

# **InDECT**

## Quick Setup Guide

Version 1.2

For InDECT 1.3.1



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## Revision History

Version	Author	Date	Changes
1.0	Stewart Hayles	01/09/2019	Initial release of InDECT v1.3.1
1.1	Nigel Witts	16/09/2019	Requirements - Add compatibility with InApp Manager v1.6.3 Creating a new system configuration, Country – Add note to set the Country code within the PBX first
1.2	Adam Page	29/10/2019	Add CP20 support and http notes

# Introduction

InDECT is a toolset that can be integrated to either NEC’s UNIVERGE SV9100 or SL2100 communication servers. It allows for easy installation, deployment and maintenance of a small scale IP DECT system with no additional IT servers required.

InDECT minimises the installation effort by automatically retrieving settings such as regional, tone plan, SIP settings etc. from the PBX configuration, whilst enabling access points to automatically download configuration files from the on-board file server with minimal intervention by the installation engineer to the end users network.

The user interface of InDECT consists of web pages that can be accessed by means of a web browser, so not requiring a dedicated PC configurator tool for installing or upgrading the system.

InDECT is part of the family of NEC’s easy to use ‘InApps’ range of applications and future versions will include additional functionality as the application is continually developed.

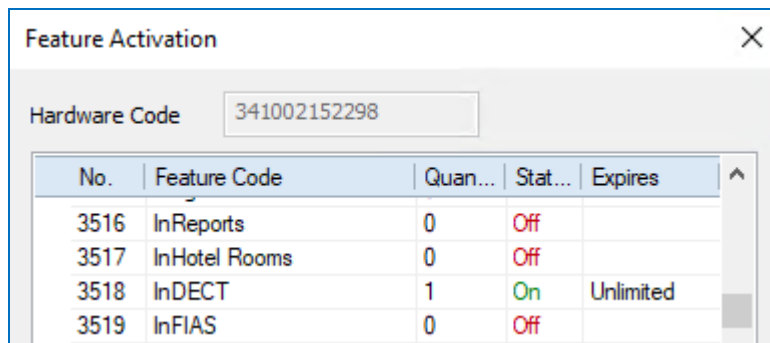
# Licensing

License Code 3518 is required to run InDECT on the SV9100 or SL2100 communication servers, it can also run if the 60 day license is enabled. The following LMS licenses are available for InDECT:

PBX	Part Number	Description
<b>SV9100</b>	BE118719	SV9100 OnBoard App. InDECT Lic.
<b>SL2100<sup>1</sup></b>	BE118720	SL2100 OnBoard App. InDECT Lic.

<sup>1</sup>The SDVMS BE116502 or SDVML BE116503 InMail memory cards can also be used. The Gx66 memory card is configured by Prophix only if the system does not already have the SDVMS/L card added.

When the license is installed, it can be viewed through PC Pro in Feature > Activation or WebPro / TelPro.



## Requirements

It is NOT necessary for the PBX to be able to access the internet. As with other InApps, the InDECT application can only be accessed using the http protocol. **When using the SV9100 CP20 Processor http is disabled by default, you must enable this in *Quick Install + Cards + CCPU Settings + CCPU TCP Ports*, set the *WebPro TCP port number to 80* and ensure that *http NOT https link* is used.** The supported platforms and minimum versions of system software required to run InDECT are as follows:

PBX	System Software Version
SV9100 CP20	10.00.51 or above
SV9100	8.50.00 or above
SL2100	1.50.00 or above

The SL2100 must have a memory card installed to run InDECT for storage of the application files. If an SDVMS BE116502 or SDVML BE116503 InMail memory card is installed, then this can be used. Otherwise a Gx66 memory card is configured by Prophix if the system does not already have the SDVMS/L card added.

InApp Manager	Version
SL2100 & SV9100	1.6.3 or above

It is recommended that latest InApp Manager is installed prior to the installation of InDECT onto the PBX. All InApps and InApp Manager are available from the SL2100 & SV9100 Communication Platform areas of the Software Database on BusinessNet.

<http://businessnet.nec-enterprise.com/...> Communication Platforms

## Capacities

InDECT can support an IP DECT system up to a maximum capacity of 32 x AP400 access points. For systems up to 10 access points the AP400S can be used, while for larger systems (11-32 APs) the AP400C or AP400E is required.

Up to 64 handsets can be used with an InDECT system, and supported devices include the following models:

G266/G277/G566/G577/G577h/I766

## Training/Documentation

InDECT is intended to be used by engineers with experience in the deployment of NEC IP DECT systems. CBT videos for the installation of InDECT and IP-DECT in general can be found on Businessnet.

Available InDECT documentation includes:

- InDECT Quick Installation Guide (this document)
- InDECT Additional Information Manual
- Site Survey Manual IP DECT

## Web Browsers

InDECT is accessed using a Web Browser. Internet Explorer 11, MS Edge, Firefox and Google Chrome are all supported.

## Network Requirements

InDECT AP400 DAPs only require a basic DHCP server to provision them with a minimum IP configuration of an IP Address, Subnet Mask, and optional Default Gateway. They will then automatically locate the PBX fileserver on the local network when running, and download the InDECT configuration files from here.

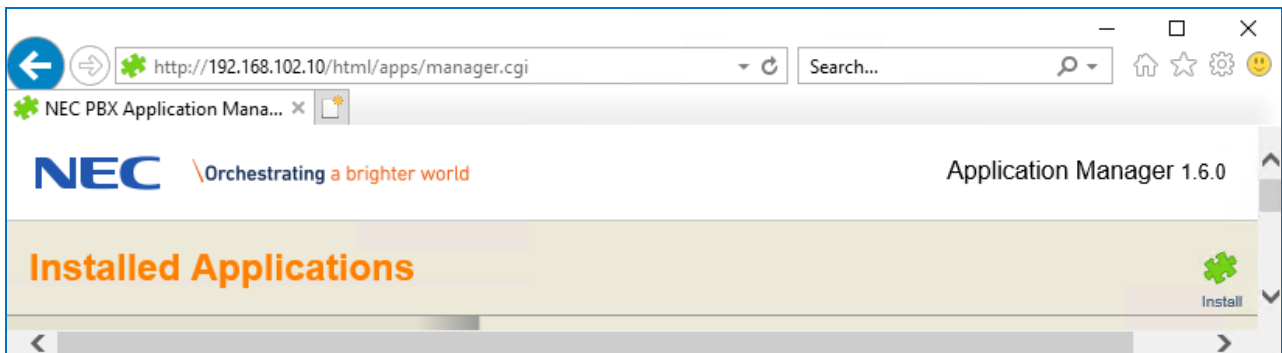
# InDECT installation procedure

InDECT is installed using the application manager on the PBX, which can be accessed via the url:

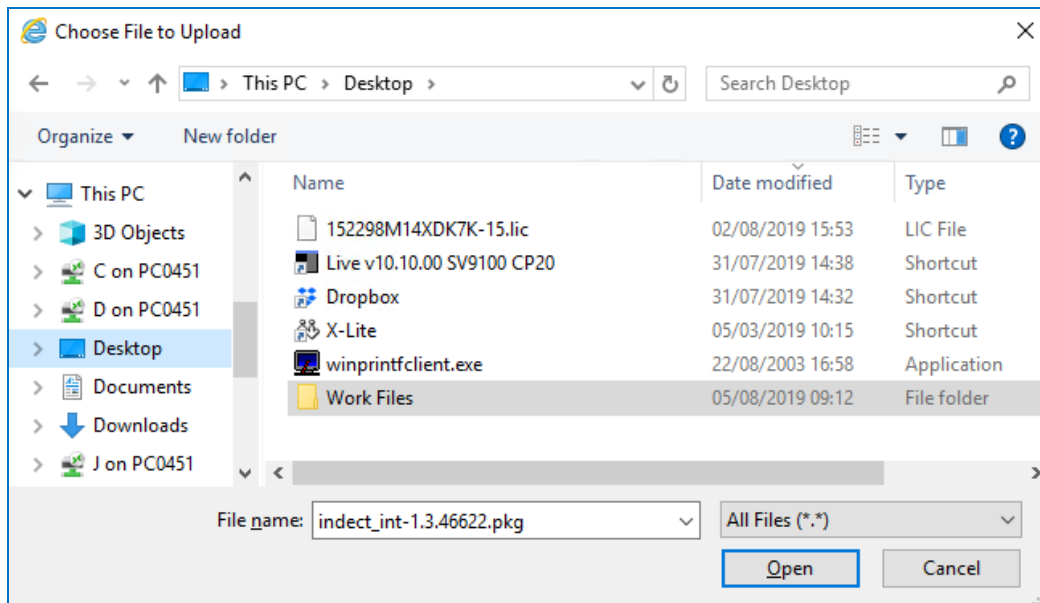
<http://IP Address of the PBX/html/apps/manager.cgi> , for example <http://192.168.102.10/html/apps/manager.cgi>

You will need to logon to the application manager with an installer account for the PBX. Once logged in, you can


begin the installation process by pressing the **Install** button  in the top right hand corner.

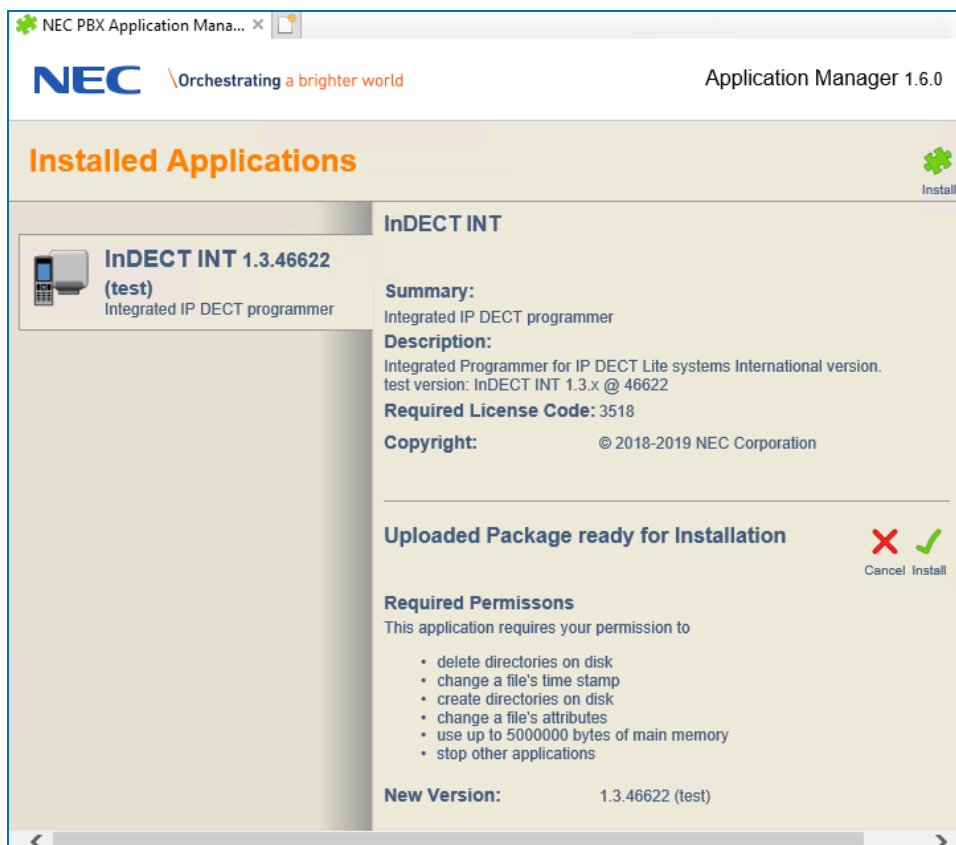


Browse to the required InDECT pkg installation file and press **Open** to select it.



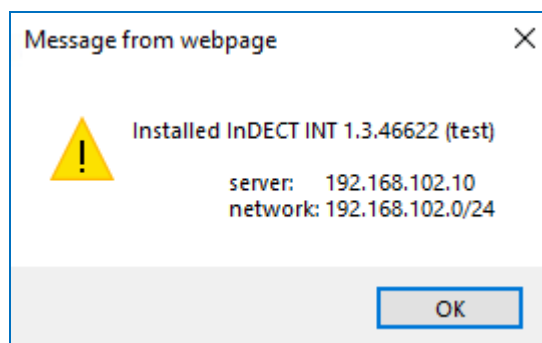
A preview of the application about to be installed will be displayed in the lower half of the window, press the green


**Tick button**  **Install** to proceed with the install.



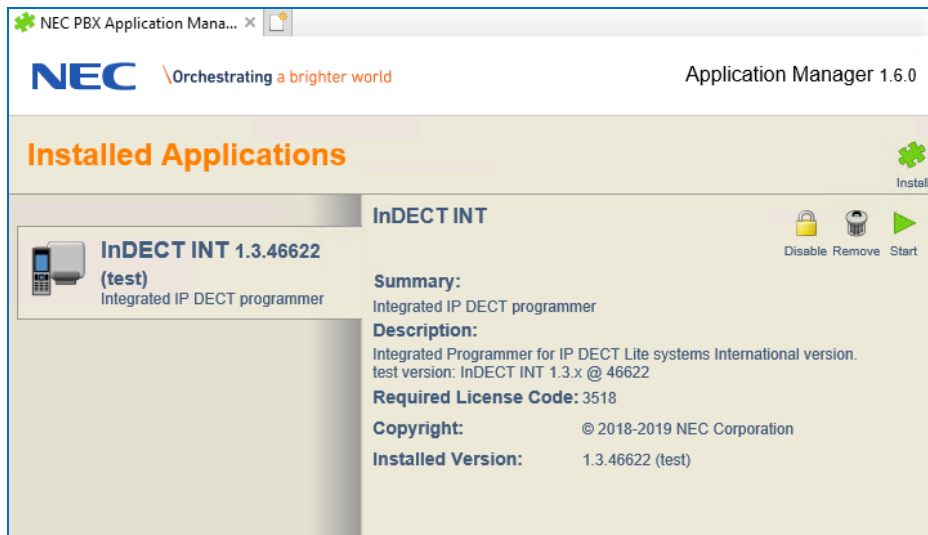
The installation process can take around 1 minute to complete. Once installed, you may see a message window showing the network IP configuration of the PBX.

Press the **OK** button to continue.



When the install has completed successfully, press on the **Start** button , this will start the InDECT services.



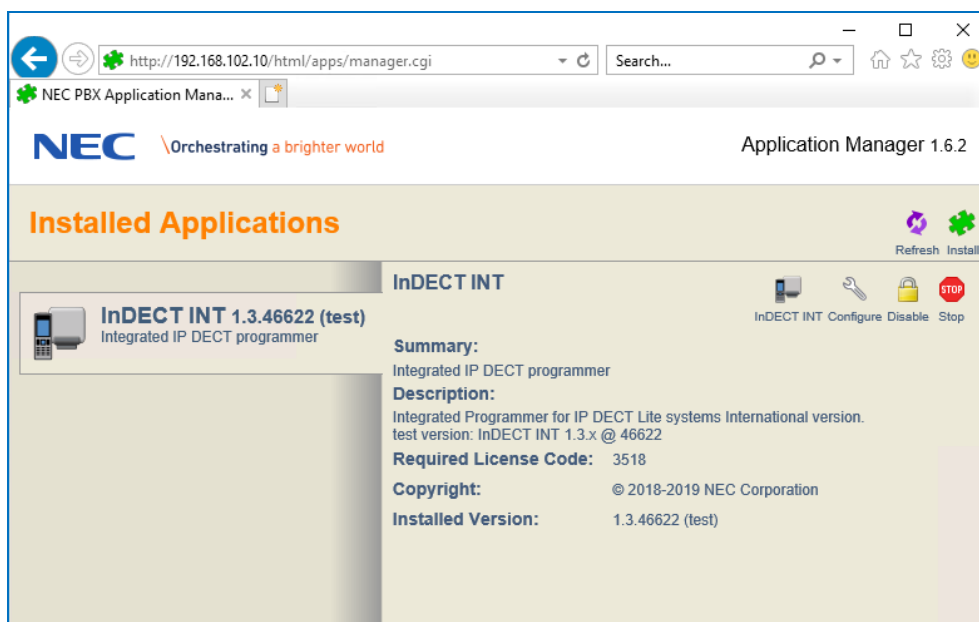


After InDECT is started, you can press the red **Stop** button to stop the application running on the PBX at any time.



You will also now see the **Disable** button, which if pressed won't stop the InDECT application if currently running, but will prevent it from automatically starting if the PBX is rebooted.

If you wish to have the application run automatically when a reboot of the PBX occurs, then press the **Enable** button



InDECT is now installed and ready to be configured.

# Logon to InDECT

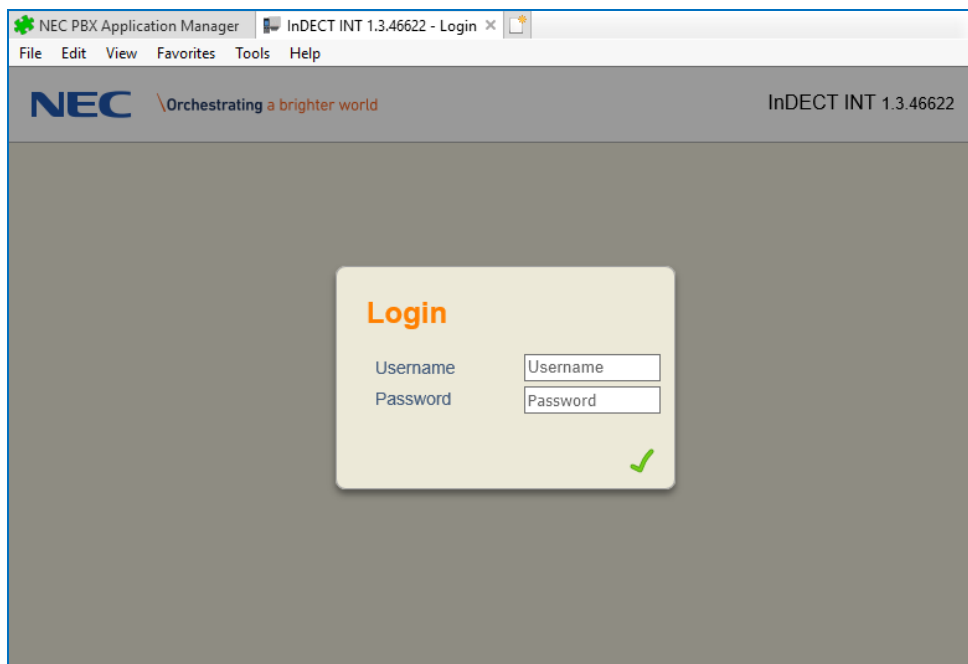


After InDECT is installed and started, you can press either the **InDECT INT** button or **Configure** button

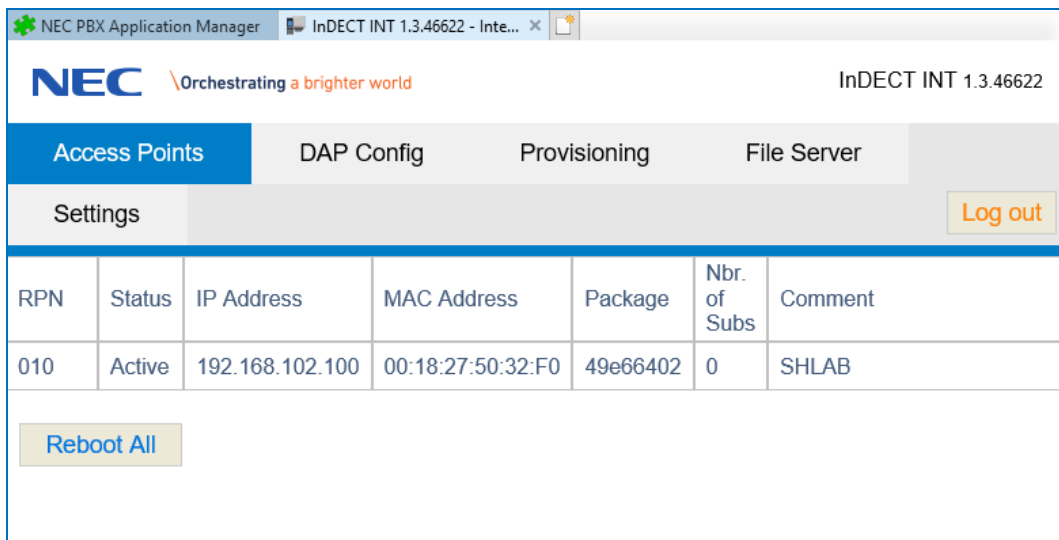


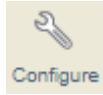
to open the InDECT interface.

The default username and password for logging on is tech / 12345678

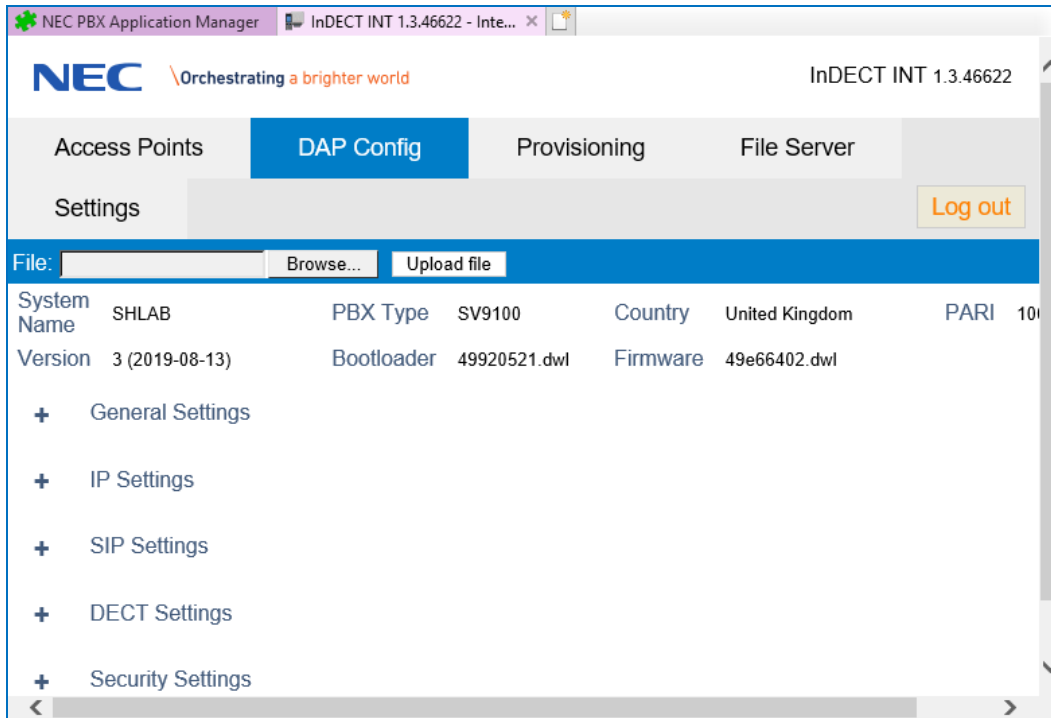


If you logon using the **InDECT INT** button, it will take you to the **Access Points** screen and give you **read only** visibility of the InDECT configuration along with access to the **DAP Config**, **Provisioning**, and **File Server** screens.





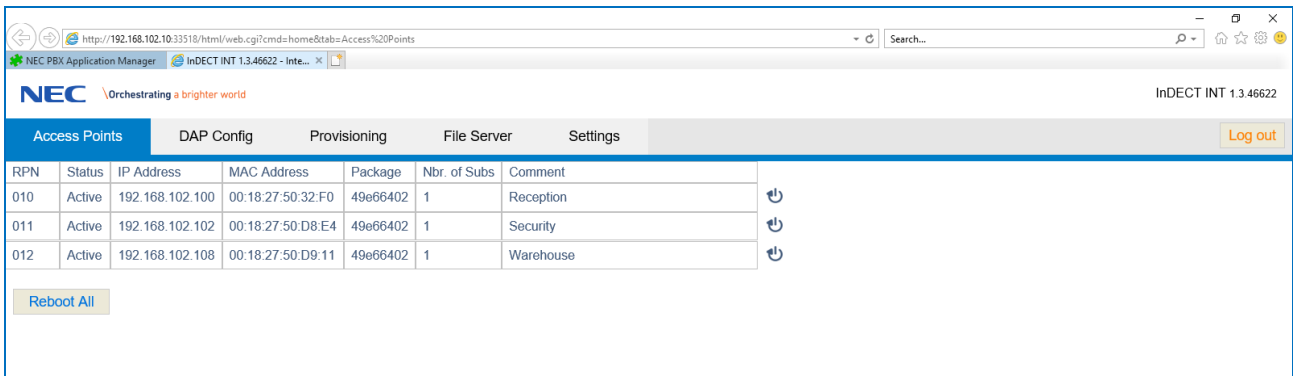
Pressing the **Configure** button takes you to the **DAP Config** screen, which can be used to create a new system configuration or edit an existing system if already found on the PBX. This is where you will normally start with a new installation.



# Overview of the InDECT GUI

## Access Points Screen



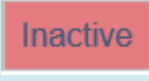
The **Access Points** screen will list details of DAPs detected by InDECT on the PBX network. You can see details about each DAP such as RPN number, allocated IP address from DHCP, MAC address, firmware package installed, and number of handset subscriptions.




On the **Access Points** screen you can perform the following functions.

Functions	Icon	Description
<b>Reboot</b>		Reboot an individual DAP
<b>Add DAP</b>		Add a newly detected DAP on the network to the InDECT system configuration
<b>Remove DAP</b>		Remove a non-operational DAP from the InDECT system.
<b>Reboot All DAPS</b>		Reboot all 'Active' DAPs connected to the InDECT system.
<b>Edit RPN</b>	<b>010</b>	You can double click any 'Active' DAPs RPN number to edit the existing value.
<b>Edit Comment</b>	<b>Reception</b>	You can double click any 'Active' DAPs Comment field to add a description of the DAP or location where it is placed.

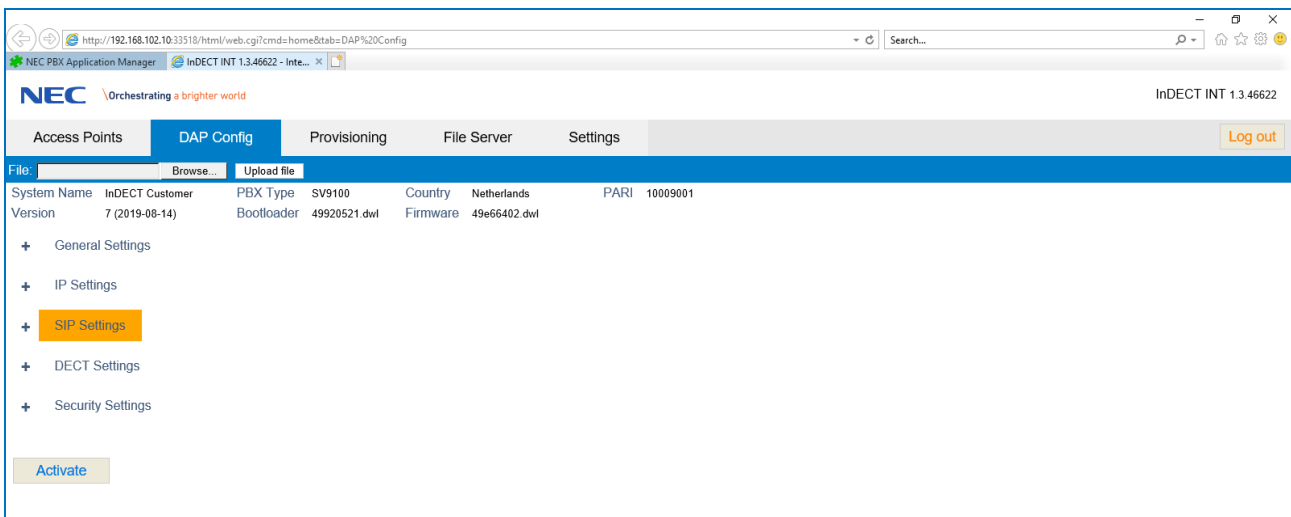
DAP status descriptions are detailed in the below table.

Status	Icon	Description
New		InDECT has detected a DAP on the PBX network but it is currently not part of the system configuration or usable.
Active		An active DAP has been added to the InDECT system configuration and running normally.
Inactive		A DAP that was added to the InDECT system configuration is no longer contactable on the PBX network.

A DAP that is in an Inactive state can be deleted from the system by pressing the **Remove DAP**  button that appears next to it.

## DAP Config Screen

The **DAP Config** screen displays the InDECT system configuration. This is split into 5 sub areas; General Settings, IP Settings, DECT Settings, and Security Settings. At the top of the screen you upload DAP bootloader/firmware packages and just below that area you see some static details about the system including the system name, version number of the configuration file on the PBX fileserver, PBX type used, current bootloader/firmware used by the DAPs, the country selection used for tones/radio frequency settings, and the InDECT PARI code.



Items highlighted in orange are changes in the PBX configuration that are detected as different from the settings currently in the InDECT configuration file. Changes can be updated to the InDECT configuration by pressing the **Activate** button. You can check for any changes when on this page at any time by pressing **F5**.

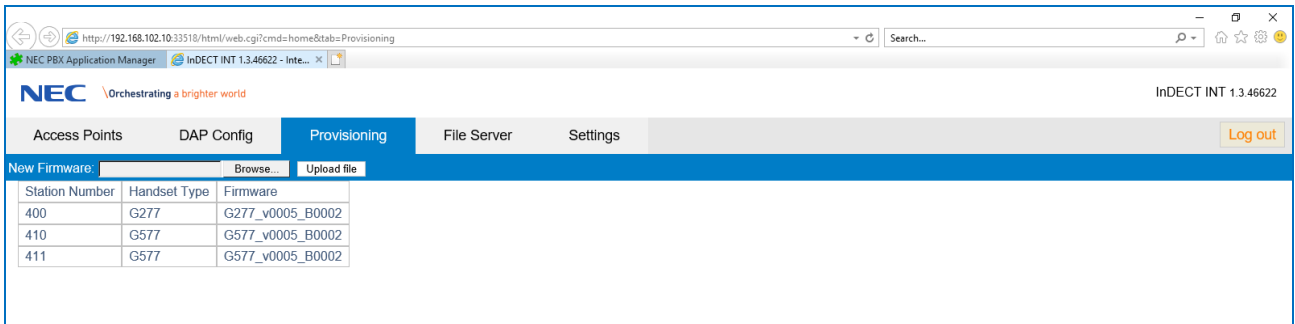


Items highlighted in blue are changes made to the InDECT DAP Config screen. Changes can be updated to the InDECT configuration by pressing the **Activate** button.

## DECT Settings

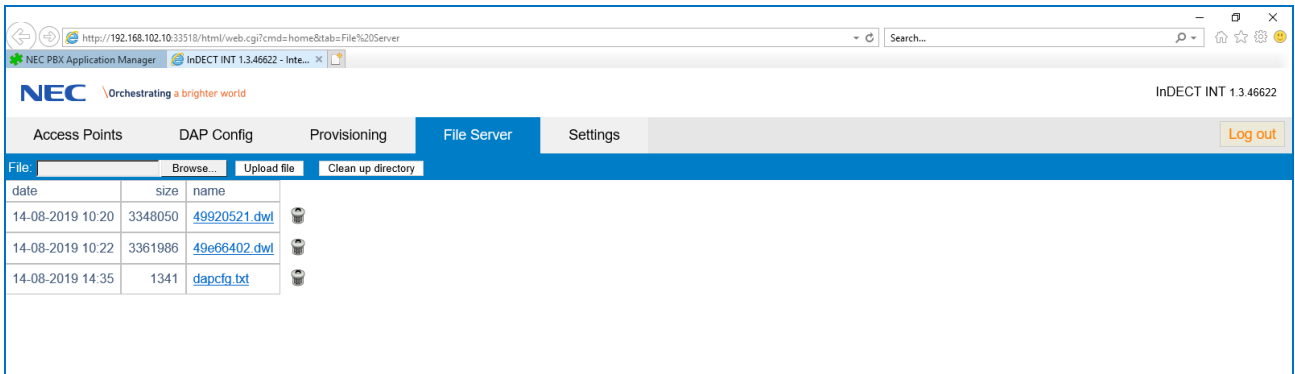
### Provisioning Screen

Once your InDECT system is up and running you can use the **Provisioning** screen to update the firmware on the handsets subscribed to the system. Further details on this feature can be found in the InDECT Additional Information Manual.




### File Server Screen

The **File Server** screen displays files stored on the PBX for the InDECT system to operate and the DAPs to download when connected to the system or rebooted for configuration changes.



Files can be downloaded to the local device by clicking on the name of the file.

You can delete any files by pressing the **Delete** button next to the file name.  If you delete the `dapcfg.txt` file this will delete the InDECT system configuration and you will be asked to create a new system again.

## Settings Screen

The **Settings** screen is used to check the InDECT HTTP provisioning IP address being used and also to allow for an external Syslog server to be configured for capturing SNMP logging information. You can also use the screen to create additional users with roles for accessing InDECT.

Further details on this feature can be found in the InDECT Additional Information Manual.

Interface IP address (HTTP)

Subnet prefix length (0..32)

Syslog Server IP address

Minimum diagnostic level

Simultaneous Handset Updates (1..64)

Multicast IP address (read only) 239.192.49.49

TCP port# for File Server 33518

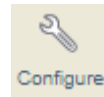
UDP port# for WIMFS (read only) 27999

UDP port# for Radio Services (read only) 3000

TCP port# for Handset update 3003

Username	Password	Characteristic
enduser	.....	VIEW <input type="text"/>
tech	.....	CONFIG <input type="text"/>

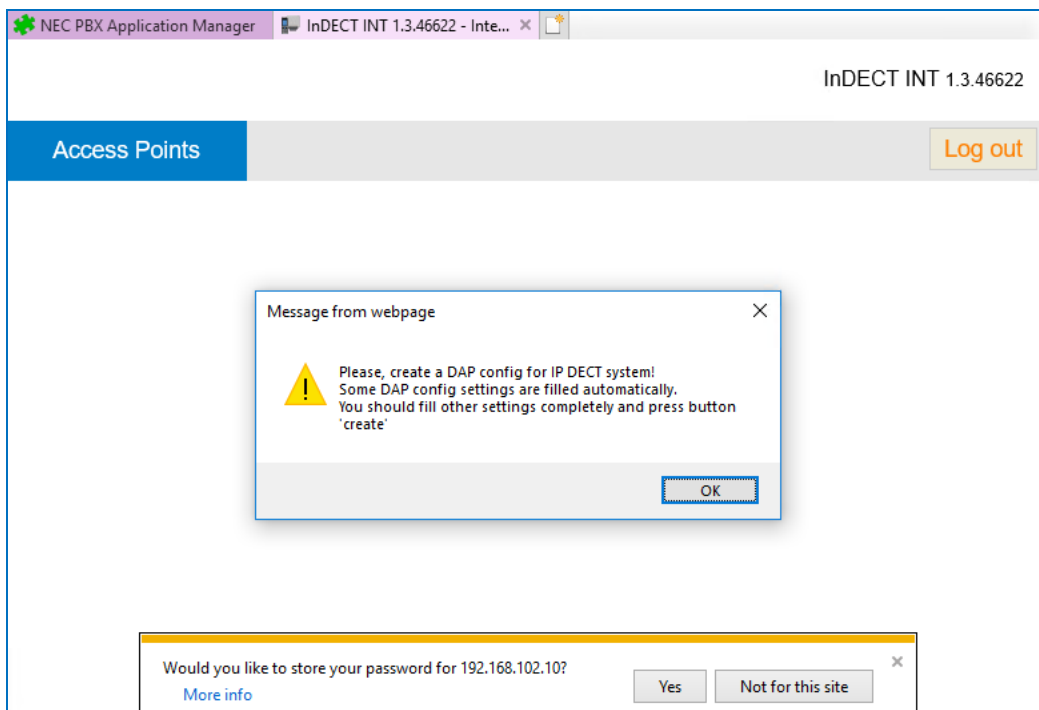
## Creating a new system configuration



From the InDECT application manager screen, press the **Configure** button .

InDECT will first check to see if a system configuration already exists on the PBX. If it finds one, it will open the “DAP Config” window and display the existing configuration.

When you first run InDECT, or when it does not find an existing configuration file on the PBX, you will see a notification to inform you that no system configuration has been found. Press the **OK** button to continue and create a new configuration.



You will next see the **New System Setup Wizard** displayed.



The screenshot shows the 'New System Setup Wizard' in the NEC PBX Application Manager. The interface includes a navigation menu with 'Access Points', 'DAP Config' (selected), 'Provisioning', and 'File Server'. A 'Log out' button is in the top right. Below the navigation is a 'File:' section with 'Browse...' and 'Upload file' buttons. The main form contains the following fields:

- System Name:
- PBX Type:
- PARI:
- Country:
- Bootloader:
- Firmware:
- ISIP on G566 I766 G577:
- Hotspot mode:

A 'Create' button is located at the bottom left of the form.

Please fill in the following settings.

#### System name

This can be any given name for your InDECT system configuration.

#### PBX Type

This will automatically be set by InDECT as either SV9100 or SL2100 depending on the PBX being used.

#### PARI

The PARI (Primary Access Rights Identifier) code is a unique 8 digit identifier for InDECT. This will be provided to you when your InDECT order is processed. You must ensure you use an InDECT PARI from NEC. PARI codes purchased for other IP DECT solutions including IP DECT Lite/Unlicensed DAP Controller/Full DAP Controller systems cannot be used in conjunction with InDECT.

#### Country

This determines the tone plan of the system and changes the DECT frequencies required for certain countries. This must be configured correctly for your installation location. If the country code is programmed in PRG10-02-01 of the PBX, InDECT can read this information and select the country automatically – **It is recommended that you set the Country Code in the PBX first, as InDECT must be configured to the same country as the PBX.**

*The supported countries for InDECT are: Algeria, Argentina, Australia, Austria, Bahrain, Belgium, Belorussia, Bolivia, Brazil, Bulgaria, Chad, Chile, China, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Egypt,*

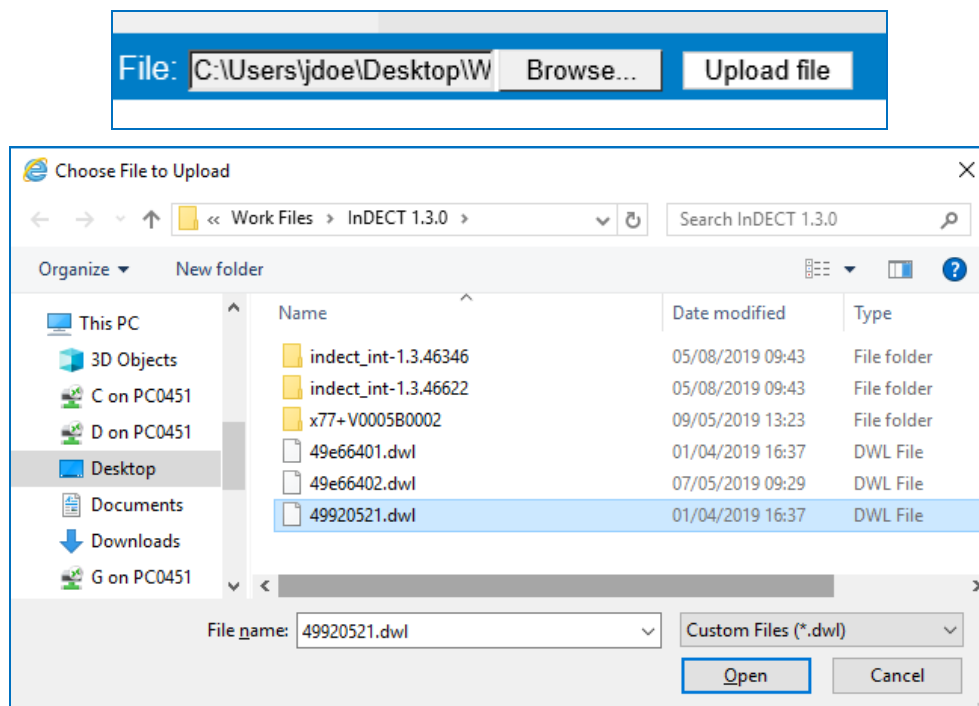
Estonia, Finland, France, Gabon, Germany, Greece, Guatemala, Haiti, Honduras, Hong Kong, Hungary, Iceland, India, Indonesia, Iran, Ireland, Israel, Italy, Japan, Kenya, Korea, Kuwait, Latvia, Libya, Lithuania, Luxembourg, Macedonia, Malaysia, Maldives, Malta, Mexico, Montenegro, Morocco, Myanmar, Nepal, Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Panama, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Saudi Arabia, Serbia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sudan, Sweden, Switzerland, Syria, Taiwan, Thailand, Tunisia, Turkey, UAE, Ukraine, United Kingdom, Uzbekistan, Venezuela, Vietnam, Yemen.

## Bootloader

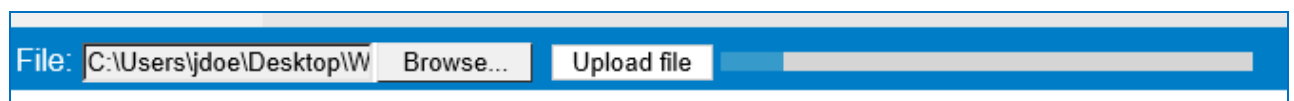
This is the loader package for the AP400 access point that controls its boot and start-up processes. Multiple files can be uploaded to the PBX, but this option will select the file to be used. It must be a minimum of **49920517.dwl** or newer for use with InDECT and the on-board file server.

Before you can select a boot loader file, you must first upload one to the PBX. Follow the steps below to do this:

- i. Use the **Browse** button to locate a valid AP400 bootloader file. Press the **Open** button to select the file.



- ii. Press the **Upload file** button to transfer to the InDECT file server. *Please wait for the progress bar to fill and the filename to appear in the Bootloader drop down list before continuing.*



- iii. Once the required file is uploaded, it can be selected using the drop down list control.



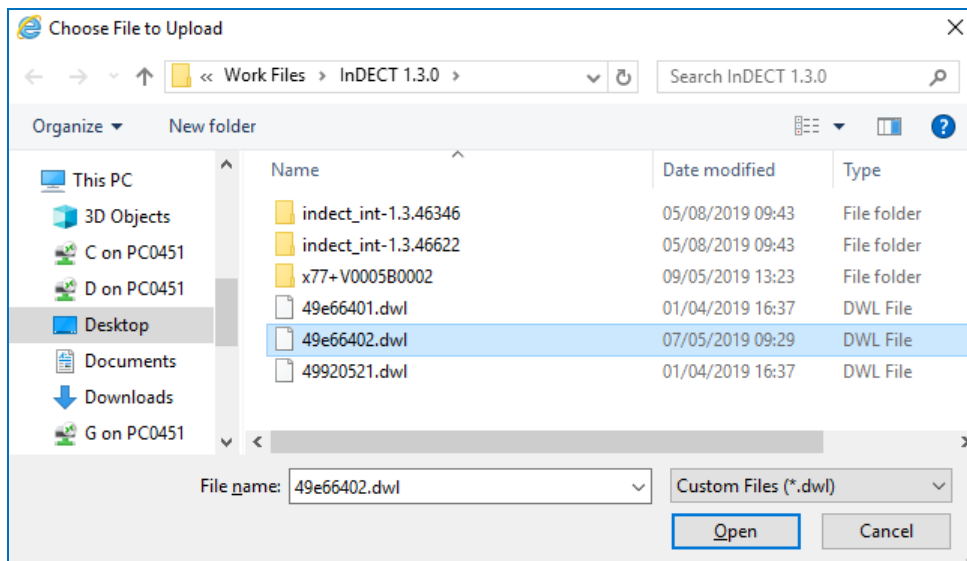
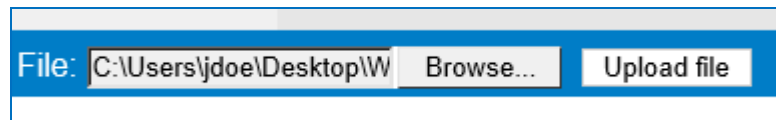
### Firmware

This is the firmware package for the AP400 access point that controls its operation whilst running. Multiple files can be uploaded to the PBX, but this option will select the file to be active. It must be a minimum of **49e66403.dwl** or newer for use with InDECT.

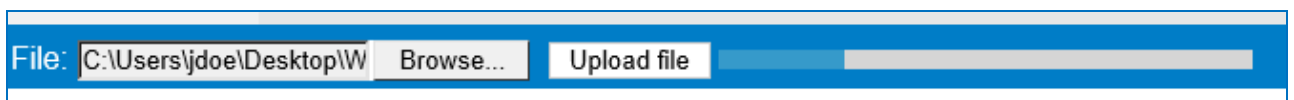
All InDECT firmware packages use the format *49exxxxx.dwl*.

Before you can select a firmware file, you must first upload one to the PBX. Follow the steps below to do this:

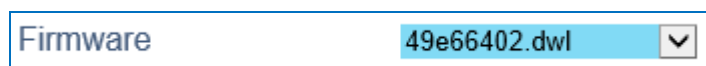
- i. Use the **Browse** button to locate a valid AP400 firmware file. Press the **Open** button to select the file.



- ii. Press the **Upload file** button to transfer to the InDECT file server. *Please wait for the progress bar to fill and the filename to appear in the Bootloader drop down list before continuing.*



- iii. Once the required file is uploaded, it can be selected using the drop down list control.

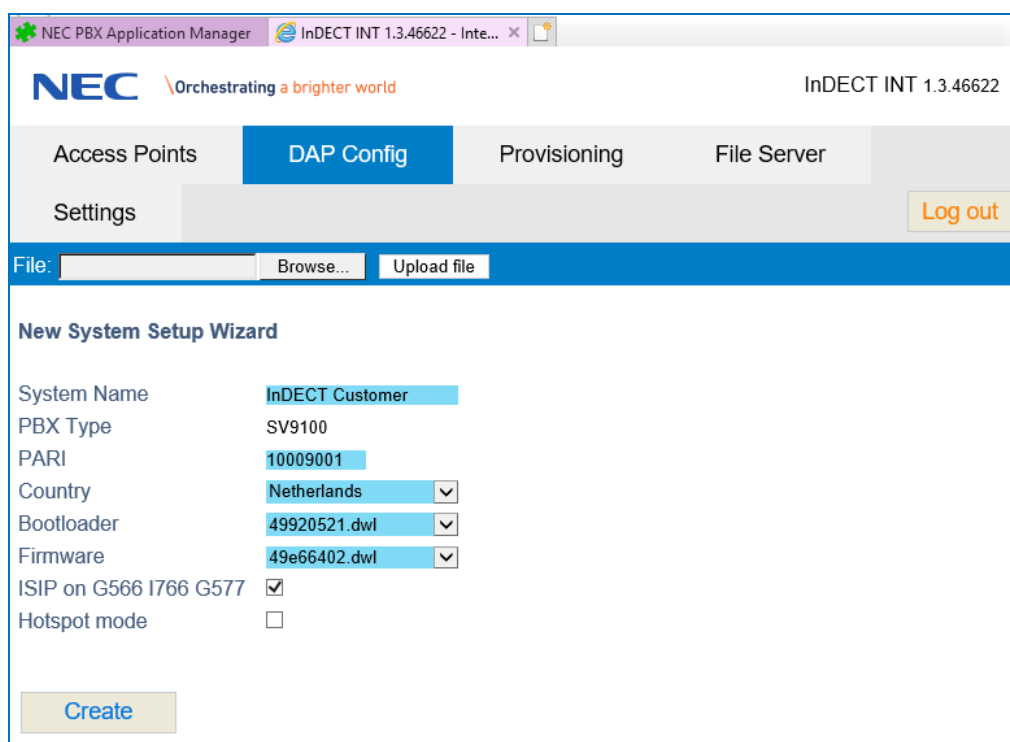


### iSIP on G566/I766/G577(h)

This checkbox is optional and can be enabled to use the NEC iSIP protocol on either the G566/I766/G577(h) handsets. If this item is not checked, then Standard SIP protocol is used.

### Hot Spot Mode

This checkbox is optional and can be enabled so that the individual DAPs do not synchronize over the air. Each individual DAP is a stand-alone “hot spot”.



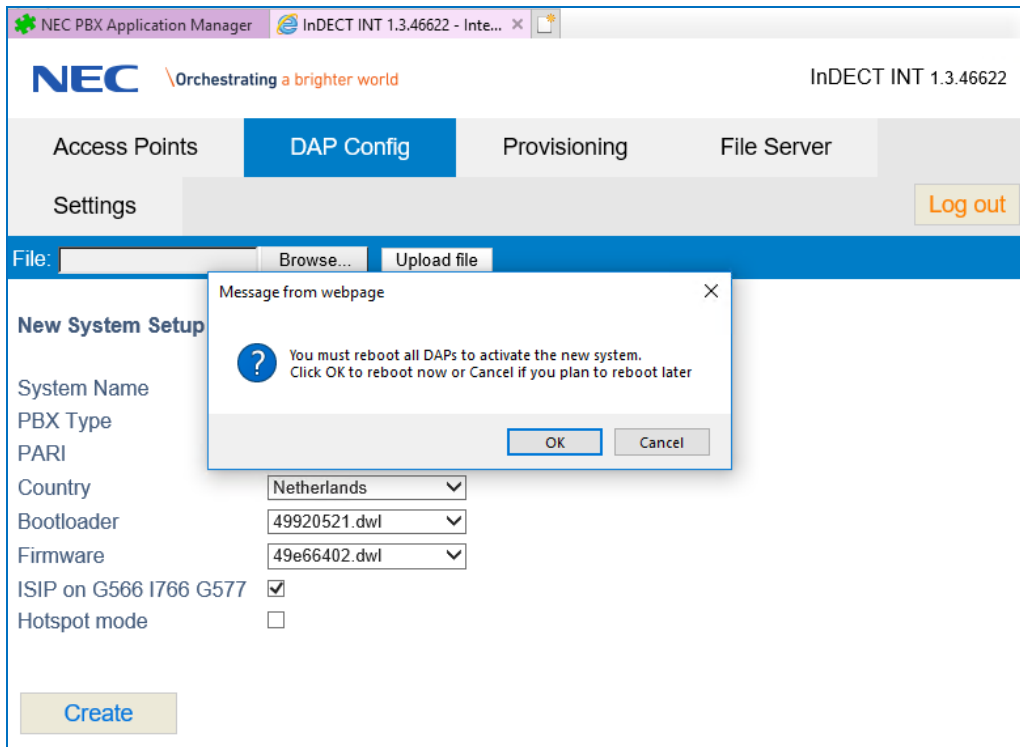
The screenshot shows the NEC PBX Application Manager web interface. The browser tabs include 'NEC PBX Application Manager' and 'InDECT INT 1.3.46622 - Inte...'. The page header features the NEC logo and the slogan 'Orchestrating a brighter world' on the left, and 'InDECT INT 1.3.46622' on the right. A navigation menu contains 'Access Points', 'DAP Config' (highlighted), 'Provisioning', and 'File Server'. Below the menu is a 'Settings' link and a 'Log out' button. A file upload section includes a 'File:' input field, a 'Browse...' button, and an 'Upload file' button. The main content area is titled 'New System Setup Wizard' and contains the following configuration fields:

System Name	InDECT Customer
PBX Type	SV9100
PARI	10009001
Country	Netherlands
Bootloader	49920521.dwl
Firmware	49e66402.dwl
iSIP on G566 I766 G577	<input checked="" type="checkbox"/>
Hotspot mode	<input type="checkbox"/>

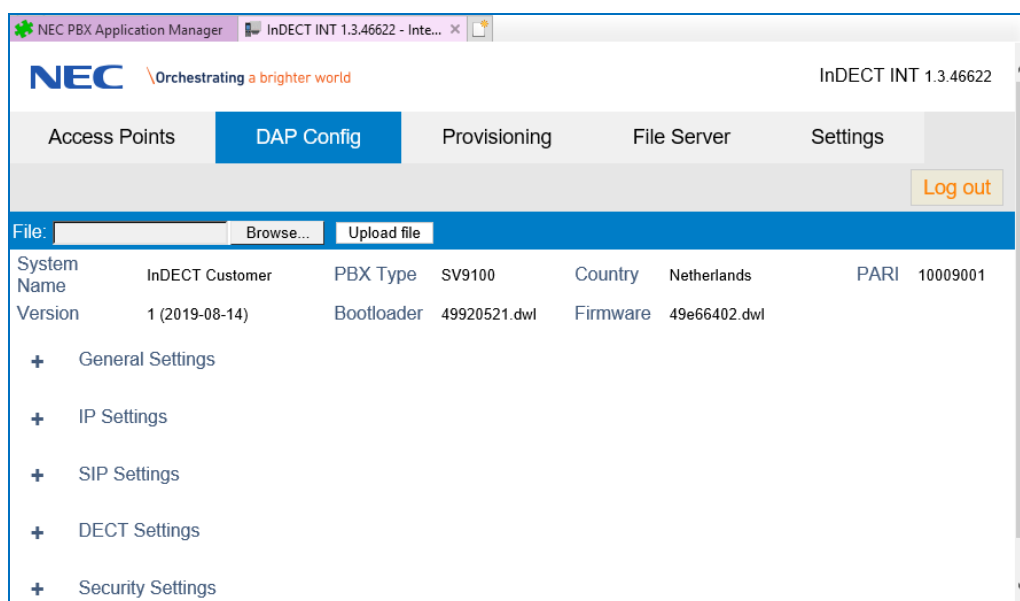
A 'Create' button is located at the bottom left of the wizard form.

Press the **Create** button when ready. This will create your system configuration and generate the new InDECT dapcfg.txt file on the PBX file server.

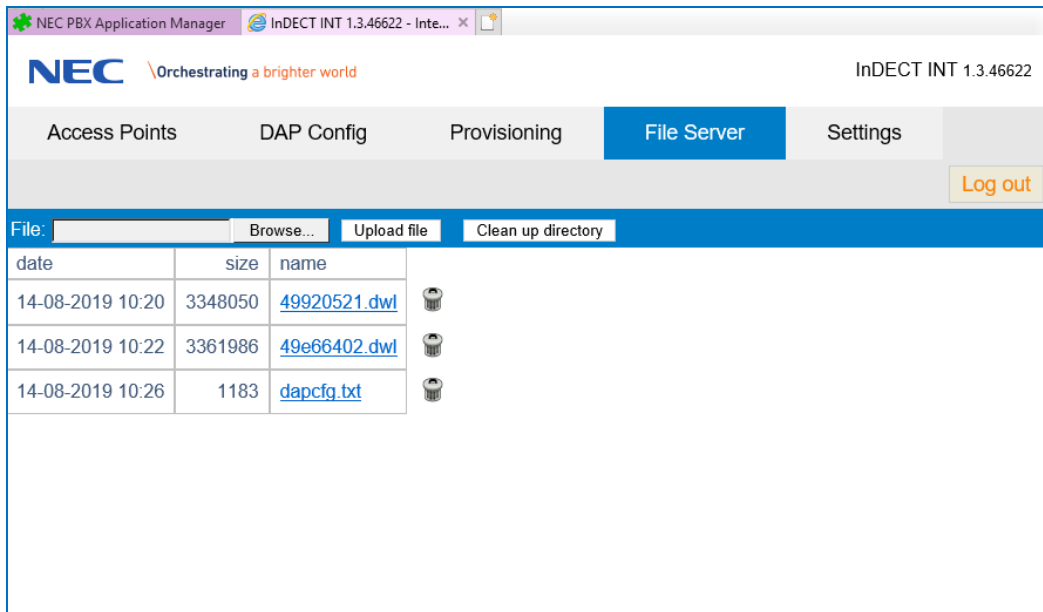
Once the **Create** button is pressed and the configuration file/firmware/bootloader packages are placed on the file server. InDECT will automatically ask to reboot any connected access points so that they download the new configuration with any changes that have been made. If you wish to reboot any access points connected to the network at this time press the **OK** button or press the **Cancel** button to ignore this and continue using InDECT.



The first time that a configuration is created, the version number in the dapcfg.txt file will be set to 1. After this, when any changes are made to your configuration file through the InDECT application, the version number will increment to differentiate itself from the configuration file on your access points.



You can move to the **File Server** screen and should see listed the firmware package for the access point, optional bootloader if required, along with the dapcfg.txt (configuration file).



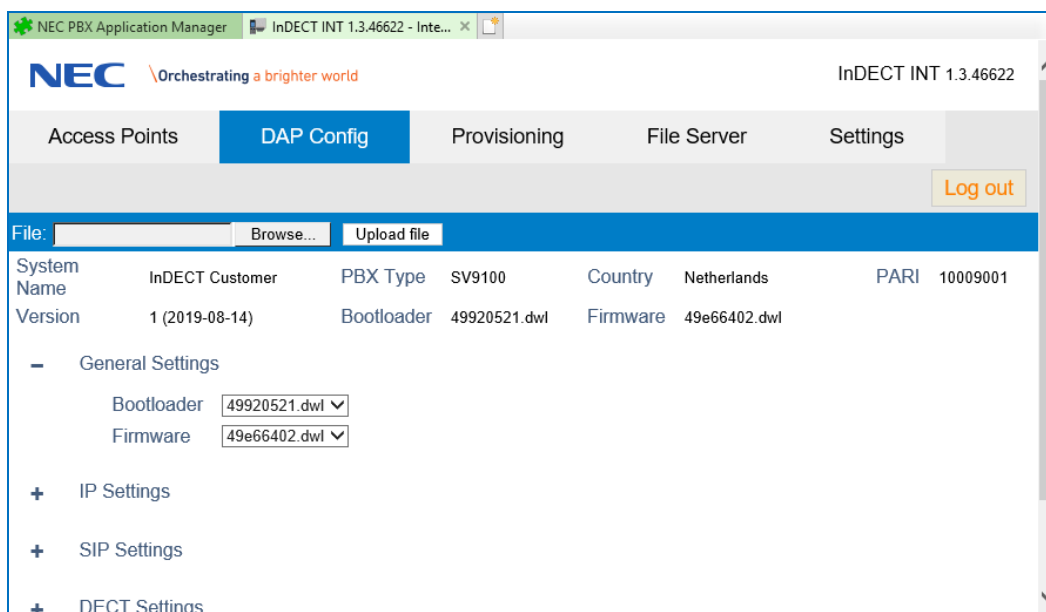
The basic system configuration is now complete but it is now possible to review additional InDECT settings if you wish or modify your settings entered using the **New System Setup Wizard** screen.

InDECT will learn many of these items from the existing PBX configuration automatically, but manual adjustments can be made to some of the items on the **DAP Config** screen. Automatically configured items however will need to be adjusted through the PBX programming, if any changes are made to the PBX whilst your still logged into InDECT, pressing the F5 key will refresh the screens and highlight any changed items.

The **DAP Config** screen is split into the following areas:

- **General Settings**

Here you can change the active firmware and bootloader files used. Switch between any uploaded files stored on the PBX fileserver.



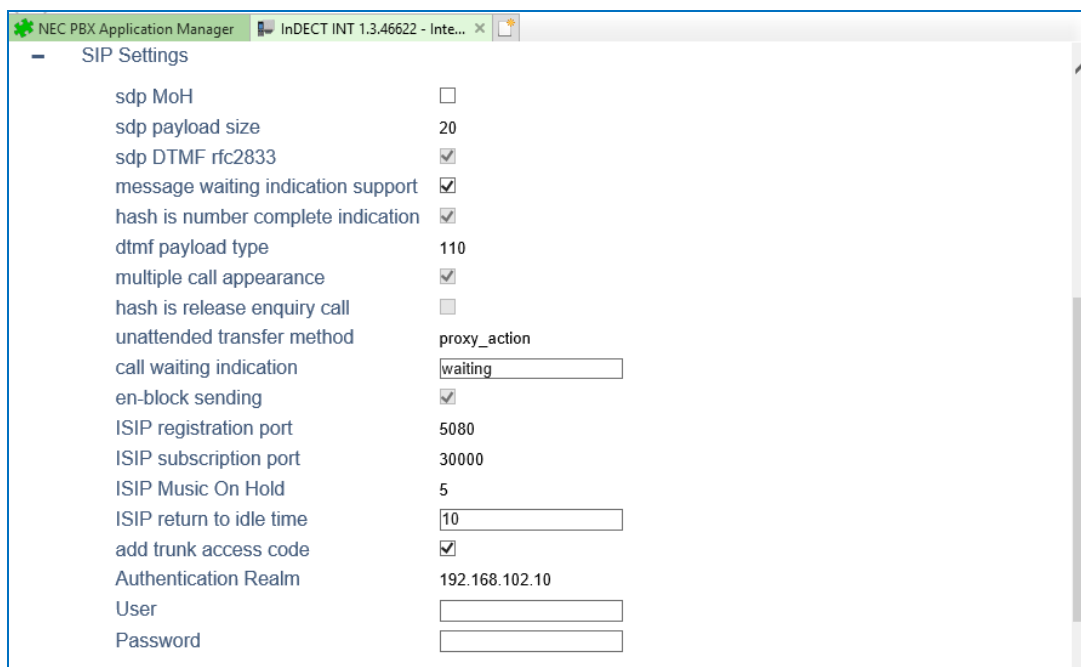
- **IP Settings**

This area shows the IP settings automatically set from the PBX configuration. These automatically configured settings are outlined in Appendix A, which also refers to the PRG commands used to set them.

- IP Settings	
Gatekeeper Proxy IP Address	192.168.102.10
Gatekeeper Proxy Port Number	4072
Corporate Directory IP Address	192.168.102.10
Corporate Directory Port Number	30160

- **SIP Settings**

This area shows commonly configured SIP Settings used by InDECT. Many items are automatically learnt from the PBX configuration or configured with default values by the application. Automatically learnt settings from the PBX are outlined in Appendix A, which refers to the PRG commands used to set them.



- SIP Settings	
sdp MoH	<input type="checkbox"/>
sdp payload size	20
sdp DTMF rfc2833	<input checked="" type="checkbox"/>
message waiting indication support	<input checked="" type="checkbox"/>
hash is number complete indication	<input checked="" type="checkbox"/>
dtmf payload type	110
multiple call appearance	<input checked="" type="checkbox"/>
hash is release enquiry call	<input type="checkbox"/>
unattended transfer method	proxy_action
call waiting indication	waiting
en-block sending	<input checked="" type="checkbox"/>
ISIP registration port	5080
ISIP subscription port	30000
ISIP Music On Hold	5
ISIP return to idle time	10
add trunk access code	<input checked="" type="checkbox"/>
Authentication Realm	192.168.102.10
User	
Password	

**sdp MoH** - When enabled, no local tone is generated by the access point when the IP DECT handset is on “hold”, audio is provided by the PBX (recvonly mode). Can be edited.

**sdp Payload Size** - Offered payload size in the SDP (Session Description Protocol) offer (in ms). This item is automatically set from the PBX configuration.

**sdp DTMF RFC2833** - When enabled, DTMF digits are sent according to RFC2833 (in RTP). Otherwise the DTMF digits are sent as SIP “INFO” messages. This item is automatically set from the PBX configuration.

**MWI Support** - Message waiting indication supported. This is supported by both SV9100 and SL2100 PBXs so can be enabled if required. Can be edited.

**Hash Is Number Complete Indication** - The hash button can be used to indicate a number is complete or can be used as part of the dialled number. This is enabled by default.

**DTMF Payload Type** - This parameter allows you to specify the DTMF payload type for RFC2833 implementation. The default value is 110 with the range between 96 ...127. This item is automatically set from the PBX configuration.

**multiple\_call\_appearance** - When the handset is busy and a second call comes in, you will hear a ticker tone and the display shows "waiting". By means of the \* button, you can toggle between the two calls. It behaves in a similar way as having a call on hold. This item is automatically set from the PBX configuration.

**Hash\_is\_release\_enquiry\_call** - When you are in an enquiry call and you end up connected to a device like a voice mail server, you cannot hang-up the phone without losing your call. In that case you can press the # key to end your enquiry call whilst keeping your original call. This is disabled by default.

**Unattended\_transfer\_method.** - This is set as proxy\_action by default.

**Call\_waiting\_indication.** - Here you can specify the call waiting indication text which is displayed on the handset when there is a call waiting. Can be edited.

**En-bloc (dialling)** - This is enabled by default.

**iSIP Registration Port** - This item is automatically set from the PBX configuration.

**iSIP Subscription Port** - This item is automatically set from the PBX configuration.

**iSIP MoH Tone** - Set to Enabled and the value as 5 by default.

**iSIP Return to Idle Time** - Set to 10 (seconds) by default. Can be edited.

**Add Trunk Access Code** - Set to Enabled by default. Can be edited.

**Authentication Realm** - This item is automatically set from the PBX configuration.

**Username** - If SIP authentication is used on the PBX, this setting is normally configured with the value '%s'. Can be edited.

**Password** - Enter the authentication password to use during the registration process of the standard SIP DECT handsets. This should match the password entered in the PBX configuration for extensions in PRG15-05-16. Can be edited.

- **DECT Settings**

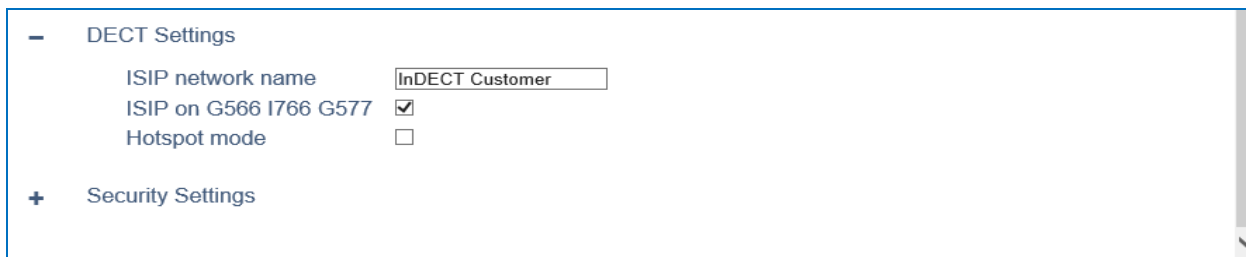
This area shows some DECT specific configuration items. You can edit the following items:

**iSIP network name** - This can be any given name for your InDECT system configuration. It is displayed on the idle display of any iSIP DECT handsets.



**iSIP on G566/1766/G577(h)** - This checkbox is optional and can be enabled to use the NEC iSIP protocol on either the G566/1766/G577(h) handsets. If this item is not checked then Standard SIP protocol is used.

**Hot Spot Mode** - This checkbox is optional and can be enabled so that the individual DAPs do not synchronize over the air. Each individual DAP is a stand-alone “hot spot”.



The screenshot shows a configuration panel with a minus sign and the title "DECT Settings". It contains three items: "iSIP network name" with a text input field containing "InDECT Customer", "iSIP on G566 1766 G577" with a checked checkbox, and "Hotspot mode" with an unchecked checkbox. Below this panel is a plus sign and the title "Security Settings".

- **Security Settings**

This area provides some security configuration items for easily securing the DAPs WEB page used for handset subscriptions with a user name and password. You can edit the following items:

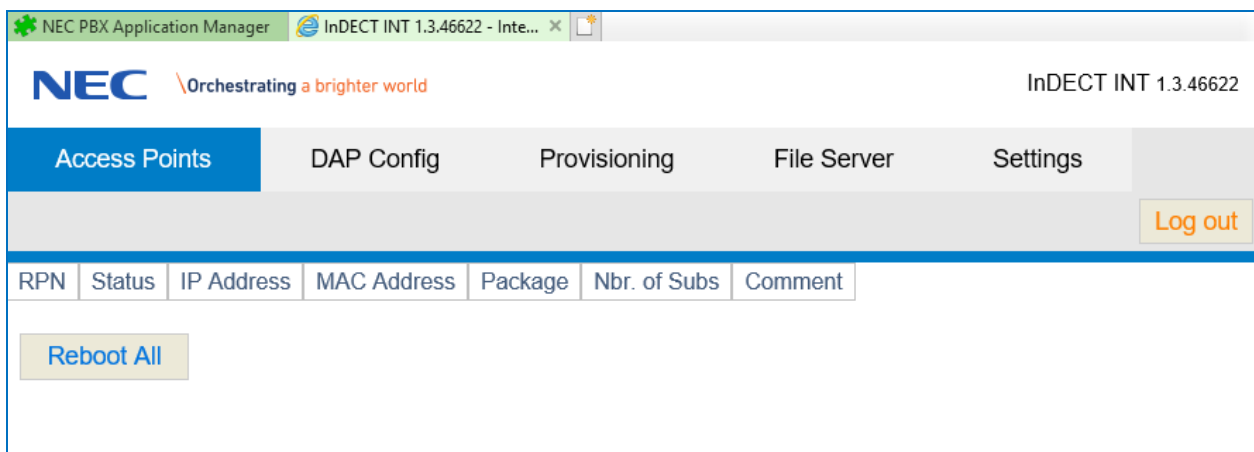
**DAP web authentication username** – Enter a username you want to use to access the DAP WEB page.

**DAP web authentication password** – Enter the password you want to use to access the DAP WEB page.



The screenshot shows a configuration panel with a minus sign and the title "Security Settings". It contains two items: "DAP web authentication username" with a text input field, and "DAP web authentication password" with a text input field.

Go to the **Access Points** screen.



The screenshot shows the NEC PBX Application Manager interface. The browser title is "InDECT INT 1.3.46622 - Inte...". The page header includes the NEC logo and the slogan "Orchestrating a brighter world" on the left, and "InDECT INT 1.3.46622" on the right. A navigation bar contains "Access Points" (highlighted), "DAP Config", "Provisioning", "File Server", and "Settings". A "Log out" button is in the top right. Below the navigation bar is a table with columns: "RPN", "Status", "IP Address", "MAC Address", "Package", "Nbr. of Subs", and "Comment". A "Reboot All" button is located below the table.

Connect all access points to the InDECT PBX network. Wait until the system has detected all DAPs in the system and has transferred the loader, firmware and configuration files. This may take 5 minutes or more depending on the number of DAPs being connected.

After a while you should start to see access points being listed. They will automatically be allocated an RPN (Radio Part Number) and have their 'Status' set as **New**. This means the access points are detected but not currently connected to the InDECT system. Wait until you see all access points you require listed on the screen before continuing.

The screenshot shows the NEC PBX Application Manager interface. The top navigation bar includes 'Access Points', 'DAP Config', 'Provisioning', 'File Server', 'Settings', and a 'Log out' button. Below the navigation bar is a table with the following columns: RPN, Status, IP Address, MAC Address, Package, Nbr. of Subs, and Comment. Two rows are visible, both with a status of 'New'.


RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment
004	New	192.168.102.100	00:18:27:50:32:F0	49e66402	0	
006	New	192.168.102.102	00:18:27:50:D8:E4	49e66402	0	

Below the table is a 'Reboot All' button. To the right of each row in the table, there are icons for a power button and a green plus sign.

The screenshot shows the NEC PBX Application Manager interface, similar to the previous one, but with an additional access point listed. The table now has three rows, all with a status of 'New'.

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment
004	New	192.168.102.100	00:18:27:50:32:F0	49e66402	0	
006	New	192.168.102.102	00:18:27:50:D8:E4	49e66402	0	
00C	New	192.168.102.108	00:18:27:50:D9:11	49e66402	0	

Below the table is a 'Reboot All' button. To the right of each row in the table, there are icons for a power button and a green plus sign.

To add detected access points to your InDECT system press the **Add** button  next to each access point.. The selected access point row should change to **green highlight**.

NEC PBX Application Manager InDECT INT 1.3.46622 - Inte... x

**NEC** \Orchestrating a brighter world InDECT INT 1.3.46622

Access Points DAP Config Provisioning File Server Settings Log out

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment	
004	New	192.168.102.100	00:18:27:50:32:F0	49e66402	0		
006	New	192.168.102.102	00:18:27:50:D8:E4	49e66402	0		
00C	New	192.168.102.108	00:18:27:50:D9:11	49e66402	0		

Activate Undo

When you add an access point to your InDECT system. At this time you can edit and reorder the RPN numbers assigned automatically by InDECT and you can also enter some descriptive detail in the comment field for each access point.

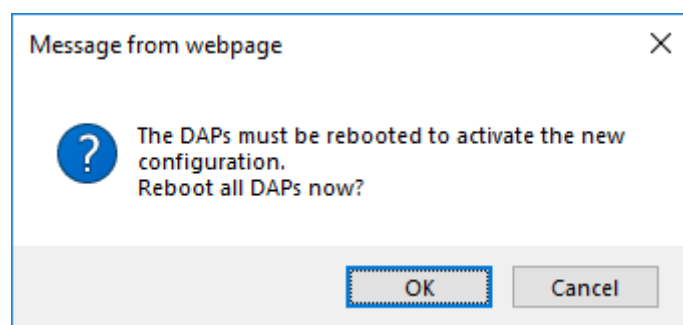
NEC \Orchestrating a brighter world InDECT INT 1.3.46622

Access Points DAP Config Provisioning File Server Settings Log out

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment	
010	New	192.168.102.100	00:18:27:50:32:F0	49e66402	0	Reception	
011	New	192.168.102.102	00:18:27:50:D8:E4	49e66402	0	Security	
012	New	192.168.102.108	00:18:27:50:D9:11	49e66402	0	Warehouse	

Activate Undo

When ready to continue, press the **Activate** button and the system asks for a reboot of all DAPs. Press **OK** to reboot all DAPs.



Now the DAPs will reboot and be configured. After some minutes if you have changed any RPN numbers, you should see a screen similar to the one below:

The screenshot shows the NEC PBX Application Manager web interface. The browser address bar displays `http://192.168.102.10:33518/html/web.cgi?cmd=home&tab=Access%20Points`. The page title is "InDECT INT 1.3.46622". The navigation menu includes "Access Points", "DAP Config", "Provisioning", "File Server", "Settings", and "Log out".

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment	
004	New	192.168.102.100	00:18:27:50:32:F0	49e66402	0		🔄 🟢
006	New	192.168.102.102	00:18:27:50:D8:E4	49e66402	0		🔄 🟢
00C	New	192.168.102.108	00:18:27:50:D9:11	49e66402	0		🔄 🟢
010	Reboot	0.0.0.0	00:18:27:50:32:F0			Reception	🔄
011	Reboot	0.0.0.0	00:18:27:50:D8:E4			Security	🔄
012	Reboot	0.0.0.0	00:18:27:50:D9:11			Warehouse	🔄

A "Reboot All" button is located at the bottom left of the table area.

Once all DAPs are correctly provisioned and online, usually after some time has elapsed (+10 minutes) your system is ready to use.

The screenshot shows the same NEC PBX Application Manager web interface. The browser address bar and page title are identical. The navigation menu is also the same. The table now shows all three DAPs in an "Active" status.

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment	
010	Active	192.168.102.100	00:18:27:50:32:F0	49e66402	0	Reception	🔄
011	Active	192.168.102.102	00:18:27:50:D8:E4	49e66402	0	Security	🔄
012	Active	192.168.102.108	00:18:27:50:D9:11	49e66402	0	Warehouse	🔄

A "Reboot All" button is still present at the bottom left of the table area.

To subscribe handsets, open the DAP WEB page for the DAP with the lowest RPN number from the Access Points screen. (In this case, click the IP address of the DAP with the lowest RPN number.).

# Handset Subscriptions

Before a handset can be used with the InDECT system, it must be made known to the system. This means that it must be “subscribed” to the system. The procedure is described in the following sections.

Please note, that each DAP holds a complete copy of all subscription records in the system. In case any of the DAPs are not working, you cannot subscribe handsets anymore. So make sure that all registered DAPs are up-and-running.

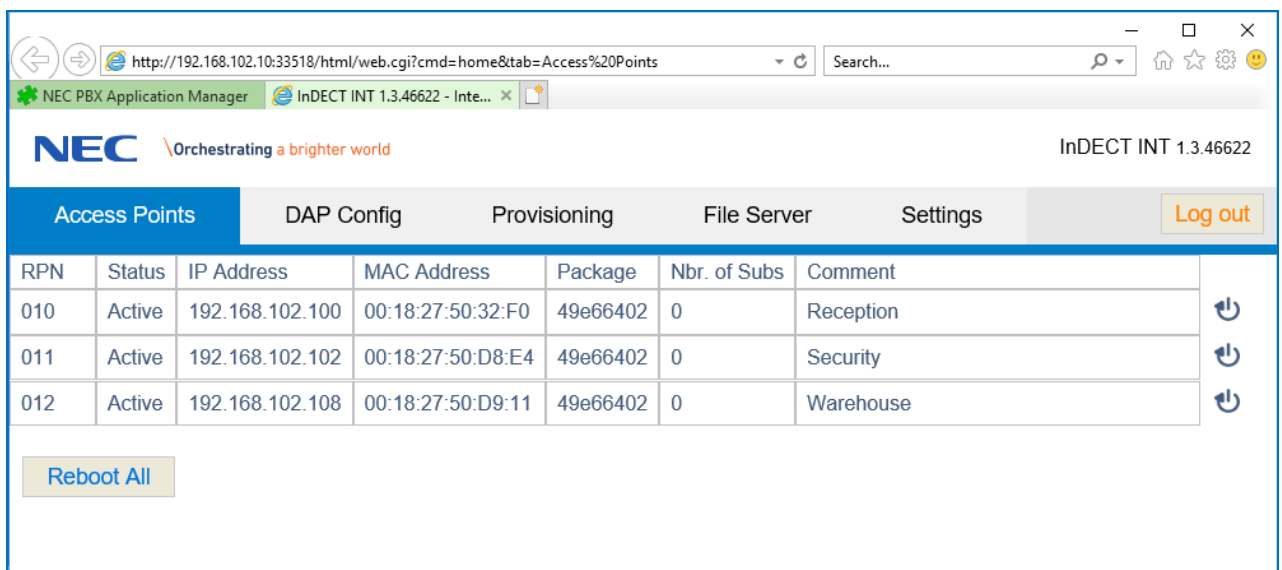
When a DAP that holds subscriptions is not working, the handsets will be unreachable for a time period of 5 minutes. After 5 minutes, the missing Subscriptions will be made active in other DAPs. This will make the handsets operational again.

## Subscribing a Handset

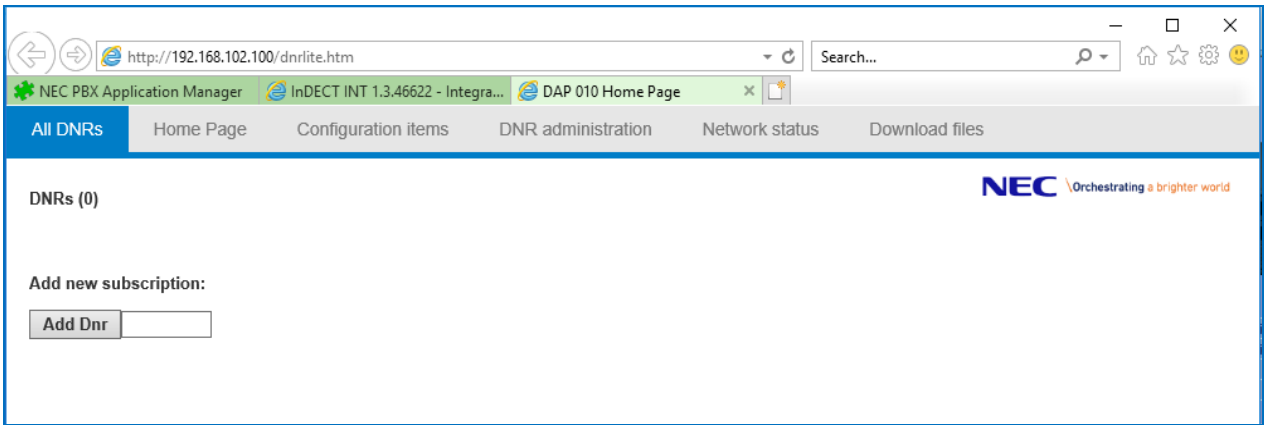
Open your WEB browser on one of the DAPs. Enter the following in the address bar:

http://<DAP IP Address>/

or click an IP address of a DAP on the Access Points screen.

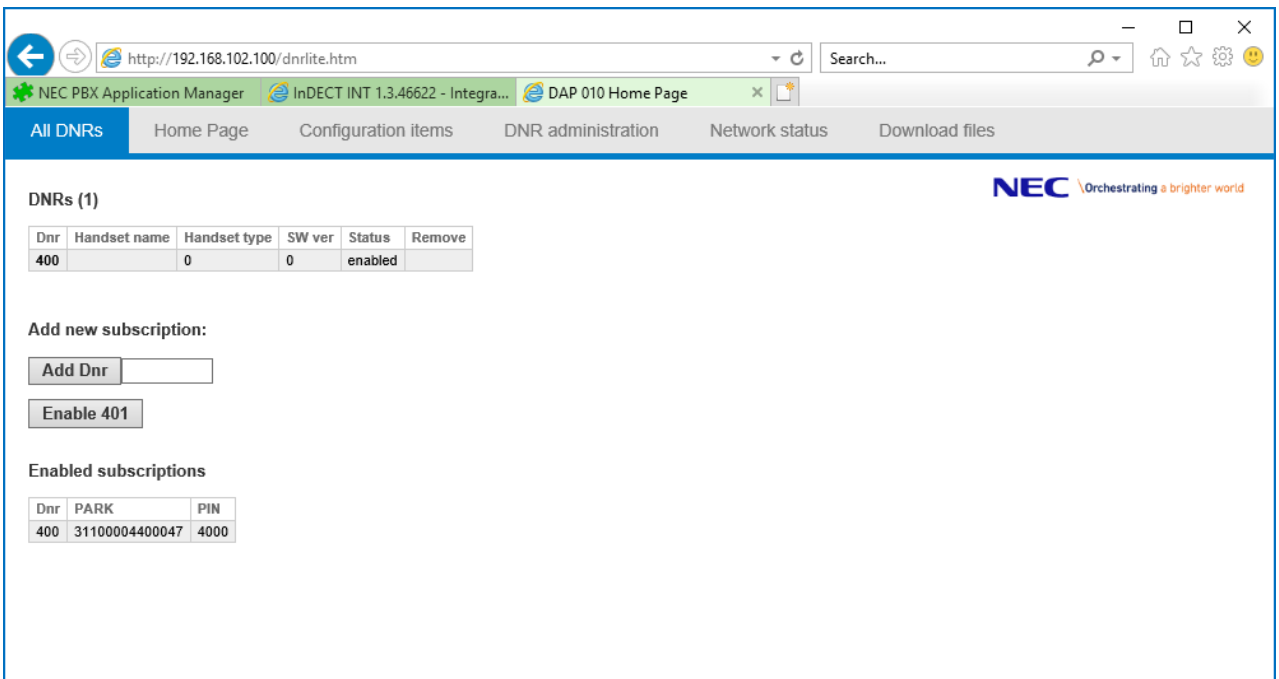


The following window is displayed:



Make sure that any “POP-UP Blocker” in your WEB Browser is switched OFF. If not, you will not see the add DNR button.

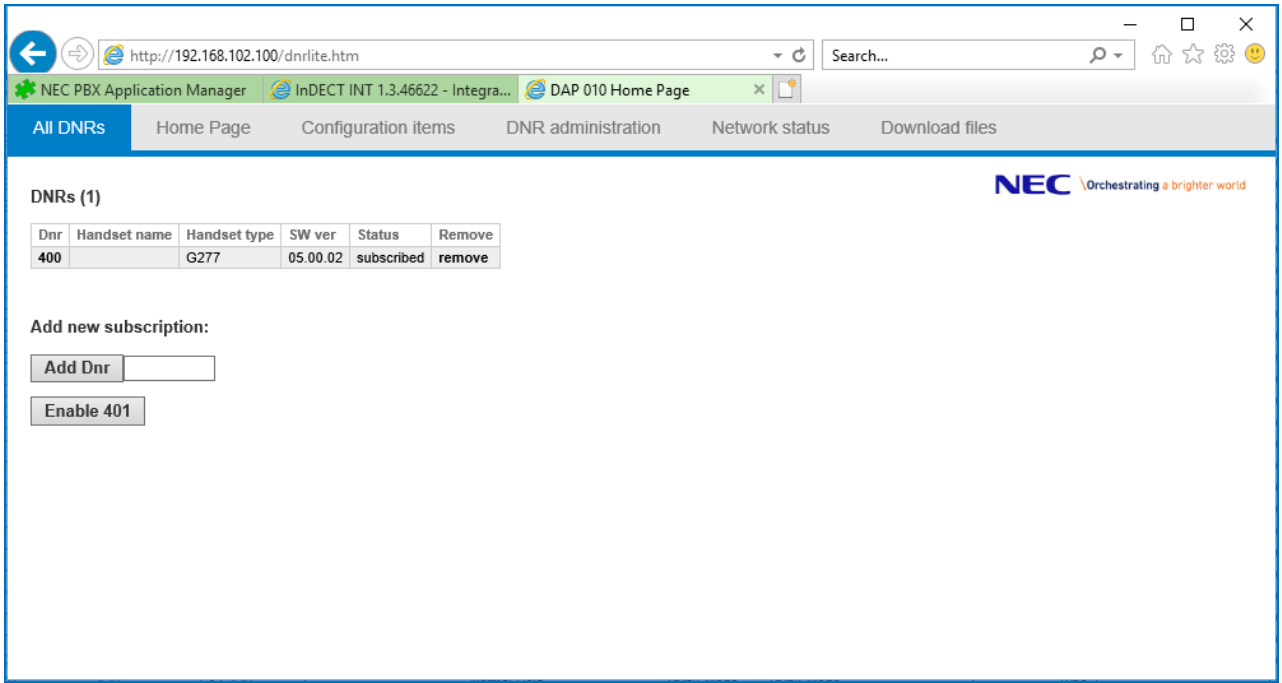
Enter an extension number and press **Add Dnr**. The system is now ready for a subscription, and a PARK and PIN code are displayed.



Execute the subscription procedure on the handset within 3 minutes! If necessary, consult the Handset documentation to know the subscription procedure for your particular handset. The subscription procedure is active for 3 minutes only. On the handset you have to enter the PARK and the PIN code that is displayed for this DNR subscription.

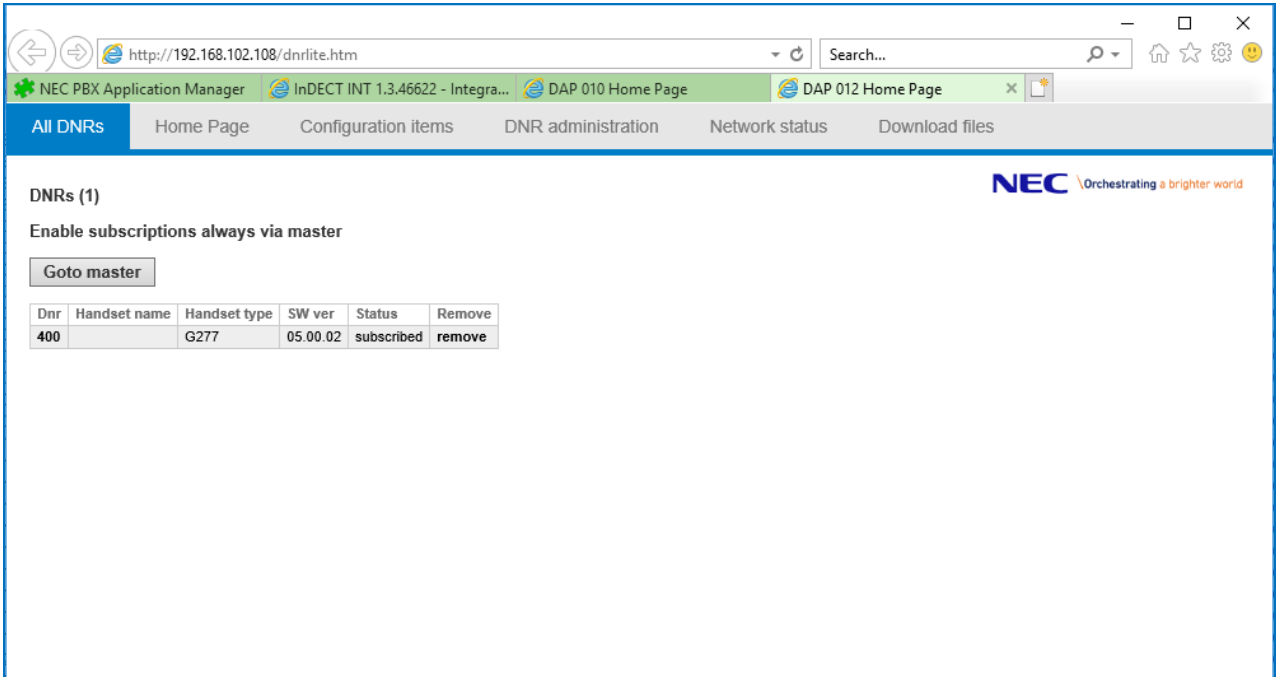
**Note:** When the subscription is not active anymore, or when the subscription was successful, the WEB page is not immediately automatically updated. Click <F5> to refresh/update the WEB page

After you have entered the extension numbers, you will see the following window (with example extension numbers). Please note that you can easily enable the next extension number by means of pressing the “Enable X” button. If you want to enter an extension number other than the proposed number on the button, you can enter that extension number in the field next to **Add DNR**.

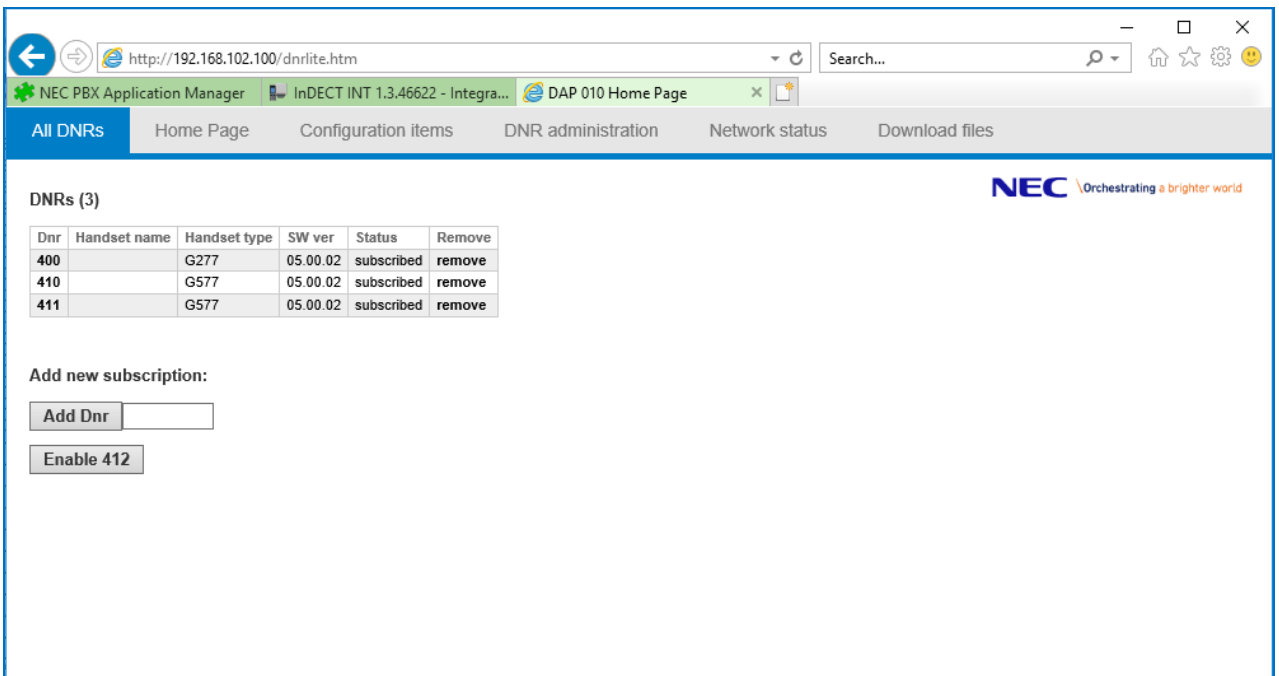


In case you are in the WEB page of a DAP other than the DAP with the lowest RPN number, you will see the following WEB page:

**Note:** Make sure that the POP UP blocker is switched OFF in your browser.



You see that in the WEB Page other than the DAP with the lowest RPN number, you cannot subscribe handsets. However, you can remove handsets. When you want to subscribe a new handset, you have to go to the DAP with the lowest RPN number. From a WEB page on a DAP which is not the master, you can easily go to the WEB page of the master, by means of pressing the button **Goto master**.





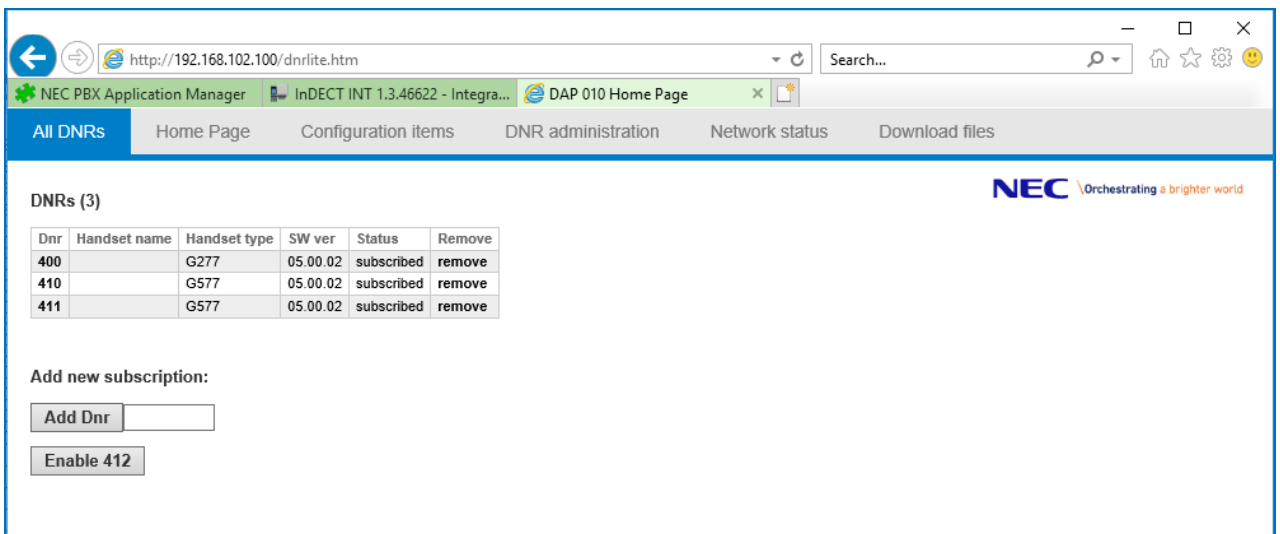
## Removing a Handset

1. Open your WEB browser on one of the DAPs. Use the following URL

http://<DAP IP Address>.

or click an IP address of a DAP on the Access Points screen.

The following window (example) is displayed:



Make sure that the handset that you want to de-subscribe is switched on and within DAP coverage. press 'Remove' behind the subscription row of the extension that you want to remove.

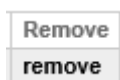
In a couple of seconds the subscription is removed from the system as well as from the DECT handset.

**Note:** Please note that the extension status in the WEB page is not automatically updated. So, to see if the remove action was successful, press <F5>.

When the extension number is not visible anymore (after a refresh), the remove action was successful. However, mark the following note:

**Note:** When the handset is not within DAP coverage, or broken or lost, the "Remove DNR" status will go to "Terminate". See window below.

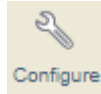
If so, click "terminate" and then subscription data is removed from the IP DECT DAP Lite system, but not from the handset! You must remove the subscription data manually from the handset (if possible).



2. When the remove action was successful, the extension number disappears from the list. (*Press <F5> to refresh the status.*)
3. To subscribe the same number again, follow the procedure in the section Subscribing a Handset.

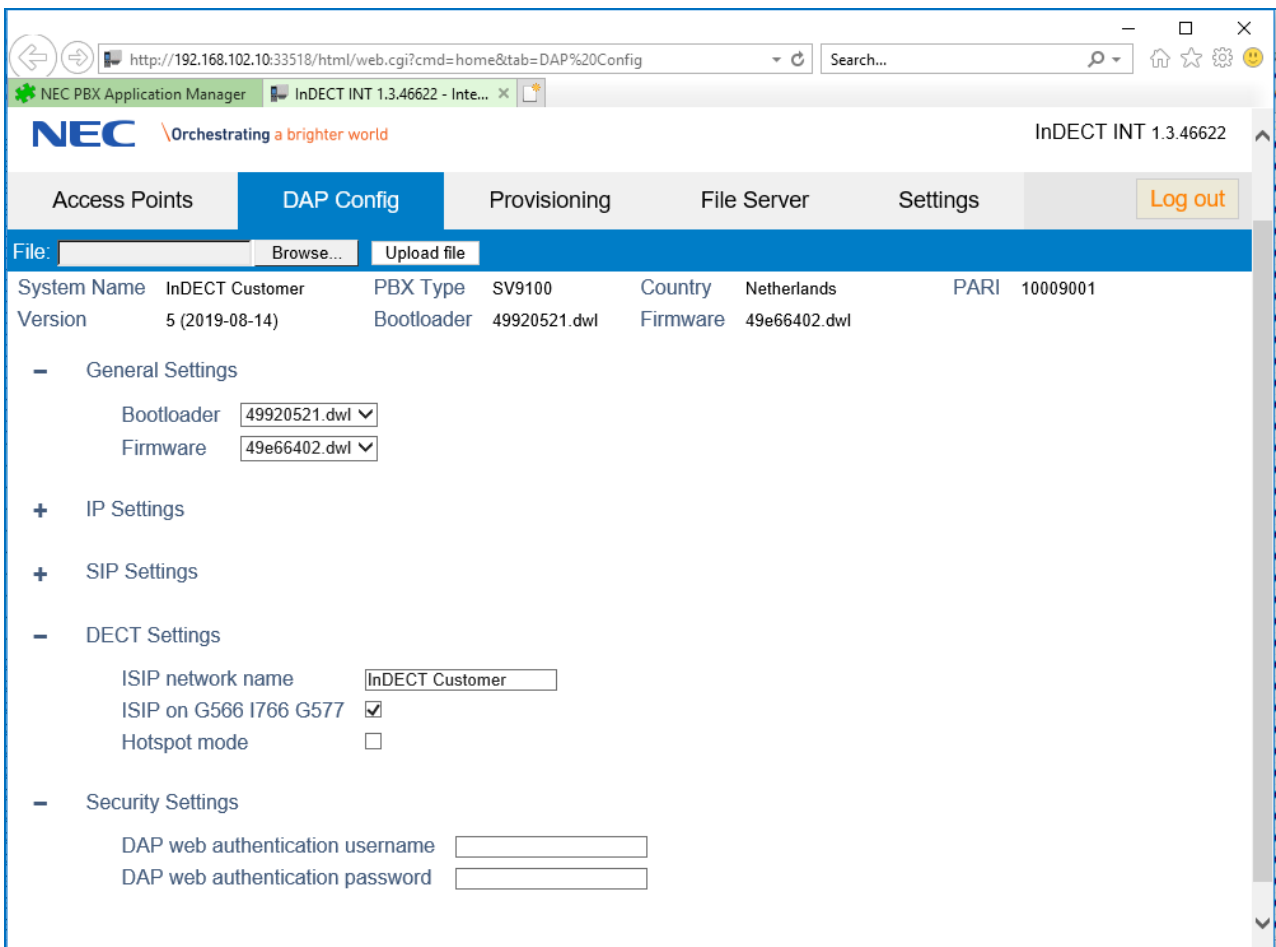
# Making Changes in the Configuration

You can easily make changes to your InDECT configuration once the system is up and running.



From the InDECT application manager window, press the **Configure** button.

InDECT will now check for a system configuration on the PBX. If it finds one, it will open the “DAP Config” window and display the system settings.



Items highlighted in orange are changes in the PBX configuration that are detected as different from the settings currently in the InDECT configuration file. Changes can be updated to the InDECT configuration by pressing the **Activate** button. You can check for any changes when on this page at any time by pressing **F5**.



Items highlighted in blue are changes made to the InDECT DAP Config screen. Changes can be updated to the InDECT configuration by pressing the **Activate** button.

## DECT Settings


Make the changes you need to do, then click the **Activate** button in the bottom Left corner to apply them to your system configuration.

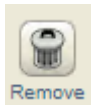
If you wish to revert back to the previous settings press the **Undo** button.

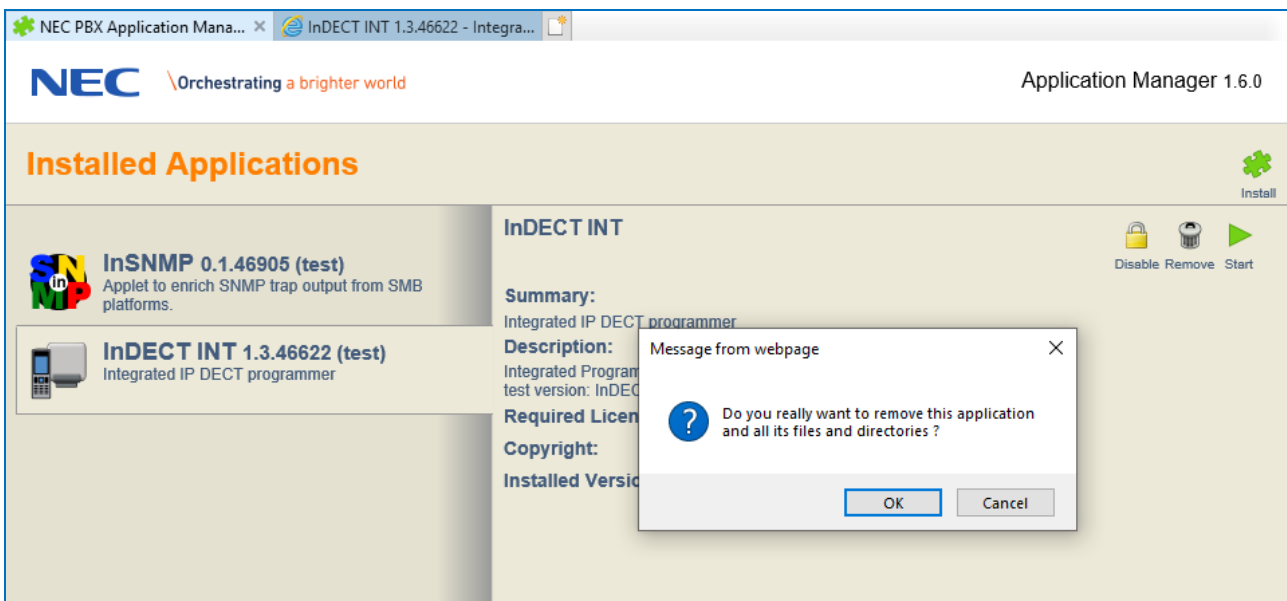
# Un-installing InDECT

Before Un-Installing InDECT you should understand that when the application is un-installed, any existing configuration and associated system files are removed. To keep a backup of the current configuration you should first download the system files from the **File Server** screen to a safe location.

To remove the application, first go to the application manager and stop InDECT if it is already running. Press the **Stop**

button  to stop the InDECT application service.


Once the application has stopped and you are ready to remove it, press the **Remove** button . This will un-install InDECT from the PBX. Confirm twice that you wish to remove the application.




NEC PBX Application Mana... x InDECT INT 1.3.46622 - Integra...

**NEC** \Orchestrating a brighter world Application Manager 1.6.0

### Installed Applications

 **InSNMP 0.1.46905 (test)**  
Applet to enrich SNMP trap output from SMB platforms.

 **InDECT INT 1.3.46622 (test)**  
Integrated IP DECT programmer

#### InDECT INT




**Summary:**  
Integrated IP DECT programmer

**Description:**  
Integrated Programmer for IP DECT  
test version: InDECT INT 1.3.x


**Required License Code:**

**Copyright:**

**Installed Version:**

    
Disable Remove Start

Message from webpage

 Are you sure ?

# Upgrading InDECT

Before upgrading InDECT, you should note the current version that is installed and take a backup of the current system configuration files by downloading them using the “File Server” screen to a safe location.

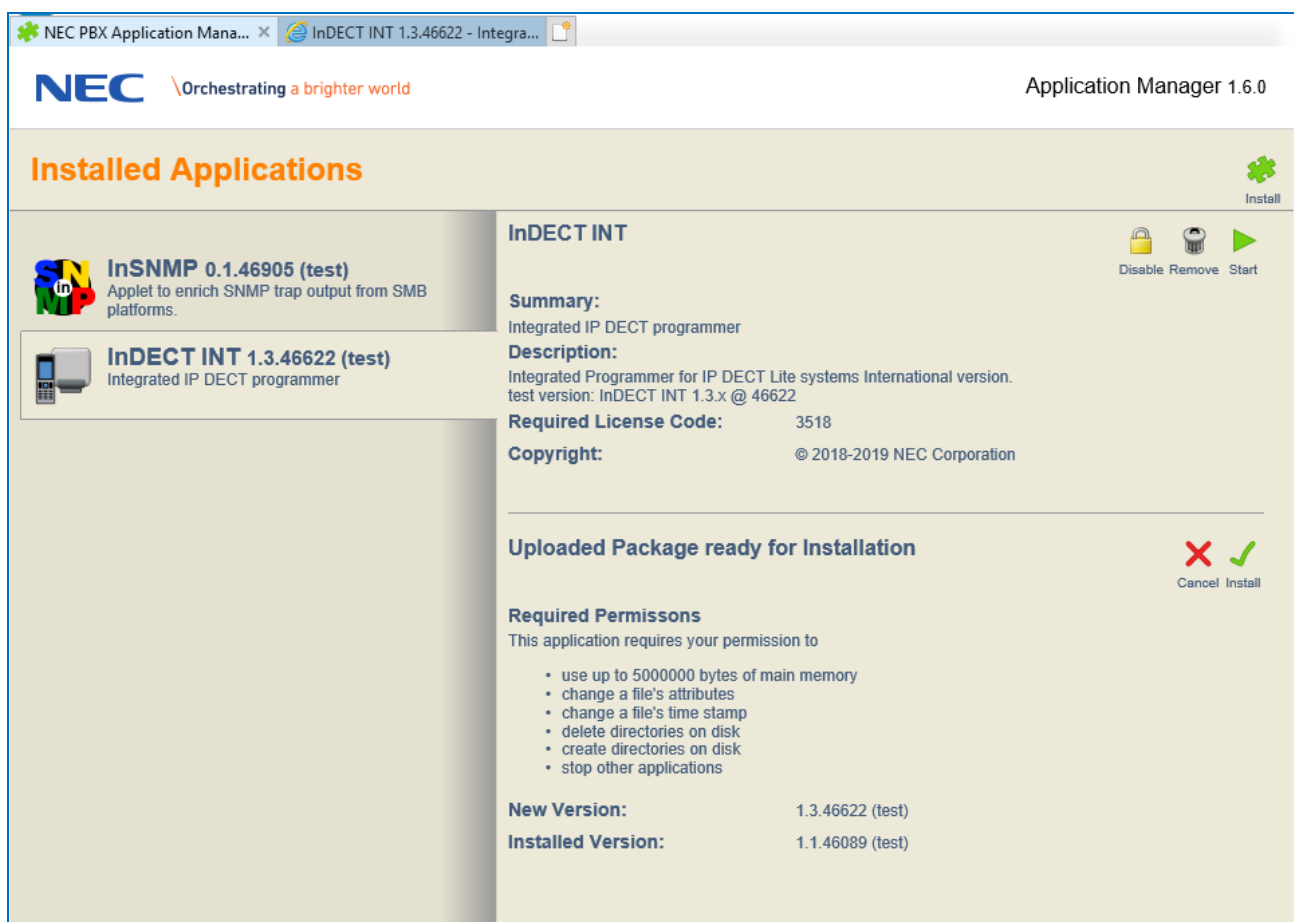
The existing configuration will automatically be available after the upgrade has been completed.

After a backup has been performed, stop InDECT from the Application Manager.

Once it is stopped, install the new version, the application manager will show the currently installed version and the new version that will be installed.



Click the **Install** button to proceed with the upgrade.



The upgrade can take around 1 minutes, once complete the application can then be started and you will be able to access it again.

## Appendix A - Items learnt automatically by InDECT from the PBX configuration

### IP Settings

IP Setting	SV9100 Programming	SL2100 Programming
Gatekeeper Proxy IP Address	PRG10-12-09	PRG10-12-09
Gatekeeper Proxy Port Number	PRG84-20-01	PRG84-20-01
Corporate Directory IP Address	PRG10-12-09	PRG10-12-09
Corporate Directory Port Number	PRG10-20-14	PRG10-20-14

### SIP Settings

SIP Setting	SV9100 Programming	SL2100 Programming
sdp Payload Size	PRG84-19-01	PRG84-19-01
sdp DTMF RFC2833	PRG84-34-01 Device Type 04 – SIP Extension	PRG84-34-01 Device Type 04 – SIP Extension
DTMF Payload type	PRG84-34-02 Device Type 04 – SIP Extension	PRG84-34-02 Device Type 04 – SIP Extension
Multiple call appearance	PRG20-13-53	PRG20-13-53
iSIP Registration port	PRG10-46-06	PRG10-46-06
iSIP Subscription port	PRG10-46-12	PRG10-46-12
Authentication realm	PRG10-12-09	PRG10-12-09



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- 1.5. "Upgrade" means major Software release the primary purpose of which is to add new functionality or enhance the performance of the Software.

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4.3. Because there is such a diverse range of telecommunications environments, NEC cannot warrant that the Software will be compatible in every operating environment. It is the Customer's responsibility to ascertain whether its own operating environment is compatible with the Software.

Any Software modifications which NEC may agree to make to achieve compatibility shall be at its prevailing rates and charges. NEC does not warrant that the Software will meet the Customer's requirements or that its operation will be uninterrupted or error-free. NEC does not warrant that the Software is free of errors or defects. The existence of such Software errors or defects shall not constitute a breach of this warranty. Notwithstanding the foregoing NEC shall provide the Customer with Software corrections for known errors that also affect NEC's other licensees. NEC excludes, and expressly disclaims, all express and implied warranties of merchantability or fitness for any particular purpose. NEC shall not be responsible for external factors affecting the performance of the Software, including without limitation, telecommunications and network breakdowns, power surges or interruptions and other "Acts of God".

4.4. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT SHALL NEC BE LIABLE FOR PERSONAL INJURY OR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES WHATSOEVER, INCLUDING WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, LOSS OF DATA, BUSINESS INTERRUPTION OR ANY OTHER COMMERCIAL DAMAGES OR LOSSES ARISING OUT OF OR RELATED TO YOUR USE OR INSTABILITY TO USE THE NEC SOFTWARE, HOWEVER CAUSED REGARDLESS OF THE THEORY OF LIABILITY (CONTRACT, TORT OR OTHERWISE) AND EVEN IF NEC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

4.5. Some jurisdictions do not allow the exclusion of certain implied warranties or conditions, so the above exclusions may not apply to the Customer. This Licence does not exclude any implied warranties or conditions that may not under applicable law be excluded. In no event shall NEC total liability to you for all damages (other than as may be required by applicable law in cases involving personal injury) exceed the amount of seventy five pounds (£75). The foregoing limitations will apply even if the above stated remedy fails of its essential purpose.

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4.6. This Licence does not impose any obligations upon NEC to provide support and Software Assurance ("SA") services outside of the warranty period. Should the Customer require such services, they shall be obtained by arrangement with NEC Technical Services.

### **5. Other Services**

5.1. If NEC provides services outside the coverage of its limited warranty or after it has expired, the Customer shall pay for such services at NEC's standard rates and charges, plus travel and accommodation if applicable.

5.2. To fix an error in the Customer's Software, it may be necessary to install an Upgrade containing both version enhancements and bug fixes. During the warranty period, NEC shall provide such Software Upgrade at no cost. After the warranty period, NEC shall provide such Upgrade at its standard price. In addition to the price of such Upgrade, the Customer shall pay us for any services that NEC provides pursuant to §5.1.

## 6. Termination/Cancellation

6.1. NEC may Terminate/Cancel this Licence if the Customer breaches any condition thereof. If the breach is capable of remedy, NEC shall give the Customer thirty (30) days written notice within which to do so. Otherwise, Termination/Cancellation shall take effect immediately upon the Customer's receipt of NEC's notice.

6.2. The Customer may Terminate/Cancel this Agreement upon forty five (45) days prior written notice to NEC. Upon the date of Termination/Cancellation, the Customer's Licence to use the Software shall be deemed revoked, the customer will no longer be bound by the terms of this Agreement. Payment for the Software remains unaffected by this clause; this clause does not grant any free period of usage.

## 7. Term of Licence

7.1. This Licence commences upon the Customer's acceptance hereof. It shall continue, in perpetuity, subject to termination by NEC in the event that the Customer breaches any term herein, or by the Customer with written notice as stipulated in §6.2.

7.2. Upon termination/cancellation the Customer or its representatives shall immediately stop using the Software and documentation and shall return, or destroy all copies of the Software and documentation in a manner directed by NEC.

## 8. Other Clauses

8.1. If NEC foregoes or delays enforcing an obligation or remedy under this Licence, such forbearance or delay shall not result in a waiver or variation of such obligation or remedy. No failure by NEC to insist upon strict performance of any term or condition in this Licence shall constitute a waiver or variation of such term or condition. Such failure shall not prevent NEC from claiming default or seeking a remedy under this Licence.

8.2. This is the entire agreement between NEC and the Customer. Upon agreeing to the terms of this Licence the Customer agrees that this Licence supersedes prior licensing agreements, both written and verbal for NEC Software.

8.3. This Agreement shall be governed by and construed in all aspects in accordance with the Laws of the jurisdiction in which NEC as the supplier of the Software is geographically based and each party submits to the non-exclusive jurisdiction of the courts in that geographic location.

8.4. The Customer acknowledges that a breach of this Agreement may cause irreparable and continuing damage to NEC for which money damages may be insufficient, and NEC shall be entitled to injunctive relief and/or a decree for specific performance and such other relief as may be proper (including money damages if appropriate). In the event of litigation between NEC and the Customer concerning Software or any other item which is subject to this Agreement, the prevailing party in the litigation will be entitled to recover legal fees and expenses from the other party.

8.5. If any part of this Agreement is found void and unenforceable, it will not affect the validity of the balance of the Agreement, which shall remain valid and enforceable according to its terms.

8.6. Acknowledgement. **BY INSTALLING SOFTWARE, THE CUSTOMER ACKNOWLEDGES THAT IT HAS READ THIS AGREEMENT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.**

NEC Enterprise Solutions reserves the right to change the specifications, functions, or features at any time without notice.

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**B.V.**  
**Olympia 4**  
**1213 NT Hilversum**  
**The Netherlands**  
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