FireSwitch Hosted PBX 2.2 Admin Guide

Client Version

Document Version 1.0

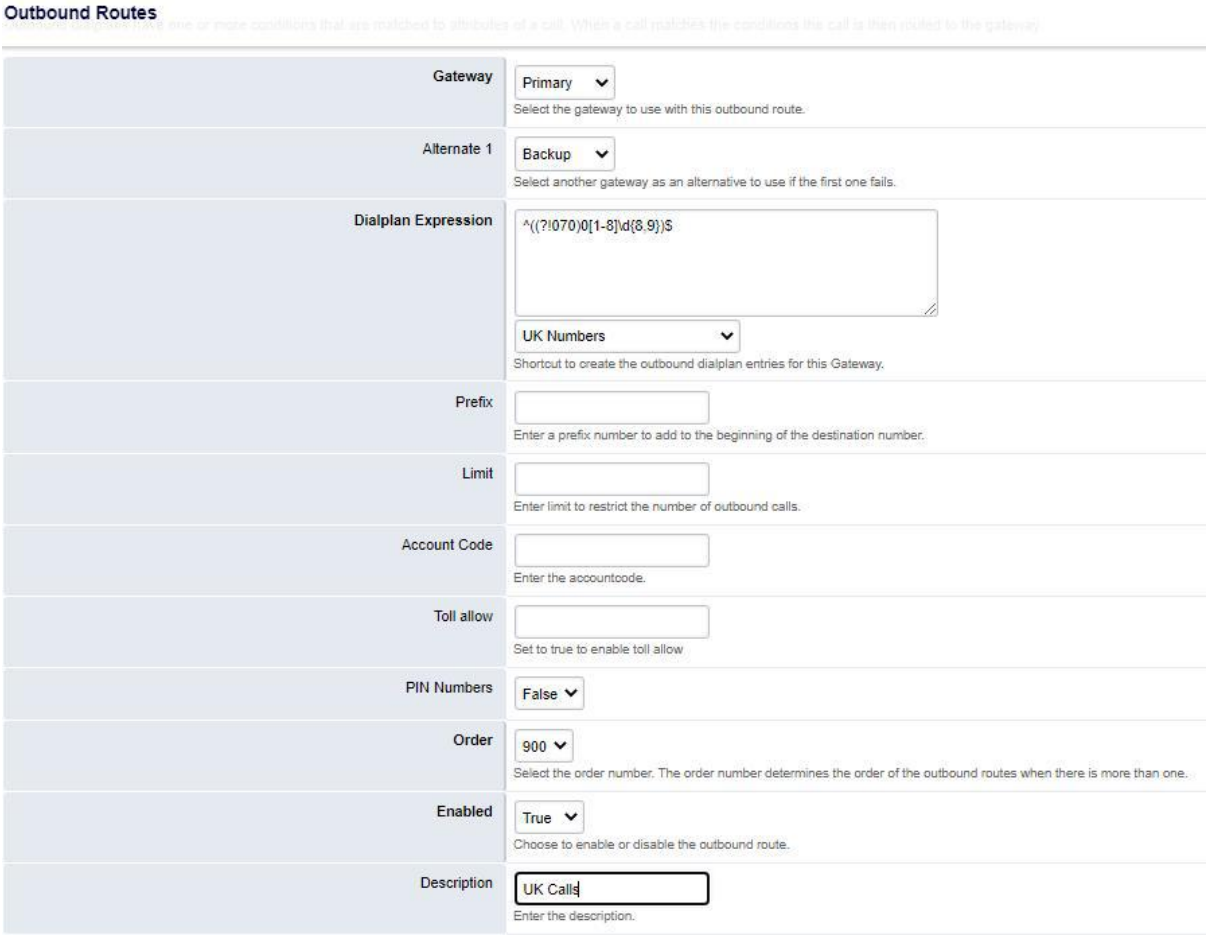
Contents

Brief

It is strongly recommended that if you are managing your PBX you do sign up for the Spitfire Training. Spitfire will not be responsible for any misconfiguration or miss-operation of the Spitfire FireSwitch.

Create Outbound Routes

Navigate to 'Configuration' > 'Outbound Routes' and click on the '+' (Plus) button to create a new outbound route. For a Standard outbound rule, select the Primary trunk as 'Gateway' and the Backup trunk as 'Alternate 1'. The outbound dial plan uses regular expressions that can be selected from drop down and edited depending on what outbound route you wish to create.



Underneath the 'Dialplan Expression' field, choose from the dropdown the appropriate option that relates to your requirements, for example "UK Numbers". This will populate the 'Dialplan Expression' field with the relevant expression. In the 'Description' field, name the route to match the chosen dial plan and save. Repeat this with further routes as required.

Please note the order number should be 900 or above. This is set by default but please ne aware on some new PBXs it might be lower. Lower numbers can conflict with system dial plans and may impact inbound and outbound dialling.

If there are restrictions on some users having access to certain routes (e.g. "International") a 'Toll allow' option must be used. This requires a logical name to be used such as "International". This can then be matched in the 'Toll allow' field for any extensions that are allowed to use this dial plan. All other extensions which are not set up with the 'Toll allow' will not be able to use the route.

'International' Outbound Route

Outbound Routes

Outbound dialplans have one or more conditions that are matched to attributes of a call. When a call matches the conditions the call is then routed to the gateway.

Gateway	Primary Select the gateway to use with this outbound route.
Alternate 1	Backup Select another gateway as an alternative to use if the first one fails.
Dialplan Expression	^(00.*)$ International Shortcut to create the outbound dialplan entries for this Gateway.
Prefix	Enter a prefix number to add to the beginning of the destination number.
Limit	Enter limit to restrict the number of outbound calls.
Account Code	Enter the accountcode.
Toll allow	International Set to true to enable toll allow
PIN Numbers	False
Order	900 Select the order number. The order number determines the order of the outbound routes when there is more than one.
Enabled	True Choose to enable or disable the outbound route.
Description	International Calls Enter the description.

Extension

Voicemail Enabled	True Enable/disable voicemail for this extension.
Voicemail Mail To	Enter the email address to send voicemail to (optional).
Voicemail File	Audio File Attachment Select a listening option to include with the email notification.
Voicemail Keep Local	True Choose whether to keep the voicemail in the system after sending the email notification.
Missed Call	Select the notification type, and enter the appropriate destination.
Toll Allow	International Enter the toll allow value here. (Examples: domestic,international,local)
Call Timeout	20 Enter the call timeout.
Call Group	Default Enter the user call group here. Groups available by default: sales, support, billing.
Call Screen	False Choose whether to enable or disable call screening.

When checking a route after setting up, you should see the "Toll allow" rule above the expression.

Tag	Type	Data
condition	${user_exists}	false
condition	${toll_allow}	International
condition	destination_number	^(00.*)$

The "Toll allow" option can also be used to set up multiple routes when you have more than one trunk. This can manage which trunk a specific extension is allowed to dial out over. See the example below.

Outbound Routes

Route outbound calls to gateways, tdm, enum and more. When a call matches the conditions the call to outbound routes.

Name	Number	Context	Order	Enabled	Description
Ashford_Primary.d			901	True	AshfordAll
Bicester Primary.d			901	True	BicesterAll
London Primary.d			901	True	LondonAll
Manchester_Primary.d			901	True	ManchesterAll

Create the rule as described previously, and this time choose a logical name that relates to the trunk in use, e.g. 'London'.

Outbound Routes

Outbound dialplans have one or more conditions that are matched to attributes of a call. When a call matches the conditions the call is then routed to the gateway.

Gateway	London Primary Select the gateway to use with this outbound route.
Alternate 1	London Backup Select another gateway as an alternative to use if the first one fails.
Alternate 2	Select another gateway as an alternative to use if the second one fails.
Dialplan Expression	^((?!070)0[1-8]\d{8,9})$ UK Numbers Shortcut to create the outbound dialplan entries for this Gateway.
Prefix	Enter a prefix number to add to the beginning of the destination number.
Limit	Enter limit to restrict the number of outbound calls.
Toll allow	London Set to true to enable toll allow
Order	901 Select the order number. The order number determines the order of the outbound routes when there is more than one.
Enabled	True Choose to enable or disable the outbound route.
Description	London - UK Numbers Enter the description.

Once again, check this after creating it to ensure the 'Toll allow' rule is above the chosen expression.

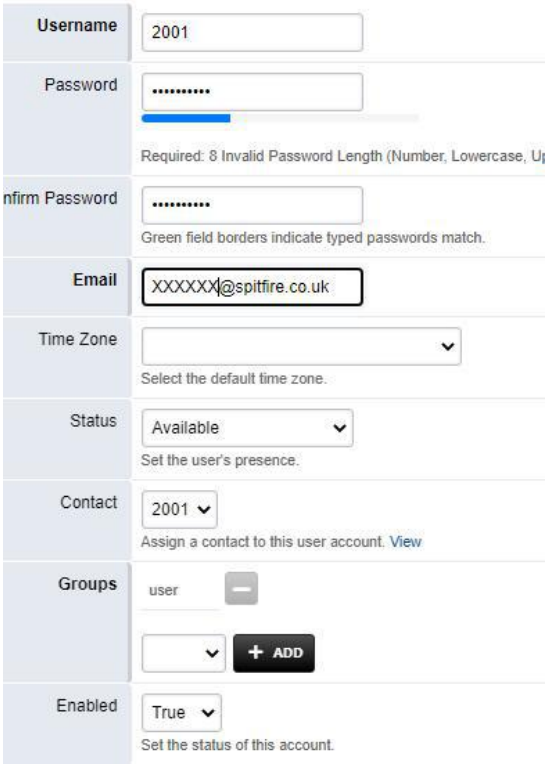
Tag	Type	Data
condition	${user_exists}	false
condition	${toll_allow}	London
condition	destination_number	^(\d*)$

Then add the 'Toll allow' name to the specific extensions that are using this trunk for outbound calls. This now allows the outbound CLI to be used for any DDIs on that trunk.

Create Users

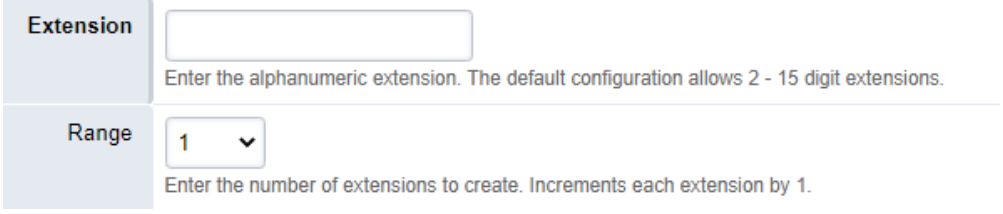
A user should be created for each extension that will be added to the PBX. This is necessary for access to the user web interface, accessing contacts, and for configuring 'Call Centre Queues'.

- Navigate to 'Configuration' > 'Users' and click on '+ ADD'.
- Use the extension number of the user as the 'Username'.
- Enter the complex password (supplied by Project Manager) in the 'Password' field.
- Enter email address of the user in the 'Email' field.
- Assign 'User' from the 'Groups' drop down menu.
- Press 'Save'.
- Repeat this for all users before creating the corresponding extensions.



Create Extensions

Navigate to 'Configuration' > 'Extensions'.
Click on '+ ADD' and enter the desired extension number. You can also use the 'Range' dropdown to create multiple extensions.



Once created, you can select each extension and complete the remaining fields as appropriate (the rest are optional) and then click 'save'.

Extension Settings:

- *User = Assigns the corresponding user for the extension.*
- *Voicemail password = PIN for accessing voicemails for that extension.*
- *Effective caller ID name = Presented name on internal calls.*
- *Device Provisioning = MAC address of handset to be added here with the appropriate template.*
- *Effective caller ID number = Presented number on internal calls. Should be the same as the extension number.*
- *Outbound caller ID number = Presented number on external calls (with NO leading '0' or '44' for Spitfire SIP Trunk).*
- *Directory Full Name = Name as required in the directory.*
- *Voicemail Enabled = True (to be active) /False (to disable).*
- *Voice Mail To = Email address for voicemail to email.*
- *Voicemail File = Can set how the PBX will issue the Voicemail File i.e. File attachment or Link*
- *Toll Allow = As discussed in the Outbound Route section.*
- *Call Group = Used for the call pickup feature. Extensions in the same Call Group will be able to pick up each other's calls.*

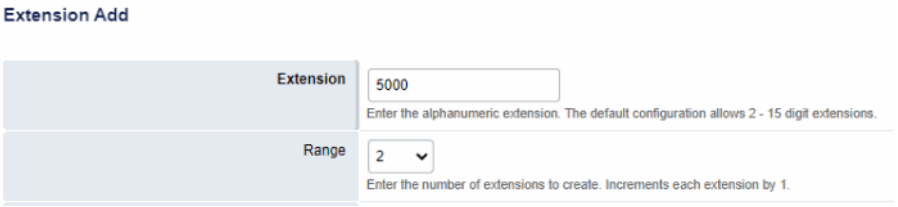
A user needs to be assigned to an extension in order for the user to be able to login to the PBX web interface for their extension.

The outbound caller ID number will always need to be populated with a valid CLI, even if it is just the default trunk CLI.

If you have created a range of extensions you will need to go back into each extension to complete each field.

Create Group Mailboxes

Group mailboxes are simply extensions which are permanently set to "Do Not Disturb" (so they will always forward to voicemail).



Create the extension as normal, and when the extension is created, select it and navigate to "Call Forward" at the top right of the page.

Set "Do Not Disturb" to "Enabled" and save.

This can now be used as a destination for unanswered ring group calls or the time out for auto attendants for example. If the users want to be notified of group mailbox messages on their handset, this extension can be registered as a second account on the handset (see page 11 for more information).

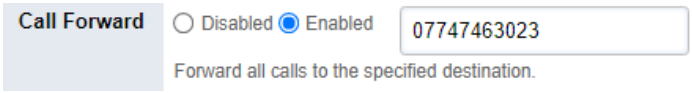
You can also choose to send the voicemail notification to an email address. Multiple email addresses can be separated by a comma.

Create Divert Extensions

Divert extensions can be used for any off system call forwarding (for example, to divert calls to a third party answering service as a final destination, or when a "Call Flow" or "Time Condition" requires an external divert). Divert extensions should be programmed with a different numbering plan from the normal extensions. For example, if the normal extensions are configured as 2xxx, then the divert extensions could be in the 3xxx range (just so it's easier to differentiate). To configure a divert extension, create an extension as described earlier.

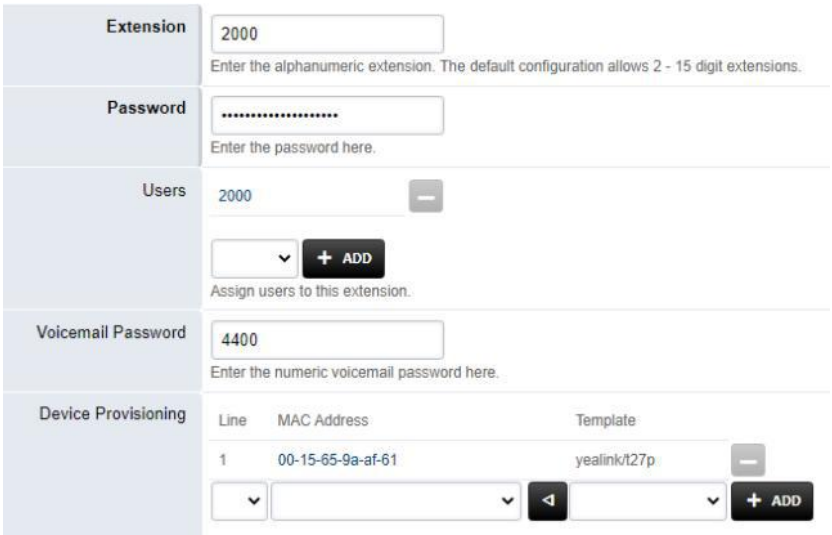
Then go to the Call forward option for that extension.

Here you can set the destination number, and save.

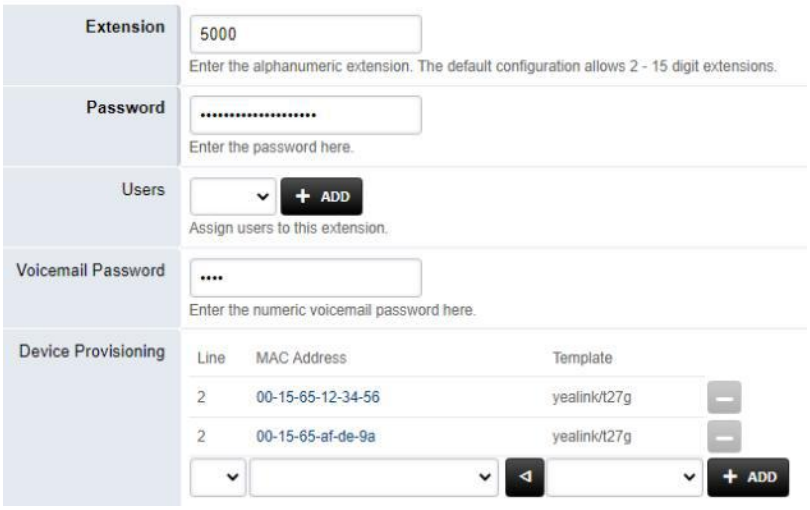


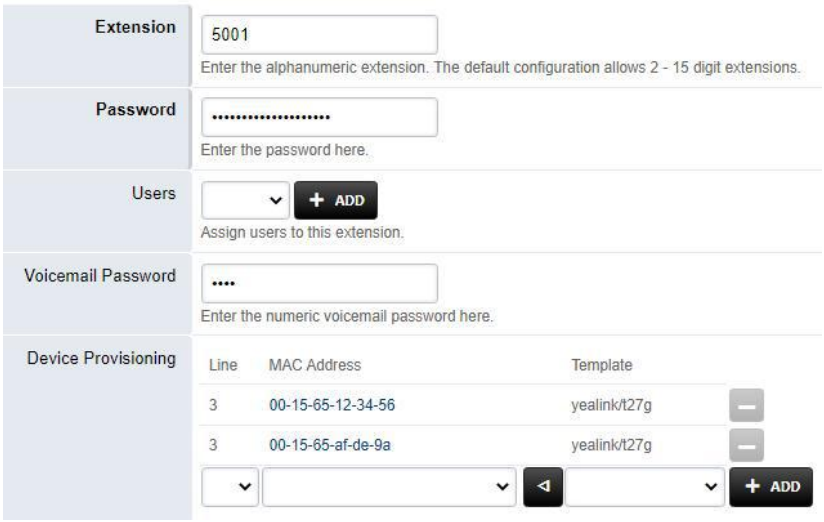
Configure Handsets

Auto provisioning is available on Yealink handsets. To utilise this, Navigate to "Configuration > Extensions" on the PBX, and click on the extension you want to provision. Under "Device Provisioning", add the MAC address of the handset, and assign the corresponding template for your device. Then click "SAVE".



To add a group mailbox extension to a handset, add the MAC addresses to the group mailbox extension's "Device Provisioning" field and assign it to "Line 2". This will add the mailbox extension as a second account on those handset/s. You could add another mailbox (e.g. the Night Mailbox) as "Line 3".

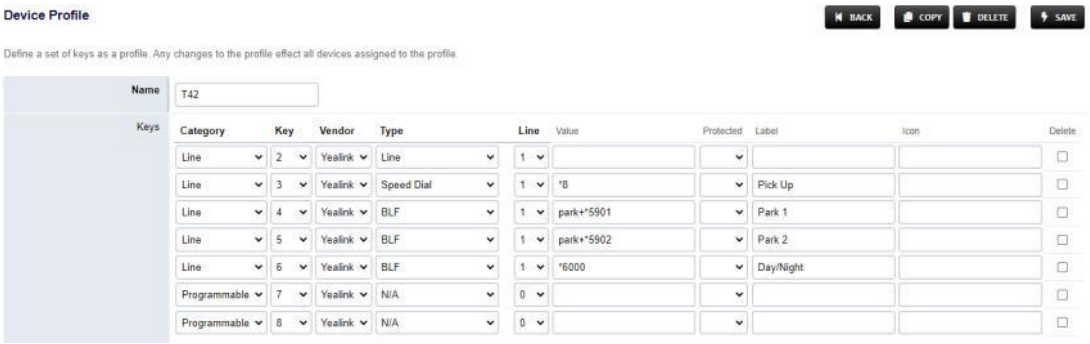




Programming Line / Feature Keys:

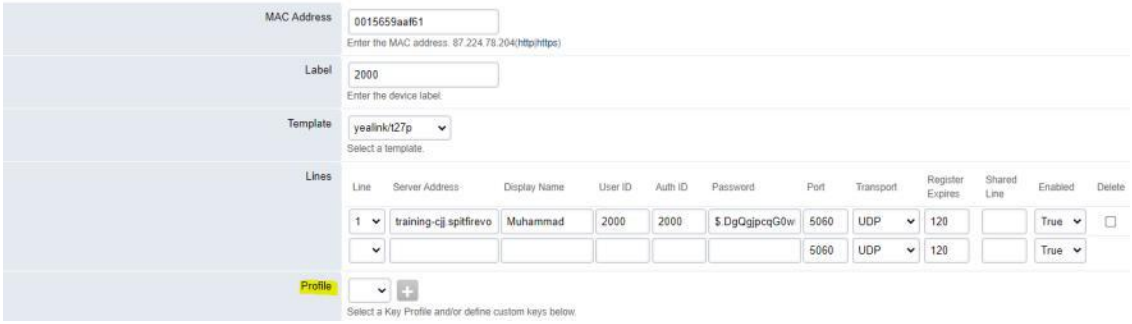
Choose the MAC address for the handset you're configuring, this can be done from "Extension > Device Provisioning", or "Configuration > Handset Provisioning".

Here you can program extensions individually, or create a profile that can be selected for multiple extensions to save time.



Always use "Key 2" as a second "Line 1" key for the main account. If the extensions have a group mailbox account added you must set programmable keys 7 and 8 as N/A. This ensures the user cannot accidentally toggle between different extensions configured on the handset (a group mailbox, for example), and attempt to dial out from here.

If you have created one or more profiles, you can select which one to use under the “Device Provisioning” for that handset.



To provision the handset, log on to the handset’s web interface.

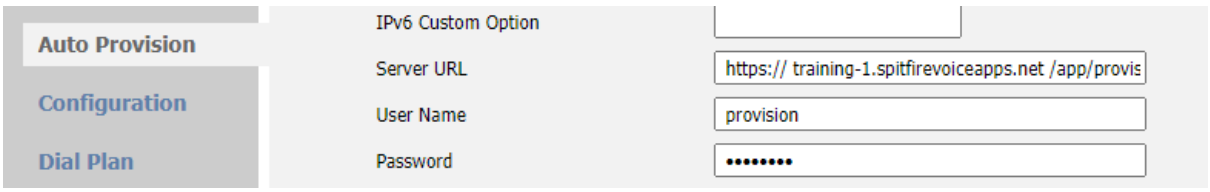
Navigate to “Settings > Auto Provision” Enter the “Server URL”, e.g.

https://training-1.spitfirevoiceapps.net /app/provision/

Enter “User Name” e.g. “provision”.

Enter “Password” (which will be provided).

Then Click “Confirm”.



Navigate to “Security”, then click on “Trusted Certificates”. For the option “Only Accept Trusted Certificates”, set to “Disabled” then click “Confirm”.

Depending on model and firmware, the phone may reboot and provision at this stage. If not go back to "Settings > Auto provision" and click "Auto Provision Now".

Configure Feature Codes

Some commonly used feature codes which can be programmed onto buttons:

*8	Group pickup.
**[extension]	Extension pickup.
*33[extension]	Eavesdrop (PIN required).
*97	Voicemail.
*22	Agent login/logout.
*732	Recordings.
*74	Call forward toggle.
park+*[5901-5999]	Shared park orbit (BLF).

Create Ring Groups

Navigate to "Configuration > Ring Groups" and click the plus button to create a new ring group. There are 4 hunt strategies to select from:

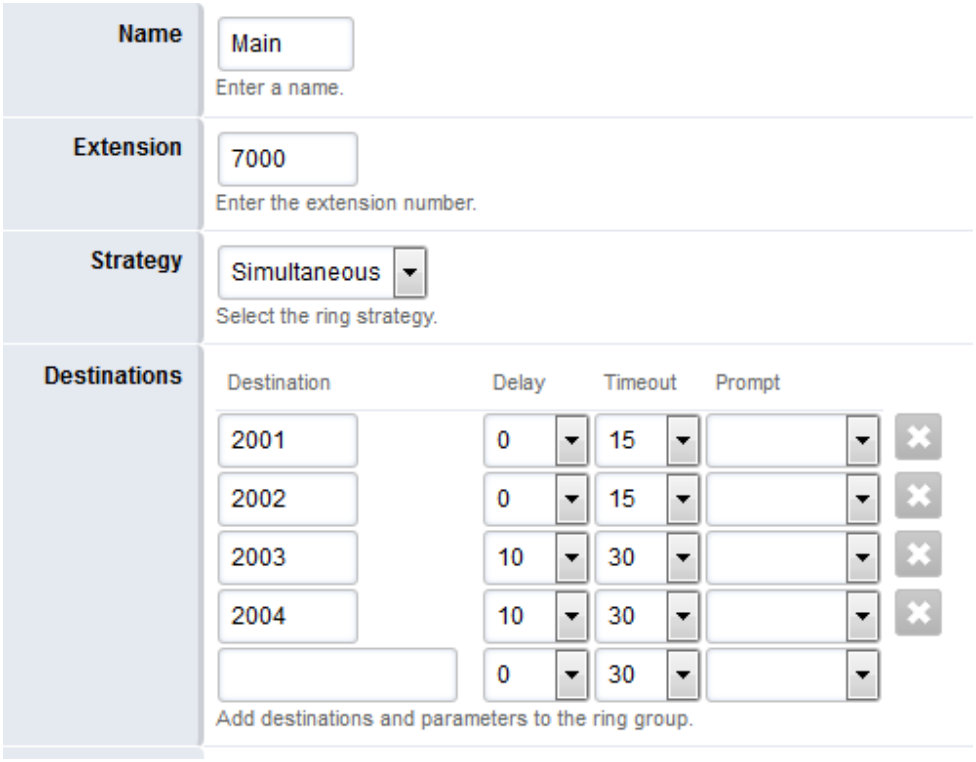
Simultaneous: Rings all defined destinations and can also be used for delayed / staged ringing.

Enterprise: Used for ring groups where more than one device is used for extensions, e.g. a handset in the office and a handset at home, or for a handset and a softphone associated with the same extension. Please note that delayed ringing does not work as it does with the "Simultaneous" groups, so the use of overflow groups should be used instead.

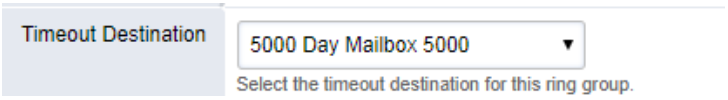
Sequence: Extensions rung in the order specified.

Random: A random destination will ring.

If you select “Simultaneous”, you are given an option of delaying each destination from ringing. Along with the timeout setting, this allows you to create different “levels” within the ring group.



You should also enter a timeout destination for any calls to the ring group that are not answered.

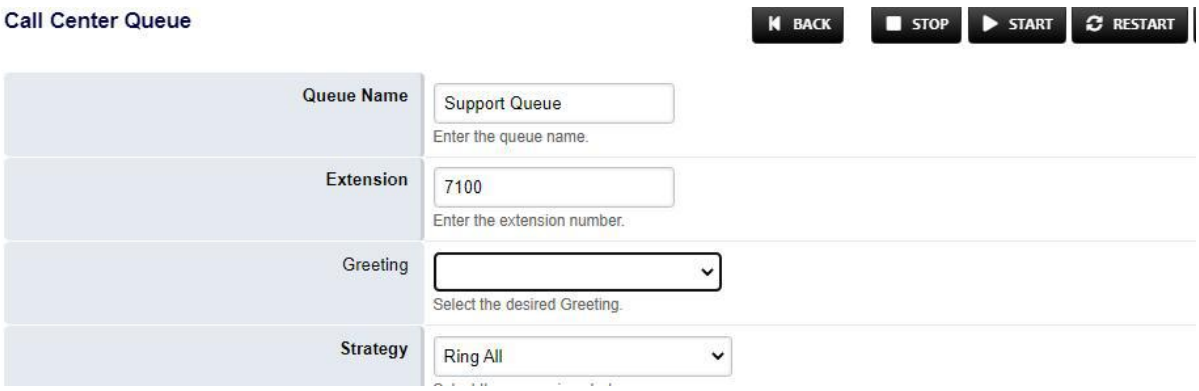


The maximum timeout for a ring group, or groups if they overflow, should be 120 seconds. For longer ring time requirements a “Call Centre Queue” should be considered.

Create Call Centre Queues

Navigate to “Configuration > Call Centre Queues” and click the plus button to create a new call centre queue.

The mandatory fields are “Queue Name” and “Extension” (the internal number of the call queue). To leave everything else default, click “SAVE”.



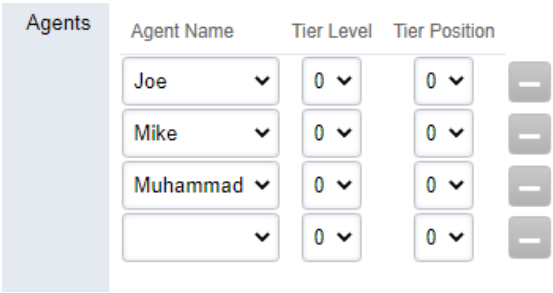
In order to add extensions to a queue, corresponding agents must first be created. From the “Call Centre Queues” menu, click on “Agents” at the top right of the page and then click the plus symbol to add a new agent.

In order to be able to create an agent, there must be a user that can be assigned to the agent.

Select the user from the “Agent Name” dropdown and enter the same value as the “Agent ID”. Next, select the corresponding extension from the “Contact” dropdown. You can also set the default agent status. This should usually be set to “Available” to ensure that agent is “logged in” to the queue by default.

Ensure that the agent timers correspond to the timers in the Queue so that the phones will ring accordingly.

Now that you have created an agent, you can go back and add the agent to the queue. From the “Agent Name” dropdown, select the agent(s) to be added to the queue.



In order for any changes to the queue to take effect, you must click **“**Restart**”** in the top right of the page. This will not disconnect any queued calls.

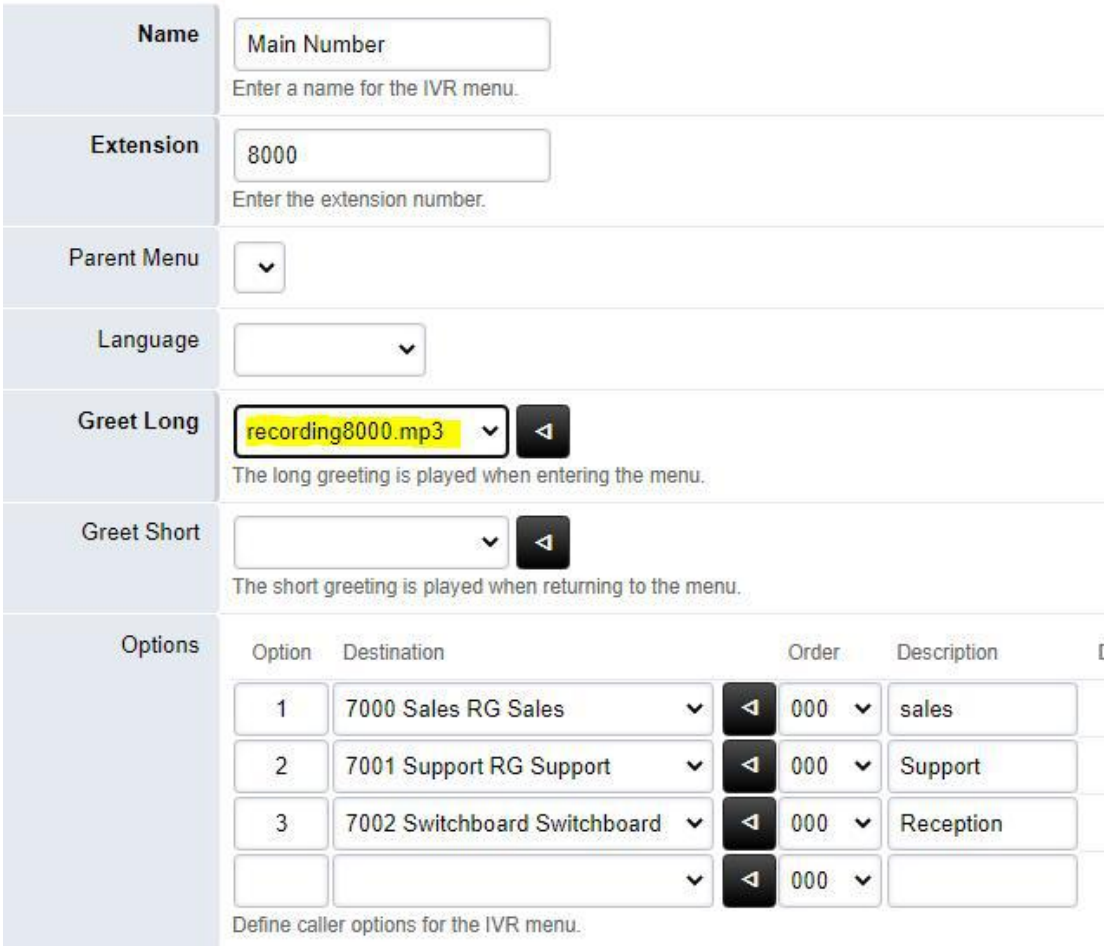
Create Auto Attendants

Navigate to “Configuration > Auto Attendants” and click on the plus button to create a new auto attendant.

Give the auto attendant a name and an extension number.

If this is a new install, there will be no greeting to select for “Greet Long” so it can be left blank. You can upload a recording in the correct format (16bit 8khz/16khz mono WAV), or dial *732 from an extension to record a greeting. When a

recording has been made / uploaded, it can then be selected here. When recording the greeting, you should choose an "ID number" to match the number of the Auto Attendant. This helps to select the correct greeting for each Auto Attendant and ensures easy re-recording. The same ID number can be used which will overwrite the previous greeting without then having to change the recording in the below field.



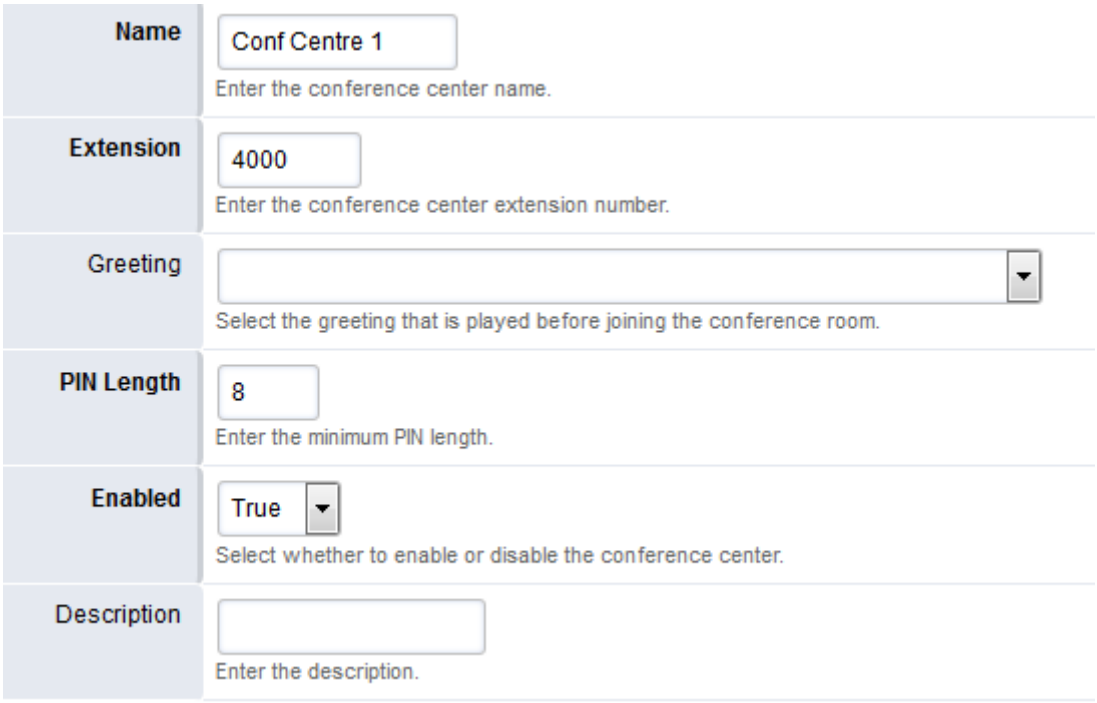
Choose the appropriate options and destinations as required.

Create Conference Bridges

Navigate to "Configuration > Conference Centres" and click the plus button to create a new "Conference Centre".

Give the "Conference Centre" a name and extension number.

If this is a new install, there will be no greeting to select for "Greeting" and this can be left blank. You can upload a recording in the correct format (16bit 8khz/16khz mono WAV), or dial *732 from an extension to record a greeting. This can then be selected here.



This is the extension that will be dialled to reach any conference bridges that have been setup.

Once the "Conference Centre" has been created, navigate to "Rooms". Here you can create individual conference bridges.

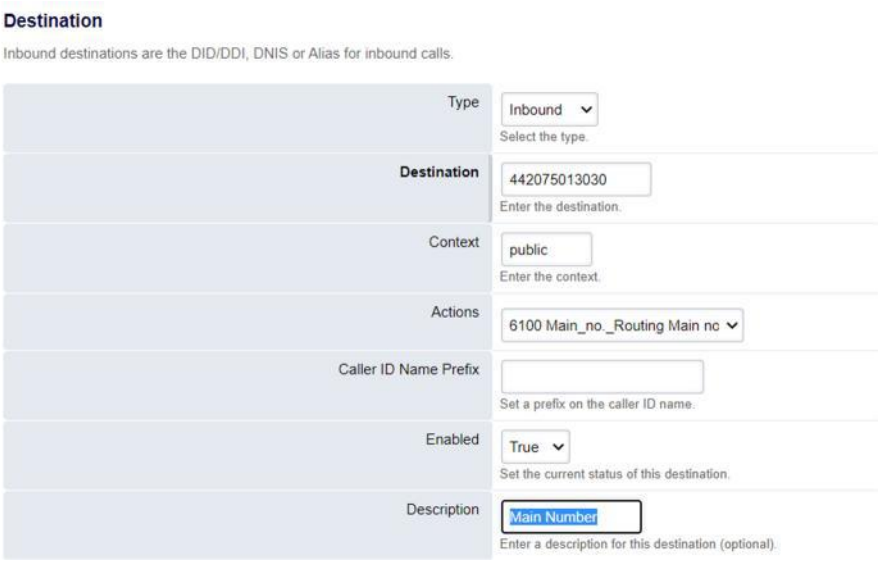
All settings (including PINs) should be populated automatically, note that "Wait for Moderator" is enabled by default. This means that the conference won't start until a moderator has joined using the moderator PIN.

Using conference centers and rooms allows one extension to be used for multiple conference bridges.

Configure Inbound Routes

With Spitfire 2.1, DDI's are pointed to one destination. This can be an Extension, an Auto Attendant, a Ring Group, a Call Queue, a Mailbox, a Conference Centre, a Call Flow, or a Time Condition.

Navigate to Configuration > Inbound Routes and click the plus button to add the route.



Configure Call Flows, Time conditions and Inbounds Routes

If you want automatic switching between a Day and Night service, (e.g. an Auto Attendant in office hours, and a group mailbox for outside of office hours), then a time condition can be configured. For further information on this, please navigate to page 22.

Quite often though, you may require further options to manually change routing to other destinations, such as an external number divert, or a mailbox for holidays.

This can be achieved by creating one or more “Call Flows”.

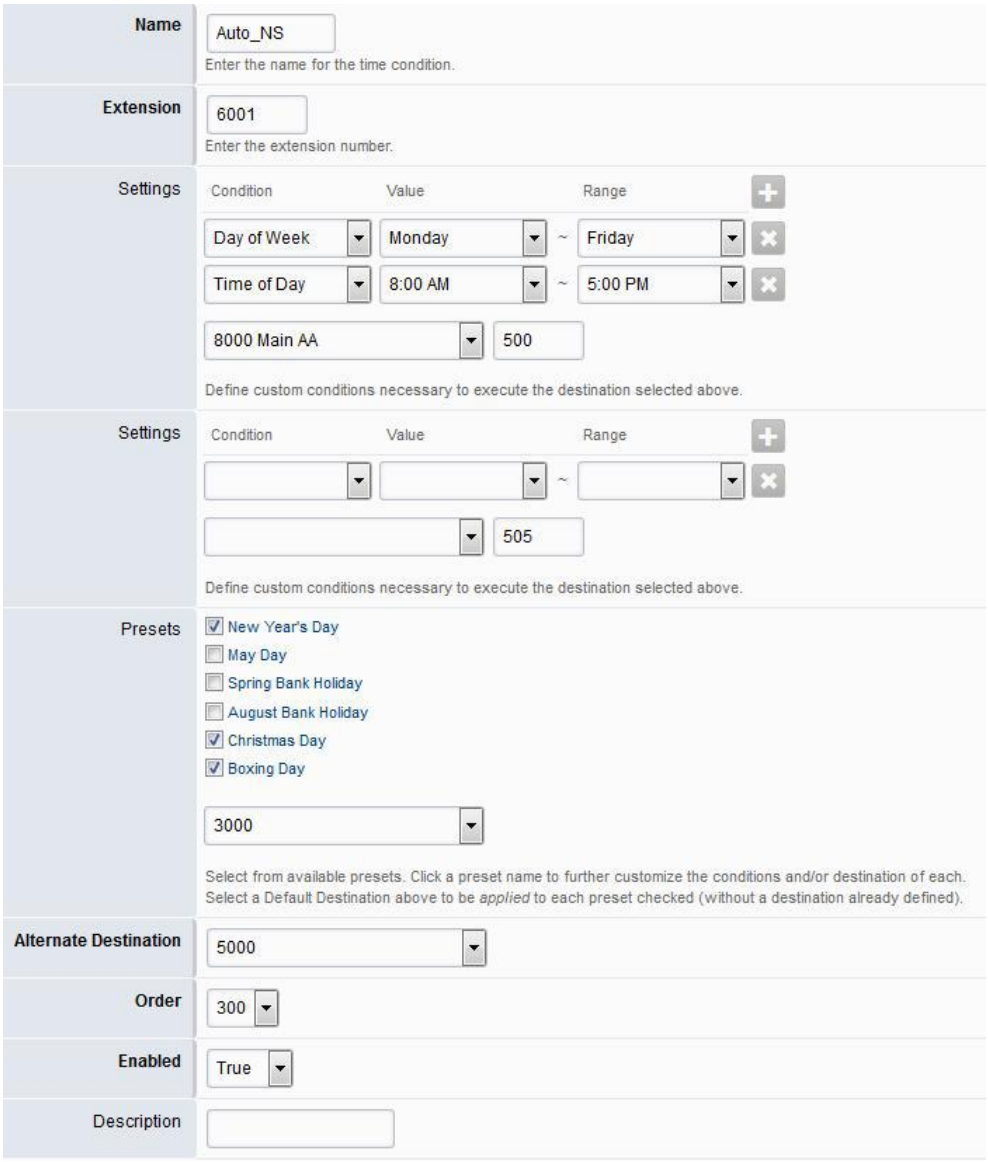
The example on page 23 shows a “Call Flow” which when set to “On” (by dialling it’s star code or pressing a pre-configured BLF) will go to a mailbox, and when set to “Off” it points to the “Time Condition”. In this example the Inbound DDI will point to the “Call Flow”.

On page 24 you will see examples of “stacking” additional “Call Flows”, where more than one manual override is required.

Please note that where a “Time Condition” is being used, this should be the last stage of the “stack”.

Configure a Time Condition for Automatic Night Service

To configure automatic night service, navigate to “Configuration > Time Conditions” and click the plus button. Give the “Time Condition” a name and an extension number, and set the conditions using the dropdowns.



Additional conditions can be stacked and there are also pre-sets available, both of which can be sent to a separate destination.

A DDI should then be pointed to the extension number of the time condition for it to be in effect.

Configure a Call Flow for Manual Night Service

To configure manual night service, navigate to “Configuration > Call Flows” and click the plus button. Give the night service a name, extension number, and “star” feature code (indicated with an asterisk). This is the code which will be dialled from an extension to enable/disable the “Call Flow”.

Giving each mode a “Label” will change what is displayed in the status dropdown and on the main call flow page. Under the “Destination” dropdown, select where calls should go when inactive, and under the “Alternate Destination” dropdown, select where calls should go when active. You can also select a confirmation sound for each mode to play when this is activated / deactivated.

Name	Manual Day/Night Mode Enter the name.
Extension	6100 Enter the extension number.
Feature Code	*6100 Enter the feature code.
Status	Off ▼ Select the status.
PIN Number	 Enter the pin number.
Destination Label	Off
Sound	ivr/ivr-disabled.wav ▼ Select the sound to play when the status is set to the destinations.
Destination	6001 Example_Time_Condition ▼ ◁ Select the destination.
Alternate Label	On Enter the alternate destination label.
Alternate Sound	ivr/ivr-enabled.wav ▼ Select the sound to play when status is set to the alternate destination.
Alternate Destination	50000 ✉ ▼ ◁ Select the alternate destination.
Context	example.spitfirevoiceapps.net Enter the context.
Description	Manual Day/Night

Configure Additional Call Flows

To configure additional "Call Flows" for the same DDI, it is recommended that you plan the flows out on a table first.

For example:

Call Flow 6100 (*6100)
On
Off

➔

Mailbox 5000

🡻

Call Flow 6101 (*6101)
On
Off

➔

Divert Extension 3000-Forward to Mobile

🡻

Call Flow 6102 (*6102)
On
Off

➔

Divert Extension 3001-FWD Third Party Answering Service

🡻

Time Condition 6000
Auto Set as required

Uploading Contacts

1. Some ground rules:

- Extensions need permissions for the 'user' role, so assign a user to an extension.
- Devices (Handsets) need permissions for the 'user' role, so assign a user to a device.
- Contacts need to be in the group 'user' so they are displayed to all users.

2. Creating the CSV import

Open a text document using a basic text editor like Notepad. Other editors have CSV editing capabilities and useful tools, like Visual Studio Code. Ideally you want something other than Excel which has a tendency to remove leading zeros from telephone numbers, replace characters with other characters and use the wrong line endings when exporting to CSV.

The file should consist of 7 headers minimum:

- contact_name_given, first name
- contact_name_family, surname if required
- phone_number, no spaces, with leading zero
- phone_type_voice, always '1'
- phone_primary, always '1'
- phone_label, usually 'Main'
- group_name, always 'user'

The last 4 are essential, and you can copy and paste 1,1,Main,user for every line. So you end up with:

contact_name_given,contact_name_family,phone_number,phone_type_voice,phone_primary,phone_label,group_name

Now to add your entries:

contact_name_given,contact_name_family,phone_number,phone_type_voice,phone_primary,phone_label,group_name

Adam,Example,02075013030,1,1,Main,user
Adam,Example(Mobile),07747463000,1,1,Main,user
Beth,Example,02075013031,1,1,Main,user
Chris,Example,02075013032,1,1,Main,user

3. When you have finished creating the CSV file, head to the import button. You can also copy and paste into the HTML input box, this ensures line endings are consistent whether you are on Unix/Windows OS's. However you can also just upload the file.

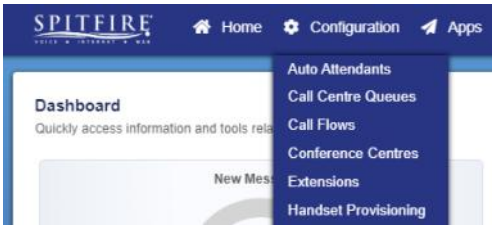
4. If the upload fails, you may have a bad character somewhere that isn't allowed. Try to stick to basic ANSI characters found on the normal ISO keyboard. Watch out for strange quote marks that Microsoft Office and websites like to use instead of: "

Quick Configuration changes

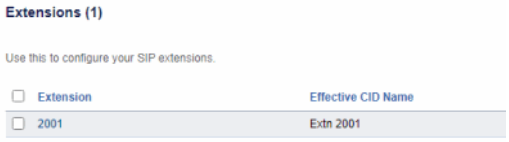
Extension Name changes

To rename an extension you will need to make the changes on the Fireswitch portal which will then push the change on to the device used to register the extension. Please note that if you have BLF buttons configured on handsets that display user names and not extension numbers they will need to be amended on the portal accordingly. Please follow the steps below to carry out the changes.

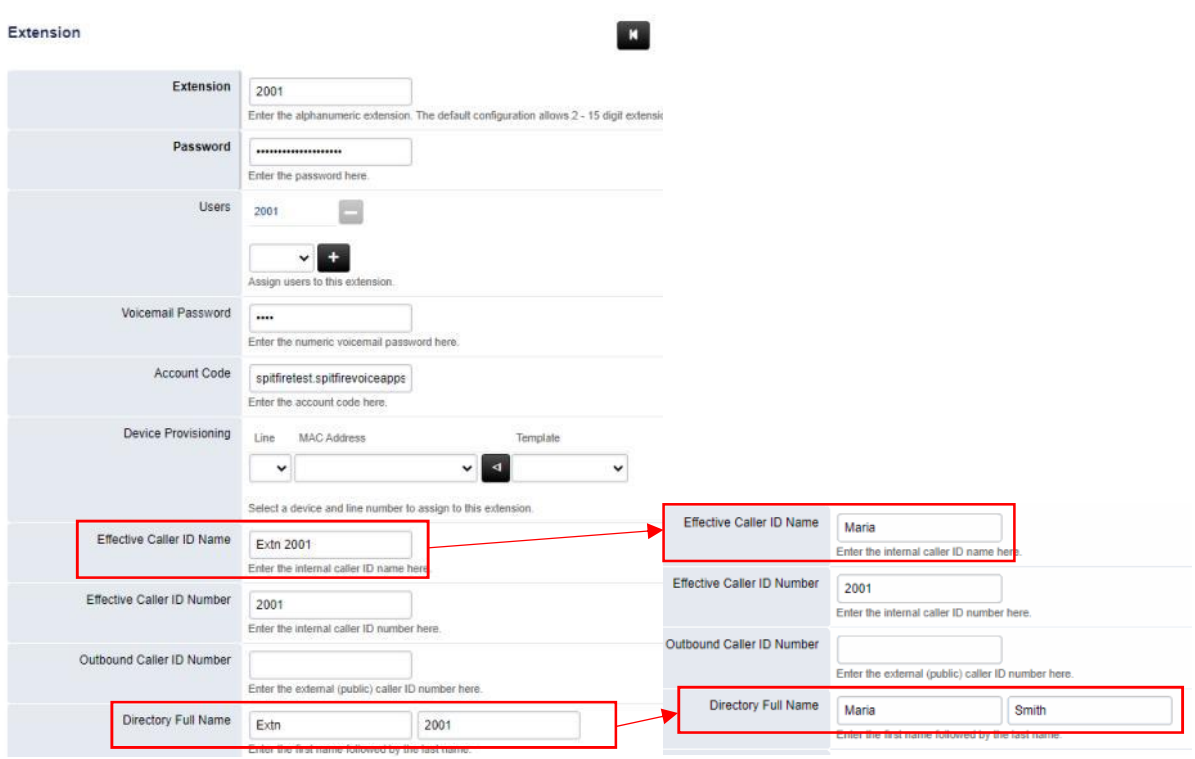
1. Navigate to 'Configuration' tab and select the 'Extensions' option.



2. Select the extension you would like to edit i.e. 2001.



3. Under the extension settings change the fields as indicated below and save (clicking on top right hand side).



4. Once saved you will need to re-register any handsets that are set up with the extension so the device configuration can be updated. You can do this by power cycling the device or navigating to "Status" > "Registrations" selecting device with the extension and clicking on "Provision" or "Reboot".