 'Admin', 'Advanced', and 'CMS', and user information 'User: admin' with links for 'Help' and 'Logout'. The left sidebar contains a tree view with categories: 'Real Time Stats' (System, Agent, Split, VDN), 'Daily Activity' (Agent, Split, VDN, Trunk Group), and 'Historical Analysis' (Agent, Agent Login/Logout, Split, VDN, Trunk Group). The 'Trunk Group' option under 'Historical Analysis' is selected and highlighted in red. The main content area is titled 'Trunk Group Historical Analysis' and features a report configuration section with a 'Report' dropdown set to 'Standard', a 'Filter' input field, and date/time selectors for 'From: 08/16/2021 00:00' to 'To: 08/17/2021 00:00' with a 'Time zone: America/New_York'. Below this is a 'Choose trunk groups:' section with a table listing two groups: '212 SIP Trunk to SBCE' and '13 PRI PSTN Trunk'. The table has columns for 'Num', 'Name', 'Calls', 'Aband', 'Avg Hold Time', 'CCS' for both Inbound and Outbound. The 'Calls' column for the first group has a dropdown arrow.

Num	Name	Inbound				Outbound			
		Calls	Aband	Avg Hold Time	CCS	Calls	Far End Comp	Avg Hold Time	CCS
<input type="checkbox"/> 212	SIP Trunk to SBCE	14	5	5:04	42.62	1	1	0:27	0.27
<input type="checkbox"/> 13	PRI PSTN Trunk	2	0	1:16	1.52	0	0		0.00

9. Conclusion

These Application Notes describe the configuration steps required for Fresche N-Focus Plus 3.8 to interoperate with Avaya Call Management System 19.2 using the ODBC interface. All feature and serviceability test cases were completed successfully.

10. Additional References

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

1. *Administering Avaya Aura® Communication Manager*, Release 8.1.x, Issue 8, November 2020, available at <http://support.avaya.com>.
2. *Administering Avaya Call Management System*, Release 19.2, Issue 1, March 2021, available at <http://support.avaya.com>.
3. *Using ODBC and JDBC with Avaya Call Management System*, Release 19.2, Issue 1, March 2021, available at <http://support.avaya.com>.
4. *Avaya Call Management System Database Items and Calculations*, Release 19.2, Issue 1, March 2021, available at <http://support.avaya.com>.
5. *N-Focus Plus Administrator Guide*, Release 3.8, March 2021, available at <http://softbase.com/netlert/login.php>.
6. *N-Focus Plus User Guide*, Release 3.8, March 2021, available at <http://softbase.com/netlert/login.php>.

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