

Avaya Solution & Interoperability Test Lab

## Application Notes for configuring Fijowave Fijoport Advanced Monitoring with Avaya IP Office IP500 V2 R11– Issue 1.0

### Abstract

These Application Notes describe the configuration steps for provisioning Fijowave's Fijoport Advanced Monitoring to access Avaya IP Office IP500 V2 standalone R11.0.

Readers should pay particular attention to the scope of testing as outlined in Section 2.1, as well as 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 for provisioning Fijowave's Fijoport Advanced Monitoring with Avaya IP Office IP500 V2 standalone.

**Note**: The current version of Fijoport Advanced Monitoring only supports a connection to the IP Office IP500 V2 for the monitoring of alarms and messages through the System Monitoring API. A connection to IP Office Server Edition is not currently supported.

Fijoport Advanced Monitoring (Fijoport) consists of both a monitoring service and allows for remote access with Avaya IP Office. The Fijowave solution consists of the Fijowave Portal VPN, the Fijowave Portal Server and the Fijoport Box. The Fijowave Portal Server is responsible for establishing and maintaining secure tunnel connections to Fijoport boxes on the remote customer networks. A customer support engineer can remotely access the Fijowave Portal Server using Fijowave Portal VPN software installed on a desktop using OpenVPN.

# 2. General Test Approach and Test Results

The interoperability compliance testing evaluates the ability of Fijoport to be used as both a monitoring service for alarm messages and as a remote access device for IP Office. There are two modules that were tested.

- 1. Fijoport Advanced Monitoring
- 2. Fijoport Remote Access

The Fijoport Advanced Monitoring product would always include the Fijoport Remote Access module however Fijoport Remote Access product would also exist as a stand-alone product without the Fijoport Advanced Monitoring module.

Fijoport Advanced Monitoring uses the Avaya IP Office System Monitoring API. This is a REST Web Service which in response to a HTTPS GET request returns data in an XML format. This monitoring service alerts the end user to various alarms coming from the IP Office. This user can then use the remote access module to gain access to the IP Office in question and observe and fix these alarms that are being raised.

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 the testing associated with these Application Notes, the interface between Avaya systems and Fijoport included the use of SSH, TLS and AES used by Fijowave to setup a secure tunnel to IP Office.

### 2.1. Interoperability Compliance Testing

The compliance testing includes the test scenarios shown below.

- Monitoring Alarm Messages from IP Office IP500 V2
- Using Avaya IP Office Manager from a remote location
- Using the IP Office Monitor tool
- Using the IP Office System Status tool

#### 2.2. Test Results

All test cases passed successfully with the following observations noted during testing.

- 1. The current version of Fijoport Advanced Monitoring only supports a connection to the IP Office IP500 V2 for the monitoring of alarms and messages through the System Monitoring API. A connection to IP Office Server Edition Linux server is not currently supported.
- 2. IP Office Manager "Broadcast Discovery" cannot be used with the VPN. The IP address must be used to discover the IP Office and this IP address is the mapped IP address provided by the Fijoport device.
- 3. Not every single Alarm code was tested on the Monitoring section, a flavour of current alarms and two new alarms were raised and observed.

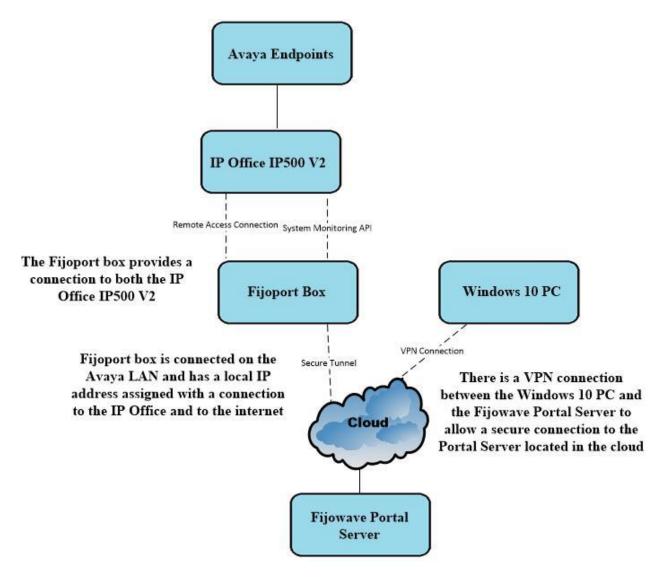
### 2.3. Support

Support from Avaya is available by visiting the website <u>http://support.avaya.com</u> and a list of product documentation can be found in **Section 9** of these Application Notes. Technical support for the Fijowave Fijoport Remote Access product can be obtained as follows:

- Web: <u>http://www.fijowave.com</u>
- Email: <a href="mailto:support@fijowave.com">support@fijowave.com</a>
- Help desk: +353 1 525 3072

## 3. Reference Configuration

**Figure 1** shows the network topology during compliance testing. Fijoport Advanced Monitoring provides a remote service platform solution that allows the user to remotely maintain products on their customer's premises in a secure manner over an IP link. The Fijoport box is located on the customer network along with a portal server appliance hosted by Fijowave. A user can establish a connection to the IP Office interface via the Fijowave Portal VPN and instruct the Portal server to establish a remote access session to specified customer network equipment via the Fijoport box.



#### Figure 1: Reference Configuration of Fijowave Fijoport Remote Access with Avaya IP Office

# 4. Equipment and Software Validated

The following equipment and software were used for the compliance test.

Equipment/Software	Version/Release
Avaya IP Office IP500 V2	R11.0.4.2.0 Build 58
Avaya 1140e Deskphone	SIP R04.04.23.00
Avaya 96x1 Deskphone	H.323 Release 6.6.115
Avaya 1608-I Deskphone	H.323 1608UA1_350B.bin
Avaya 9508 Digital Deskphone	V60
Fijowave Fijoport Box	V1.1
Fijowave Portal VPN	V2.2
Fijowave Portal Server	V3.5

**Note:** Compliance Testing is applicable when the tested solution is deployed with a standalone IP Office 500 V2 only.

**Note**: The current version of Fijoport Advanced Monitoring only supports a connection to the IP Office IP500 V2 for the monitoring of alarms and messages through the System Monitoring API.

# 5. Configure Avaya IP Office

There is no specific configuration of IP Office required for the compliance testing of Fijoport Advanced Monitoring. The IP address of the IP Office is required in order to configure the Fijoport box in **Section 6**. Configuration and verification operations on the Avaya IP Office illustrated in this section were all performed using Avaya IP Office Manager. It is implied a working system is already in place. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**. The configuration operations described in this section can be summarized as follows:

- Launch Avaya IP Office Manager
- Display LAN Configuration
- Create System Monitoring Web Service User

**Note**: The example below shows the IP address information for the Server Edition only, however both the Server Edition and the IP500V2 IP information must be acquired to setup a connection to both.

#### 5.1. Launch Avaya IP Office Manager

From the IP Office Manager PC, click **Start**  $\rightarrow$  **Programs**  $\rightarrow$  **IP Office**  $\rightarrow$  **Manager** to launch the Manager application (not shown). Select the required Server Edition as shown below and enter the appropriate credentials. Click on the **OK** button.

2 Select IP Office						
Name IP Address Type	Version Edition					
	nux-PC 10.0.0.3.0 build 5 Server (Primary)					
Server Edition Expansion 10.0 IP 1P0500V2PG 10.10.40.20 IP 500 V2 10.0.0.3.0 build 5 Server (Expansion)						
	Configuration Service User Login IP Office : IPOSEPG (Primary System - IPO-Linux-PC)					
	Service User Name Administrator Service User Password					
	OK Cancel Help					
TCP Discovery Progress						
Unit/Broadcast Address 10.10.40.255  • Refresh	Øpen with Server Edition Manager	OK Cancel				

Click on **Configuration** at the top right of the page, as shown, to receive the IP Office configuration.

E Server Edition	
Summary	Open
Server Edition Primary	Configuration
Hardware Installed     Control Unit: IPO-Linux-PC     Secondary Server: NONE     Expansion Systems: 10.10.40.20     System Identification: ad7eda2f5eb0bdb66b99fc8e123999283ddd6fb0     Serial Number: 005056948621	System Status           Voicemail Administration           Resiliency Administration           On-boarding
System Settings     IP Address: 10.040.25     Sub-Net Mask: 255.255.255.0     System Locale: Ireland (UK English)     Device ID: NONE     Number of Extensions on System: 9	
	Add * Secondary Server * Expansion System

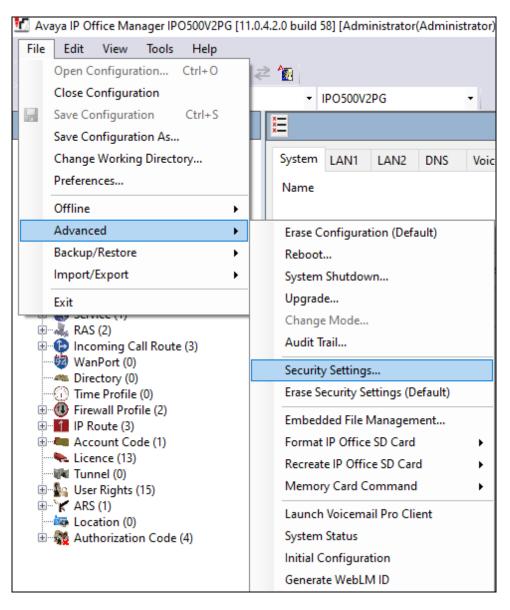
#### 5.2. Display LAN Properties

From the left window navigate to **System** as shown and in the main window click on the **LAN1** tab and within that tab select the **LAN Settings** tab. The **IP Address** of the IP Office is shown, and this will be required for setup in **Section 6.2**.

Configuration	System	E IPOSEPG
BOOTP (4) Operator (3) Solution User(30) Short Code(19) Minectory(0) Time Profile(0) Minectory(0) Minectory(0) Minectory(0)	Name	System       LAN1       LAN2       DNS       Voicemail       Telephony       Directory Services       System Events         LAN Settings       VoIP       Network Topology       III       III       III       IIII       IIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
User Rights(8)         Location(0)         IPOSEPG		Number Of DHCP IP Addresses 200 🔄 DHCP Mode Server O Client O Disabled Advanced

### 5.3. Create System Monitoring Web Service User

Once the configuration is opened to the IP Office IP500 V2, navigate to File  $\rightarrow$  Advanced  $\rightarrow$  Security Settings, as shown below.



Expand the **Rights Groups** in the left window, right-click on **Rights Groups** and select **New**, as shown below.

Security Set	tings	Rights	s G	Froup: A	dministrator Gr	oup
🖃 🖓 Security		Group Detai	ls	Configuration	Security Administration	System Status
🕂 🐨 🐨 System (1)		Name	Ad	Iministrator Grou	ID.	
🗄 💮 Services (7)		Name	-		ap	
Rights Groups (1	New					
Administrator						
System Statu 🗙	Delete					
TCPA Group	Validate					
IPDECT Gro	Demonstra					
- 🙀 Security Adm	Rename					
	Show in Groups					
🔤 🕅 Upgrade Adr	Show in Groups					
💏 System Admi	Customise Columns					
Maint Admin						
Business Partner						

Enter a suitable Name under the Group Details tab.

Rights (	Rights Group: Fijowave									
Group Details	Configuration	Security Administration	System Status	Telephony APIs	HTTP	Web Services	External			
Name Fi	jowave									

Click on the Web Services tab and tick the box beside Service Monitor Read, as shown below.

Rights G	roup: F	ijowave					
Group Details	Configuration	Security Administration	System Status	Telephony APIs	HTTP	Web Services	External
IP Office Service Security Re Security Wr Security Wr Config Real Config Write Backup Restore Upgrade Service Mo	ead All rite All rite Own Passw d All e All	vord					

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Security Settings							
🖃 🖓 Security		Servi					
🍪 General							
🗄 🖏 System (1)		Nam					
Services (7)							
🗄 🖓 Rights Groups (18)		Pass					
Service Users (1 <sup>4</sup> )		<u> </u>					
🔤 🔤 Administrator	🕺 🛃 Administrator						
EnhTcpaSer 🗙	Delete						
IPDECTServ	Validate						
BusinessPart	validate						
Maintainer	Rename						
BranchAdmir							
OpenAPIUse Show in Groups							
ServiceUser	Customise Columns						
DirectorySer	custornise columnis						

Enter a suitable **Name** and **Password** for this new user, note that these details will be required in the configuration of the Fijowave Monitoring in **Section 6.3**. Ensure that the **Rights Group** created above is ticked as shown below. Click on **OK** at the bottom of the screen (not shown).

Service Us	ser: fi	ijowa	ave	/2						
Service User Deta	ails									
Name	fijowave	ev2								
Password	•••••	•••••		••				Change	Clear Cache	
Account Status	Enabled	ł					~			
	<none></none>	>						$\sim$		
	No Acc	count E	xpiry	$\checkmark$						
	•		Feb	ruary 2	2020		×			
	Sun	Mon	Tue	Wed	Thu	Fri	Sat			
Account Expiry	26	27	28	29	30	31	1			
	2	3	4	5		7	8			
	9	10	11				15			
	16	17	18	19			22			
	23	24 2	25 3	26 4	27 5	28 6	29 7			
	11	<sup>2</sup>	-	oday:	-	-				
				ouay:	17/02/	2020				
Rights Group Mer	mbership									
Business Part									~	
Customer Adr	min									
Maintainer										
SMGR Admin										
Directory Gro	up	p								
Open API Gro	200									
Open APIGp	Jup									
Fijowave									~	

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### 6. Configure Fijowave Fijoport Remote Access

The configuration of the Fijoport Remote Access includes the installation and configuration of the Fijoport Portal VPN. Fijowave provides a username and password for the Fijoport Portal VPN in order to ensure connectivity to the Fijoport Portal Server. This username and password is required during the installation of the Fijoport Portal VPN.

### 6.1. Install Fijowave Portal VPN

Unpack the contents of the RAR file, FijowavePortalServer2.2.rar, browse to the Fijowave Portal VPN directory and run the installer FijoVPN-2.x.x-xxxx.exe (not shown). Click **Yes** if User Account Control asks permission to proceed.

😌 User	Account	Control				
?	Do you want to allow the following program to make changes to this computer?					
	N	Program name: Verified publisher: File origin:	FijoVPN <b>Fijowave Limited</b> Hard drive on this computer			
🕑 Sh	now <u>d</u> etai	ls	Yes No			
			Change when these notifications appear			

Browse and select the appropriate VPN configuration key file (not shown) and then click Install.

K FijoVPN 2.4.3-I602 Setup	)			
Fijowave	<b>Configuration</b> Select a configuration file			
		FijoVPN needs a configuration file to establish a secure connection. This file should have downloaded with the installer. You may skip this step and add the file later but you will not be able to connect to the portal without it.		
		Browse		
Nullsoft Install System v2.50-1		< Back Install Cancel		

Solution & Interoperability Test Lab Application Notes ©2020 Avaya Inc. All Rights Reserved. If OpenVPN is not already installed, then install it by clicking **Yes** and following the OpenVPN installation instructions.

K FijoVPN 2.4.3-I602 Setup	X
OpenVPN not found. It is necessary to install it. Click terminate the installation.	k yes to install. Clicking no will:
	Yes <u>N</u> o

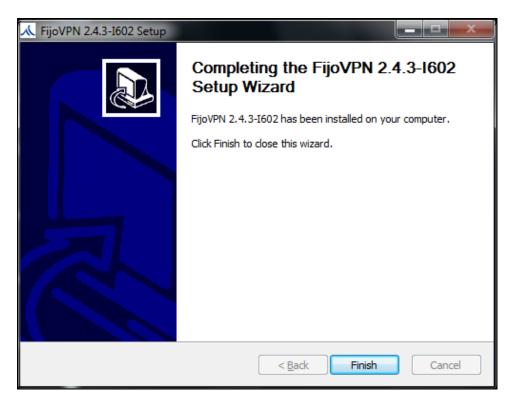
Click on **Next** to continue.



Click on **I Agree** to continue.

O OpenVPN 2.4.3-I602 Setup	x						
COMPENSION         License Agreement           Please review the license terms before installing OpenVPN 2.4.3-I602.							
Press Page Down to see the rest of the agreement.							
ppenVPN (TM) An Open Source VPN daemon	*						
Copyright (C) 2002-2017 OpenVPN Technologies, Inc. <sales@openvpn.net></sales@openvpn.net>							
This distribution contains multiple components, some of which fall under different licenses. By using OpenVPN or any of the bundled components enumerated below, you agree to be bound by the conditions of the license for each respective component.							
OpenVPN trademark	Ŧ						
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install OpenVPN 2.4.3-I602.							
Nullsoft Install System v2.46-101							
< <u>B</u> ack I Agree Canc	el						

Close the installer by clicking **Finish**.



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#### 6.2. Configure Connection to IP Office

Open a URL to the Fijoport Box. Enter the appropriate credentials and click on submit.

Fijowave
Login Username: Password:
submit
Powered by Fijowave www.fijowave.com

Click on the **Remote Access Control** link.

Fijowave	
Configuration	Logout
Select an item from the menu below.	
Remote Access Control	
Portal Server	
Customer Data IP Configuration	-
Change Password	-
<u>Upgrade</u>	- 1
Reset Options	]
Fijoport v_1.1.13-2-001	
38:b7:4d:00:62:9b	

Enter the local IP address of the IP Office Server Edition for **ID 1** and the local IP address of the IP Office IP500 V2 for **ID 2** (if applicable). Press the **Save** button and then close the browser tab.

note Ac	cess Control		L
er the na	ames and IP addresse	s of the devices that may l	be accessed via the portal.
Π	D Description	IP address	Device Type
1	Server Edition	10.10.40.25	Avaya IPO SE 🔹
2	IP500V2	10.10.40.20	Avaya IPO 500 V2 🔹
3			<b>T</b>
4			<b>T</b>
5			<b>T</b>
6	j		<b>T</b>
7			▼
8			<b>T</b>

### 6.3. Configure Monitoring on Fijowave Portal Server

Open a URL to **web.fijoport.com** as shown below, enter the appropriate credentials and click on **Log in**.

← → C	n/?next=/admin/portal/device/38b74d00629b-2/	7	☆	0 <b>-</b> 7	0	:
Fijowave		English (en)				<b>.</b>
How to Access the Portal						
	Fijowave Portal Hosting					
	Log in					
	Username					
	avaya					
	Password					
	Log in					

Click on **Devices**.

Fijowave			
How to Access the F	Portal User Manual	Administrator Manual	
Home > Remote A	ccess		
Bomoto Aco	ess administr	ation	
Remote Acc	ess administri	ation	
Remote Access			
Remote Access Devices			
Devices			
Devices Fijoports			
Devices Fijoports Logs			

evices									Ticke	ets	Tickets s	ummary
16 total							C		Filter			~
Device ID 3 🔨	Customer ID 2 A	Customer name 1 🔨	Device name	Local IP	Device model	Version	Monitored	NH	Backup	AM&S	Online	License
38b74d0015cf-1	Avaya0015cf	Avaya Devconnect	IPOv2	10.10.40.20	-		0	0	0	Ø	0	Hardware
38b74d0015cf-2	Avaya0015cf	Avaya Devconnect	IPOse	10.10.40.25	-		0	8	0	0	0	Hardware
38b74d0015cf-3	Avaya0015cf	Avaya Devconnect			-		0	0	0	0	0	Hardware
38b74d0015cf-4	Avaya0015cf	Avaya Devconnect			-		0	0	0	Ø	0	Hardware
38b74d0015cf-5	Avaya0015cf	Avaya Devconnect			-		0	0	0	Ø	0	Hardware
38b74d0015cf-6	Avaya0015cf	Avaya Devconnect			-		0	8	0	0	0	Hardware
38b74d0015cf-7	Avaya0015cf	Avaya Devconnect			-		0	0	0	Ø	0	Hardware
38b74d0015cf-8	Avaya0015cf	Avaya Devconnect			-		0	0	0	Ø	0	Hardware
38b74d00629b-1	Avaya00629b	Avaya Devconnect	Server Edition	10.10.40.25	Avaya IPO SE		•	0	0	0	•	Hardware
38b74d00629b-2	Avaya00629b	Avaya Devconnect	IP500V2	10.10.40.20	Avaya IPO 500 V2		•	0	٥	•	•	Hardware
38b74d00629b-3	Avaya00629b	Avaya Devconnect		-	-		8	8	0	0	0	Hardware

On sites where many Fijoports are in use, click on the **Device ID** to be accessed.

When the appropriate **Device** is opened, click on **Change** at the top.

Iome > Remote Access	> Devices > 38b74d00629b-2					
Device 38b74d0	0629b-2	↗ Browse	Detect AM	&S Network	health Chan	ge Histo
Device name	IP500V2			Device tick	ets	
Local IP	10.10.40.20			Open 3	Confirmed 0	Resolved 7
Monitored	0			Hazard note		
Network Health enabled	2			No active haza	ard notes	
Customer site				Status		
ijoport	38b74d00629b			Online	C	•
Customer ID	Avaya00629b			Connected	٢	)
Customer name	Avaya Devconnect			Mapped IP	10	).190.40.2
Device information						
Device model	Avaya IPO 500 V2					

Scroll down and enter the appropriate Credentials, this will be the **Username** and **Password** of the Web Services user created in **Section 5.3**.

Home > Remote Access >	Devices > 38b74d00629b-2 > Change
Customer name	Avaya Devconnect
Device information	
Device model	Avaya IPO 500 V2 3
Version	
Last detected	•
Credentials	
Username	fijowavev2
Password	SHOW
Backup	

Scroll down to the section called **Advanced Monitoring and Security**. Ensure **Enabled** is ticked. For compliance testing all **Available alert settings** were chosen as shown below. Click on **Save** at the bottom of the screen.

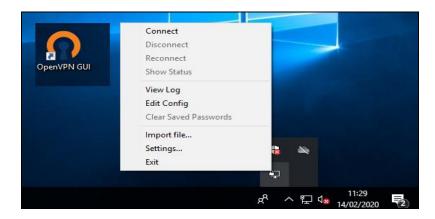
Home > Remote Access >	Devices > 38b74d00629b-2 > Change			
Last run				
Last status	0			
Last backup				
Advanced Monitoring an	d Security			
Enabled				
Alert settings	Available alert settings	Chosen alert settings		
	Q Filter	Configuration   CodecAlarm Configuration   DuplicateEntries Configuration   HardwareAlarm Configuration   InsufficientRAMAlarm Configuration   LostAlarm Configuration   ProcessorAlarm Configuration   TrunkChannelAlarm Licensing   LicenseErrorAlarm Licensing   NoLicenseAlarm Licensing   PLDSFileAlarm Licensing   VebLicenseAlarm Licensing   VebLicenseAlarm Network health   PDECTAlarm Network health   SCEPLinkAlarm		•
	Choose all	Remove all		
	Hold down "Control", or "Command" on a Mac, to select more than one.			
Cancel			Save and conti	nue editing Save

### 7. Verification Steps

The following steps can be taken to ensure that connections between Fijowave Fijoport Remote Access and IP Office are up. The Fijowave Portal VPN is executed in order to setup the VPN connection. This connection can be verified, and the IP Office applications can be run.

#### 7.1. Verify Fijowave Portal VPN

Start the VPN application by double-clicking on the shortcut. Once this is started it will appear in the system tray at the bottom right of the screen where is can be accessed and **Connect** is chosen.



The following window will appear for a few moments before the default browser is opened.

Fri Feb 14 11:30:51 2020 OPTIONS IMPORT: route options modified Fri Feb 14 11:30:51 2020 OPTIONS IMPORT: route-related options m Fri Feb 14 11:30:51 2020 Outgoing Data Channel: Cipher 'AES-256-Cf Fri Feb 14 11:30:51 2020 Outgoing Data Channel: Using 160 bit mess.			^
Fir Feb 14 11:30:51 2020 Incoming Data Channel: Cipher 'AES-256-CI Fir Feb 14 11:30:51 2020 Incoming Data Channel: Using 160 bit mess. Fir Feb 14 11:30:51 2020 Incoming Data Channel=0 Fir Feb 14 11:30:51 2020 ROUTE_GATEWAY 10.10.16.1/255.255.2! Fir Feb 14 11:30:51 2020 Open_tun Fir Feb 14 11:30:51 2020 TAP-WiN32 device [Ethemet 5] opened: \\ Fir Feb 14 11:30:51 2020 TAP-WiNdows Driver Version 9.21 Fir Feb 14 11:30:51 2020 Set TAP-Windows TUN subnet mode netwo Fir Feb 14 11:30:51 2020 Set TAP-Windows TUN subnet mode netwo Fir Feb 14 11:30:51 2020 Successful ARP Hush on interface [12] (8CI Fir Feb 14 11:30:51 2020 Successful ARP Hush on interface [12] (8CI Fir Feb 14 11:30:51 2020 MANAGEMENT: >STATE:1581679851.ASS	age hash 'SHA1' for Hi 3C' initialized with 256 b age hash 'SHA1' for Hi 55.0 I=16 HWADDR=d \Global\{8CFFC8DE-7 rk/local/netmask = 10 IP/netmask of 10.90.6 FFC8DE-7279-4B1B-87	MAC authentica authentica 4.be:d9:b6:57: 279-4B1B-871 90.66.0/10.90 6.27/255.255. 18-3E8197386	
<		>	

The following message verifies that the VPN is up and running and connected correctly.



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#### 7.2. Verify Monitoring of IP Office

Open a URL to **web.fijoport.com** as shown below, enter the appropriate credentials and click on **Log in**.

$\leftrightarrow$ $\rightarrow$ C $\$ web.fijoport.com/admin/logi	n/?next=/admin/portal/device/38b74d00629b-2/	☆	07	θ	:
Fijowave	E	nglish (en)			3
How to Access the Portal					
	Fijowave Portal Hosting				
	Log in				
	Username				
	avaya				
	Password				
	Log in				

#### Click on **Devices**.

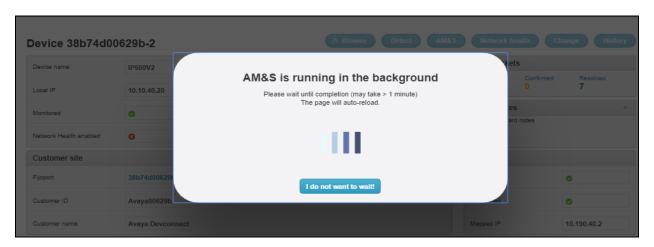
Fijowave			
How to Access the Portal	User Manual	Administrator Manual	
Home > Remote Access			
Remote Access	administra	ation	
Devices			
Fijoports			
Logs			
Serial devices			
Sessions			
Tickets			

evices									Ticke	ets	Tickets s	ummary
16 total					Q				Filter	~		
Device ID 3 🔨	Customer ID 2 \Lambda	Customer name 1 🔨	Device name	Local IP	Device model	Version	Monitored	NH	Backup	AM&S	Online	License
38b74d0015cf-1	Avaya0015cf	Avaya Devconnect	IPOv2	10.10.40.20	-		0	0	0	Ø	0	Hardware
38b74d0015cf-2	Avaya0015cf	Avaya Devconnect	IPOse	10.10.40.25	-		0	8	0	0	0	Hardware
38b74d0015cf-3	Avaya0015cf	Avaya Devconnect			-		0	0	0	0	0	Hardware
38b74d0015cf-4	Avaya0015cf	Avaya Devconnect			-		0	8	0	Ø	0	Hardware
38b74d0015cf-5	Avaya0015cf	Avaya Devconnect			-		0	0	0	0	0	Hardware
38b74d0015cf-6	Avaya0015cf	Avaya Devconnect			-		0	0	0	Ø	0	Hardware
38b74d0015cf-7	Avaya0015cf	Avaya Devconnect			-		0	8	0	Ø	0	Hardware
38b74d0015cf-8	Avaya0015cf	Avaya Devconnect			-		0	8	0	Ø	0	Hardware
38b74d00629b-1	Avaya00629b	Avaya Devconnect	Server Edition	10.10.40.25	Avaya IPO SE		•	8	0	0	•	Hardware
38b74d00629b-2	Avaya00629b	Avaya Devconnect	IP500V2	10.10.40.20	Avaya IPO 500 V2		•	0	0	۲	•	Hardware
38b74d00629b-3	Avaya00629b	Avaya Devconnect		-	-		0	0	0	0	0	Hardware

On sites where many Fijoports are in use, click on the **Device ID** to be accessed.

When the appropriate **Device** is opened, click on **AM&S** at the top. This will initiate a scan of any new alarms generated by the IP500 V2.

Fijowave				4
How to Access the Portal	User Manual Administrator Manual		Paul	
Home > Remote Access >	Devices > 38b74d00629b-2			
Device 38b74d00	629b <b>-</b> 2	↗ Browse Detect AM&S	Network health	Change History
Device name	IP500V2		Device tickets	
Local IP	10.10.40.20		Open Confir 3 0	rmed Resolved 7
Monitored			Hazard notes	+
Network Health enabled	0		No active hazard notes	
Customer site			Status	
Fijoport	38b74d00629b		Online	0
Customer ID	Avaya00629b		Connected	•
Customer name	Avaya Devconnect		Mapped IP	10.190.40.2



Something like the following should be displayed, showing that the data is being collected.

The message at the top of the screen shows that the am&s probe was successful. There are **3** tickets that have been opened showing that three new alarms are present. Clicking on **Open**, highlighted below will open a new window and display these three tickets.

am&s probe: successful		
evice 38b74d0	0629b-2	Prowse         Detect         AM&S         Network health         Change         History
Device name	IP500V2	Device tickets
Local IP	10.10.40.20	Open Confirmed Resolved 3 0 7
Nonitored	•	Hazard notes
Network Health enabled	0	
Customer site		Status
Fijoport	38b74d00629b	Online
Customer ID	Avaya00629b	Connected
Customer name	Avaya Devconnect	Mapped IP 10.190.40.2

These three tickets are shown below, the middle ticket **4480** was chosen, clicking on this will open the ticket as shown on the next page.

Ticl	kets			Monitor	Fijoport dashbo	ard	Device dashboard	Statistics		
3 results 11 total 38b74d00629b-2 Q Filter V										~
	Created V	Ticket ID	Queue	Content type	Content object	Customer ID	Customer name	Status	Modified	
	Feb. 14, 2020, 9:42 a.m.	4483	Advanced Monitoring & Security	device	38b74d00629b-2	Avaya00629b	Avaya Devconnect	Open	Feb. 14, 2020, 9:42 a.m.	
	Feb. 13, 2020, 2:11 p.m.	4480	Network health	device	38b74d00629b-2	Avaya00829b	Avaya Devconnect	Open	Feb. 13, 2020, 2:11 p.m.	
	Feb. 13, 2020, 2:11 p.m.	4479	Service	device	38b74d00629b-2	Avaya00629b	Avaya Devconnect	Open	Feb. 13, 2020, 2:11 p.m.	
3 1	results 11 total									

PG; Reviewed: SPOC 4/10/2020 Solution & Interoperability Test Lab Application Notes ©2020 Avaya Inc. All Rights Reserved. 22 of 34 FijoportAMIPO11 The ticket information shows that a **TrunkGroupAlarm** was created. There are no more details shown until the user logs into the IP Office in question to investigate the problem. This is shown in **Section 7.4**.

Ticket 4480					Change	History
Queue	Network health					
Content type	device					
Content object	38b74d00629b-2					
Alert type	Network health   Trur	nkGroupAlarm				
Status	Open					
Description	None					
Created	Feb. 13, 2020, 2:11 p. Date this ticket was first c					
Modified	Feb. 13, 2020, 2:11 p. Date this ticket was most					
Timeline						
Date	User	Status	Comment			
Feb. 13, 2020, 2:11 p.m.	system	Open	-			

### 7.3. Verify connection to Fijoport

Open a URL to **web.fijoport.com** as shown below, enter the appropriate credentials and click on **Log in**.

$\leftrightarrow$ $\rightarrow$ C $($ web.fijoport.com/admin/logi	n/?next=/admin/portal/device/38b74d00629b-2/	\$	07	Θ	:
Fijowave	E	English (en)			J.
How to Access the Portal					
	Fijowave Portal Hosting				
	Log in				
	Username				
	avaya				
	Password				
					ļ
	Log in				

Click on Fijoports.

How to Access the Portal User Man	nual Administrator Manual	
Home		
Fijowave Portal Hosting	g	
Remote Access	Dashboards	
Devices	> Monitor	
Fijoports	> Network health	
Logs	> Fijoport dashboard	
Serial devices	> Device dashboard	
Sessions	Status	
Tickets	Fijowave Portal: 3.5	
	Maintenance mode: no	
	Platform status: Healthy	

Click on the appropriate **Fijoport ID**. For compliance testing only one Fijoport was used, so there is only one choice displayed. On sites where many Fijoports are in use, click on the Fijoport ID to be accessed.

								David State		_
low to Access the Po	rtal User Manual <i>I</i>	Administrator Manual						Paul		
Iome > Remote Acc	ess > Fijoports									
ijoports				(1		Q		Tickets 1	fickets sumr	mary
Fijoport ID 3 A	Customer ID 2 A	Customer name 1 A	Commissioned	Decommissioned	Monitored	NH	Online	Active sessions	License	Version
38b74d00629b	Avaya00629b	Avaya Devconnect	•	0	•	0	•	0	Hardware	1.1.13-2

Click on **Connect** at the top.

ome > Remote Acces	S > Fijoports > 38b74d00629b			
ijoport 38b74	d00629b	LAN Reset Network health	Change His	story
Customer ID	Avaya00629b		Fijoport tickets	
Customer name	Avaya Devconnect		Open Confirmed 0 0	Resolve 1
Commissioned	0		Hazard notes	
Decommissioned	0			
Monitored	o			
Network Health enabled	0			

The message displayed at the top shows that the VPN as connected successfully. The **Mapped IP** will be required in order to connect to each of the Server Edition and the IP500 V2 devices.

How to Access the P	ortal User Manual	Administrator Manua						Paul			
Home > Remote Ac	cess > Fijoports > 3	8b74d00629b									
RAS on: command	completed successfully	Mapped range: 10.19	0.40.0/24. Support range: 1	10.90.66.27. Race ra	ange: 10.90.66.27.						
Fijoport 38b7	74d00629b				Diso	onnect LAN	Reset Networ	k health Change	History		
Customer ID	Avaya00629b					Fijoport ticke		Device tickets			
Customer name	Avaya Devcor	inect				Open Co 0 0	onfirmed Resolved 1	Open Confirm 3 0	ed Resolved 7		
Commissioned	0		Hazard notes +								
Decommissioned	0		No active hazar	a notes							
Monitored	0										
Network Health enable	ed 📀										
Status						RAS					
Online	0					Connected	٢				
Public IP	165.225.196.9	7				Fijoport mapped	10.190.40	).254			
License	Hardware					Active sessions	1				
Devices											
Device	Device name	Local IP	Device model	Monitored	Network Health	Online	Mapped IP	Actions			
Device 1	Server Edition	10.10.40.25	Avaya IPO SE	0	8	0	10.190.1 .1	Browse			
Device 2	IP500V2	10.10.40.20	Avaya IPO 500 V2	•	0	0	10.190.1 .2	Browse			
Device 3		-	-	0	0	0					

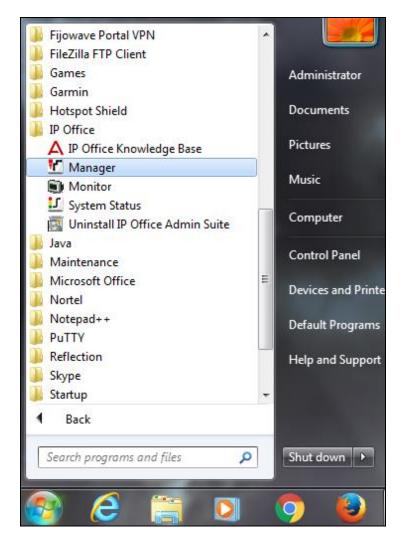
Using the **Mapped IP** from above the IP Office Manager and System Monitor can be used to access the IP office using these IP addresses to connect to each device, see **Section 7.4**.

### 7.4. Verify Remote Access IP Office connections

Once the secure tunnel is established to the IP Office, the IP Office clients can be used to connect to each of the Server Edition and the IP500 V2. To verify that Fijoport Remote Access is fully working, from the PC running the Fijowave Portal VPN, open the three IP Office applications, IP Office Manager, Monitor and System Status.

#### 7.4.1. Verify IP Office Manager

Open the IP Office Manager either from the desktop shortcut or from **Programs**  $\rightarrow$  **IP Office** as shown below.



The **Unit Broadcast Address** will need to be set to that of the **Mapped IP** found in **Section 7.3**. The mapped IP address is entered, and **Refresh** is pressed and that should bring up the IP Office unit.

🖌 Ava	iya IP	Office Ma	nager											
File	Edi	t View	Tools	Help										
			-		•		- 🧕 🎽 -	J 🔺 🔜	E 🔺 🖂 🛎 .	₹				
	ļ	P Offic	es										 	
- 8	BO	😭 Select	IP Office											X
. See	Ор	Name	IP Address	; Туре	Version Edition	n								
		TCP Dise	overy Pro	aress										
			adcast Ad	dress		_							 	
		10.190.1	1	•	Refresh							OK	Cancel	
						_								

Select the IP Office unit and click on **OK** at the bottom of the screen and this will bring up another smaller window where the IP Office username and password are entered and again **OK** is pressed on the smaller window.

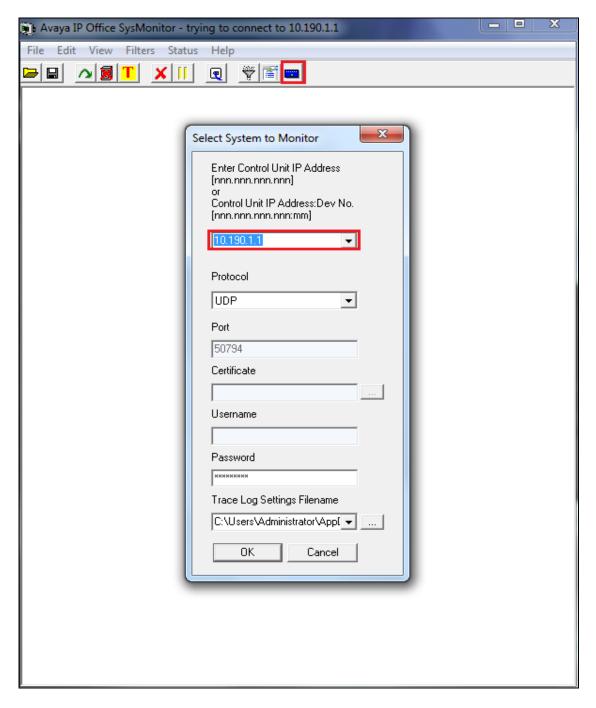
Select IP Office		
Name IP Address Type Server Edition Expansion 9.1	e       Version       Edition         0 V2       9.1.6.0 build 153       Server (Expansion)         Configuration Service User Login         IP       Office :       IPO91(PG)V2Exp (Expansion System - IP 500 V2)         Service User Name       Administrator         Service User Password       OK       Cancel	
TCP Discovery Progress Unit/Broadcast Address 10.1901.1   Refresh		OK Cancel

Solution & Interoperability Test Lab Application Notes ©2020 Avaya Inc. All Rights Reserved. The IP Office Manager screen should be opened and should appear something like shown below where changed can be made and saved (not shown).

#### 7.4.2. Verify IP Office Monitor

IP Office Monitor is accessed in the same was as IP Office Manager is from **Section 7.4.1**. Once opened the connection information must be changed to reflect the mapped IP address instead of the real IP Office address.

Click on the connection icon highlighted at the top of the screen and enter the mapped IP address for the IP Office as per **Section 7.3**. Click on OK and the monitor should start correctly.



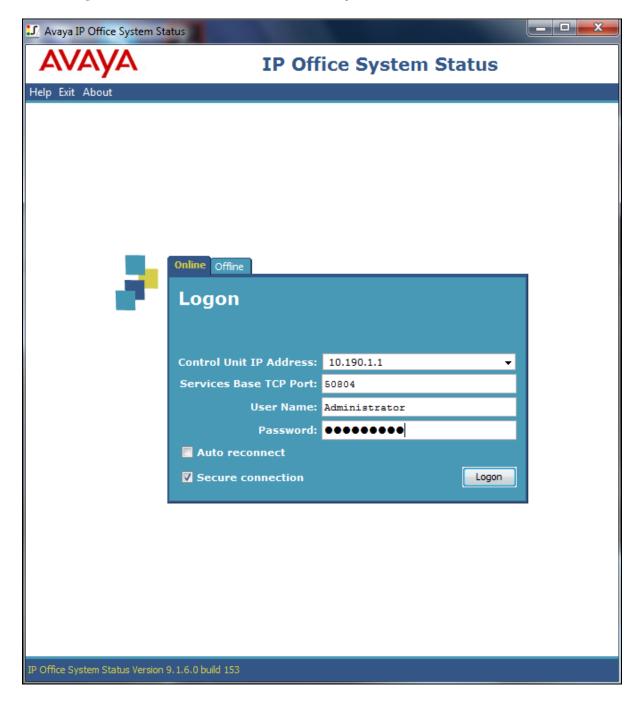
The monitor should now display information on IP Office correctly.

🚁 Avaya IP Office SysMonitor - Monitoring 10.190.1.1 (IPO91(PG)V2Exp (Server Edition 💶 💷 🗮 🌌
File Edit View Filters Status Help
******** SysMonitor v9.1.6.0 build 153 ********
********** contact made with :10.190.1.1 at 14:30:56 13/4/2016 **********
********* System (10.10.40.20) has been up and running for 6days, 5hrs, 57mins a:
******** Warning: TEXT File Logging selected *********
<pre>******** Warning: TEXT Logging to C:\Program Files (x86)\Avaya\IP Office\Monito 539848974mS PRN: Monitor Started IP=10.10.40.202 S-Edition Expansion (V2) 9.1.6.         (Supports Unicode, System Locale is default) 539848975mS PRN: LAW=A PRI=2, BRI=2, ALOG=4, VCOMP=32, MDM=0, WAN=0, MODU=0 LANM 539851975mS PRN: +++ START OF ALARM LOG DUMP +++ 539851975mS PRN: ALARM: 16/02/2015 14:37:18 IP 500 V2 9.1.0.0 build 437 <log +++="" ++++<="" 539851975ms="" 539852975ms="" alarm="" client="" client:="" dump="" end="" ipaddress="10.10.40.202" lastreceived="53984" log="" monitor="" of="" pre="" prn:="" s="" start="" udp="" udpport="54690"></log></pre>
539860070mS SIP Rx: UDP 10.10.40.155:5071 -> 10.10.40.20:5060 REGISTER sip:devconnect.local:5060 SIP/2.0 Via: SIP/2.0/UDP 10.10.40.155:5071;branch=z9hG4bKe2556882579b Max-Forwards: 70 From: <sip:5221@devconnect.local>;tag=3a01f07a5c To: <sip:5221@devconnect.local> Call-ID: 37984b8966da6387 CSeq: 28262 REGISTER Accept-Encoding: nt-im-1.0 Allow-Events: vq-rtcpxr,dialog Contact: <sip:5221@10.10.40.155:5071> Expires: 300 Supported: path User-Agent: Avaya IP Phone 1140E (SIP1140e.04.03.12.00) x-nt-GUID: 0024B5F6EA0B Allow: INVITE, ACK, OPTIONS, CANCEL, BYE, REFER, INFO, MESSAG Content-Length: 0</sip:5221@10.10.40.155:5071></sip:5221@devconnect.local></sip:5221@devconnect.local>
539860072mS SIP Reg/Opt Rx: phone
REGISTER sip:devconnect.local:5060 SIP/2.0 Via: SIP/2.0/UDP 10.10.40.155:5071;branch=z9hG4bKe2556882579b Max-Forwards: 70 From: <sip:5221@devconnect.local>:tag=3a01f07a5c</sip:5221@devconnect.local>

#### 7.4.3. Verify IP Office System Status

IP Office System Status is accessed in the same was as IP Office Manager is from **Section 7.4.1**. Once opened the connection information must be changed to reflect the mapped IP address instead of the real IP Office address.

Enter the mapped IP address for the IP Office as per **Section 7.3**, enter the log in credentials and click on **Logon** and the monitor should start correctly.



The IP Office System Status should open correctly and display the correct IP Office information as shown below.

lelp Snapshot LogOff Exit	About								
System									
Alarms (4)					Exte	nsion Status	6		
Configuration (0) Service (0)	Extensi	on Number			5201				
🗉 🎂 Trunks (4)	Slot:				1				
Link (0)	Port:				1				
Call Quality of Servic	Active L	ocation:			None				
🗉 Security (0)	Telepho	ne Type:			9408				
Extensions (19)	Current	Current User Extension Number:			5201				
5201	Current	User Nam	e:		5201				
5202 5203	Forwarding:				Forward On No Answer 955201 Forward On Busy 955201				
5204	Twinnin	Twinning:			Off				
5205		Do Not Disturb:			Off				
5206		Message Waiting:			off				
5207 5208	-	Number of New Messages:			011				
5211		Phone Manager Type:			None				
5212		Packet Loss Fraction:						Connectio	n Type:
5213	Jitter:							Codec:	
5214	Round Trip Delay:								ledia Address
5215	- Countra i	mp beidy.						Remote P	
5216	Button	Button	Call Ref	Current		Time in State		Direction	Other Pa
5217 5218	Number	Туре		State			Number or		
5210	1	CA		Idle		00:01:23			
5250	2	CA		Idle	2				
5251									
Trunks (12)									
Active Calls									
Resources									
Voicemail IP Networking									
Locations									
Locations									
	•				1	11			

# 8. Conclusion

These Application Notes describe the configuration steps required for provisioning Fijowave's Fijoport Advanced Monitoring to interoperate with Avaya IP Office IP500V2 standalone R11.0. It has been verified that the Fijoport solution allows both the monitoring of the IP Office IP500 V2 and a secure connection to IP Office to allows the end user to connect to IP Office using IP Office Manager, IP Office Monitor tool and IP Office System Status tools. Please refer to **Section 2.2** for test results and observations.

# 9. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at <u>http://support.avaya.com</u> where the following documents can be obtained.

Product documentation for Avaya products may be found at http://support.avaya.com.

- [1] Administering Avaya IP Office<sup>TM</sup> Platform with Manager, Release 11
- [2] Avaya IP Office<sup>TM</sup> Platform Documentation Catalog Release 11
- [3] Avaya IP Office<sup>™</sup> Platform 11 Deploying Avaya IP Office<sup>™</sup> Platform Servers as Virtual Machines

Technical support for the Fijowave Fijoport Remote Access product can be obtained as follows:

- Web: <u>http://www.fijowave.com</u>
- Email: <u>support@fijowave.com</u>
- Help desk: +353 1 525 3072

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