

# InDECT Quick Setup Guide

December 2021

For InDECT 1.6.0

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## Revision History

Version	Author	Date	Changes
1.0	Jake List	July 2021	Initial release of InDECT v1.5.1
1.1	Raimond Couwenbergh	December 2021	Initial release of InDECT v1.6.0 <ul style="list-style-type: none"><li>Added Appendix B</li></ul>

## 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.

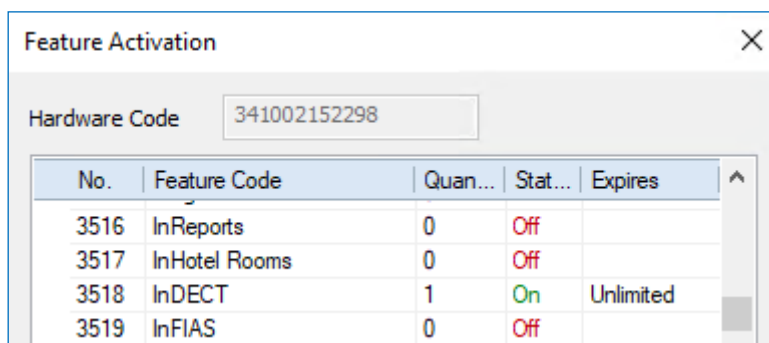
## Licensing

License Code 3518 is required to install and 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.



The screenshot shows a 'Feature Activation' window with a 'Hardware Code' field containing '341002152298'. Below this is a table with the following data:

No.	Feature Code	Quan...	Stat...	Expires
3516	InReports	0	Off	
3517	InHotel Rooms	0	Off	
3518	InDECT	1	On	Unlimited
3519	InFIAS	0	Off	

## Requirements

It is NOT necessary for the PBX to be able to access the internet. The InDECT application can be accessed using the HTTP or HTTPS protocol. Please refer to the document “Accessing InApps Using HTTPS over TLS” for further details. **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.** The supported platforms and minimum versions of system software required to run InDECT are as follows:

PBX	System Software Version
<b>SV9100 CP20</b>	12.00.51 or above
<b>SL2100</b>	4.00.00 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
<b>SL2100 &amp; SV9100</b>	1.8.1 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/M166

## 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. Google Chrome, Firefox, MS Edge and Internet Explorer 11 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

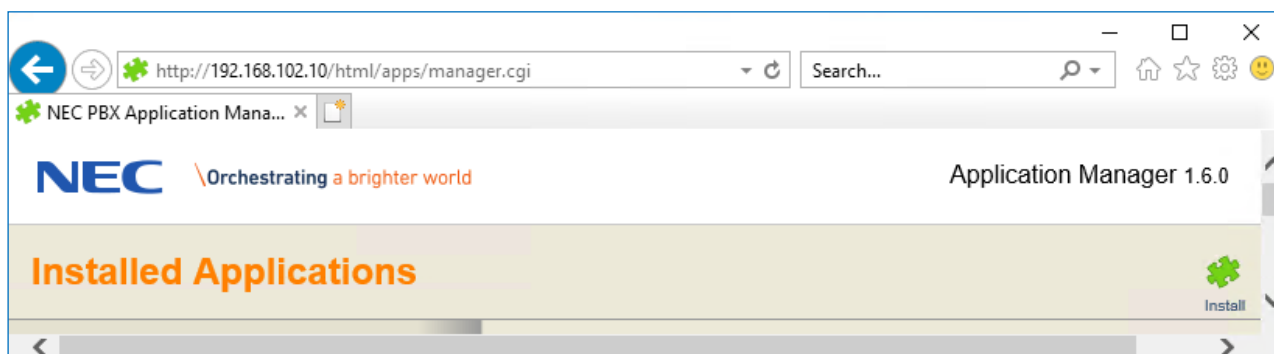
InDECT is installed using the application manager on the PBX, which can be accessed via the url:

*Note: The required license must be installed on the NEC communication server prior to being installed of INDECT.*

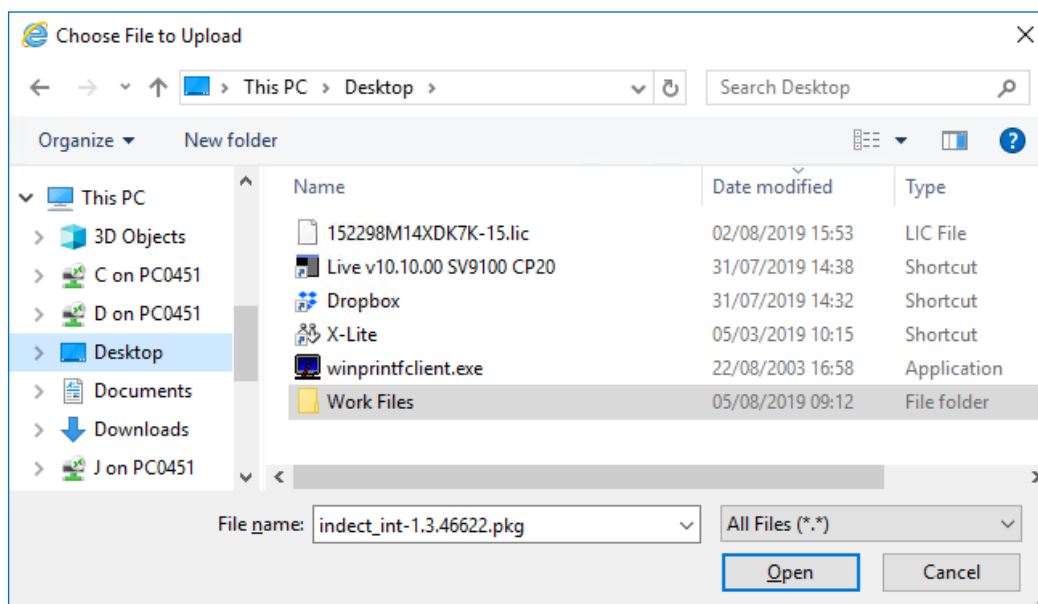
<http://IP Address of the PBX/html/apps/manager.cgi> , for example  
<http://192.168.102.10/html/apps/manager.cgi>

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.

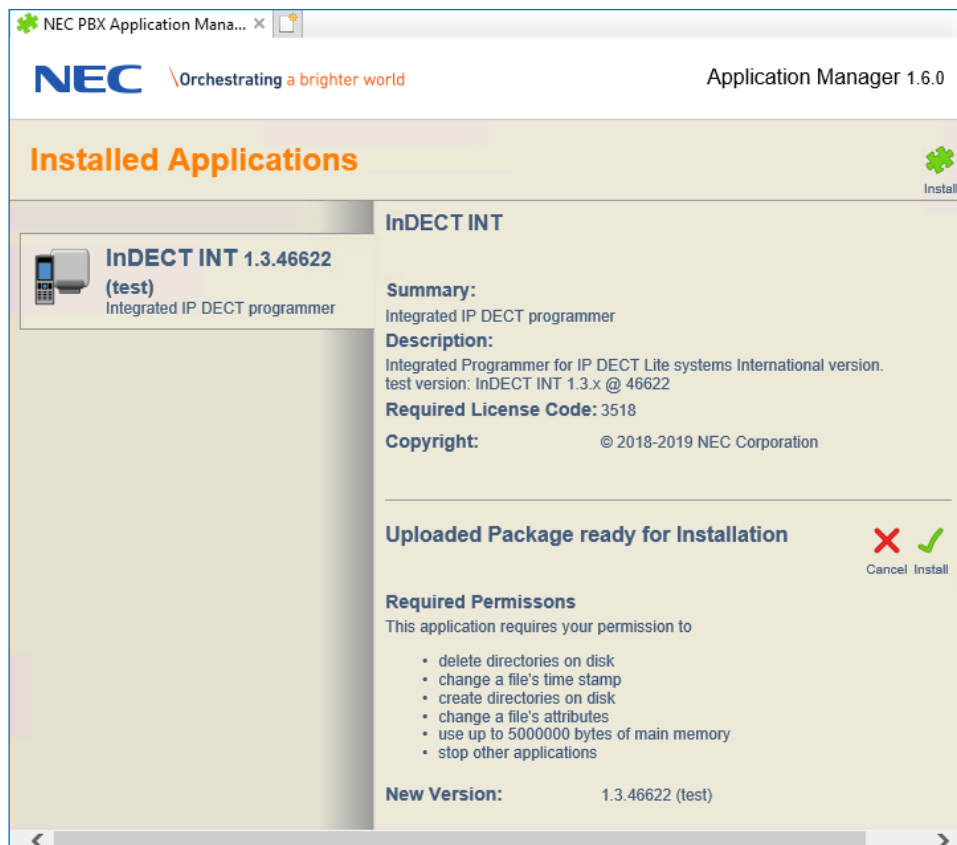


Browse to the required InDECT pkg installation file and press **Open** to select it.



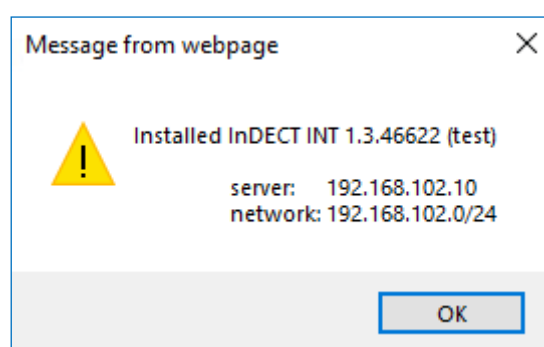
A preview of the application about to be installed will be displayed in the lower half of the window, press the

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



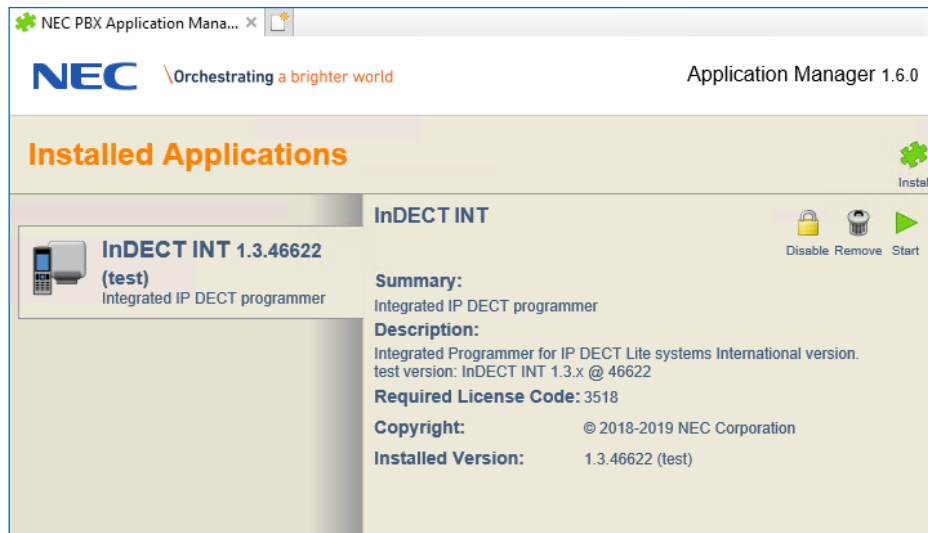
The installation process can take around 1 minute to complete. Once installed, you may see a message window showing the network IP configuration of the PBX.

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.

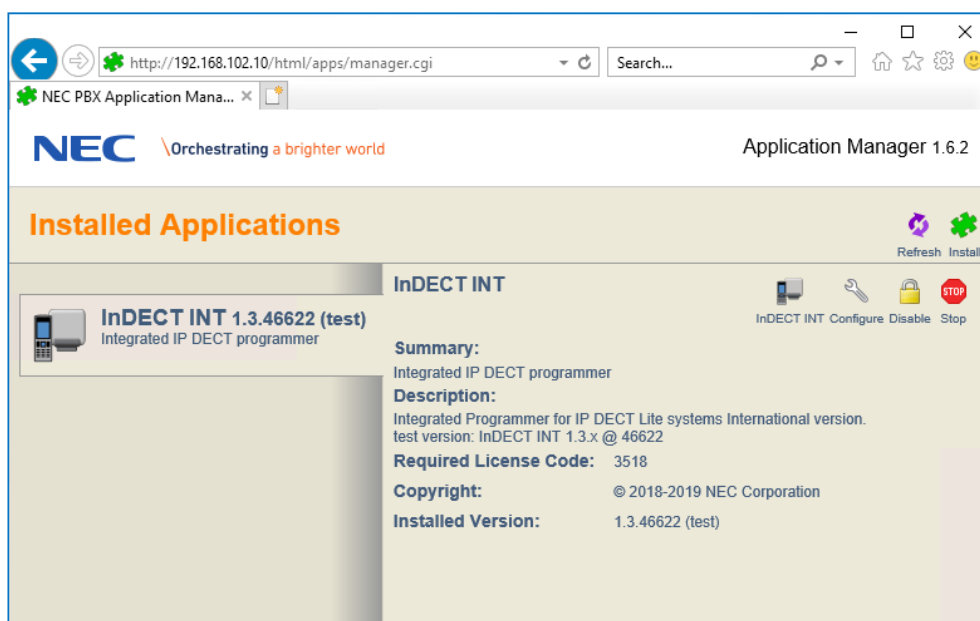


You will also now see the **Disable** button, which if pressed won't stop the InDECT application if currently running, but will prevent it from automatically starting if the PBX is rebooted.

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



button.



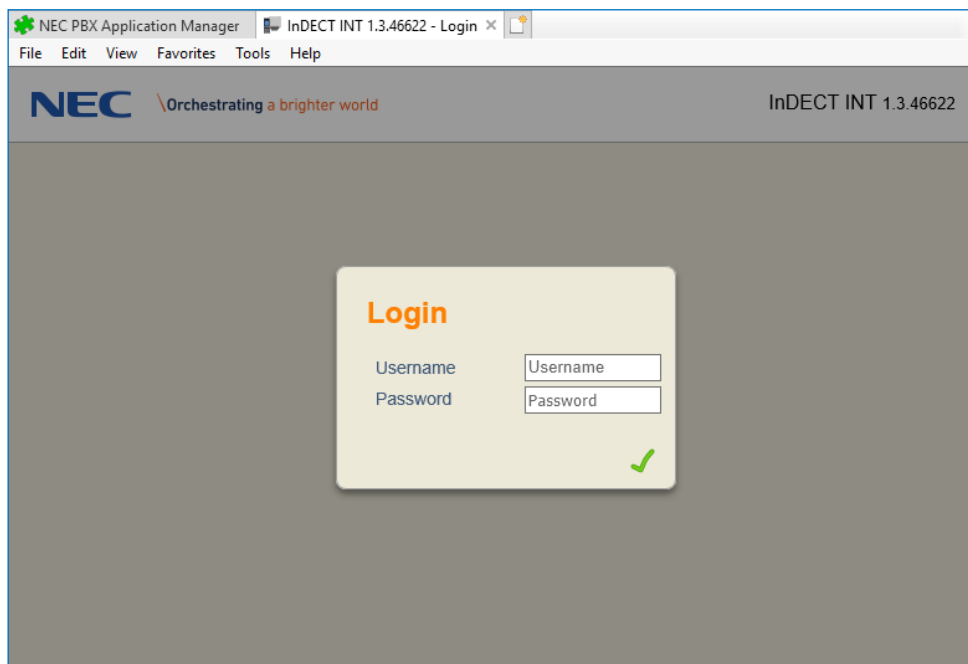
InDECT is now installed and ready to be configured.


## 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, the account used to install InDECT can always be used to configure INDECT this is the installer account in command 90-02



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.

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

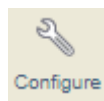
NEC \Orchestrating a brighter world InDECT INT 1.3.46622

Access Points DAP Config Provisioning File Server

Settings Log out

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment
010	Active	192.168.102.100	00:18:27:50:32:F0	49e66402	0	SHLAB

Reboot All



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.

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

File: Browse... Upload file

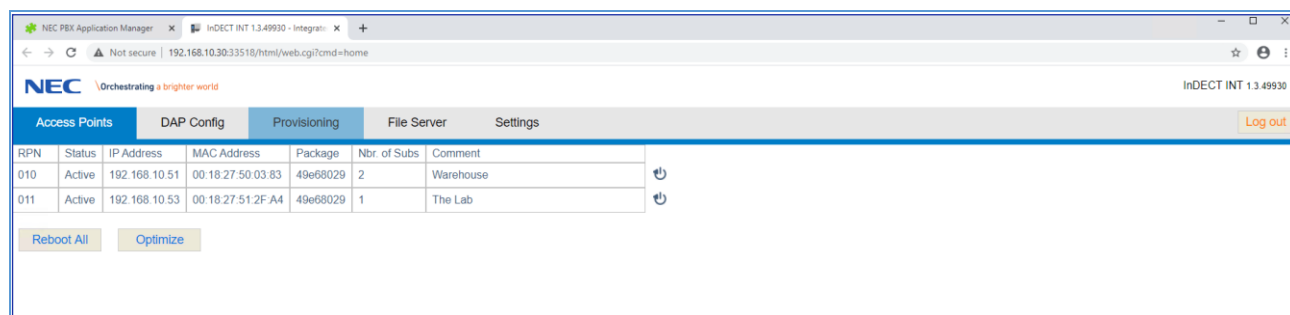
System Name	SHLAB	PBX Type	SV9100	Country	United Kingdom	PARI	100
Version	3 (2019-08-13)	Bootloader	49920521.dwl	Firmware	49e66402.dwl		

- + General Settings
- + IP Settings
- + SIP Settings
- + DECT Settings
- + Security Settings








# 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.



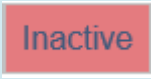



On the **Access Points** screen you can perform the following functions.

Functions	Icon	Description
Reboot		Reboot an individual DAP
Add DAP		Add a newly detected DAP on the network to the InDECT system configuration
Remove DAP		Remove a non-operational DAP from the InDECT system.
Reboot All DAPS		Reboot all 'Active' DAPs connected to the InDECT system.
Edit RPN		You can double click any 'Active' DAPs RPN number to edit the existing value.
Edit Comment		You can double click any 'Active' DAPs Comment field to add a description of the DAP or location where it is placed.
Optimize DAPs		Clicking the Optimize icon will setup the synchronization structure in the most efficient way <sup>1</sup>

<sup>1</sup> The Optimize feature should be used when setting up an InDECT system for the first time or when any changes are made to the location of the DAPs. Further information regarding the optimize feature can be found in the InDECT additional information document

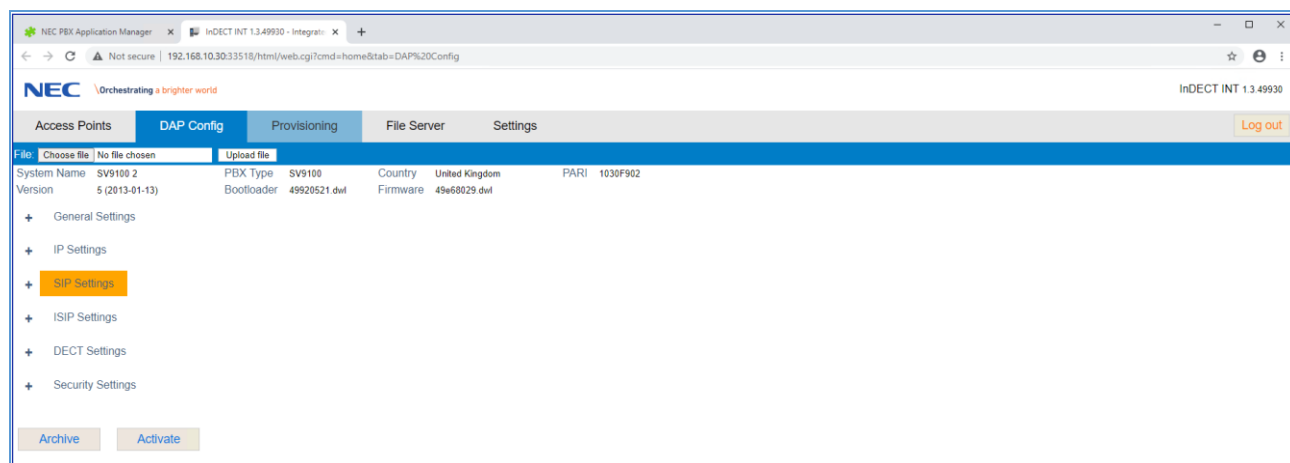
DAP status descriptions are detailed in the below table.

Status	Icon	Description
<b>New</b>		InDECT has detected a DAP on the PBX network but it is currently not part of the system configuration or usable.
<b>Active</b>		An active DAP has been added to the InDECT system configuration and running normally.
<b>Inactive</b>		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, ISIP 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**.



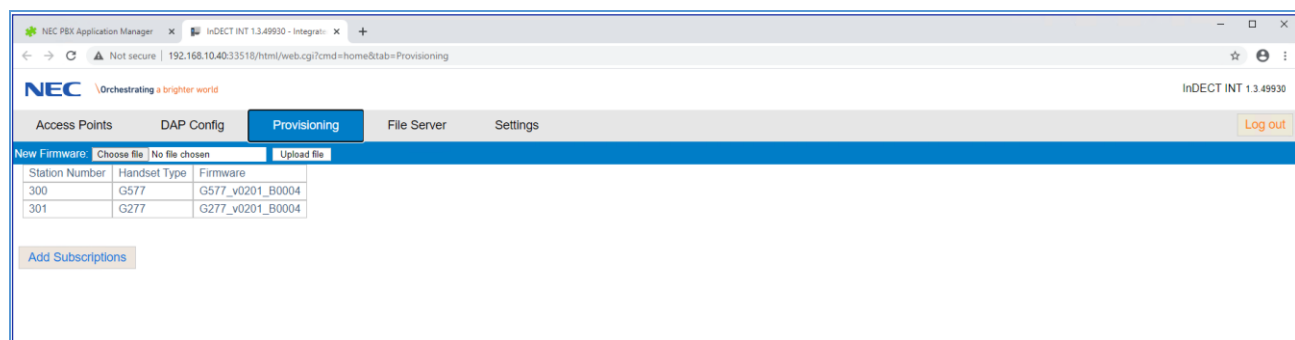
Items highlighted in blue are changes made to the InDECT DAP Config screen. Changes can be updated to the InDECT configuration by pressing the **Activate** button.

## DECT Settings

The **Archive** button will create an archive of the INDECT system and download this to the computer accessing the INDECT web GUI.

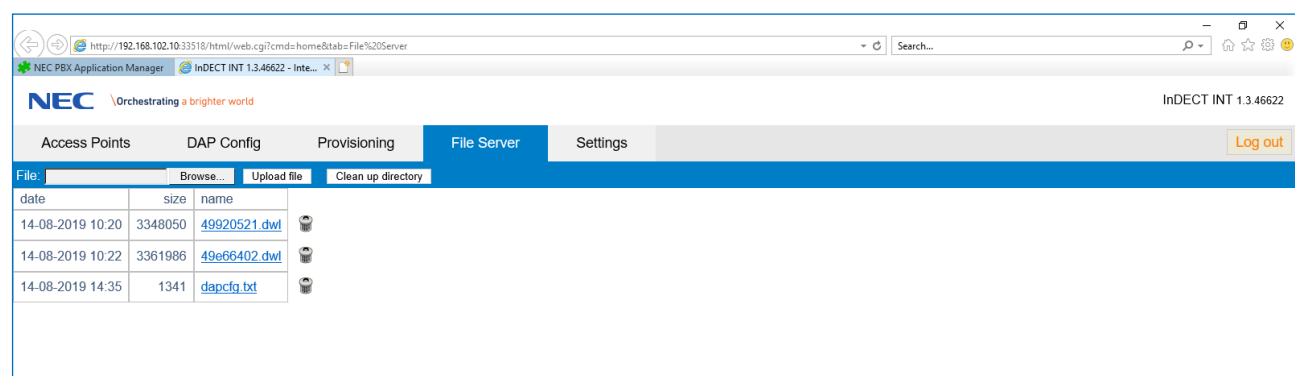
## Provisioning Screen

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.

When using the SL2100 NEC communication server the setting will contain a check box “Use SD for data” this is checked by default when a SD card is present on the system.

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

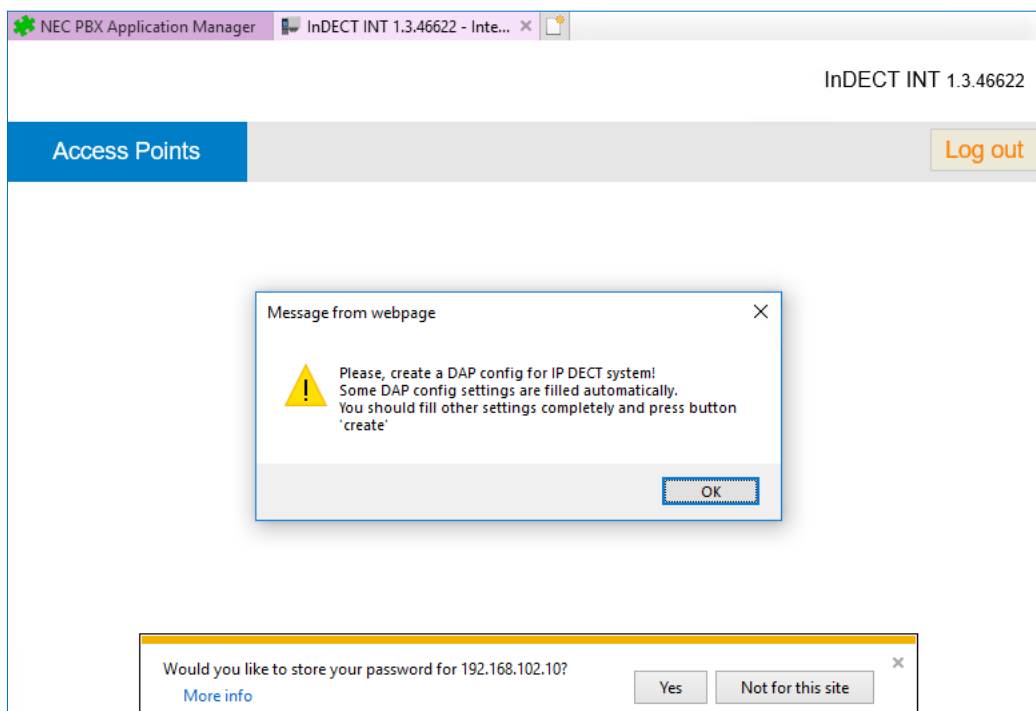
## Creating a new system configuration

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 a web browser window with the URL `192.168.4.10/html/apps/dect/dect.cgi?cgi=web&cmd=home&tab=DAP%20Config`. The page title is "InDECT INT 1.4.51664 - Integrat...". The NEC logo and tagline "Orchestrating a brighter world" are at the top. A navigation bar includes "Access Points", "DAP Config" (active), "Provisioning", "File Server", and "Settings". A "Log out" button is in the top right. Below the navigation bar is a file upload section with "Choose file" and "Upload file" buttons. The main content area is titled "New System Setup Wizard" and contains the following fields:

- System Name:
- PBX Type: SV9100
- PARI:
- Country:
- Bootloader:
- Firmware:
- ISIP on G566 1766 G577: ☒
- Hotspot mode: ☐
- Messaging application allowed: ☐

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,*

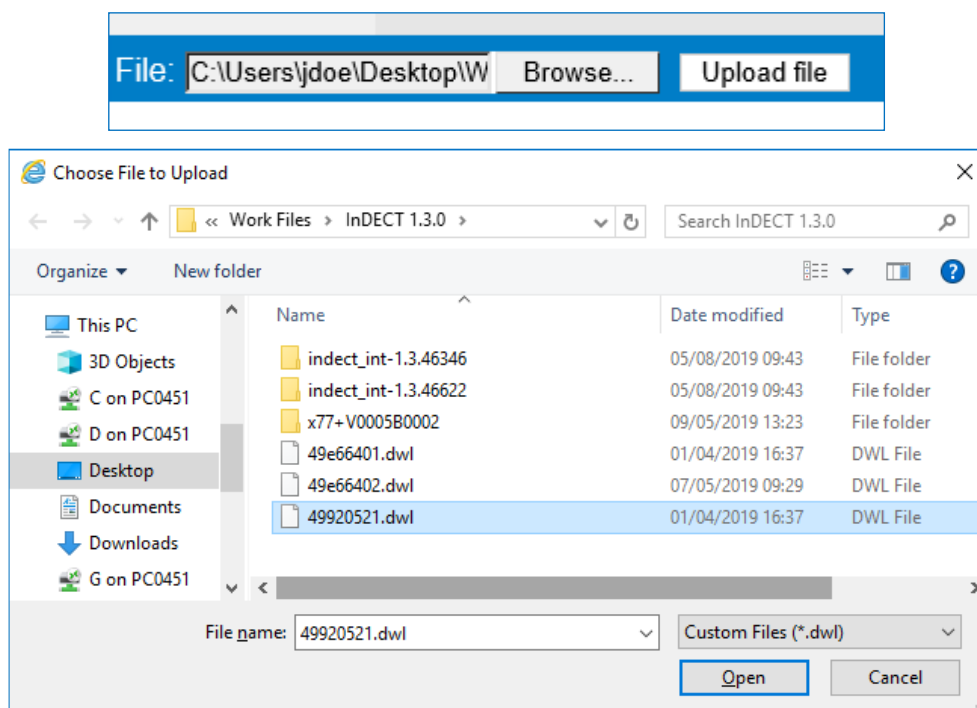
Yemen.

## Bootloader

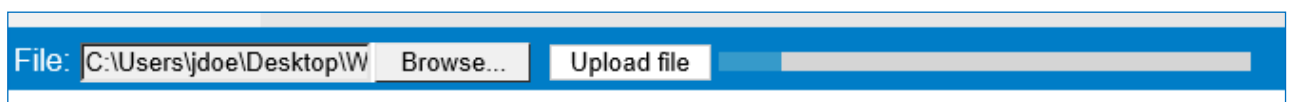
This is the loader package for the AP400 access point that controls its boot and start-up processes. Multiple files can be uploaded to the PBX, but this option will select the file to be used. It must be a minimum of **49920521.dwl** or newer for use with InDECT and the on-board file server. (see Appendix B, for an overview which bootloader should be used)

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

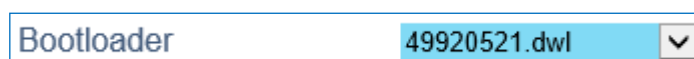
- i. Use the **Browse** button to locate a valid AP400 bootloader file. Press the **Open** button to select the file.



- 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

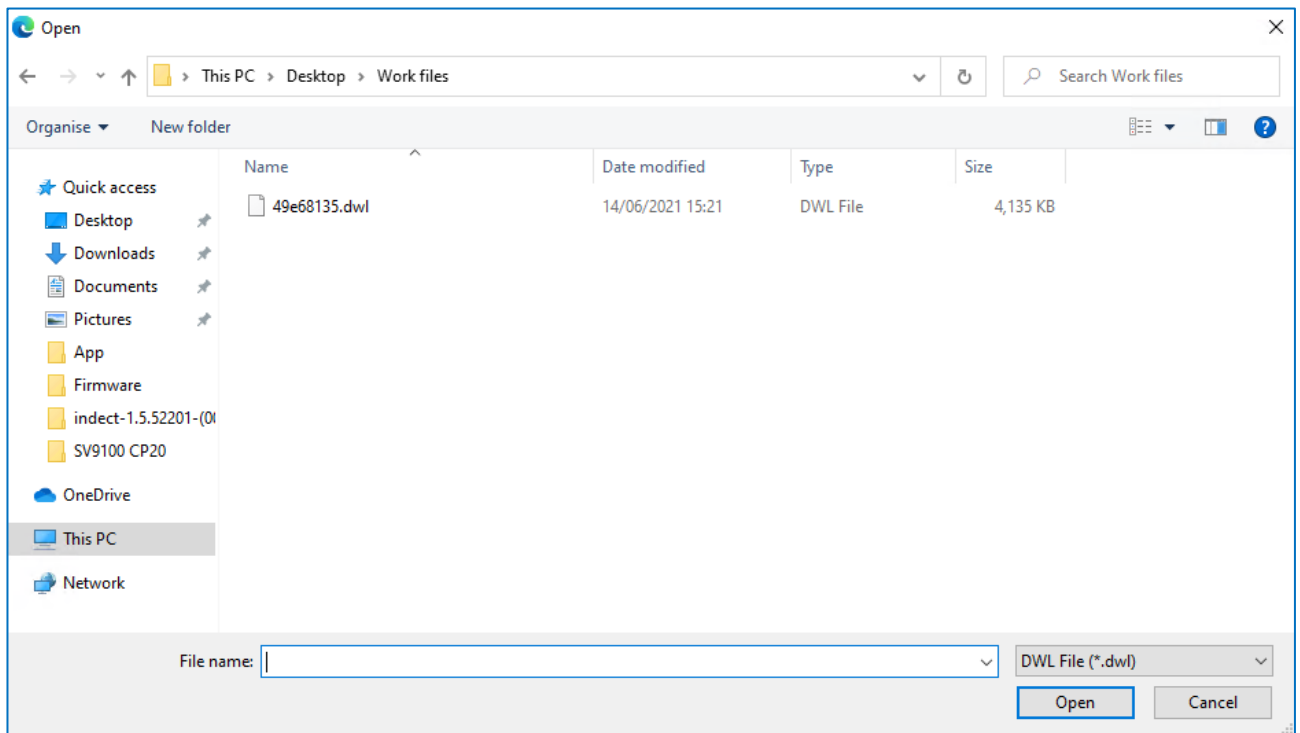
This is the firmware package for the AP400 access point that controls its operation whilst running. Multiple files can be uploaded to the PBX, but this option will select the file to be active. It must be a minimum of **49e68135.dwl** or newer for use with InDECT. (see Appendix B, for an overview on firmware versions)

*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.

**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.*

**File:**

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

Firmware

49e68135.dwl ▼

### 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 'New System Setup Wizard' in the NEC PBX Application Manager. The interface includes a top navigation bar with 'Access Points', 'DAP Config' (selected), 'Provisioning', and 'File Server'. Below this is a 'Settings' section with a 'Log out' button. The main area contains a 'File:' input field with 'Browse...' and 'Upload file' buttons. The 'New System Setup Wizard' form has the following 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 form.

### Messaging application allowed

This check option is optional and should be able when using the NEC InAlerts application with InDECT

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.

192.168.4.10 says  
You must reboot all DAPs to activate the new system.  
Click OK to reboot now or Cancel if you plan to reboot later

NEC Orchestrating a brighter world InDECT INT 1.4.51664

Access Points DAP Config Provisioning Settings Log out

File: Choose file No file chosen Upload file

### New System Setup Wizard

System Name JL LAB

PBX Type SV9100

PARI 1030F90F

Country United Kingdom

Bootloader 49920521.dwl

Firmware 49e68039.dwl

ISIP on G566 I766 G577 ☒

Hotspot mode ☐

Messaging application allowed ☐

Create

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.

NEC Orchestrating a brighter world InDECT INT 1.4.51664

Access Points DAP Config Provisioning File Server Settings Log out

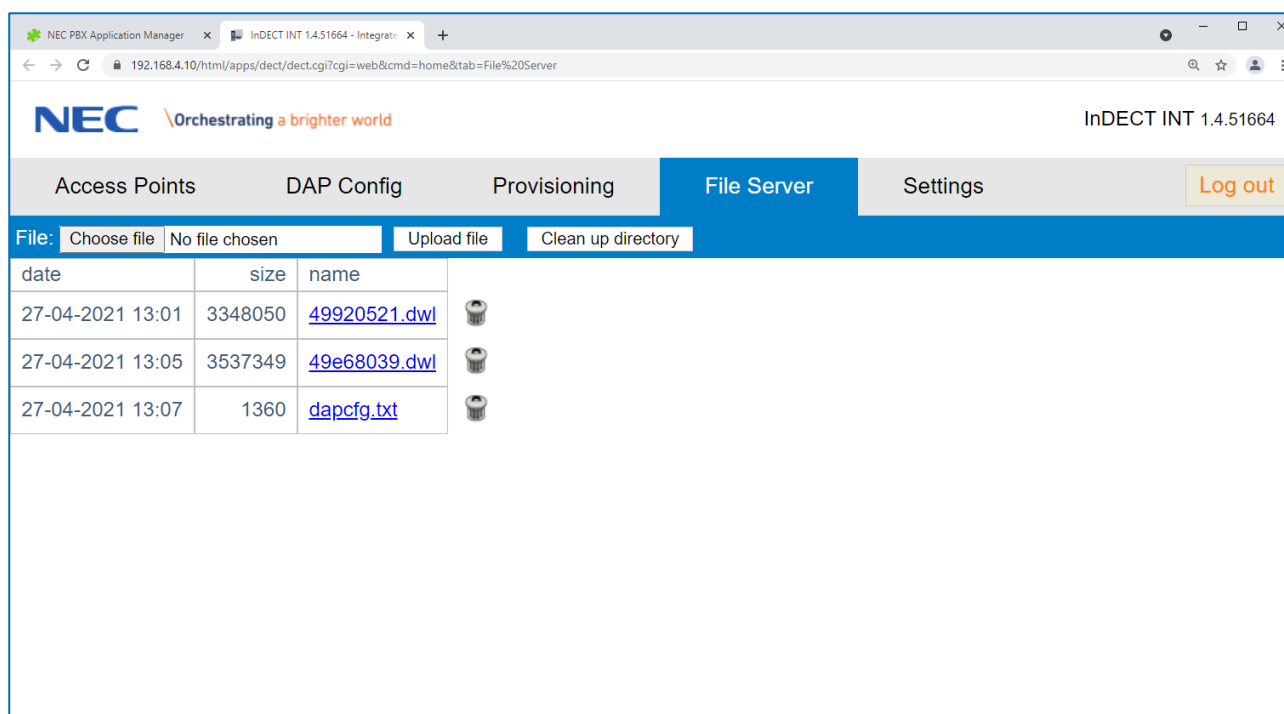
File: Choose file No file chosen Upload file

System Name	JL LAB	PBX Type	SV9100	Country	United Kingdom	PARI	1030F90F
Version	1 (2021-04-27)	Bootloader	49920521.dwl	Firmware	49e68039.dwl		

- + General Settings
- + IP Settings
- + SIP Settings
- + ISIP Settings
- + DECT Settings
- + Security Settings

Archive

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.

NEC PBX Application Manager | InDECT INT 1.4.51664 - Integrati...

192.168.4.10/html/apps/dect/dect.cgi?cgi=web&cmd=home&tab=DAP%20Config

NEC | Orchestrating a brighter world | InDECT INT 1.4.51664

Access Points | **DAP Config** | Provisioning | File Server | Settings | Log out

File: Choose file | No file chosen | Upload file

System Name	JL LAB	PBX Type	SV9100	Country	United Kingdom	PARI	1030F90F
Version	1 (2021-04-27)	Bootloader	49920521.dwl	Firmware	49e68039.dwl		

- General Settings

Bootloader: 49920521.dwl

Firmware: 49e68039.dwl

+ IP Settings

+ SIP Settings

+ ISIP Settings

+ DECT Settings

- **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. DAP messaging IP address and DAP messaging port number are automatically set by the DMLS service.

- IP Settings

Gatekeeper proxy IP address	192.168.4.10
Gatekeeper proxy port number	5070
Corporate directory IP address	192.168.4.10
Corporate directory port number	30160
DAP messaging IP address	192.168.4.10
DAP messaging port number	7080

- **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 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"/>
add trunk access code	<input checked="" type="checkbox"/>
Authentication Realm	192.168.4.10
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 (recvnly 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.

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



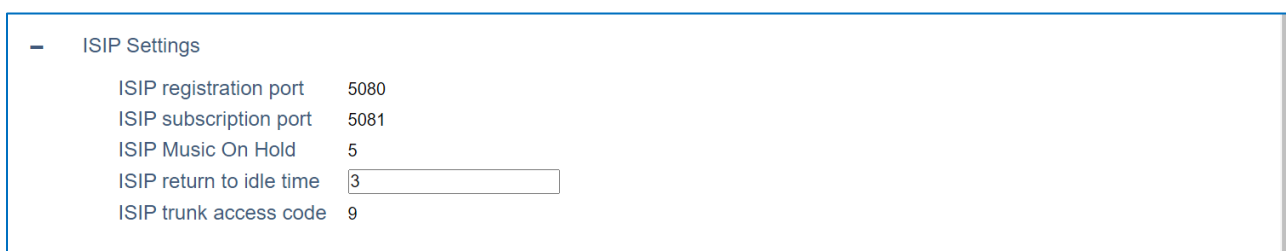
**Authentication Realm** - This item is automatically set from the PBX configuration.

**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.

- **ISIP Settings**

This area shows commonly configured ISIP 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.



- ISIP Settings	
ISIP registration port	5080
ISIP subscription port	5081
ISIP Music On Hold	5
ISIP return to idle time	3
ISIP trunk access code	9

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

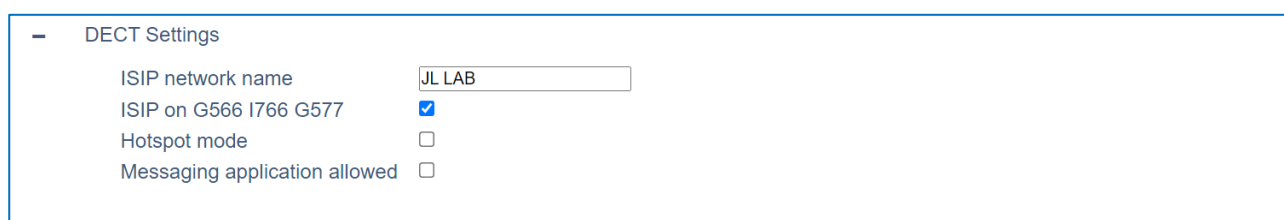
**iSIP Subscription Port** - This item is automatically set from the PBX configuration.

**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.

**iSIP Trunk access code** - This item is automatically set from the PBX configuration.

- **DECT Settings**



- DECT Settings	
ISIP network name	JL LAB
ISIP on G566 I766 G577	<input checked="" type="checkbox"/>
Hotspot mode	<input type="checkbox"/>
Messaging application allowed	<input type="checkbox"/>

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/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”.

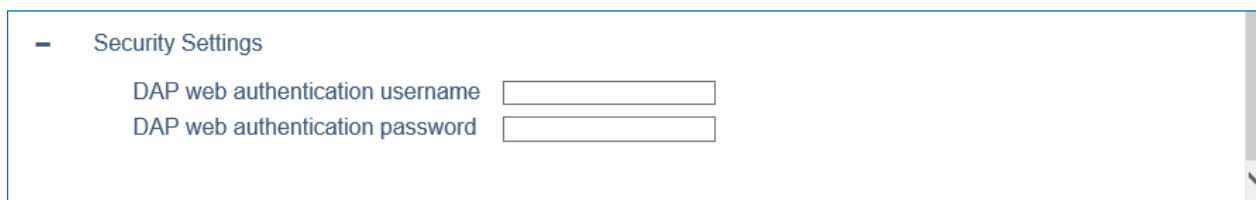
**Messaging application allowed** - This check option is optional and should be abled when using the NEC InAlerts application with InDECT

- **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.

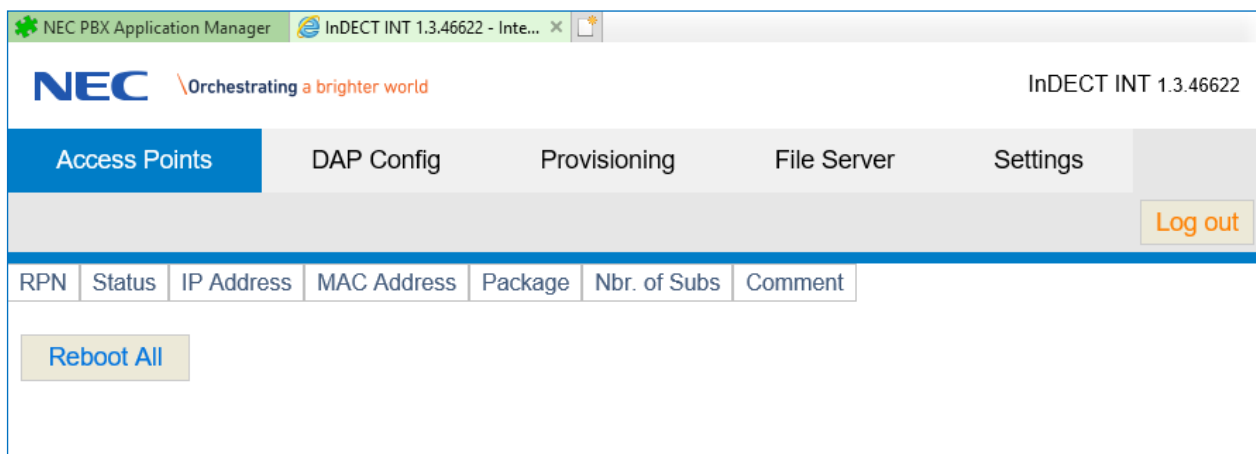


– Security Settings

DAP web authentication username

DAP web authentication password

Go to the **Access Points** screen.



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
Reboot All						

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.

NEC PBX Application Manager

InDECT INT 1.4.51664 - Integrat...

192.168.4.10/html/apps/dect/dect.cgi?cgi=web&cmd=home&tab=Access%20Points

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InDECT INT 1.4.51664

Access Points





DAP Config

Provisioning


File Server

Settings

Log out

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment	
016	New	192.168.4.150	00:18:27:50:D7:64	49e68039	0		 
018	New	192.168.4.152	00:18:27:50:03:83	49e68039	0		 

Reboot All

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 1.4.51664 - Integrat...

→ ↺ 🔒 192.168.4.10/html/apps/dect/dect.cgi?cgi=web&cmd=home&tab=Access%20Points

🔍 ⚙️ ☆ 👤 ⋮

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InDECT INT 1.4.51664

Access Points



DAP Config

Provisioning

File Server

Settings

Log out

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment	
016	New	192.168.4.150	00:18:27:50:D7:64	49e68039	0		
018	New	192.168.4.152	00:18:27:50:03:83	49e68039	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 PBX Application Manager

InDECT INT 1.4.51664 - Integrati...

+

192.168.4.10/html/apps/dect/dect.cgi?cgi=web&cmd=home&tab=Access%20Points

NEC

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InDECT INT 1.4.51664

Access Points



DAP Config

Provisioning

File Server

Settings

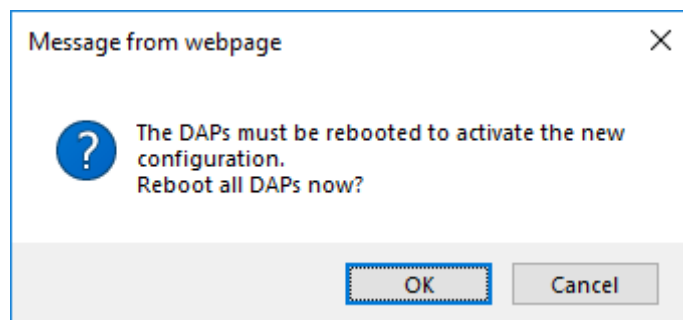
Log out

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment	
016	New	192.168.4.150	00:18:27:50:D7:64	49e68039	0	Lab	
018	New	192.168.4.152	00:18:27:50:03:83	49e68039	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.



The DAP will now reboot and after some time (10 minutes or more) will display in the Access Point screen with the new RPN numbers and comments if added during the installation process.

RPN	Status	IP Address	MAC Address	Package	Nbr. of Subs	Comment
016	Active	192.168.4.150	00:18:27:50:D7:64	49e68039	0	Lab
018	Active	192.168.4.152	00:18:27:50:03:83	49e68039	0	Warehouse

To complete the provisioning of the DAPs click the Optimize button to run the optimization process. Should the InDECT system find any change which can be made to optimize the synchronization hierarchy this will be displayed in an optimization report. Click OK to apply the suggested changes in the optimization report, the Access Points screen will now be displayed with some, if not all DAPs given new RPN numbers, click activate and reboot all DAPs to apply the changes, all DAPs will now reboot with the new RPN numbers. The InDECT system is now ready to use.

*Note: Further details on the optimization process and synchronization hierarchy can be found in the InDECT Additional information document.*

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.

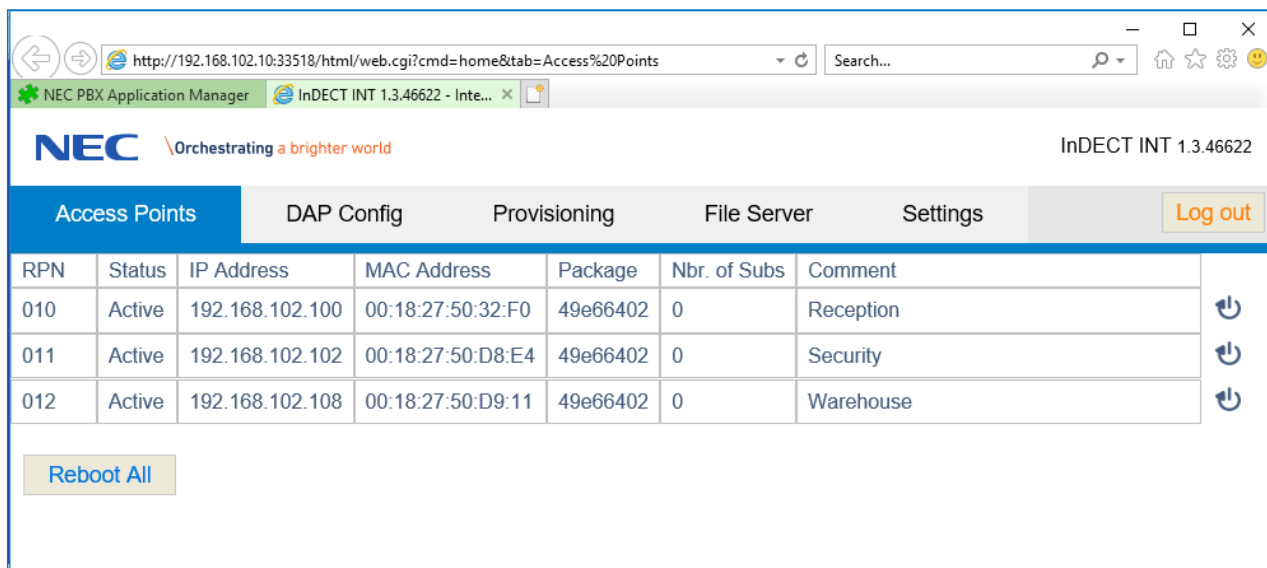
When a DAP that holds subscriptions is not working, the handsets will be unreachable for a time period of 5 minutes. After 5 minutes, the missing Subscriptions will be made active in other DAPs. This will make the handsets operational again.

### Subscribing a Handset

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

`http://<DAP IP Address>/`

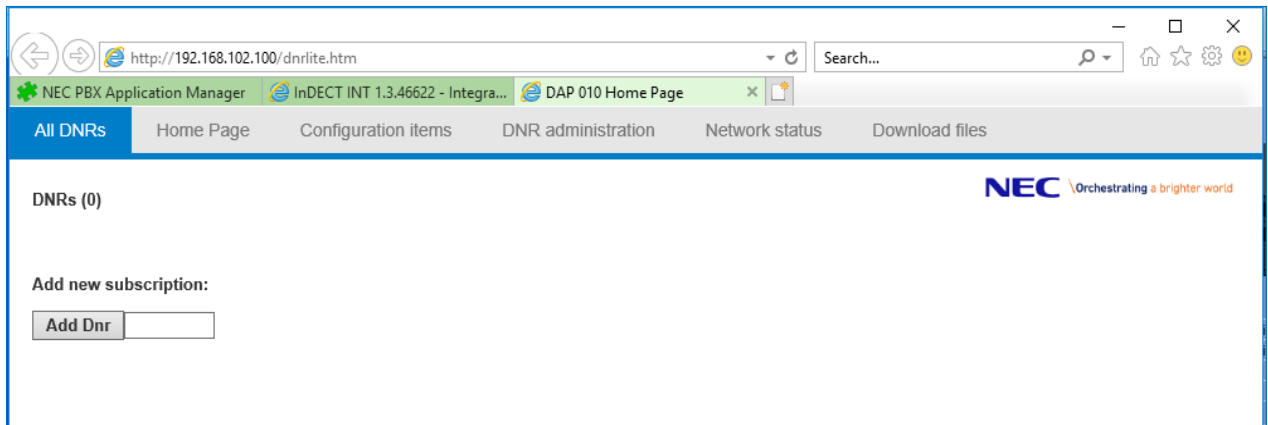
or click an IP address of a DAP on the Access Points screen.



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

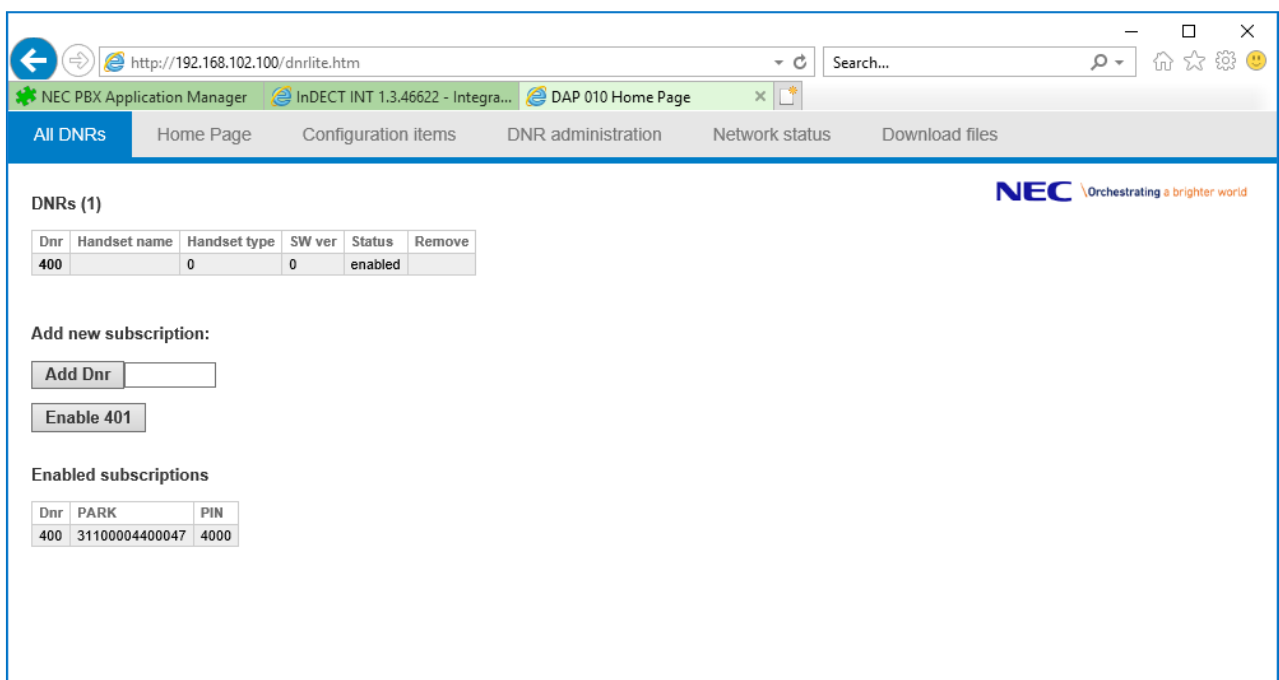
Reboot All

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.*

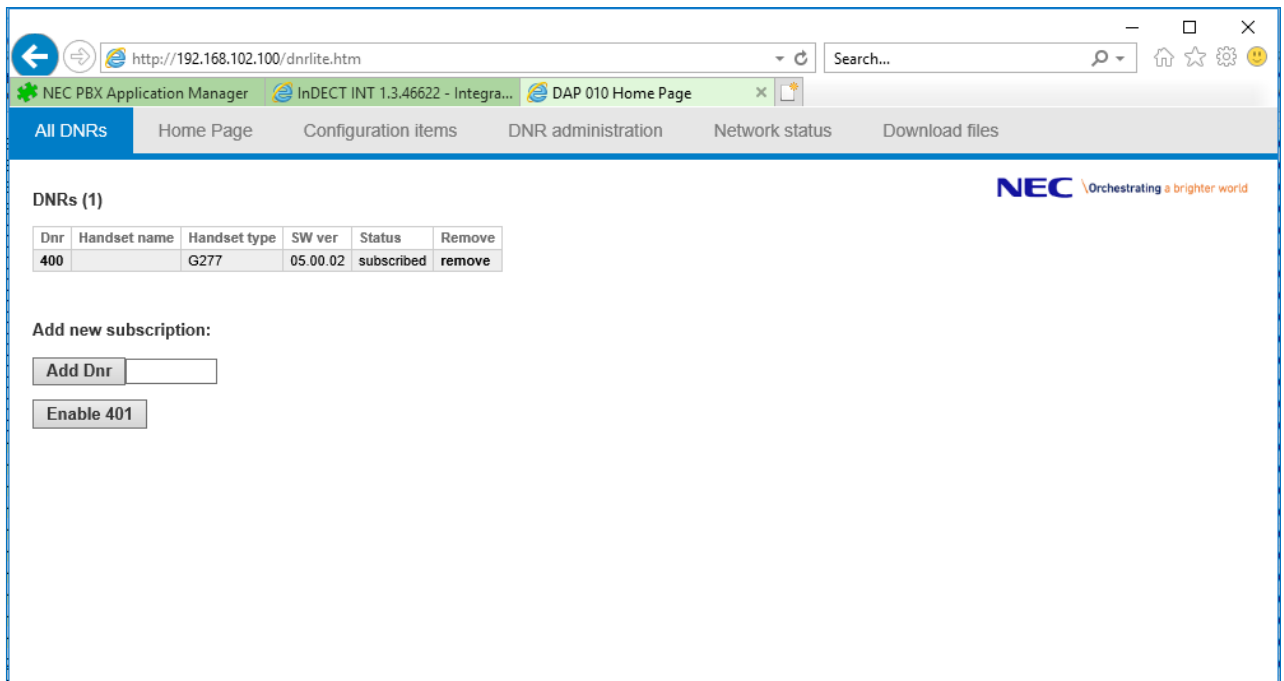
Enter an extension number and press **Add Dnr**. The system is now ready for a subscription, and a PARK and PIN code are displayed.



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.

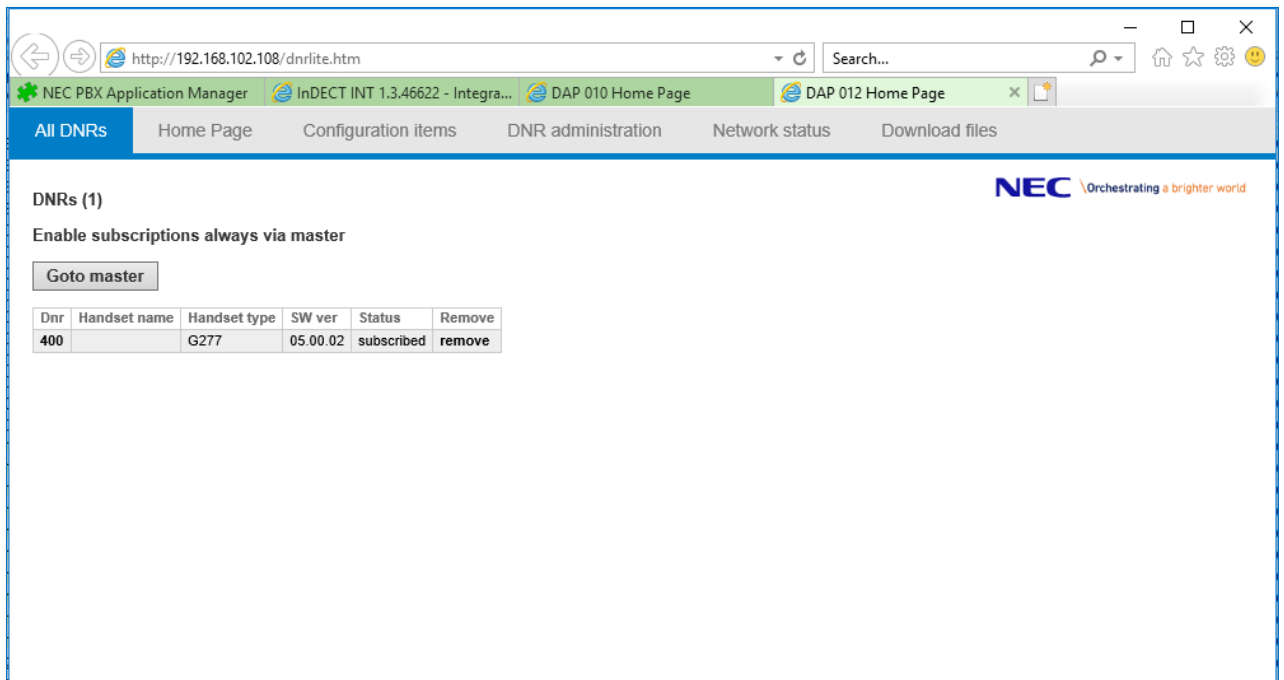
**Note:** *When the subscription is not active anymore, or when the subscription was successful, the WEB page is not immediately automatically updated. Click <F5> to refresh/update the WEB page*

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**.

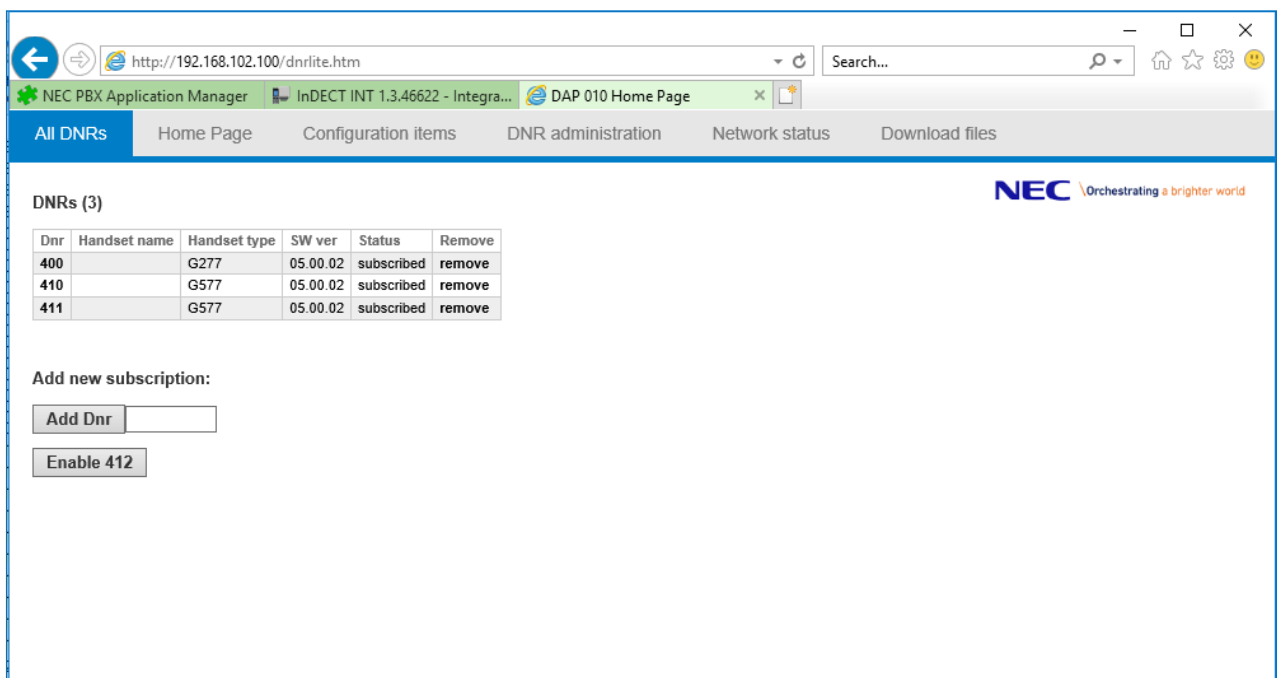


In case you are in the WEB page of a DAP other than the DAP with the lowest RPN number, you will see the following WEB page:

**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**.





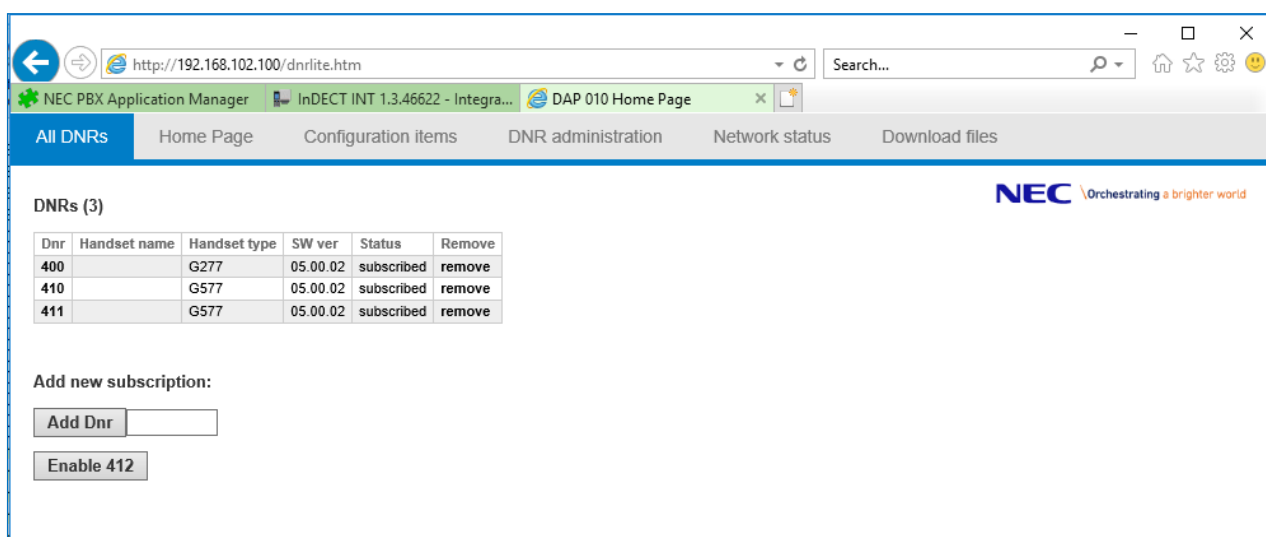
## Removing a Handset

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 InDECT system, but not from the handset! You must remove the subscription data manually from the handset (if possible).

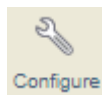
301		G277	02.01.00.04	blacklisted	terminate
-----	--	------	-------------	-------------	-----------

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 of the InDECT GUI. Setting within all areas of the InDECT system can now be edited.

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**.

### SIP Settings

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.

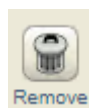
If you wish to revert back to the previous settings press the **Undo** button.

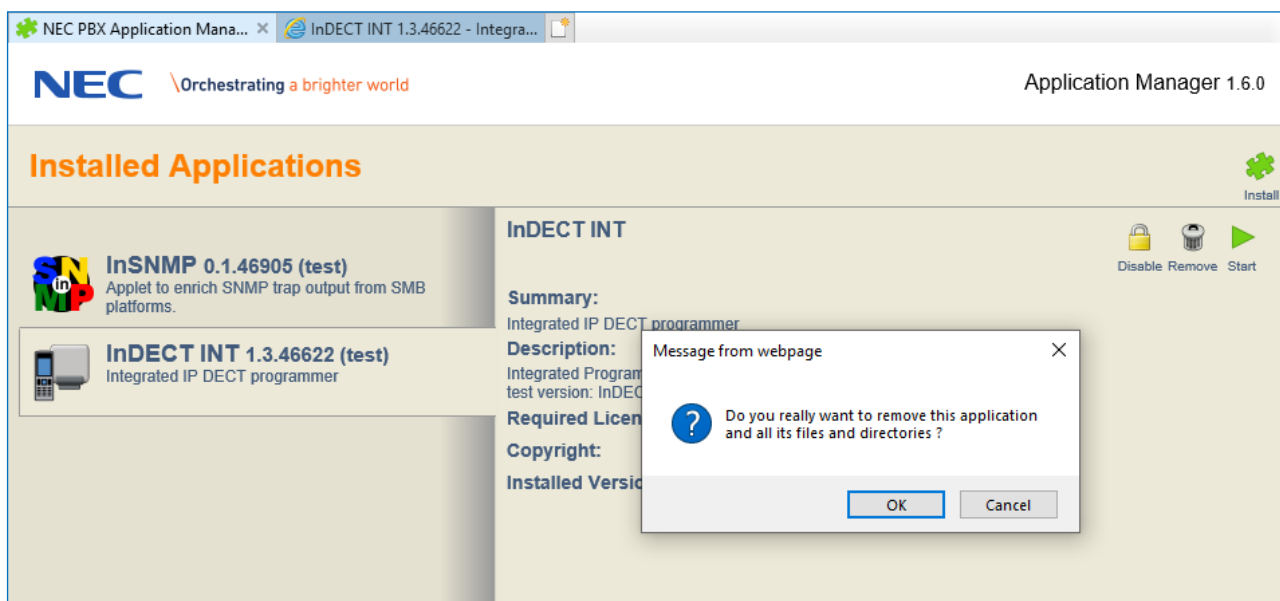
## Un-installing InDECT

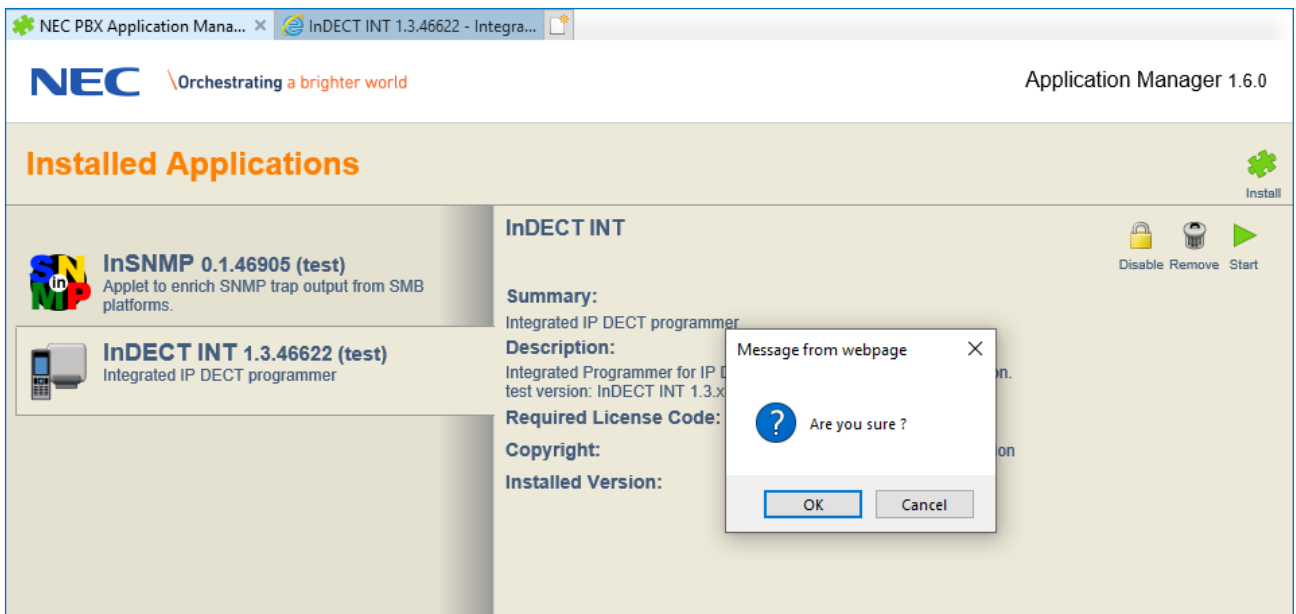
Before Un-Installing InDECT you should understand that when the application is un-installed, any existing configuration and associated system files are removed. To keep a backup of the current configuration you should first download the system files from the **File Server** screen to a safe location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

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.





## 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.

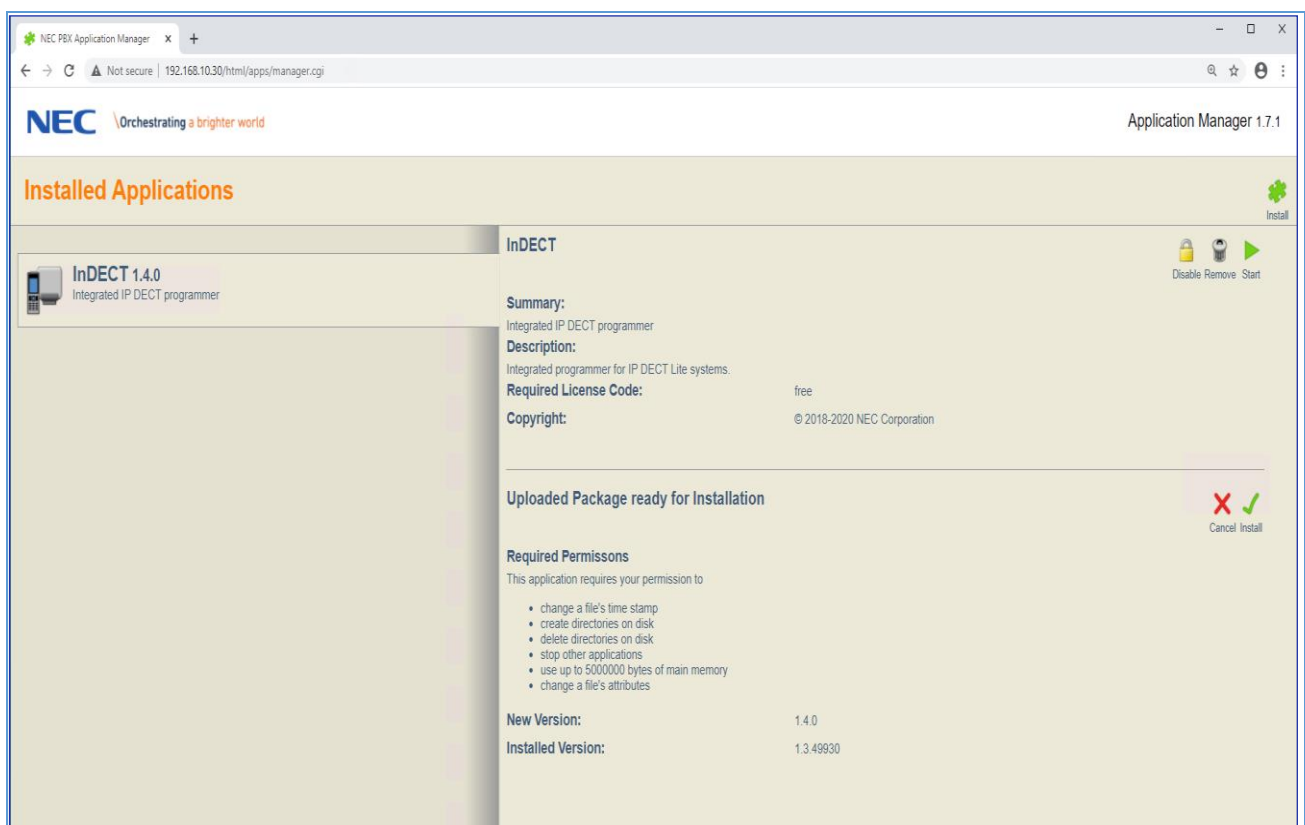
The existing configuration will automatically be available after the upgrade has been completed.

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

### iSIP Settings

SIP Setting	SV9100 Programming	SL2100 Programming
iSIP Registration port	PRG10-46-06	PRG10-46-06
iSIP Subscription port	PRG10-46-12	PRG10-46-12
iSIP trunk access code	PRG11-09-01	PRG11-09-01

## Appendix B – Software Overview of DAP firmware introduction on InDECT

Table below shows the introduction of firmware and bootloader for the AP400 at the different InDECT versions.

	Bootloader	Firmware
<b>InDECT 1.4.0</b>	49920251.dwl	49e68036.dwl
<b>InDECT 1.5.0</b>	49920521.dwl	49e68039.dwl
<b>InDECT 1.5.1</b>	49920251.dwl	49e68135.dwl
<b>InDECT 1.6.0</b>	49920620.dwl	49e68222.dwl



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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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