Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Avaya IP Office 500 v2 R8.1 with NovaLink NovaTax on NovaBox – Issue 1.0

Abstract

These Application Notes describe the compliance testing of the NovaLink NovaTax on NovaBox call accounting system with Avaya IP Office. These Application Notes contain a description of the configurations for both NovaLink NovaTax on NovaBox and Avaya IP Office.

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.

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1. Introduction

The purpose of this document is to describe the configuration for connecting the NovaLink NovaTax on NovaBox to Avaya IP Office, as well as the compliance tests which were performed, and a summary of the results of those tests.

The NovaLink NovaTax on NovaBox call accounting server processes Station Message Detail Records (SMDR) and generates statistics and invoices to be used for customer billing. NovaLink NovaTax on NovaBox calculates the cost of a call based on the duration, origin, and destination of the call.

2. General Test Approach and Test Results

The interoperability compliance testing evaluated the ability of NovaTax on NovaBox to carry out SMDR collection and reporting under a variety of call handling scenarios. Execution of call scenarios and verification of correct call data was performed manually and the results compared against reports generated via the NovaTax on NovaBox web interface.

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 testing focused on verifying the accurate reporting of calls in the following scenarios:

- Inter/Intra PBX calls
- Incoming/outgoing PSTN calls
- Call forwarding internal/external
- Call transfer internal/external supervised/blind
- Trunk to trunk transfer
- Call conferencing
- Account codes
- Hold/retrieve
- Calls to hunt groups

Serviceability tests tested the ability of IP Office and NovaTax on NovaBox to recover from power or network interruption.

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2.2. Test Results

All test cases were executed successfully with the following observations:

- Where an outbound PSTN call is placed from a phone on IP Office and transferred by the PSTN to another phone on IP Office, the second inbound call leg is reported by IP Office as an outbound call.
- Where a call is forwarded, the dialed extension is not shown by the NovaTax on NovaBox reports, only the answering phone.
- Where a call is placed to a hunt group, the dialed hunt group extension is not shown by the NovaTax on NovaBox reports, only the answering phone.
- Where a call is blind transferred the information for all of the transferring parties is not shown.
- Where an outbound PSTN call is blind transferred to another outbound Inter PBX number a zero duration call with no answer for the blind transfer part is reported.
- IP Office resumed SMDR output when NovaTax on NovaBox was rebooted only once IP Office was also rebooted. No call data was lost.

2.3. Support

Technical support from NovaLink can be obtained through the following:

NovaLink GmbH
Businesstower
Zuercherstrasse 310
8500 Frauenfeld
Switzerland
helpdesk@novalink.ch
Phone: +41 52 762 66 77
Fax: +41 52 762 66 99

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3. Reference Configuration

Figure 1 below shows the compliance tested configuration comprising of IP Office connected to NovaTax on NovaBox over an SMDR link and an assortment IP endpoints with a simulated PSTN connection and an H.323 trunk to another PBX.

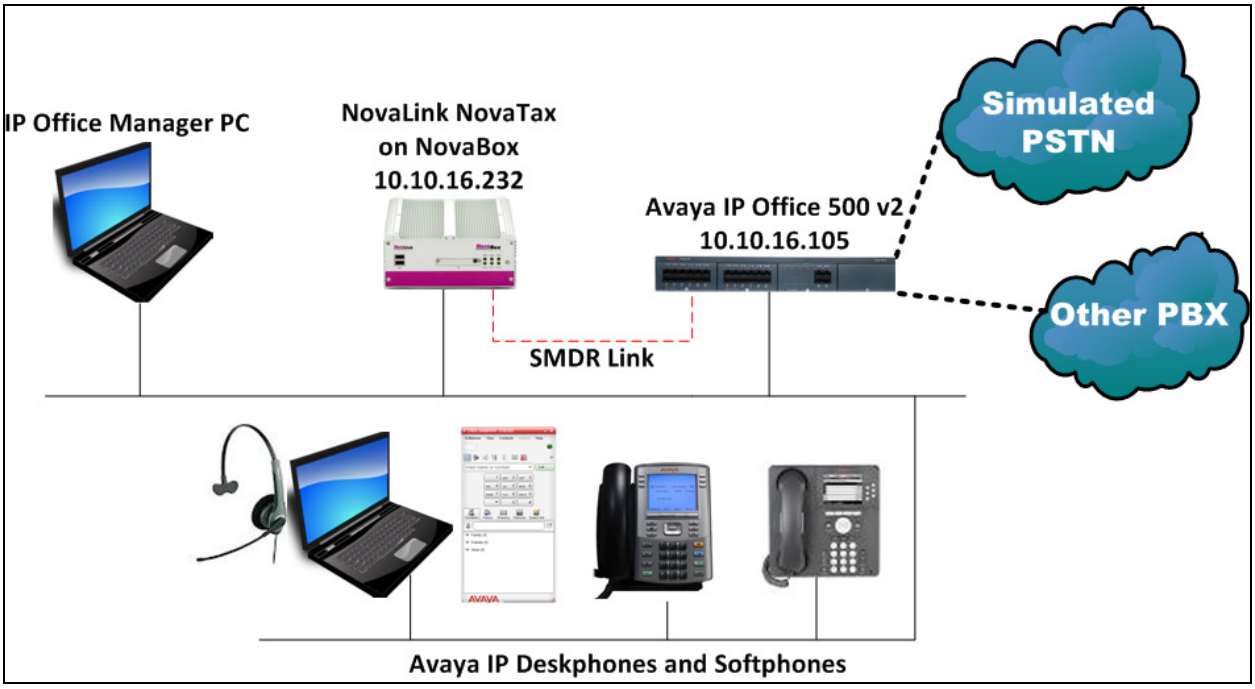

Figure 1: Avaya IP Office with NovaLink NovaTax on NovaBox Solution

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 Avaya IP 500 v2	R8.1 (69)
Avaya 1140E	4.3 SP1
Avaya 9630	3.2
Avaya IP Office Softphone	3.2.3.15 64595
NovaLink NovaTax on NovaBox	9.8

Testing was performed with IP Office 500 R8.1, but it also applies to IP Office Server Edition R8.1. Note that IP Office Server Edition requires an Expansion IP Office 500 v2 R8.1 to support analog or digital endpoints or trunks.

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5. Configure Avaya IP Office

The configuration of IP Office is performed from the IP Office Manager application and can be summarized as follows:

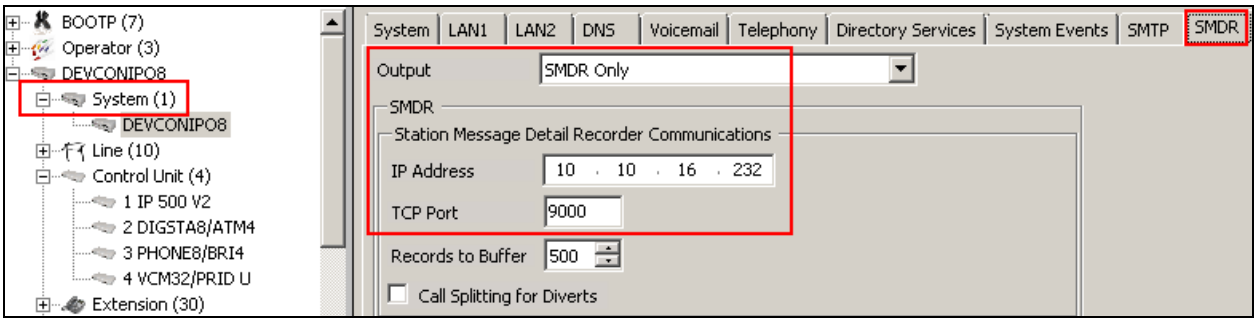
- Configure SMDR

It is assumed that endpoints have been pre-configured as required, for more information see **Section 9**.

5.1. Configure SMDR

The SMDR settings must be administered on IP Office in order to define the destination of the SMDR output. In the left pane of the Manager application click **System → SMDR** and configure as follows:

- **Output** – select **SMDR Only** from the drop down list
- **IP Address** – enter the IP address assigned to NovaTax on NovaBox, in this case **10.10.16.232**
- **TCP Port** – enter the port used by NovaTax on NovaBox for the SMDR connection, in this case **9000**



6. Configure NovaLink NovaTax on NovaBox

The configuration of NovaTax on NovaBox is performed using its web interface and can be summarized as follows:

- Configure Avaya IP Office SMDR Collection Parameters

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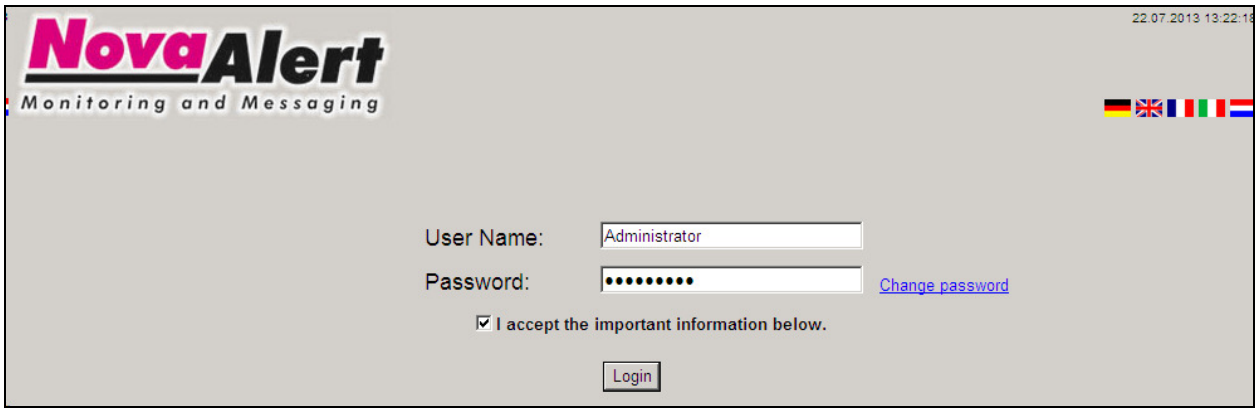
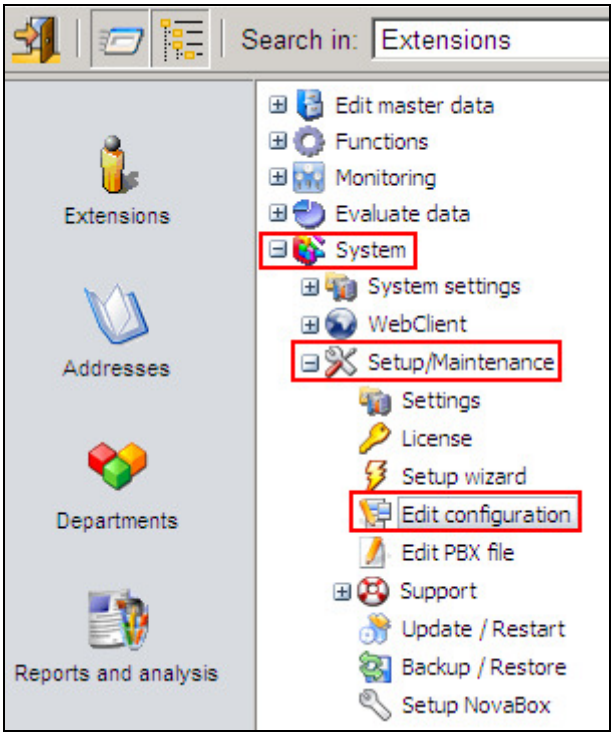
Navigate to http://NovaAlert_IP_ADDR/NovaAlert and enter the appropriate credentials and click **Login**, where NovaAlert_IP_ADDR is the IP address of NovaAlert on NovaBox.



6.1. Configure Avaya IP Office SMDR Collection Parameters

From the NovaTax on NovaBox web interface click **System → Setup/Maintenance → Edit Configuration**.



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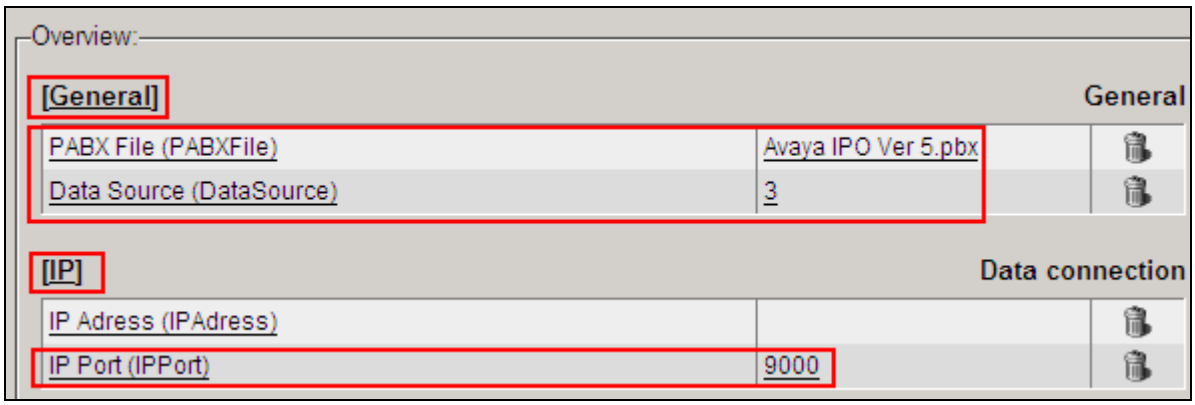
In the right hand pane scroll down to the **[General]** and **[IP]** sections and configure as shown below:

- **PABX File** – set to **Avaya IPO Ver5.pbx**
- **Data Source** – set to **3**
- **IP Port** – set to **9000** as configured on IP Office in **Section 5.1**.



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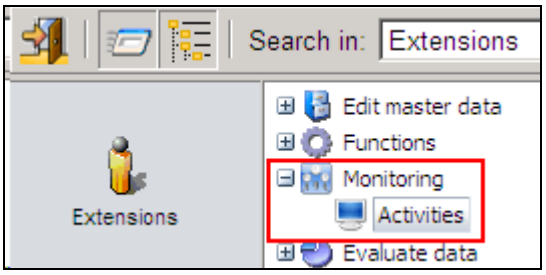
7. Verification Steps

This section provides the tests that can be performed to verify the proper configuration of NovaTax on NovaBox with IP Office.

- Place a variety of calls including internal, external, inter PBX, transfer, conference and forwarding

7.1. Verify NovaLink NovaTax on NovaBox Successfully Receives Raw Data

From the NovaTax on NovaBox web interface click **Monitoring → Activities**.



In the right hand pane confirm that the configuration has been loaded using the correct **PBX file**, NovaTax on NovaBox is **Waiting for connection** and the message **Successfully started** is shown. Confirm an **Incoming connection** is received from the IP address of the IP Office and an SMDR record containing call information is received.

24.07.2013 13:05:55	Debug	Receiver	Loading configuration!
24.07.2013 13:05:55	Info	Receiver	Using PBX file: Avaya IPO Ver 5.pbx
24.07.2013 13:05:55	Debug	Receiver	Nr 1: 50 Extension Licences found!
24.07.2013 13:05:55	Debug	Receiver	Nr 1: 1 File Site Licences found!
24.07.2013 13:05:55	Debug	Receiver	Nr 1: Waiting for connection... (0.0.0.0:9000)!
24.07.2013 13:05:55	Info	Receiver	Nr 1: Successfully started...
24.07.2013 13:07:56	Info	Receiver	Nr 1: Incoming connection from: 10.10.16.105:4096
24.07.2013 13:07:56	Info	Receiver	Nr 1: 2013/07/24 13:07:59,00:00:15,7,302,O,9900447939991792,9900447939

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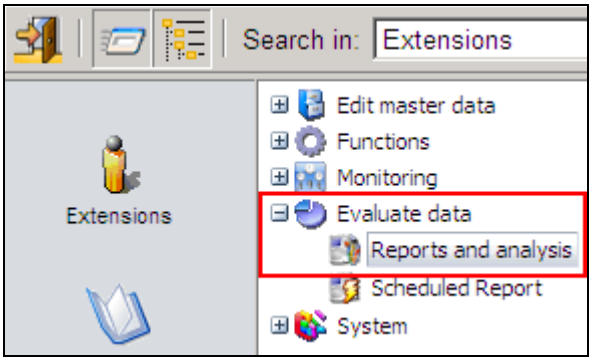
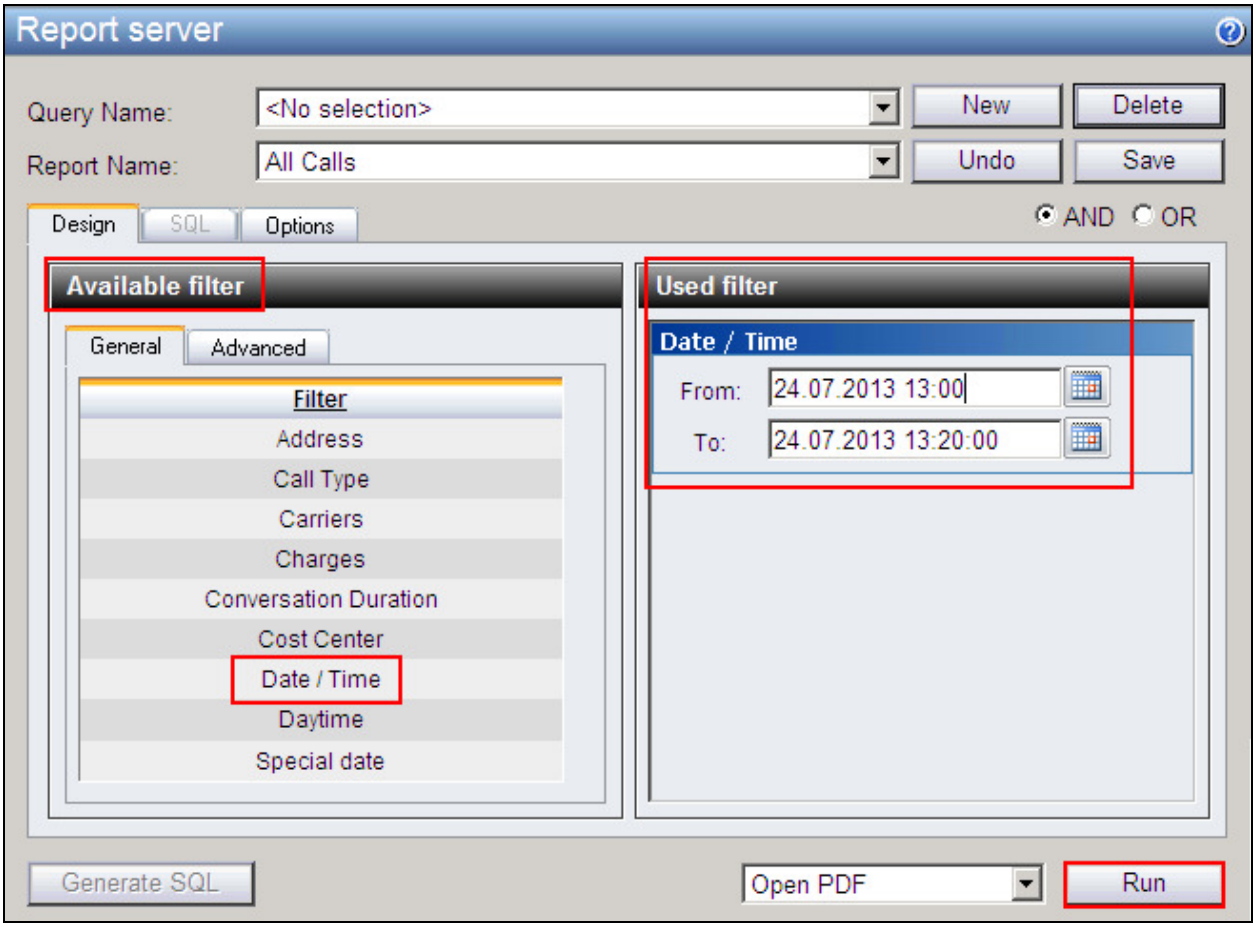
7.2. Verify NovaLink NovaTax on NovaBox Report

From the NovaTax on NovaBox web interface click **Evaluate date → Reports and analysis**.



In the right hand pane drag **Data / Time** from the **Available filter** section to the **Used filter** section and enter the date and time range for which to report on.



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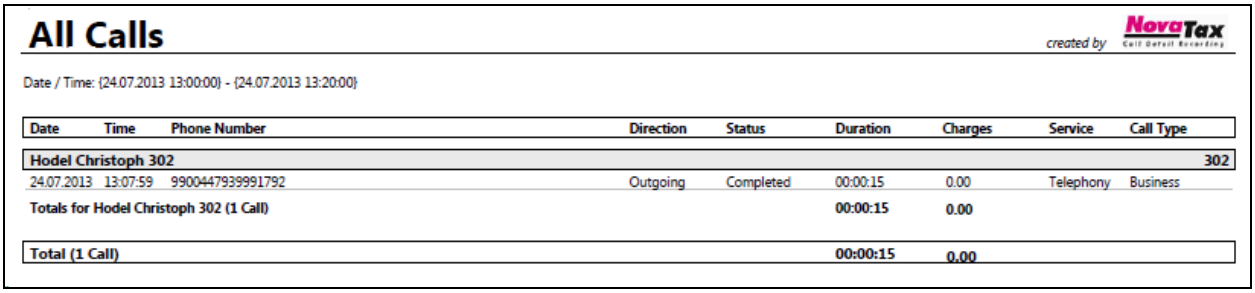
Verify that the displayed data correctly represents the actual call activity.



All Calls

created by NovaTax

Date / Time: {24.07.2013 13:00:00} - {24.07.2013 13:20:00}

Date	Time	Phone Number	Direction	Status	Duration	Charges	Service	Call Type
Hodel Christoph 302								**302**
24.07.2013	13:07:59	9900447939991792	Outgoing	Completed	00:00:15	0.00	Telephony	Business
Totals for Hodel Christoph 302 (1 Call)					**00:00:15**	**0.00**		
Total (1 Call)					**00:00:15**	**0.00**		

8. Conclusion

These Application Notes describe the configuration steps required for NovaLink NovaTax on NovaBox to successfully interoperate with Avaya IP Office. All feature test cases were completed successfully with any observations noted in **Section 2.2**.

9. Additional References

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

1. http://marketingtools.avaya.com/knowledgebase/.
2. ftp://support.novalink.ch/Technikerhandbuch/English/Technikerhandbuch NovaLink GmbH EN.chm
   (please request Login and Password from NovaLink)

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