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# Essentra™ BAX

## Subscriber Services Description

Essentra™ BAX version 8.0



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# Chapter 1: Introduction

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This document describes the various services available with the Essentra™ BAX Release 8.0.

Each service description includes a short overview of the service, how to setup and configure the service for use (both by the service provider and by the end-user), and how to use the service.

## OVERVIEW

Essentra™ BAX is a carrier grade solution that offers service providers a cost-effective entry into the world of broadband VoIP services, with the capability of scaling up to millions of subscribers. Essentra BAX supports traditional subscriber calling features (e.g. call waiting, call forward) as well as a wide range of innovative features including call screening and anonymous call rejection. For enterprise customers, Essentra BAX supports VoIP VPNs and a wide range of Hosted Enterprise (IP Centrex) features. A web-based subscriber self-provisioning interface enables subscribers to control their own services, thereby allowing service providers to reduce their OPEX.

Essentra BAX can be deployed with other Essentra products to create a comprehensive VoIP solution for residential and SOHO/SME subscribers.

## PRODUCT DESCRIPTION

Essentra BAX is a SIP based softswitch platform designed to support broadband residential VoIP and Hosted Enterprise services. Through its support for the SIP and H.248 protocols, Essentra BAX is interoperable with a range of subscriber endpoint devices as well as trunking gateways and softswitches. In addition, Essentra BAX can interwork via SIP with other Essentra products and third party application servers to broaden the functionality of the system.

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## Chapter 2: Service Descriptions

### ANNOUNCEMENT REPOSITORY

The Announcement repository service enables the administrator to customize the standard messages provided by the BAX. From this interface, the Administrator uploads announcements which are converted to the relevant CODECs by the system.

#### Subscriber Benefits

- Benefit from announcements in their local language.
- Benefit from customized / localized announcements.

#### Administrator Setup and Configuration

The administrator uploads an announcement he wants to use for a specific service; he then configures the service to use this announcement. The service is available by default for any VPN administrator. By default, when a new VPN is created, it inherits all announcements used by the parent VPN.

Audio files must be uploaded in WAV format with the following parameters: 16 kHz, 8 bit, mono. The input file will be transcoded to supported formats and stored to the File Repository with "ann-" prefix. File size must be less than 3Mb.



**Note:** Existing announcement with same name will be replaced.

The administrator uploads announcements from the Essentra BAX web administration services section:

Services > Announcement Repository

**File To Upload**

Audio file\*  Browse... ?

Description

Upload Reset

Figure 2-1: Announcement Repository Administrator Configuration

- **File To Upload:**
  - **Audio File** - The name of the audio file you would like to upload or click  to browse for a file on your PC.
  - **Description** - Add a description to the uploaded file (Optional).

#### Using the Service

The subscriber does not configure this service.

### ANONYMOUS CALL REJECTION

The Anonymous Call Rejection service enables the subscriber to refuse all calls from callers who have their caller ID blocked.

## Subscriber Benefits

- Provides the subscriber with full control in phone privacy and security.

## Administrator Setup and Configuration

The system administrator registers a subscriber to the service by selecting this option when configuring or creating a subscriber:



Figure 2-2: Call Screening Option

The system administrator configures the Call Screening parameters as defined in the Call Screening service description.

## Using the Service

The Anonymous Call Rejection service sends all incoming call to the predefined option. For any telephone, the subscriber can activate Anonymous Call Rejection service via the Essentra BAX Self Provisioning web interface:

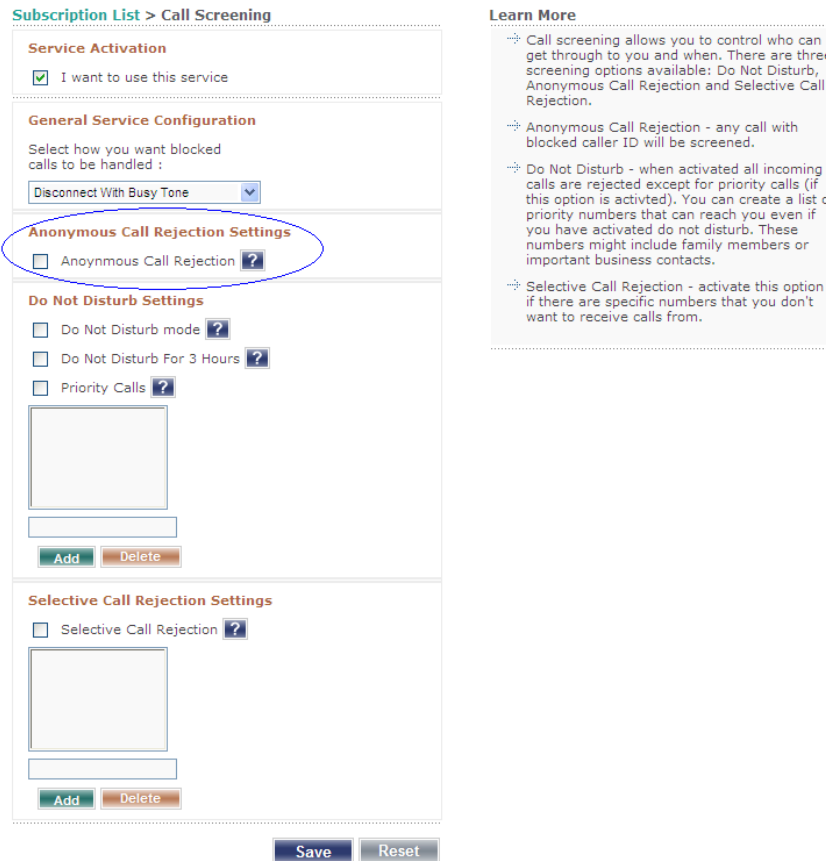


Figure 2-3: Anonymous Call Rejection Subscriber Configuration

- **Service Activation** - Select if you want to activate the call screening service.
- **Select how you want blocked calls to be handled** - Incoming calls can be handled in the following manners:
  - Disconnected with Busy Tone.

- Redirected to Voice Mail.
- Redirected to a standard message announcing the subscriber is not available.
- **Anonymous Call Rejection** - Select this option to enable/disable the Anonymous Call Rejection service

## APPLICATION SERVERS

BAX can be configured to work with external third-party SIP application servers to extend its functionality. In this screen, administrators can add details of application servers and configure BAX to work with them.

### Subscriber Benefits

- Gives the subscriber access to services that are not supported directly by BAX.

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-4: Application Servers Option

The system administrator configures the Application Servers service parameters from the Essentra BAX web administration services section.

On selecting Application Servers from the Services List screen, a list of available application servers is displayed:

Server Name	Server IP Address	BAX will contact Application Server for	Numbers	Edit	Remove	Down
Example	0.0.0.0	all calls		Edit	Remove	Down
Example 2	100.100.100.100	all calls		Edit	Remove	Up

Figure 2-5: Application Servers List

Click *Up* or *Down* to change the order in which BAX will communicate with the application servers when more than one is configured.

### Adding Application Servers

To add an application server, click *Add Server*. The Add Application Server screen is displayed.

Application Server List

Services > Application Servers > Add Server

Server Name *	<input type="text"/>	?
Server IP Address *	<input type="text"/>	
BAX will contact Application Server for	all calls	?

Save Reset

Figure 2-6: Add Application Server Screen

- **Server Name** - Enter an alphanumeric name for the application server. Mandatory field. This name can be up to 40 characters (letters, digits, \_, -, spaces).
- **Server IP Address** - Enter the IP address of the application server. Mandatory field.
- **BAX will contact Application Server for** - Select the conditions under which BAX will send calls to the application server. The options are as follows:
  - **All Calls**
  - **The following dialed numbers** - If this option is selected, a text box appears in which the system administrator can enter telephone numbers. When calls are made to these numbers, BAX automatically sends the calls to the application server.
  - **Incoming calls for specified users** - If this option is selected, BAX sends calls made to subscribers who have been configured to work with this application server to the application server.
  - **Outgoing calls for specified users** - If this option is selected, BAX sends calls made by subscribers who have been configured to work with this application server to the application server.

## Using the Service

The subscriber does not configure this service.

## ATTENDANT CONSOLE

The Attendant Console service enables a subscriber to act as an operator within a web-interface. From this interface, the subscriber can answer, hold, initiate, terminate, transfer, and park calls.

## Subscriber Benefits

- Extends the capabilities of the subscriber, saves the cost of additional operator equipment.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Attendant Console ?

Figure 2-7: Attendant Console Option

The system administrator configures the Attendant Console service parameters from the Essentra BAX web administration services section:

Services > Attendant Console

**Announcement URL**

Welcome message\*  ?

Figure 2-8: Attendant Console Administrator Configuration

- **Welcome message** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

The subscriber logs in to the Essentra BAX Self Provisioning web interface to access this service:

The screenshot shows the Attendant Console web interface. The browser address bar displays "http://62.0.10.10:8888 - Attendant Console - Microsoft Internet Explorer". The page title is "Attendant Console™". The interface includes a navigation bar with "MAIN SCREEN" and "CONTACTS" tabs, and a "Welcome! hi bi" message. There are links for "Help", "Subscription List", and "Log Out".

The main content area is divided into several sections:

- Active**: A section with tabs for "Active", "Missed", "Dialed", and "Received". It contains sub-sections for "Current Call", "Held Calls", and "Waiting Calls", each with a table of call details.
- Internal**: A section with tabs for "Favorites", "Internal", and "External". It features a search form with fields for "First Name", "Last Name", "Company" (set to "onyx"), and "Group" (set to "---All Groups---"). Below the search form is a table of contacts.

	First Name	Last Name	Company	Group		
1			...0017	offline		
2			...0014	offline		
3			...0015	offline		
4			...0016	offline		
5			...0024	offline		
6			...0025	offline		
7			...0027	offline		
8	addpac		...3445	online		
9	Alberto	Santinato	...0010	offline		
10	DEMO		...0026	offline		

At the bottom of the interface, there is a "Dial Number" field with a "Call" button and an "Auto Transfer" button. The footer contains the copyright notice: "© 2005, VocalTec Communications Ltd., All Rights Reserved".

Figure 2-9: The Attendant Console Service

- i** **Note:** A subscriber that has the Attendant Console service enabled in its Class of Service (CoS), has to enable auto-answer on its phone to make the Attendant Console work. In such a case some services (e.g. CFB, CFNA, Follow Me, Hunt Group, Find Me and Pickup) cannot work and are disabled automatically, as the call was in fact already answered.

## AUTO ATTENDANT

The Auto Attendant service enables subscribers to define the IVR Server and Database Server locations.

## Subscriber Benefits

- Gives the subscriber direct control over which IVR and Database servers are connected to BAX.
- Allows subscribers without DID to accept incoming calls from Offnet/outside the VPN.
- Allows full control over the menus and prompts used in the Auto Attendant.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-10: Auto Attendant Option

The Root administrator configures the Auto Attendant default service parameters from the Essentra BAX web administration services section:

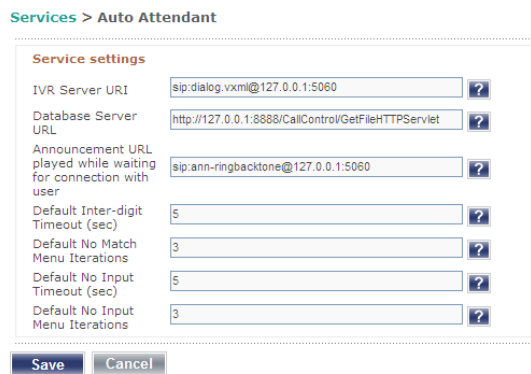
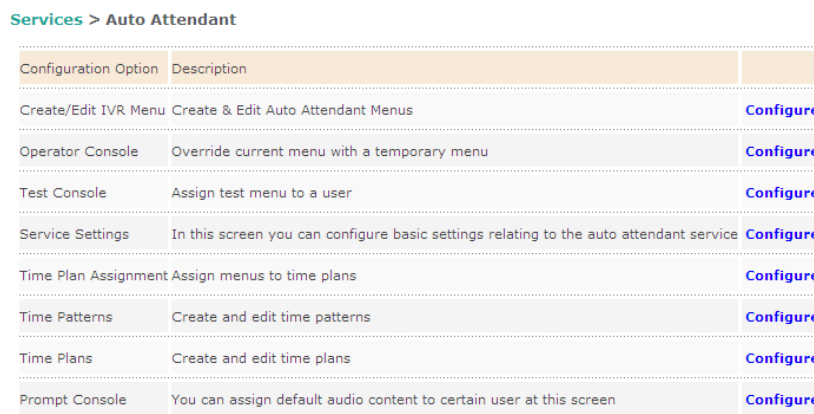


Figure 2-11: Auto Attendant Root Administrator Configuration

The VPN administrator configures the Auto Attendant menu, prompts and time plans for the IVR in its specific VPN:

A screenshot of the 'Services > Auto Attendant' configuration page showing a table of configuration options. The table has three columns: 'Configuration Option', 'Description', and a 'Configure' link. The table is bordered by a dotted line.

Configuration Option	Description	
Create/Edit IVR Menu	Create & Edit Auto Attendant Menus	<a href="#">Configure</a>
Operator Console	Override current menu with a temporary menu	<a href="#">Configure</a>
Test Console	Assign test menu to a user	<a href="#">Configure</a>
Service Settings	In this screen you can configure basic settings relating to the auto attendant service	<a href="#">Configure</a>
Time Plan Assignment	Assign menus to time plans	<a href="#">Configure</a>
Time Patterns	Create and edit time patterns	<a href="#">Configure</a>
Time Plans	Create and edit time plans	<a href="#">Configure</a>
Prompt Console	You can assign default audio content to certain user at this screen	<a href="#">Configure</a>

Figure 2-12: Auto Attendant VPN Administrator Configuration

## Using the Service

The subscriber does not configure this service.

## AUTOMATIC REDIAL

Automatic Redial, redials the busy number until it is available. A subscriber can activate the automatic redial service after calling another subscriber whose line was busy. The Essentra BAX will continue to try the destination number until that line becomes available. The Essentra BAX automatically notifies the calling subscriber when the destination number is free.

### Subscriber Benefits

- It automatically redials the busy number, thus leaving subscribers free to do other things

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-13: Automatic Redial Option

The system administrator configures the Automatic Redial service parameters from the Essentra BAX web administration service section:

Figure 2-14: Automatic Redial Administrator Configuration

- **Service Activation/Deactivation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to activate or deactivate the service. Can be up to 20 characters: digits, # or \*. Default is \*66.
- **Service Timeout** - Enter the maximum time that the system will attempt to dial the busy destination number after activating the service. The time is defined in seconds, up to 4 digits (maximum of 9999 seconds, approximately 2.5 hours).
- **Announcement URLs:**
  - **Subscriber is busy** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Service has been deactivated** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **For music to be played while a subscriber is being reached** - Enter the URL of the appropriate music location on the media server. (Up to 100 characters.)

## Using the Service

Automatic Redial allows you to redial the last number by simply dialing \*66. When calling/reaching a “busy” subscriber/number, dial \*66 and hang-up. The Essentra BAX will continue to try the destination number until it becomes available. The Essentra BAX automatically notifies the calling subscriber when the destination number is free.

After activating the service, dial \*66 again to cancel the service.

## BILLING CODES

This service enables subscribers to mark their off-net calls with pre-configured billing codes. These codes appear in the CDR and can be used for charging clients or analyzing subscriber call activity. The use of billing codes can be defined by the VPN administrator as optional or mandatory.

## Subscriber Benefits

- Enables you to keep an accurate account of which calls were made for each project.

## Administrator Setup and Configuration

Each VPN administrator has a screen to define the billing codes for the company. The screen has two fields:

- Billing Code (2 to 9 digits)
- Description (text up to 20 characters)

The use of billing codes can be mandatory or optional for groups of subscribers. If billing codes are mandatory, then all subscribers MUST use billing codes in order to call outside of the VPN.

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-15: Billing Codes Option

The system administrator configures the Billing Codes service parameters from the Essentra BAX web administration services section:

A screenshot of the "Billing Codes Administrator Configuration" page. It includes a "Mandatory Billing Codes" section with a checkbox to enforce use for all off-net calls. Below are input fields for "Activation Code" (value: \*50), "Billing Codes Delimiter" (value: \*), "Wrong billing code\*" (value: sip:ann-Servicewrongbc@127.0.0.1:5060), and "Missing a billing code\*" (value: sip:ann-Serviceissingbc@127.0.0.1:5060). At the bottom are "Save" and "Reset" buttons.

Figure 2-16: Billing Codes Administrator Configuration

- **Mandatory Billing Codes** - Check to enforce the use of billing codes for all off-net calls.

- **Activation Code** - Enter the prefix to activate the Billing Code service.
- **Billing Codes Delimiter** - Enter the character(s) to separate between the billing code and the number to dial.
- **Announcement URLs:**
  - **Wrong billing code** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Missing a billing code** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

In order to activate the billing code for a particular call, the subscriber dials an activation code followed by the billing code, #, and the destination number. For example, \*5023#099797777, where \*50 is the activation code and 23 is the billing code for that call.

## BLACK AND WHITE LISTS

This service enables VPN administrators to restrict or allow calls to and from specific destinations or trunk numbers.

### Subscriber Benefits

- VIP subscribers can call destinations generally restricted for other subscribers.
- Administrator can block malicious numbers and other unwanted numbers and prefixes to specific destinations.

## Administrator Setup and Configuration

The service is always active for the VPN. The VPN administrator configures the lists used for the service by selecting *Configure* on the service section:



Figure 2-17: Black and White Lists Configuration

The system administrator configures the Caller ID Blocking service parameters from the Essentra BAX web administration service section:

Services > Black and White List

[Originating White List](#) | [Originating Black List](#) | [Terminating White List](#) | [Terminating Black List](#) | [Settings](#)

Originating Black List [0 Records]

Table is Active

Ignore PG information

Number/Prefix

Number/Prefix

Number/Prefix	
9729	<a href="#">Delete</a>
PG29A72	<a href="#">Delete</a>
PG2A972	<a href="#">Delete</a>

Figure 2-18: Black and White Lists Administrator Configuration

- **Originating White List** - Applies to CLI numbers of the call (SIP 'From' header), and defines the list of privileged numbers.
- **Originating Black List** - Applies to CLI numbers of the call (SIP 'From' header), and defines the list of restricted numbers.
- **Terminating white list** - Applies to DNIS numbers of the call (SIP 'To' header), and defines the list of privileged numbers.
- **Terminating Black list** - Applies to DNIS numbers of the call (SIP 'To' header), and defines the list of restricted numbers.
- **Settings** - Defines general setting for the service
- **Table is Active** - Mark the radio button to enable the list
- **Ignore PG information** - Mark the radio button to ignore CX trunk information

## Using the Service

The subscriber does not configure this service.

## BOSS SECRETARY

This service enables VPN administrators to nominate certain subscribers as bosses and certain subscribers as their secretaries.

## Subscriber Benefits

- Subscribers can organize their phone network according to the internal company hierarchy.

## Administrator Setup and Configuration

The VPN administrator configures the Boss Secretary service parameters from the Essentra BAX web administration services section:

Services > Boss Secretary

**Boss Secretary assignments**

Boss Extension\*  ?

Secretary Extension\*  ?

**Add**

Boss Details	Secretary Details	
Worker05 Worker05 401	Worker2 Worker2 402	Delete

Figure 2-19: Boss Secretary VPN Administrator Configuration

- **Boss Extension** - Enter the extension number of the subscriber who is designated as the boss. A number up to 20 digits.
- **Secretary Extension** - Enter the extension number of the subscriber who is nominated as the secretary. A number up to 20 digits.

## Using the Service

Subscribers who are bosses can configure the service via the Essentra BAX Self Provisioning web interface:

Subscription List > Boss Secretary

**Service Activation**

My secretary is: **June Maybell**

Forward all calls to my secretary

---

But let the following numbers reach me directly

All my secretary's calls will appear like my calls

**Save** **Cancel**

Figure 2-20: Boss Secretary Subscriber Configuration

## CALLER ID BLOCKING PER CALL

The Caller ID Blocking service allows subscribers to block their identity when making a phone call. Subscribers can activate this service on a per call basis by dialing the defined activation code. When the subscriber makes a call after activation of the service, the Caller ID is not displayed to the called party.

### Subscriber Benefits

- Withholds the calling line number information on the next call made

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Caller ID Blocking ?

Figure 2-21: Caller ID Blocking Option

The system administrator configures the Caller ID Blocking service parameters from the Essentra BAX web administration service section:

The screenshot shows the 'Services > Caller ID Blocking' configuration page. It contains three input fields for codes: 'Activation Code \*' with value '\*67', 'Block ID For All Calls Activation Code \*' with value '\*62', and 'Block ID For All Calls DeActivation Code \*' with value '\*63'. Below these is a section titled 'Announcement URLs' with three input fields: 'Service is not available \*' with value 'sip:ann-Serviceavailable@127.0.0.1:5060', 'Service is activated \*' with value 'sip:ann-serviceactivated@127.0.0.1:5060', and 'Service is de activated \*' with value 'sip:ann-service deactivated@127.0.0.1:5060'. At the bottom are 'Save' and 'Reset' buttons.

Figure 2-22: Caller ID Blocking Administrator Configuration

- **Activation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*67.
- **Block ID for All Calls Activation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to block caller ID for all calls. Can be up to 20 characters: digits, #, or \*. Default is \*62.
- **Block ID for All Calls Deactivation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to send caller ID for all calls. Can be up to 20 characters: digits, #, or \*. Default is \*63.
- **Announcement URLs:**
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Service is activated** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Service is Deactivated** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

To disable caller ID delivery for outbound calls, first dial \*67 and wait for the announcement that the service was enabled. Then dial the call as usual and the outbound caller ID will be suppressed.

## CALLER ID BLOCKING (RESTRICTION)

This service enables the subscriber to permanently block delivery of their identity to the called party.

## Subscriber Benefits

- Withholds the calling line number information

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

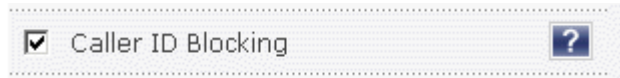


Figure 2-23: Caller ID Restriction Option

## Using the Service

The subscriber can enable/disable the service via the Essentra BAX Self Provisioning web interface:



Figure 2-24: Caller ID Blocking Subscriber Configuration

When you check 'Always block my Caller ID', caller ID delivery for outbound calls is disabled and all of the subscriber calls will be anonymous.

Alternatively to permanently disable caller ID delivery for outbound calls, first dial \*62 and wait for the announcement that the service was enabled. Then hang up the phone.

Once activated, caller ID blocking for all calls is enabled, until the subscriber dials \*63 to deactivate the service.

## CALLER LINE ID PRESENTATION

This service presents the number of the calling party to the subscriber. This applies to devices with appropriate caller ID display.

### Subscriber Benefits

- Caller-ID lets the subscriber know who's calling
- Caller ID enables the subscriber to decide whether to pick the call or reject it
- Prevents unwanted calls

### Administrator Setup and Configuration

Always enabled

### Using the Service

When an incoming call is received, if the phone has display capabilities and the called ID is not blocked, the caller ID phone number will be displayed.

## CALL FORWARD

The Call Forward service automatically routes incoming calls to another pre-selected number/destination under a variety of circumstances.

### Call forward on Busy

The Call Forward on Busy service allows subscribers to automatically redirect all calls to another number or station specified when the called number is busy. The subscriber can choose whether to forward incoming calls to a designated number or to their voicemail box. The latter option is only available if the subscriber is subscribed to the voicemail service.

### Call forward Unconditional

The Call Forward Unconditional service allows subscribers to automatically redirect all incoming calls to a pre-selected number.

### Call forward on No Answer

The Call Forward on No Answer service allows subscribers to automatically redirect all calls to another number or station specified when the called number is not answered within a defined timeout period. The timeout is defined in seconds.

### Call Forward on Offline

The Call Forward on Offline service allows subscribers to automatically redirect all calls to another number or station specified when the called number is not registered.

### Off Group Call Forward

This option of call forward applies to existing call forward features. When enabled, only calls originated outside the VPN are forwarded. Calls within the VPN are not affected by the call forward options.

## Subscriber Benefits

- Allows customer to forward calls to any number, under the specified conditions, any time at their own convenience.
- Enables the user to filter external calls while maintaining full service capabilities within the office/VPN.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-25: Call Forward Option

The system administrator clicks the *Configure* link to configure the service for this Class of Service as follows:

Subscribers > > Class Of Service List > Edit Class Of Service > Call Forward

**Call Forward On No Answer**

Default timeout\*  ?

Selective Call Forward

Follow Me

Off Group

Figure 2-26: Call Forward Configuration

The system administrator configures the Call forward service parameters from the Essentra BAX web administration services section:

Services > Call Forward

**Call Forward Unconditional**

Activation Code\*  ?

Deactivation Code\*  ?

Off Group Activation Code\*  ?

**Call Forward On Busy**

Activation Code\*  ?

Deactivation Code\*  ?

Off Group Activation Code\*  ?

**Call Forward On No Answer**

Activation Code\*  ?

Deactivation Code\*  ?

Play Announcement Activation Code\*  ?

Off Group Activation Code\*  ?

**Call Forward On Offline**

Activation Code\*  ?

Deactivation Code\*  ?

How many times a call will be forwarded\*  ?

**Announcement URLs**

Service is not available\*  ?

Service has been activated\*  ?

Service has been deactivated\*  ?

Subscriber is Absent\*  ?

**Caller identification on forward**

Originating user  Forwarding user

Figure 2-27: Call Forward Administrator Configuration

- **Call Forward Unconditional:**
  - **Activation Code** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*72.
  - **Deactivation Code** - The sequence of digits to be keyed in by the subscriber in order to deactivate the service. Can be up to 20 characters: digits, #, or \*. Default is \*73.
  - **Off Group Activation Code** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*41. Available only for enterprise VPN users.

- **Call Forward On Busy:**
  - **Activation Code** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*74.
  - **Deactivation Code** - The sequence of digits to be keyed in by the subscriber in order to deactivate the service. Can be up to 20 characters: digits, #, or \*. Default is \*75.
  - **Off Group Activation Code** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*42.
- **Call Forward On No Answer:**
  - **Activation Code** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*76.
  - **Deactivation Code** - The sequence of digits to be keyed in by the subscriber in order to deactivate the service. Can be up to 20 characters: digits, #, or \*. Default is \*77.
  - **Play Announcement Activation Code** - The sequence of digits to be keyed in by the subscriber in order to activate the service and play announcement instead of playing a busy tone. Can be up to 20 characters: digits, #, or \*. Default is \*71.
  - **Off Group Activation Code** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*43.
- **Call Forward On Offline:**
  - **Activation Code** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*78.
  - **Deactivation Code** - The sequence of digits to be keyed in by the subscriber in order to deactivate the service. Can be up to 20 characters: digits, #, or \*. Default is \*79.
- **How many times a call will be forwarded** - The number of times that a single call can be forwarded.



**Note:** The Call Forward service is currently not recursive. This means that a single call can be forwarded only once, regardless of the value in the **How many times a call will be forwarded** field.

- **Announcement URLs:**
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Service has been activated** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Service has been deactivated** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Subscriber is Absent** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). This announcement is used in call forward on No answer, when "Play Announcement" option is used.
- **Caller Identification on Forward:**

Allows the administrator to define which caller ID will be presented for a forwarded call:

- **Originating user** - The caller ID sent to the terminating user is the caller ID of the call originator (default).

- **Forwarding user** - The caller ID sent to the terminating user is the caller ID of the forwarding user, i.e. the original called number.

## Using the Service

When the subscriber's phone is busy, there is no answer, or in both cases, all calls will be redirected to the number specified by the subscriber.

Call Forward is currently not recursive. This means that after a call is forwarded to one extension, it cannot be forwarded from that extension to second extension.

The subscriber can activate or deactivate the Call forward service via the star code (DTMF):

- Call Forward Unconditional activate \*72
- Call Forward Unconditional deactivate \*73
- Call Forward Unconditional for calls originating outside the VPN activate \*41
- Call Forward on Busy activate \*74
- Call Forward on Busy deactivate \*75
- Call Forward on Busy for calls originating outside the VPN activate \*42
- Call Forward on no answer activate \*76
- Call Forward on no answer deactivate and Play announcement on no answer deactivate \*77
- Play announcement on no answer activate \*71
- Call Forward on No Answer for calls originating outside the VPN activate \*43
- Call Forward on Offline activate \*78
- Call Forward on Offline deactivate \*79

### **Activate call forward services using the service activation keys:**

Using the phone the subscriber needs to specify the number to which he wishes to forward calls. Subscribers cannot configure advanced call forward settings (such as selective settings) using the phone. Configuring the service using service activation keys is done according to the following sequence:

< Service Activation Prefix><phone number>, e.g. dialing \*7297299073888, will unconditionally forward all calls to 97299703888.



**Note:** Dialing an activation code that is not followed by a phone number will result in the call being forwarded to voice mail.

For deactivating a service using service keys, the deactivation prefix needs to be keyed-in, e.g. \*73 will disable the unconditional call forward service.

Call forward and Call forward with off group options cannot co-exist. When enabling one option (e.g. Call forward unconditional) using the service activation keys, while the other (e.g. Call forward unconditional off group) is active, only the last activated option is enabled (call forward unconditional - in the example).

### **Activate call forward services using the self care web portal:**

The subscriber can also configure the service via the Essentra BAX Self Provisioning web interface:

Subscribers > Edit Subscriber > Edit Subscriber's Subscriptions > Call Forward

**Forward unconditionally to**

Regular setting

Don't forward

Voice mail

Phone number  ?

Active for toll numbers only

Selective setting

When the calling number is one of the following:

Don't forward

Voice mail

Phone number  ?

**Forward on no answer to**

Don't forward

Play Announcement after  seconds

Voice mail after  seconds

Phone number

after  seconds call

after another  seconds call  ?

after another  seconds call  ?

after another  seconds call  ?

after another  seconds call  ?

after  seconds forward the call to voice mail

Active for toll numbers only

**Forward on busy to**

Don't forward

Voice mail

Phone number  ?

Active for toll numbers only

**Forward on offline to**

Don't forward

Voice mail

Phone number  ?

Figure 2-28: Full Call Forward Subscriber Configuration screen

Subscribers > Edit Subscriber > Edit Subscriber's Subscriptions > Call Forward

**Forward unconditionally to**  
[Regular setting](#)

Don't forward

Voice mail

Phone number  ?

**Forward on no answer to**

Don't forward

Play Announcement after  seconds

Voice mail after  seconds

Phone number  after  seconds

**Forward on busy to**

Don't forward

Voice mail

Phone number  ?

**Forward on offline to**

Don't forward

Voice mail

Phone number  ?

Figure 2-29: Basic Call Forward Subscriber Configuration screen

- The option 'Selective Settings' is available only when the 'Selective Settings' option was enabled in the class of service for the specific subscriber.
- The option 'Active for toll number only' is available only when the 'Off Group' option was enabled in the class of service for the specific subscriber.
- The 'Follow Me' option (after another...) is available only when the 'Follow Me' option was enabled in the class of service for the specific subscriber.
- The 'Voice mail' option is available only when the 'Voice mail' service was enabled in the class of service and a voice mail server IP is configured for the service.

## CALL HOLD

Lets the subscriber place an active call on hold using their business phone. After a call is put on hold, the subscriber may perform some task related to the call (e.g., look up customer information), originate another call, answer another call, answer an incoming call with the Call Waiting service, or return to a previously held call.

## Subscriber Benefits

- Save time and effort with no phoning back and forth.

## Administrator Setup and Configuration

This service is always enabled.

## Using the Service

Press the FLASH button (on your phone) once to hold or un-hold. If your phone does not have a flash button, tap on the hang up button once to hold and un-hold.

## CALL LOGS

Subscribers can view and monitor their calls via the Subscriber Web Self Provisioning interface.

### Subscriber Benefits

- Know anytime anywhere your call logs and data.

### Administrator Setup and Configuration

No configuration needed.

### Using the Service

Access the Calls section in the Subscriber Web Self Provisioning interface. Select the search criteria:

Monitoring > Calls History

From date: 05/03/2009 15:01  
To date: 12/03/2009 15:01  
 Zero Duration

**Caller**

All  
 Phone Number  
 User ID  
VPN: None

**Destination**

All  
 Phone Number  
 User ID  
VPN: None

Search Reset

Figure 2-30: Calls Search

Submitting the query results in all the call logs for the required query:

> >>  
Export

Monitoring > Calls History > Calls List [1-20 of 73 Records]

Date	Duration	Disconnect Reason	Caller			Destination			Services Used
			Phone	VPN	User ID	Phone	VPN	User ID	
22/02/2009 12:44	00:00:00	Failed (480-BAX:DND)	97299703105	shlomi	user6	97299703102	shlomi	user3	
22/02/2009 12:24	00:00:06	Normal	97299703103	shlomi	user4	97299703102	shlomi	user3	
22/02/2009 12:24	00:00:00	Cancelled	97299703103	shlomi	user4	9729102			
22/02/2009 12:12	00:00:36	Normal	97299703103	shlomi	user4	97299703105	shlomi	user6	Transferred explicitly by 97299703102
22/02/2009 12:11	00:00:11	Normal	97299703103	shlomi	user4	97299703102	shlomi	user3	Transferred explicitly to 97299703105
22/02/2009 12:11	00:00:29	Normal	97299703103	shlomi	user4	97299703105	shlomi	user6	Transferred explicitly to 97299703103
22/02/2009 12:09	00:00:00	Failed (491)	97299703103	shlomi	user4	97299703102	shlomi	user3	Transferred implicitly by 97299703105
22/02/2009 12:08	00:00:35	Normal	97299703103	shlomi	user4	97299703105	shlomi	user6	Transferred implicitly to 3100
22/02/2009 12:08	00:00:00	Failed (481)	97299703103	shlomi	user4	97299703105	shlomi	user6	Transferred implicitly by 97299703102
22/02/2009 12:08	00:00:07	Normal	97299703103	shlomi	user4	97299703102	shlomi	user3	Transferred implicitly to 4101
22/02/2009 12:08	00:00:00	Busy	97299703103	shlomi	user4	97299703103	shlomi	user4	
22/02/2009 12:07	00:00:00	Failed (480-BAX:DND)	97299703103	shlomi	user4	97299703103	shlomi	user4	Transferred implicitly by 97299703102
22/02/2009 12:07	00:00:09	Normal	97299703103	shlomi	user4	97299703102	shlomi	user3	Transferred implicitly to 3101
22/02/2009 12:07	00:00:00	Failed (480)	97299703103	shlomi	user4	97299703102	shlomi	user3	

Figure 2-31: Root Admin Calls List

Calls History > Calls List

Placed Calls [1-8 of 8 Records]:

#	Date	Duration	Disconnect Reason	Phone Number	Services Used
1	12/03/2009 14:07	00:02:24	Normal	<a href="#">97299703883</a>	
2	12/03/2009 11:18	00:22:56	Normal	<a href="#">972545607141</a>	
3	12/03/2009 10:52	00:00:28	Normal	<a href="#">97299703861</a>	
4	12/03/2009 10:52	00:00:01	Normal	Voice Mail	MultipleRegistrations,CFNR (97299703737)
5	12/03/2009 10:34	00:01:37	Normal	<a href="#">972545607141</a>	
6	11/03/2009 18:33	00:02:15	Normal	<a href="#">97299703702</a>	
7	11/03/2009 16:00	00:25:05	Normal	<a href="#">972545607141</a>	
8	11/03/2009 15:08	00:02:30	Normal	<a href="#">97239314492</a>	

Total Calls Duration: 0:57:16

Figure 2-32: Subscriber Calls List

## CALLER NAME

This service presents the name of the calling party to the subscriber. This applies to devices with appropriate caller ID display. The caller name can be presented if the name is associated with a phone number. If an incoming call is matched against a subscriber in the Essentra BAX, the caller name can be displayed,

## Subscriber Benefits

- Caller Name lets the subscriber know who's calling
- Caller Name enables the subscriber to decide whether to pick the call or reject it
- Prevents unwanted calls

## Administrator Setup and Configuration

This service is always enabled for receiving. For sending to the remote side this service should be enabled by the administrator. The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-33: Caller Name Option

## Using the Service

When an incoming call is received, if the phone has display capabilities and the called ID is not blocked, the caller ID phone number or user name will be displayed.

When you make a call, the other party can see your phone number.

When you use the Caller Name service, you can choose the name that is displayed.

The subscriber can configure the caller name to display via the Essentra BAX Self Provisioning web interface:

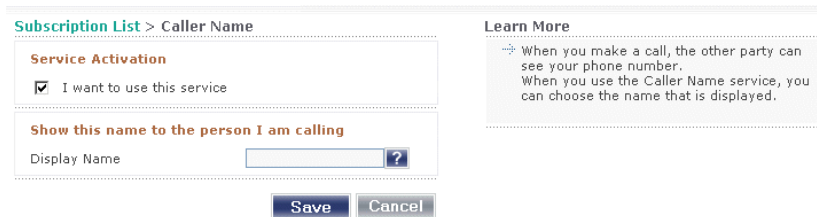


Figure 2-34: Caller Name Subscriber Configuration

## CALL PICKUP

Call pickup enables subscribers to answer a call ringing at another extension. Two types of call pickup are supported:

- **Direct call pickup** - The subscriber dials the direct call pickup code followed by the number of the ringing extension.
- **Group call pickup** - The subscriber dials the group call pickup code. A pickup group defines a group of extensions that can answer other extensions or hunt groups. Multiple pickup groups can be defined per VPN. In order to be able to answer another extension, the subscriber must be defined within the same pickup group as the other extension.

## Subscriber Benefits

- Call pickup allows the subscriber to answer any ringing line within his/her pickup group.

## Administrator Setup and Configuration



The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-35: Call Pickup Option

The system administrator configures the Call Pickup service parameters from the Essentra BAX web administration services section:

Figure 2-36: Call Pickup Administrator Configuration

- **Direct pickup prefix key** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 100 characters: digits, #, or \*.
- **Group pickup prefix key** - The sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 100 characters: digits, #, or \*.
- **Announcement URLs:**
  - **Cannot pickup call** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
- **Groups Assignment** - To define group call pickup, select a pickup group from the Groups List and click . The pickup group moves to the Assigned Pickup Groups area. To remove a pickup group from the Assigned Pickup Groups, select the pickup group and click .

## Using the Service

The subscriber executes a pickup by dialing a star code or pickup button on his/her phone and then dialing the ringing extension or hunt group number.

There is no indication that a call is parked at an extension. The subscriber picks up a parked call by first going off-hook, then, after hearing a dial tone, pressing \*99 (the call pickup code) and the extension where the call was parked. If the pickup is successful, the subscriber will be connected to the parked call.

The subscriber can enable/disable the service via the Essentra BAX Self Provisioning web interface:

**Subscription List > Call Pickup**

**Service Activation**

I want to use this service

**Activation Prefixes**

Direct pickup prefix key      \*9

Group pickup prefix key      \*99

**Your Groups**

Currently you are not a member of any group.

[Save](#) [Cancel](#)

**Learn More**

- Call pickup allows users to answer a call ringing at another extension.
- Two types of call pickup are supported: Direct call pickup and Group call pickup.
- Direct call pickup - the user dials the direct call pickup code followed by the number of the ringing extension.
- Group call pickup - the user dials the group call pickup code.
- In order to be able to answer another extension the user must be defined within the same group as the other extension.
- If you wish to join a group, please contact your local administrator.

Figure 2-37: Call Pickup Subscriber Configuration

## CALL RESTRICTION

BAX provides support for Call Restriction. You implement Call Restriction by defining restriction categories and applying these categories to specific subscribers or groups of subscribers. A restriction category is a set of restrictions on outgoing calls on certain numbers or prefixes.

In the Call Restriction administrator configuration screen, you can assign call restriction categories to all the subscribers of the VPN. Additionally, you can assign call restriction categories to individual subscribers and to classes of services.

## Subscriber Benefits

- Saving the cost of expensive or unnecessary calls.

## Administrator Setup and Configuration

The system administrator configures the Call Restriction service for subscribers when configuring or creating their Class of Service:

Call Restriction [Configure](#) ?

Figure 2-38: Call Restriction Option

The Call Restriction service is always enabled. The system administrator clicks the *Configure* link to configure the service for this Class of Service as follows:

**Subscribers > Class Of Service List > Edit Class Of Service > Call Restriction**

Available Categories: Long Distance, Elixir Restriction

Assigned Categories: [Empty]

VPN Assigned Categories: [Empty]

[Save](#) [Reset](#)

**Learn More**

- Assign call restriction categories for all users in the class of service.
- On the right you can see the call restriction categories that are assigned for all users of the VPN.

Figure 2-39: Call Restriction Configuration

The system administrator configures the Call Restriction service parameters from the Essentra BAX web administration services section:

**Services > Call Restriction**

**Announcement URL**  
Media server URL for announcing 'Call was blocked by administrator' \*  ?

Available Categories

Assigned Categories

[Configure Call Restriction Categories](#)

Figure 2-40: Call Restriction Administrator Configuration

Before you can configure call restriction, you must first define Configure Restriction Categories.

**To configure Call Restriction categories:**

- Click *Configure Call Restriction Categories*. The Available Categories screen appears.

[Add new category](#)

**Services > Call Restriction > Available Categories**

Category ID	Category Name	Prefix List	Block long distance	Block international		
1	zone1	9785	no	no	<a href="#">Edit</a>	<a href="#">Delete</a>
2	zone3	75	no	no	<a href="#">Edit</a>	<a href="#">Delete</a>

Figure 2-41: Available Categories Screen

**To add a new Call Restriction category:**

- Click *Add new category*. The Add/Edit Categories screen appears:

**Services > Call Restriction > Available Categories > Add/Edit Category**

Category Name \*  ?

Restricted Prefixes

Block all long distance calls  
 Block all international calls

Figure 2-42: Add/Edit Category

- Define the following fields:

- Category Name** - Enter an alphanumeric name for the Call Restriction category. Mandatory field. This name can be up to 20 characters (letters, digits, \_, -, spaces).
- Restricted Prefixes:**
  - To add a restricted prefix, enter a prefix in the text box below the Restricted Prefixes list and click *Add*.
  - To remove restricted prefixes, select them from the list and click *Delete*.

- **Block all long distance calls** - Check to block all long distance calls.
  - **Block all international calls** - Check to block all international calls.
3. To save your changes, click *Save*. To clear the fields, click *Reset*.

**To edit a Call Restriction Category:**

1. From the Available Categories screen click *Edit*. The Add/Edit Category screen appears.
2. Edit the following fields:
  - **Category Name** - Enter an alphanumeric name for the Call Restriction category. Mandatory field. This name can be up to 20 characters (letters, digits, \_, -, spaces).
  - **Restricted Prefixes:**
    - To add a restricted prefix, enter a prefix in the text box below the Restricted Prefixes list and click *Add*.
    - To remove restricted prefixes, select the prefixes in the Restricted Prefixes list and click *Delete*.
  - **Block all long distance calls** - Check to block all long distance calls.
  - **Block all international calls** - Check to block all international calls.
3. To save your changes, click *Save*. To restore the fields to their original settings, click *Reset*.

Once you have configured Call Restriction Categories, you can configure Call Restriction from the Call Restriction screen.

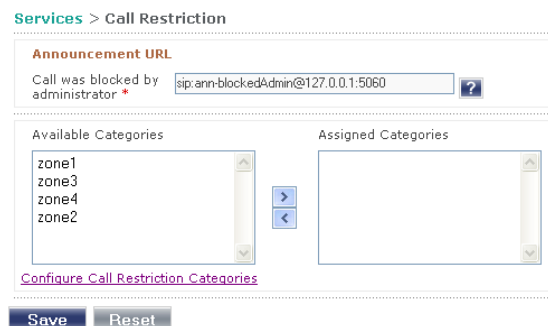




Figure 2-43: Restriction Categories Added

- **Announcement URL** - Enter the Media server URL for announcing 'Call was blocked by administrator'. The URL can be up to 100 characters.
- **Call Restriction Categories** - Select a call restriction category from the Available Categories area and click . The call restriction category moves to the Assigned Categories area. To remove the call restriction category from the Assigned Categories area, select the call restriction category and click .

## Using the Service

Restrictions are performed according to a list of prefixes.

The service provider needs to configure a list of numbers or prefixes (for example ILD = 00, NLD = 00). Subscribers can select what numbers or prefixes they want to restrict and what numbers or prefixes to allow.

The subscriber can override restrictions for a single call by dialing a special PIN number before the number.

The subscriber can view the Call Restriction categories via the Essentra BAX Self Provisioning web interface:

#	Assigned Categories
1	Tel Outbound
2	Long Distance
3	Elixir Restriction

Figure 2-44: Call Restriction - Category Assignment List

## CALL RETURN

The Call Return service allows a subscriber to redial the last number that called where caller ID was available, whether or not the call was answered.

The service is not available if that number had caller ID blocking enabled.

## Subscriber Benefits

- With Call Return, the subscriber can automatically return the last call received, whether you answered the phone or not.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Figure 2-45: Call Return Option

The system administrator configures the Automatic Redial service parameters from the Essentra BAX web administration service section:

Figure 2-46: Call Return Administrator Configuration

- **Service Activation:**
  - **Activation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*69.
- **Announcement URLs:**
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

Pick up any phone (IP or analog with adapter) and press \*69. The last incoming call will be dialed.

## CALL SCREENING

Call Screening includes a number of services, which allow Essentra BAX subscribers to block all or some incoming calls depending on different criteria. The services included under the Call Screening heading are:

- Do not disturb
- Timed do not disturb
- Anonymous call rejection
- Selective call rejection
- Priority call

## Subscriber Benefits

- Provides the subscriber with full control in phone privacy and security.

## Administrator Setup and Configuration

The system administrator configures the Call Screening Services parameters from the Essentra BAX web administration service section:

The screenshot displays the 'Services > Call Screening' configuration page. It is organized into several sections, each with a title and a list of configuration fields. Each field consists of a text input box and a help icon (a question mark in a blue square). The fields are: 'Service Activation code \*' with value '\*60', 'Service Deactivation code \*' with value '\*80', 'Timed Do Not Disturb' section containing 'Activation Code \*' with value '\*90#', 'Deactivation Code \*' with value '#90#', and 'Timeout (hours) \*' with value '12'. The 'Do Not Disturb' section contains 'Activation Code \*' with value '\*99#' and 'Deactivation Code \*' with value '#99#'. The 'Announcement URLs' section contains three fields: 'Service is not available \*' with value 'sip:ann-Servicenotavailable@127.0.0.1:5060', 'Service has been activated \*' with value 'sip:ann-serviceactivated@127.0.0.1:5060', and 'Service has been deactivated \*' with value 'sip:ann-servicedeactivated@127.0.0.1:5060'. At the bottom of the form are two buttons: 'Save' and 'Reset'.

Figure 2-47: Call Screening Administrator Configuration

- **Service Activation code** - Enter the sequence of digits to be keyed in by the subscriber in order to activate Call Screening. Can be up to 20 characters: digits, #, or \*. Default is \*60.
- **Service Deactivation code** - Enter the sequence of digits to be keyed in by the subscriber in order to deactivate Call Screening. Can be up to 20 characters: digits, #, or \*. Default is \*80.
- **Timed Do Not Disturb**

- **Activation code** - Enter the sequence of digits to be keyed in by the subscriber in order to activate Timed Do Not Disturb service. Activation Code can be up to 20 characters: digits, #, or \*. Default is \*90#.
- **Deactivation code** - Enter the sequence of digits to be keyed in by the subscriber in order to deactivate Timed Do Not Disturb service. Deactivation Code can be up to 20 characters: digits, #, or \*. Default is #90#.
- **Timeout (hours)** - Enter the 'Timed Do Not Disturb' timeout in hours. Default is 12 hours. When the service is activated by the subscriber, he will be in the Do Not Disturb mode for the specified time and all incoming calls will receive a busy signal.
- **Announcement URLs:**
  - **Media server URL for announcing 'Service is not available'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Media server URL for announcing 'Service has been activated'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Media server URL for announcing 'Service has been deactivated'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

Users can define the desired call screening behavior as defined below and activate the service at a later stage using the web or the service keys.

**To configure and activate the Call Screening service using the self care web portal:**

Subscription List > Call Screening

**Service Activation**

I want to use this service

**General Service Configuration**

Select how you want blocked calls to be handled :

Disconnect With Busy Tone

**Anonymous Call Rejection Settings**

Anonymous Call Rejection ?

**Do Not Disturb Settings**

Do Not Disturb mode ?

Do Not Disturb For 12 Hours ?

Priority Calls ?

Add Delete

**Selective Call Rejection Settings**

Selective Call Rejection ?

Add Delete

Save Reset

Figure 2-48: Call Screening Subscriber Configuration

- **Service Activation** - check this box, if you want to enable the call screening service.
- **Select how you want blocked calls to be handled** - Incoming calls can be handled in the following manners:
  - Disconnected with Busy Tone
  - Redirected to Voice Mail
  - Redirected to a standard message announcing the subscriber is not available.
- **Anonymous Call Rejection Settings** - Check this box to enable rejection of anonymous calls.
- **Do Not Disturb mode** - Check this box to activate the Do Not Disturb service.
- **Timed Do Not Disturb mode** - Check this box to activate the Timed Do Not Disturb service for the specified time period.
- **Priority Calls** - If checked, calls from the numbers listed in the priority list will be connected even when Do Not Disturb service is active.
- **Selective Call Rejection** - If checked, calls from the numbers listed in the rejection list will be rejected.

**To activate the service using the phone:**

1. Pick up the receiver.
2. Wait for dial tone.

3. Dial the call screening service activation code
4. Wait for confirmation announcement
5. Hang up

## CALL TRANSFER

Transfers an existing call to another party (inside or outside the VPN) through a series of keystrokes on the business phone or using hook flash and transfer on analog sets.

The following types of transfers are possible:

- **Blind Transfer** - Transfer the call to another number by dialing a prefix and then the destination number.
- **Attended Transfer** - First call the destination number, and ask if the party would like to accept the call, and then transfer the call to the destination number.

## Subscriber Benefits

- Lets a subscriber transfer an active call to another subscriber.

## Administrator Setup and Configuration

This service is enabled together with the three way call service, as both services define that the user is able to have two simultaneous calls. The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-49: Three-Way Calling Option

## Using the Service

SIP phone users can press the TRNS softkey while on a call. Dial the number you want to transfer the caller to, and then hang up to connect the call.

**To use the service with an analog phone connected to an IAD (available on supporting IAD only):**

1. During the call press the hook-flash button.
2. Wait for dial tone.
3. Dial the transfer number
4. Hang up

## CALL WAITING

Call Waiting notifies a subscriber of a second incoming call while a call is already in progress and allows the subscriber to accept the second call. This service places the first call on hold while the second incoming call is answered. The subscriber uses the Hold/Flash service button to switch back and forth between the two calls.

## Subscriber Benefits

- Receive all-important calls.

- Alternate conversation between two callers.
- Have the option of temporarily canceling Call Waiting when making important calls.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-50: Call Waiting Option

After enabling the service in the class of service, the administrator needs to define the prefixes that will be used by the user to enable and disable the service using the phone:

A screenshot of a web configuration page titled "Services > Call Waiting". It contains several input fields with labels and question mark icons: "Service Activation code \*" with the value "158#", "Service Deactivation code \*" with the value "#58#", "Announcement URLs" section with "Service is not available \*" (value: sip:ann-Serviceavailable@127.0.0.1:5060), "Service has been activated \*" (value: sip:ann-serviceactivated@127.0.0.1:5060), and "Service has been deactivated \*" (value: sip:ann-service deactivated@127.0.0.1:5060). At the bottom are "Save" and "Reset" buttons.

Figure 2-51: Call Waiting Option

## Using the Service

When an incoming call comes in while the subscriber is on a call, the subscriber can toggle to the incoming call by using the Hold/Flash button/hook to switch between the calls. Pressing the flash hook connects the subscriber with the waiting party and holds the original party. Subsequent use of the flash hook allows the subscriber to return to toggle between the two parties.

The service ends when any party hangs up.



**Note:** In order to use the Call Waiting service, subscribers must have multi-line device support.

The subscriber can disable the call waiting service temporarily while making an important call via the Essentra BAX Self Provisioning web interface or by keying on the phone the prefixes defined by the administrator.

**Using the Self Provisioning web interface:**

A screenshot of a web configuration page titled "Subscription List > Call Waiting". It features a "Service Activation" section with a checked checkbox and the text "I want to use this service". To the right is a "Learn More" section with a blue arrow icon and text: "When you activate Call Waiting, a tone will sound if you are on the phone and another call comes in, allowing you to answer the new call." At the bottom are "Save" and "Reset" buttons.

Figure 2-52: Call Waiting Subscriber Configuration

**Activate call waiting service using the service activation keys:**

1. Pickup the receiver.
2. Dial <call waiting service activation code>.

3. Wait for confirmation announcement.
4. Hang up.

**Deactivate call waiting service using the service activation keys:**

1. Pickup the receiver.
2. Dial <call waiting service deactivation code>.
3. Wait for confirmation announcement.
4. Hang up.

## CAMP ON BUSY

If an extension is busy, a subscriber can transfer (only using blind transfer option) a call to the busy extension and have the transferred user camp on that extension until the user becomes available - or up to 60 seconds. If the extension remains busy after 60 seconds, the call returns to the transferor. This operation is done by performing a blind transfer (available only on supporting SIP phones) and dialing the activation code followed by the required extension. During the waiting period, the subscriber hears music (if the Music on Hold service has been configured).

## Subscriber Benefits

- Camp on busy allows to transfer a call to an extension even if that user is busy.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-53: Camp on Busy Option

The system administrator configures the Camp on Busy service parameters from the Essentra BAX web administration services section:

Services > Camp on Busy

Activation Code*	<input type="text" value="4"/>	<a href="#">?</a>
Maximum parking time (seconds)*	<input type="text" value="6"/>	<a href="#">?</a>
<b>Announcement URLs</b>		
Music to be played to parked calls*	<input type="text" value="sip:ann-musiconholddefault@127.0.0.1:50"/>	<a href="#">?</a>

Figure 2-54: Camp on Busy Administrator Configuration

- **Activation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to activate the service. Can be up to 20 characters: digits, #, or \*. Default is \*4.
- **Maximum parking time** - Enter the amount of time in seconds to wait for extension availability. Default is 6.
- **Announcement URLs:**
  - **Music to be played to parked calls** - Enter the URL of the appropriate music on the media server.

## Using the Service

The subscriber does not configure this service.

When a SIP subscriber in an enterprise VPN wants to transfer an active call to a different extension, he may do so using the camp on busy service. By doing so, the transferring party makes sure that the call remains active even if the target subscriber is busy.

## CARRIER PRE SELECTION

This service allows administrators to define the preferred carrier for international calls. When the user dials the default international access code, the BAX uses this carrier code instead of the default international access code. The VPN administrator can define the preferred carrier for its subscribers and then choose whether to allow the subscribers to change it. The feature does not prohibit the subscribers from dialing other carrier prefixes.

## Subscriber Benefits

- Choose between international carriers, without the need to specifically dial their prefix.
- Control which international carrier is used by subscribers of enterprise VPNs.

## Administrator Setup and Configuration

The system administrator defines the list of carriers, their name and their associated prefix to be used by the subscribers:

[Add carrier](#)

Services > Carrier Pre-selection

Default	Carrier Name	Prefix		
<input type="checkbox"/>	International 1	011	<a href="#">Edit</a>	<a href="#">Delete</a>
<input checked="" type="checkbox"/>	bezeq	014	<a href="#">Edit</a>	<a href="#">Delete</a>

Figure 2-55: International Carrier list

Each VPN administrator configures the preferred carrier for its VPN including whether to allow the subscribers to change this carrier:

Services > Carrier Pre-selection

Default Carrier:

Subscribers can choose their default carrier

Figure 2-56: Carrier pre-selection VPN Administrator Configuration

- **Default Carrier** - Set the default carrier used in the VPN. This carrier is used for every new subscriber until he changes it.
- **Subscribers can choose their default carrier** - when checked, the subscribers may use their self care portal to change their default carrier.

## Using the Service

When dialing and international number with the default international access code (defined in the subscriber edit screen), the BAX replaces this number with the selected prefix and sends it to the appropriate offnet gateway.

The subscriber may change their preferred carrier using their self care portal:

Figure 2-57: Carrier Pre-selection Subscriber Configuration

## CLICK-TO-DIAL

This service enables subscribers to initiate calls via the subscriber web portal. This can be achieved either by clicking a phone number listed in the subscriber's call logs or by selecting the Click-to-Dial service link from the subscriber home page and entering the number to be dialed manually.

### Subscriber Benefits

- Saves the subscriber the time it takes to type the number.

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Figure 2-58: Click-to-Dial Option

The system administrator configures the Click-to-Dial service parameters from the Essentra BAX web administration services section:

Figure 2-59: Click-to-Dial Administrator Configuration

- **Announcement URLs:**
  - **Subscriber is busy** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **For ringback tone** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **The IP of the BAX server which handles the calls** - Enter the IP address of the BAX server that handles these types of calls.

### Using the Service

Click-to-dial can be executed from:

- A corporate address book/directory.

- By clicking a number in a call log on the BAX web interface.

Subscribers are presented with a confirmation window (including details of the number to be called) before the call is actually initiated.

After the subscriber has clicked the number, BAX connects to the calling party's phone.

The subscriber can configure the Click-to-Dial Destination Number via the Essentra BAX Self Provisioning web interface:

Subscription List > Click-to-Dial

Destination Number:  ?

**Learn More**

- Essentra BAX allows you to enter a destination number via the web portal. BAX will dial the number for you and notify your phone when the call has been set up.
- The destination number can be international, national, extension or +E164-format.
- Click-to-Dial can also be performed via calls screen (there you can click on the number in order to perform Click-to-Dial).

Figure 2-60: Click-to-Dial Subscriber Configuration

## CONFERENCE CALLS

The Conference Call service enables subscribers to dial a conference number and participate in a conference call. The Essentra BAX conferencing resources are supported by the IP-Media 2000 media server. The conferencing server supports up to 240 simultaneous sessions.

### Subscriber Benefits

- Save time and effort with no phoning back and forth.
- Create a multi-party conference anytime.

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Conference Calls ?

Figure 2-61: Conference Calls Option

The system administrator configures the Conference Call service parameters from the Essentra BAX web administration services section:

Services > Conference Calls

---

**Conference Server Configuration**

Conference server URL  ?

Max. simultaneous conference calls  ?

Max. participants per conference call  ?

---

**Announcement URL**

Service is not available\*  ?

---

Figure 2-62: Conference Calls Administrator Configuration

- **Conference Server Configuration:**
  - **Conference server URL** - Enter the URL of the conference/media server to be used with BAX.
  - **Max. simultaneous conference calls** - Enter the maximum number of concurrent conference calls to be allowed on BAX. Default is 200.
  - **Max participants per conference call** - The maximum number of participants allowed for each conference call. Default is 30.
- **Announcement URL:**
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

Dial the conference bridge number from any phone to connect to a conference call.

## DO NOT DISTURB

Everyone needs some privacy once in a while. If a subscriber doesn't want to be disturbed, the Do Not Disturb service enables the subscriber to redirects calls to a standard 'user not available' message, to the user's voice mail box, or to disconnect with busy tone. Two types of Do Not Disturb services are available: permanent and timed.

When selecting Timed Do Not Disturb, the subscriber will be in Do Not Disturb mode for the time specified by the administrator as described in *Timed Do Not Disturb* service.

When selecting permanent Do Not Disturb, the subscriber will be in Do Not Disturb mode until he disables the service.

## Subscriber Benefits

- Subscribers can work, eat and sleep without being interrupted by unwanted calls.
- Subscribers can still make outgoing calls.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-63: Call Screening Option

The system administrator configures the Do Not Disturb service parameters as defined in the *Call Screening* service description.

## Using the Service

The Do Not Disturb service sends all incoming calls to the predefined option. For any phone, the subscriber can activate the Do Not Disturb service via the Essentra BAX Self Provisioning web interface or by using the service keys.

**To activate Do Not Disturb service using the self care web portal:**

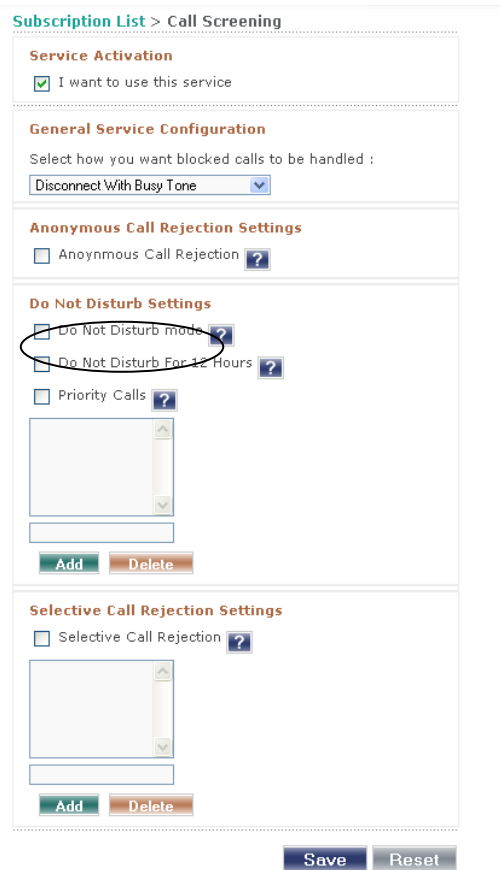


Figure 2-64: Do Not Disturb Subscriber Configuration

- **Service Activation** - Select if you want to activate the call screening service. Users can also activate and deactivate the service using service keys prefixes defined by the administrator.
- **Select how you want blocked calls to be handled** - Incoming calls can be handled in the following manners:
  - Disconnected with Busy Tone
  - Redirected to Voice Mail
  - Redirected to a standard message announcing the subscriber is not available.

- **Check box to activate Do Not Disturb mode** - Select this option to enable/disable the Do Not Disturb service.
- **Check box to activate Timed Do Not Disturb mode** - Select this option to enable/disable the Do Not Disturb service for the specified time period.
- **Priority Calls** - If checked, calls from the numbers listed in the area below will reach you even when Do Not Disturb is activated.

**To activate the Do Not Disturb service using the service key codes:**

1. Pick up the receiver.
2. Dial \*99# to activate the Do Not Disturb service.
3. Hang up.

**To deactivate the Do Not Disturb service using the service key codes:**

1. Pick up the receiver.
2. Dial #99# to deactivate the timed do not disturb service.
3. Hang up.

## EMERGENCY CALLS

BAX provides support for Emergency Calls by translating emergency access numbers into legitimate E164 numbers. Numbers are translated based on the location of the calling subscriber as defined via the subscriber self-provisioning Web interface.

### Subscriber Benefits

- The subscriber can quickly access emergency services.

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



*Figure 2-65: Emergency Calls Option*

The system administrator configures the Emergency Calls service parameters from the Essentra BAX web administration services section:

Services > Emergency Calls

**New Record**

Add to Existing Location:  ?

New Location:  ?

Emergency Access Number\*:  ?

E164 number to call\*:  ?

Location	Emergency Access Number	Number to Call	
California	911	14081234567	Delete
California	611	14081237654	Delete
New York	911	12127895465	Delete
New York	611	12125652164	Delete

Figure 2-66: Emergency Calls Administrator Configuration

- **New Record:**
  - **Add to Existing Location** - Select the location to which you would like to add an emergency number. This field only appears if there are existing locations in the database.
  - **Add New Location** - Enter the new location’s name. Up to 50 characters.
  - **Emergency Access Number** - Enter the emergency access number to be dialed by the subscriber. Up to 20 characters (digits, #, \*).
  - **E164 number to call** - Enter the E164 number into which the dialed emergency access number will be translated. Up to 20 characters (digits, #, \*).

To store new records, click *Add*.

The lower part of this screen displays the locations and emergency numbers already configured in the system. Click *Delete* to delete existing records. You will be asked to confirm your deletion.

## Using the Service

The subscriber can configure the service via the Essentra BAX Self Provisioning web interface:

Subscription List > Emergency Calls

**My Physical Location**

Select:  ?

**Learn More**

Learn more about Emergency Calls

✦ Since Essentra BAX allows you to connect up to the network from any geographical location, you need to inform the system of your physical location in order for Emergency Calls from your phone to be handled correctly. In this screen, select your current physical location. If your location is not listed, please contact your service provider's customer support department.

Figure 2-67: Emergency Calls Subscriber Configuration

## EXTENSION DIALING

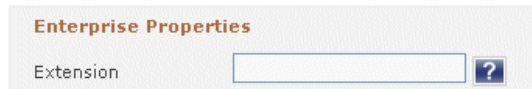
This service enables subscribers to dial extensions to call other subscribers in their VPN group. Extension dialing allows subscribers to dial an abbreviated digit string to call other subscribers in the group. The extension length is set to a valid string of *n* digits by the system administrator.

## Subscriber Benefits

- Provides short numbers dialing plans.

## Administrator Setup and Configuration

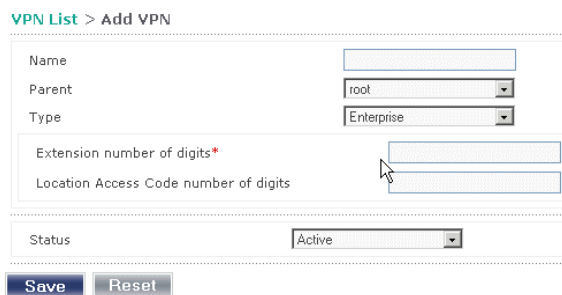
The system administrator registers a subscriber to the service by assigning the subscriber an Enterprise VPN. When creating or configuring this subscriber's properties, the system administrator enters the extension number in the Extension field of the Enterprise Properties area:



The screenshot shows a form titled "Enterprise Properties". Below the title is a label "Extension" followed by a text input field and a small blue question mark icon.

Figure 2-68: Extension Dialing Option

The system administrator configures the Extension dialing parameters from the Essentra BAX web VPNs section when configuring a VPN:



The screenshot shows the "VPN List > Add VPN" form. It contains several fields: "Name" (text input), "Parent" (dropdown menu with "root" selected), "Type" (dropdown menu with "Enterprise" selected), "Extension number of digits\*" (text input), "Location Access Code number of digits" (text input), and "Status" (dropdown menu with "Active" selected). At the bottom are "Save" and "Reset" buttons.

Figure 2-69: Add VPN

When creating a new VPN the following fields need to be completed:

- **Name** - (Mandatory) A unique name for the VPN being created.
- **Parent** - Select the parent VPN for the VPN being created. The default is the VPN that the administrator is currently logged into.
- **Type** - Must be Enterprise.
- **Extension number of digits** - (Mandatory) The number of digits used by extensions in the VPN being created. Default is 4. The length of the extension is common to all subscribers in the group.
- **Location Access Code Number of Digits** - The location access number is a prefix that should be dialed before the extension to access a specific office location, in case multiple office locations exist for this VPN. If no location access number is defined, then all VPN extensions are treated as if they are in the same location. The default for this field is blank.

## Using the Service

When dialing a subscriber's call dial the extension number. This service is available from any phone for subscribers in the same group.

## FILE REPOSITORY

File Repository enables the administrator to add authorized IPs and subscribers.

## Subscriber Benefits

- File Repository give the subscriber more control over the security aspects of the system, by allowing access only to authorized IPs and subscribers.

## Administrator Setup and Configuration

The system administrator configures the File Repository service parameters from the Essentra BAX web administration services section:

Search File | Upload File

Services > File Repository

**File Repository List**

IP Address\*  ?

User\*  ?

Password\*  ?

IP Address	User	Password		
100.100.100.100	Test1	*****	Show	Delete
200.200.200.200	Test2	*****	Show	Delete

Figure 2-70: File Repository List Administrator Configuration

- **File Repository List:**
  - **IP Address** - Enter the IP address here. Up to 15 characters.
  - **User** - Enter the user name here. Up to 10 characters.
  - **Password** - Enter the password here. Up to 10 characters.

To see the password, click *Show*.

To delete an IP address, click *Delete*. You will be asked to confirm your deletion.

## Using the Service

The subscriber does not configure this service.

## FIND ME

The subscriber can define up to five numbers, in a specific order, that will ring when the subscriber is being called but he/she does not answer his/her SIP end-point.

The subscriber SIP end-point will ring first, and, if there is no answer (not busy or do not disturb), the defined numbers will be called. The subscriber can define if the other phones ring in parallel or one after the other.

When the first number answers, all others are disconnected.

If there is no answer after trying all the numbers, the Call Forward On No Answer policy will be executed.

The subscriber's number should not be part of the Find Me numbers, since it will be called in any case.

When calling numbers in the Find Me list, no forward will be performed, except for the original number of the subscriber.

Interaction with other services:

- If the subscriber's main line is busy then the other numbers are not called.
- Call screening and CFNA settings take precedence over this service.
- Find Me/Follow Me takes precedence over CFNA. This means that if the subscriber activates Find Me/Follow Me, the list of FMFM numbers is tried first in the specified order. If there is no answer from any of those numbers then the configured CFNA treatment is applied.

## Subscriber Benefits

- Subscribers can be reached, even when not by their usual phone.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-71: Find Me Option

The system administrator configures the Find Me service parameters from the Essentra BAX web administration services section:

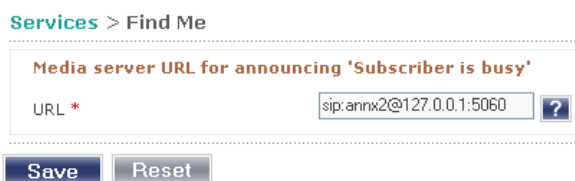


Figure 2-72: Find Me Administrator Configuration

- **Media server URL for announcing 'Subscriber is busy':**
  - **URL** - Enter the URL of the appropriate announcement on the media server.

## Using the Service

The subscriber can enable or disable this service (from the Web or using a star code - unlike the CFNA activation/deactivation codes) without deleting the current settings.

From a CDR point of view, each call looks like a separate call from the called subscriber to the destination numbers.

The subscriber can configure the Find Me service via the Essentra BAX Self Provisioning web interface:

Figure 2-73: Find Me Subscriber Configuration

## FOLLOW ME

The Follow Me service allows the subscriber to define a list of up to 6 numbers that should ring in case there is no answer on his extension. The numbers will ring sequentially in the order they were defined. The subscriber may choose to end the call with voice mail.

## Subscriber Benefits

- Allows customers to change locations and still receive incoming calls.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Figure 2-74: Call Forward Option

The system administrator clicks the *Configure* link to configure the service for this Class of Service as follows:

Figure 2-75: Follow Me Configuration

- The system administrator does not have to perform any special configurations for this service.

## Using the Service

When the subscriber configures call forward on No answer, he can configure up to 5 additional numbers that will ring sequentially when an incoming call (to his number) is not answered. If there was no answer on none of the extensions, the call can be forwarded to voice mail. The

subscriber also defines how much time the call should ring on each extension waiting to be answered.

**Activate Follow Me service using the self care web portal:**

The subscriber needs to configure the service via the Essentra BAX Self Provisioning web interface:

**Subscription List > Call Forward**

**Always forward my calls to**

Don't forward

Voice mail

Phone number  ?

**If I do not answer, forward the calls to**

Don't forward

Play Announcement after  seconds

Voice mail after  seconds

Follow me list

after  seconds call  ?

after another  seconds call  ?

after another  seconds call  ?

after another  seconds call  ?

after another  seconds call  ?

after  seconds forward the call to voice mail

Figure 2-76: Follow Me Subscriber Configuration

- **Follow me list**
  - **After another ...** - Defines the duration, in seconds, the phone will ring on the specific number.
  - **...Call...** - The number to call after the duration specified.
  - **After ... seconds forward the call to voice mail** - check the radio button to forward the call to voice mail in case none of the other numbers answered the call.

## GENERAL CALLING ID

Outgoing calls should have a caller ID associated with them. This service allows the administrator of an enterprise VPN to define the caller ID sent for off-VPN calls.

The feature allows an administrator of an enterprise VPN to define one global caller ID that is used, when a subscriber calls a number outside the VPN. The administrator can choose to set the caller ID only for a specific office location or globally for the entire VPN. The administrator can also choose to set the caller ID to anonymous rather than a number.

In residential environments the caller ID is set by the phone number of the subscriber but can also be anonymous.

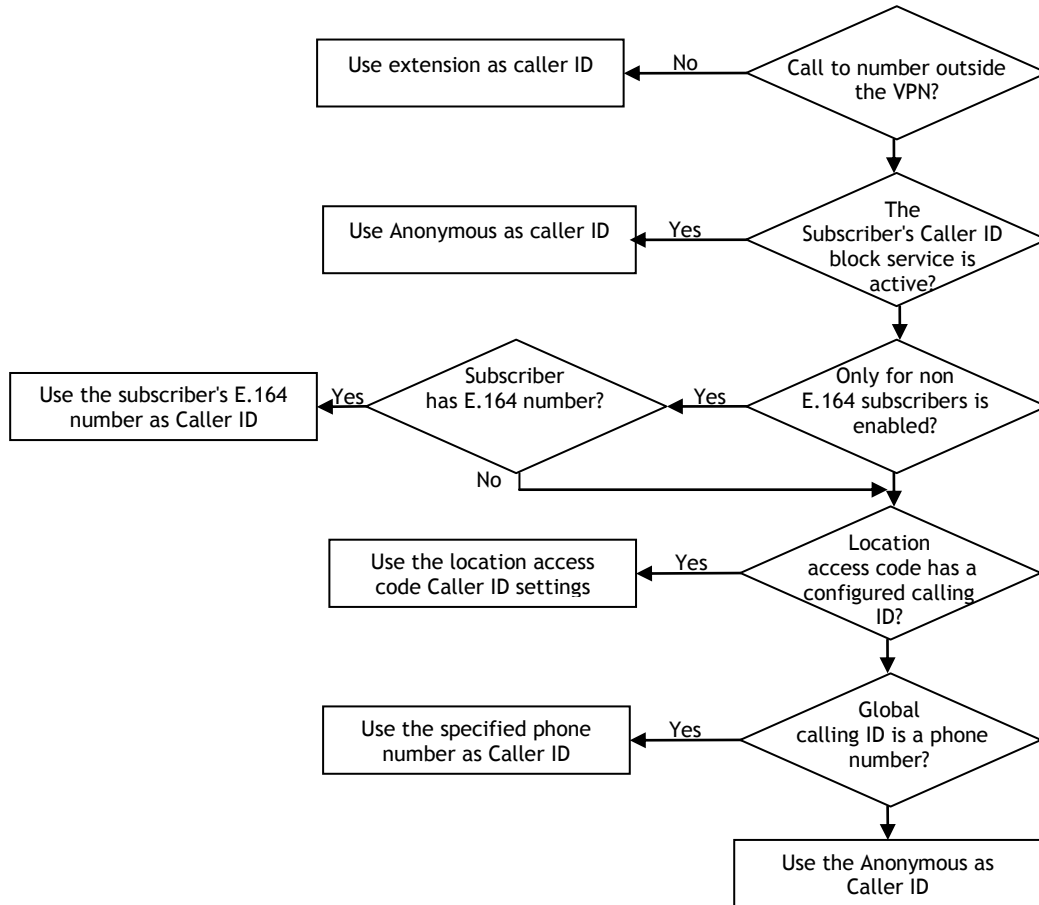


Figure 2-77: General Calling ID decision flow (service is enabled)

## Subscriber Benefits

- Allows setting one calling number - so that callback calls are directed to a secretary, auto-attendant or attendant console depending on the number set in the service.
- Allows setting a calling ID per location - callback calls can be local calls even when the VPN service crosses multiple locations.

## Administrator Setup and Configuration

The enterprise VPN administrator enables this service from the Services tab, by checking the 'Service Enable' check box:



Figure 2-78: General Calling ID Option

The system administrator configures the service parameters for the whole VPN as follows:

**Services > General Calling ID**

Service Enabled  
 Non E164 Subscribers only  All Subscribers

**Global Calling ID**  
 Anonymous  
 Phone Number

**ANI per Location**  
 Location Access Code   
 Anonymous  
 Phone Number

Location Access Code	ANI	
2	anonymous	Delete
3	97299703888	Delete

Figure 2-79: General Calling ID

## Using the Service

The subscriber does not configure this service.

## HOT LINE

The service is activated when the user picks up the receiver. If activated, the call is routed to a pre-configured number, immediately or after a timeout, as defined for the service.

Choosing between Immediate and delayed Hotline service is done in the CoS settings screen.

**i** **Note:** The feature is available only for Megaco users.

## Subscriber Benefits

- Subscribers assure that all calls will be automatically directed to them immediately when the receiver is picked up. This can be useful in any situation where the subscriber wants to bypass the need to physically dial the number.
- Subscribers can continue making normal outgoing calls when delayed hot line service option is used.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Hot Line

Figure 2-80: Hot Line Option

The system administrator configures the hot line parameters as defined in the hot line service description.

## Using the Service

The Hot line service sends outgoing calls to the predefined number immediately or after a timeout, as defined by the administrator in the Class of Service. The Hot Line service can be activated only using the service activation keys.

### To activate Hot line service:

The subscriber picks up the phone and dials <Hot Line Activation Prefix><telephone number>, e.g. \*52\*2658802365 will call the number 2658802365 when ever the subscriber pick up the phone.

### To Deactivate Hot line service:

The subscriber picks up the phone and dials <Hot Line Deactivation Prefix>, e.g. #52# will deactivate the service.

**i** **Note:** The prefixes used for the service are defined by the root VPN administrator for all VPNs and cannot be changed.

**i** **Note:** When the immediate Hot line service is used, deactivating the service can only be done by calling the operator from a different line.

## HUNT GROUP

This service enables VPN administrators to organize subscribers into hunt groups. A hunt group is a grouping of extensions that are set up to receive calls in a particular order if a line is busy or not answering. For example, if a call arrives to the hunt group root extension, the service alerts line A. If line A is busy and a call comes in, then that call will be routed to line B. If lines A and B are busy, the call will be routed to line C, and so on.

## Subscriber Benefits

- A hunt group gives subscribers greater control over how incoming calls are handled and prevents cases where calls are missed due to certain extensions being busy or not answering.

## Administrator Setup and Configuration

The VPN administrator configures the Hunt Group service parameters from the Essentra BAX web administration services section:

[Add Hunt Group](#)

Services > Hunt Group

Currently Active	Root E164 Number	Root Extension	Location Access Code	Group Name	Behavior	Timeout	Ringing Order	Finish with voice mail		
Yes	97299703889	888	3	test	serial	5	As Group	Yes	<a href="#">Edit</a>	<a href="#">Delete</a>

Figure 2-81: Hunt Group VPN Administrator Configuration

To add a new hunt group, click [Add Hunt Group](#). The Add Hunt Group screen appears:

Services > Hunt Group > Add Hunt Group

---

**Hunt Group Activation**

activate the hunt group

---

**Hunt Group Configuration**

Root E164 Number  ?

Root Extension  ?

Location Access Code  ?

Group Name  ?

Behavior  Parallel  Serial ?

Timeout  ?

**Ringling Order**

As per order defined in group ?

Random ?

Finish with voice mail ?

Figure 2-82: Add Hunt Group VPN Administrator Configuration

- **Hunt Group Activation:**
  - **activate the hunt group** - Select this option to enable the hunt group service.
- **Hunt Group Configuration:**
  - **Root E164 Number** - The E.164 number used to access the hunt group service for the defined group.
  - **Root Extension** - The Extension used to access the Hunt-Group service for the defined group.
  - **Location Access Code** - Enter the VPN access code.
  - **Group Name** - Select the hunt group name.
  - **Behavior** - Select Parallel or Serial. If Parallel is selected, all the extensions ring in parallel. If Serial is selected, the extensions ring according to the selected Ringling Order.
  - **Timeout** - Enter a timeout value between 1 and 30 seconds. If the call is not answered after the timeout period, it is transferred to the next extension in the hunt group.
  - **Ringling Order** - Select the order by which calls will be handled within the hunt group:
    - As per order defined in group.
    - Random.
  - **Finish with voice mail** - Select this option to transfer unanswered calls within the hunt group to voice mail.

## Using the Service

The subscriber does not configure this service.

## MALICIOUS CALL

Malicious Call service is available only for Megaco users. The feature allows the subscriber to mark a specific call as malicious and then contact the operator and get the calling number information, even if the call was from an anonymous source.

When the subscriber marks the call, the BAX generates the CDR for the call with the field "MaliciousCall" set to Y.

## Subscriber Benefits

- Subscribers can trace unknown callers that disturb them.
- Information is still confidential and its availability depends on the Operator.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-83: Malicious Call Option

The system administrator configures the Malicious Call service parameters from the Essentra BAX web administration services section:

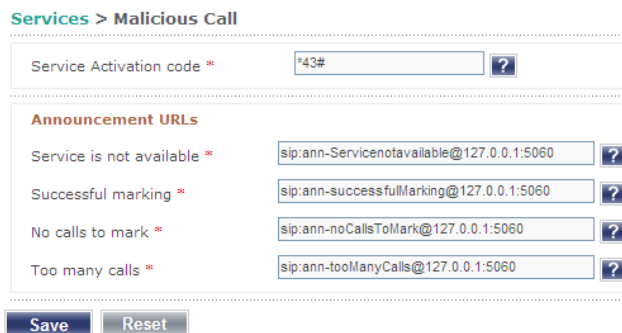


Figure 2-84: Malicious Call Administrator Configuration

- **Service activation code** - Enter the sequence of digits to be keyed in by the subscriber in order to mark the call. Can be up to 20 characters: digits, #, or \*. Default is \*43#.
- **Announcement URLs:**
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Successful marking** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). The announcement is played when the user successfully marked the call as malicious.
  - **No calls to mark** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). The announcement is played when the user has no calls to mark as malicious, e.g. last call was outgoing call or the user hang up and then pickup and tried to mark the call.
  - **Too many calls** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). The announcement is played when the user has more than one active call, and call cannot be marked.

## Using the Service

Once the subscriber receives a call, and finds the call to be malicious, he needs to perform the following, in order to mark the call as malicious.

**To mark the call as malicious:**

1. Do not hang up the call
2. Press the hook-flash button
3. Wait for dial tone
4. Dial the activation prefix (in our case it is \*43#)
5. Wait for confirmation message.

Upon receiving the confirmation message the user can hang up the call or press Hook-Flash again to return to the call.

The subscriber can mark the call as long as he didn't hang up, ever if the other side did hang-up.

## MEGACO MEDIA GATEWAY

MEGACO is a media gateway control protocol used to create, modify, and delete media streams across a media gateway.

This service enables administrators to configure Megaco Media Gateways and subscribers. Megaco is a signaling protocol used between a Media Gateway and a Media Gateway Controller in a VoIP network. Megaco defines the necessary signaling mechanism to enable a Media Gateway Controller to control gateways in order to support voice/fax calls between PSTN-IP or IP-IP networks

## Subscriber Benefits

- Subscribers have access to media streams via their phone system.

## Administrator Setup and Configuration

The system administrator configures the Megaco Media Gateway service parameters from the Essentra BAX web administration services section:

Subscribers **Services** Administrators VPNS Monitoring Support ? Contact Us i Log Out X

[Add Media Gateway](#)

Feature currently DISABLED > [Click here to enable feature](#)

[Services](#) > Media Gateway list [1-1 of 1 Records].

IP Address	Port	Digit Map	Regret Time	Description		
1.2.3.4	2944	xxxx	16	sample gateway	<a href="#">Edit</a>	<a href="#">Remove</a>

*Figure 2-85: Megaco Media Gateway Administrator Configuration*

- To enable/disable this service, click the *Click here to enable/disable service* link.
- To edit or remove a listed Megaco Media Gateway, click the *Edit* or *Remove* link on its line.
- To add a new Megaco Media Gateway, click *Add Media Gateway*. The Add Megaco Media Gateway screen appears.

Services > Add Megaco Media Gateway

IP Address \*

Port \*

Digit Map \*

Regret Time \*  ?

Description

Caller ID

Anti Tromboning

Save Reset

Figure 2-86: Add Megaco Media Gateway

- **IP Address** - Enter the IP address here. Up to 15 characters. Must be unique.
- **Port** - Enter the port number. Must be unique.
- **Digit Map** - Enter the digit map.
- **Regret Time** - Enter the regret time, between 0 and 180.
- **Description** - Enter a description of the gateway.
- **Caller ID** - Enter enable/disable to enable or disable the caller ID service.
- **Anti-tromboning** - Enable or disable tromboning, i.e. when enabled, two users behind the same gateway (or on the same subnet) will not use media relay.

To add a Megaco Media Gateway User, click *Update*. To reset the fields, click *Reset*.

## Using the Service

The subscriber does not configure this service.

## MESSAGE WAITING

For SIP phones and digital phones, a phone lamp notifies the subscriber a message has been left on voicemail and a message button acts as a speed dial key to voice mail. The customer must be subscriber to the voicemail service in order for this service to be enabled.

## Subscriber Benefits

- Be informed of new messages in your mailbox.
- Need not constantly check the mailbox for new messages as you could be notified.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Voice Mail ?

Figure 2-87: Voice Mail Option

## Using the Service

Checking for Voice Mail Messages: the message waiting light is lit and/or blinking when you have one or more voice mail messages.

Dial your voice mail access number or press the message button, if your phone has a messages button, to call your voice mailbox.

## MULTIPLE REGISTRATIONS

The Multiple Registrations service enables subscribers to register more than one device on the same account. The Subscriber is able to receive and generate calls from both devices.

The administrator may limit the amount of devices the subscriber is able to register at any specific time. In case the service is disabled, the subscriber may register more than one device, but incoming calls alerts the last registered device.

### Subscriber Benefits

- While traveling, subscribers are capable of registering soft phones on the same account without the need to unregister their desk phone.
- Up to 5 phones can be registered.

### Administrator Setup and Configuration

The VPN administrator adds the service to the class of service. In the class of service the VPN administrator defines the amount of devices the subscriber may register and the amount of concurrent outgoing calls the subscriber can make from all registered devices.

The VPN administrator configures the Multiple Registrations service from the Essentra BAX web administration Class of Service section:

Subscribers > Class Of Service List > Edit Class Of Service > Multiple Registrations

Max Registered Devices*	<input type="text" value="2"/>	<a href="#">?</a>
Max outgoing concurrent calls*	<input type="text" value="2"/>	<a href="#">?</a>

Figure 2-88: Multiple Registrations Administrator Configuration

- **Max Registered Devices** - Defines the total number of devices (SIP or Megaco) that can be registered/assigned at the same time to a specific account. Up to 5 devices per account.
- **Max outgoing Concurrent calls** - Each device can generate a call regardless of the state of the other devices on the account. In case Multiple Registrations service is used, this parameter defines the maximum concurrent calls that can be generated by devices assigned to a specific account. Up to 5 outgoing calls per account.

### Using the Service

The subscriber can register devices and make calls and is not required to perform any configurations.

In case the subscriber tries to register a device and the registration is rejected since he has registered too many devices, the subscriber may remove a device from the list of registered devices using its self care portal.

**To remove a device from the list of registered devices:**

1. Login to the self care portal
2. Click on the *Edit* link adjacent to the Multiple Registrations service. The multiple registrations screen appears.

#	Endpoint Address	
1	194.90.71.124:11556	<a href="#">Delete</a>
2	199.203.72.60:5334	<a href="#">Delete</a>

Figure 2-89: Multiple Registrations Subscriber Configuration

3. Click on the delete link adjacent to the device IP you would like to unregister.
4. Register the new device.

## MUSIC ON HOLD

The Music On Hold service enables subscribers to hear music while their call is put on hold. The audio clip uploaded by the administrator will be played repeatedly until the call is re-established or terminated.

## Subscriber Benefits

- Subscribers listening to music tend to wait more patiently and are less prone to hang up. The music also indicates to the subscriber that his/her call has not been disconnected.

## Administrator Setup and Configuration

Music on hold is configurable per VPN. When configuring a VPN, the type of music to be played on hold can be selected from a list of options available on the Media server.

Music is stored on the media server.

The system administrator configures the Music On Hold service parameters from the Essentra BAX web administration services section:

Services > Music On Hold

Service Activation

**Announcement URL**

Music on hold\*  ?

Figure 2-90: Music On Hold Administrator Configuration

- **Service Activation** - Check this field to activate the Music on Hold service.
- **Announcement URL:**
  - **Music on hold** - Enter the URL of the appropriate audio clip on the media server.

## Using the Service

The subscriber does not configure this service.

## OFF-NET CALL HANDLING

Subscribers are assigned a public phone number (E164 format number) that can be used to place or receive calls directly.

## Subscriber Benefits

- Subscribers can be reached from anywhere.

## Administrator Setup and Configuration

The system administrator registers a subscriber to the service by selecting this option when configuring or creating a subscriber:



**Off-net call handling**

International Access Code: 00

Country Code \*: 972

Area Access Code: 0

Area Code \*: 9

Phone Number: 9701234

SIP Device:  Access Gateway  SIP device

Figure 2-91: Off-net Call Handling Configuration

The system administrator configures the subscriber off-net call handling and defines the International Access code, Country Code, Area Access code, Area Code, subscriber's Phone Number, SIP Device, and media relay fields.

The system administrator configures the Off-net Call Handling service parameters from the Essentra BAX web administration services section:

Services > Off-net call handling

Configuration Option	Description	
Announcement URLs	Configure announcement URLs	<a href="#">Configure</a>
Sub-VPNs permissions	Configure sub-VPNs permissions	<a href="#">Configure</a>
VPN Preferences	Configure VPN Preferences	<a href="#">Configure</a>
Alternate Endpoints	Configure alternate endpoint preferences	<a href="#">Configure</a>
Dial Plan	Configure dial plan	<a href="#">Configure</a>

Figure 2-92: Off-net Call Handling Administrator Configuration

For provisioning of the Off-net call handling please refer to the Essentra Bax manual.

## Using the Service

This service is available by default.

## OFFNET CALL PREFIX

The feature simulates PBX behavior. When enabled, Enterprise VPN users need to dial a prefix in order to make a call to a number outside the VPN.

## Subscriber Benefits

- Simulate PBX behavior.

- Extensions may have the same number as offnet numbers.

## Administrator Setup and Configuration

The system administrator configures the offnet call prefix service parameters from the **Edit VPN** settings screen:

Name	shlomi
Parent	root
Type	enterprise
Extension number of digits*	3
Location Access Code number of digits	1
<input checked="" type="checkbox"/> Use offnet prefix	9
Status	Active

Figure 2-93: Offnet Call Prefix Administrator Setting

- **Use Offnet prefix** - Mark the check box and fill-in the offnet call prefix to be used by the subscribers.

## Using the Service

When dialing a number that is outside the VPN (including emergency numbers), the subscriber **MUST** dial the prefix followed by the required number, e.g. in the example above, where the offnet call prefix is '9', the subscriber must dial 91800888888 to make a call to the toll free number 1-800-888-888.



**Note:** In the example above, the subscriber must dial 9911 to make a call to the emergency number: 911.

## PASSWORD MODIFICATION

The Password Modification service enables subscribers to change their password using the web or using the phone. The password defined is used for the following services: password modification, remote control, Call screening, self call restriction and Allowed Prefixes.

The password defined in this service replaces the secret used in self call restriction.

## Subscriber Benefits

- Password Modification service, allows the subscriber to safely control the subscribed services using the phone's keypad.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

<input checked="" type="checkbox"/> Password Modification	?
---	---

Figure 2-94: Password Modification Option

The system administrator configures the Password Modification service parameters from the Essentra BAX web administration services section:

Services > Password Modification

Service Prefix *	<input type="text" value="*88*"/>	<a href="#">?</a>
Password Length *	<input type="text" value="4"/>	<a href="#">?</a>
Default Password *	<input type="text" value="1234"/>	<a href="#">?</a>
Delimiter *	<input type="text" value="*"/>	<a href="#">?</a>

**Announcement URLs**

Password Changed successfully *	<input type="text" value="sip:ann-passwordChanged@127.0.0.1:5060"/>	<a href="#">?</a>
New Password not valid *	<input type="text" value="sip:ann-passwordInvalid@127.0.0.1:5060"/>	<a href="#">?</a>
Service not available *	<input type="text" value="sip:ann-ServiceNotAvailable@127.0.0.1:5060"/>	<a href="#">?</a>

Figure 2-95: Password Modification Administrator Configuration

- **Service Prefix** - Enter the prefix to be dialed by the user to activate the password modification service. Can be up to 20 characters: digits, #, or \*. Default is \*88\*
- **Password Length** - Defines the number of digits in the password. Default is 4 digits.
- **Default Password** - Enter the default password that will be assigned to every new subscriber. Default is '1234'.
- **Delimiter** - Enter the delimiter to be dialed by the user to differentiate between the old password and the new password. Default is \*.
- **Announcement URLs:**
  - **Password Changed Successfully** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **New Password not valid** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). The announcement let the subscriber know that the new password entered is not valid.
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

### Administrator

The administrator can change the password for the subscriber or check for the last password by editing the subscriber subscription.

Subscribers > Edit Subscriber > Edit Subscriber's Subscriptions > Password Modification

Old Password	<input type="password" value="••••"/>	<a href="#">Show</a>
New Password *	<input type="text"/>	<a href="#">?</a>
Confirm New Password *	<input type="text"/>	<a href="#">?</a>

Figure 2-96: Password Modification subscriber's password Configuration

- **Old Password** - Defines the user's old password. The default is set to 1234. By default this password is hidden. To view the password, please click on the *show* link.
- **New Password** - Allows setting a new password for the user.

- **Confirm New Password** - Must match the new password entered in the "New Password" field.

## Subscriber

The subscriber can access the same configuration screen using the self care web portal and change the password manually.

The subscriber can also change the password using the service keys.

**To change the password using the service keys:**

1. Pick up the phone and wait for dial tone.
2. Dial the following:  
<service prefix><old password><delimiter><new password><delimiter><new password>, e.g.  
\*88\*1234\*4567\*4567 will change the default password 1234 to new password 4567.
3. Wait for confirmation that the password was changed successfully.

## PERSONAL SPEED DIAL

The Personal Speed Dial service enables subscribers to store up to 100 short numbers for frequently-called destinations. To call a number using personal speed dial, the subscriber must dial the Personal Speed dial prefix followed by the speed dial number assigned to the required destination.

## Subscriber Benefits

- Personal Speed Dial numbers save the time it takes to look up and call commonly used numbers.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



*Figure 2-97: Personal Speed Dial Option*

The system administrator configures the Personal Speed Dial service parameters from the Essentra BAX web administration services section:

Services > Personal Speed Dial

Personal Speed Dial Prefix *	<input type="text" value="*2"/>	<a href="#">?</a>
Add a Speed Dial Number Prefix *	<input type="text" value="*51*"/>	<a href="#">?</a>
Adding a Speed Dial Number Delimiter *	<input type="text" value="*"/>	<a href="#">?</a>
Delete a Speed Dial Number Prefix *	<input type="text" value="*51#"/>	<a href="#">?</a>

**Announcement URLs**

Cannot SpeedDial *	<input type="text" value="sip:ann-SpeedDialNotRecogniz"/>	<a href="#">?</a>
Service has been activated *	<input type="text" value="sip:ann-serviceactivated@127"/>	<a href="#">?</a>
Service has been deactivated *	<input type="text" value="sip:ann-service deactivated@1"/>	<a href="#">?</a>
Service not available *	<input type="text" value="sip:ann-Service not available@"/>	<a href="#">?</a>

Figure 2-98: Personal Speed Dial Administrator Configuration

- **Personal Speed Dial Prefix** - Enter the prefix to be dialed by the subscriber before entering a personal speed dial number.
- **Add a Speed Dial Number Prefix** - Enter the prefix to be dialed by the subscriber for assigning a new speed dial number.
- **Add Speed Dial Number Delimiter** - Enter the delimiter to be dialed by the user to differentiate the speed dial memory location from the speed dial number and the prefix.
- **Delete a Speed Dial Number Prefix** - Enter the prefix to be dialed by the user to delete a personal speed dial number.
- **Announcement URLs:**
  - **'Cannot speedDial' announcement** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

The subscriber picks up any phone (IP, digital, or analog with adapter) and presses \*2 and the Personal Speed Dial code. The number dialed is the number assigned to that speed dial code.

Prefixes are defined on a per system basis.

The subscriber can configure the Personal Speed Dial service via the Essentra BAX Self Provisioning web interface or by using the service keys.

**To configure the Personal Speed Dial numbers using the web:**

Subscription List > Personal Speed Dial

**Service Activation**

I want to use this service

**Speed Dial List**

Add new description  ?

Speed dial Number\*  ?

Number to call\*  ?

#	Description	Personal Speed Dial	Number to call	
1	Base	4	2658802365	Delete
2	Gate 5	5	2651426634	Delete

**Learn More**

- ➔ Add numbers you call frequently to the personal speed dial list.
- ➔ Use speed dial by dialing \*2 and the short number.

Figure 2-99: Personal Speed Dial Subscriber Configuration

**To configure the Personal Speed Dial numbers using the service keys:**

To add a number to the list, dial <Add a Speed Dial Number Prefix><memory location><Add Speed Dial Number Delimiter><telephone number>, e.g. \*51\*4\*2658802365 will add the number 2658802365 to location 4 in the personal speed dial list.

To delete a number from the list, dial <Delete a Speed Dial Number Prefix><memory location>, e.g. \*51#4 will delete the number 2658802365 from location 4 in the personal speed dial list.



**Note:** memory location '4' and memory location '04' are two separate memory locations in the BAX.

## PRIORITY CALLS

This service enables the subscriber to define numbers that allows incoming calls for these numbers. All other incoming calls are rejected.

## Subscriber Benefits

- Subscribers will receive only calls from specific numbers.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Call Screening ?

Figure 2-100: Call Screening Option

The system administrator configures the Call Screening parameters as defined in the Call Screening service description.

## Using the Service

The Selective Call Rejection service sends incoming calls from predefined numbers to the predefined option. For any telephone, the subscriber can activate Selective Call Rejection service via the Essentra BAX Self Provisioning web interface:

Figure 2-101: Priority Calls Subscriber Configuration

- **Service Activation** - Select if you want to activate the call screening service.
- **Select how you want blocked calls to be handled** - Incoming calls can be handled in the following manners:
  - Disconnected with Busy Tone
  - Redirected to Voice Mail
  - Redirected to a standard message announcing the subscriber is not available.
- **Do Not Disturb mode** - Select this option to enable/disable the Do Not Disturb service.
- **Priority Calls** - Select this option to enable/disable the Selective Priority Calls service
- **List of Phone numbers to Accept** - List of phone numbers to accept incoming calls.
- Enter the phone number to accept incoming calls. The number format should be relative to your location or E164 format with a + sign (+E164).

## RADIUS INTERFACE

BAX provides a standards-based RADIUS client for interfacing with external authentication and accounting systems. The RADIUS Interface enables the call data records to be sent to a RADIUS Server for accounting.

Pre-paid subscribers authentication against the RADIUS Server is performed before call initiation and the credit time of the pre-paid subscriber is retrieved.

## Subscriber Benefits

- Enables the subscriber transparent access to external accounting systems, without having to worry about connecting to a separate system.

## Administrator Setup and Configuration

The system administrator configures the RADIUS Interface service parameters from the Essentra BAX web administration services section:

Services > RADIUS Interface

RADIUS Server URL	<input type="text" value="194.90.71.74"/>	<a href="#">?</a>
Backup RADIUS Server URL	<input type="text"/>	<a href="#">?</a>
Authentication port *	<input type="text" value="1812"/>	<a href="#">?</a>
Accounting port *	<input type="text" value="1813"/>	<a href="#">?</a>
RADIUS secret	<input type="text" value="vocaltec"/>	<a href="#">?</a>
Authentication method *	<input type="text" value="PAP"/>	
Retries *	<input type="text" value="3"/>	<a href="#">?</a>

**Announcement URLs**

'Service is not available' announcement *	<input type="text" value="sip:ann-ServiceNotAvailable@1"/>	<a href="#">?</a>
Media server URL for announcing 'Credit Expired' *	<input type="text" value="sip:ann-creditExpired@127.0.0."/>	<a href="#">?</a>

Figure 2-102: Radius Interface Administrator Configuration

- **RADIUS Server URL** - Enter the URL of the main RADIUS server to which to connect.
- **Backup RADIUS Server URL** - Enter the URL of the backup RADIUS server to which to connect.
- **Authentication port** - Enter the port to be used for authentication requests to the RADIUS server. Default: 1812.
- **Accounting port** - Enter the port to be used for accounting requests to the RADIUS server. Default: 1813.
- **RADIUS secret** - Enter the RADIUS secret, as defined on the RADIUS server.
- **Authentication method** - Select the authentication method to use. Options available are:
  - PAP
  - CHAP
  - MSCHAP
  - MSCHAP2
- **Retries** - Enter the number of times the system should attempt to send RADIUS requests in case of failure.
- **Announcement URLs:**
  - **'Service is not available' announcement** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

- **Media server URL for announcing 'Credit expired'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

The system administrator registers subscribers to the prepaid service by selecting this option when configuring or creating their Class of Service:



Figure 2-103: Prepaid Service Option

## Using the Service

The subscriber does not configure this service.

## REMOTE CONTROL

BAX enables subscribers to control a selective set of phone services through a remote phone.

Services that can be controlled include: call forward unconditional, call forward on busy, call forward on no answer, Call Restriction, Immediate Hotline and Password Modification.

## Subscriber Benefits

- Enables the subscriber to remotely control selected services using the phone without the need to physically be at his desk.

## Administrator Setup and Configuration

The system administrator configures the remote control service parameters and announcements from the Essentra BAX web administration services section:

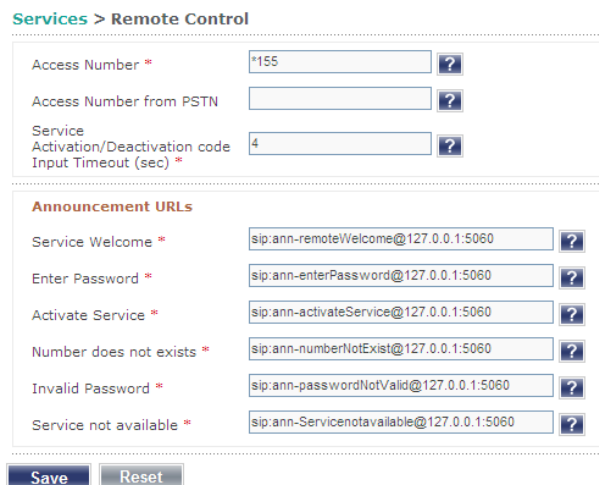


Figure 2-104: Remote Control Configuration

- **Access Number** - Enter the access number to be dialed by BAX subscribers in order to start using the remote control service.
- **Access Number from PSTN** - Enter the access number to be dialed from an external telephone number in order to reach the BAX remote control service. This feature enables BAX subscribers to access the remote control service even when they do not have access to their BAX line.

- **Service Activation/Deactivation code Input Timeout (sec)** - Defines the maximum time allowed between digits when entering the controlled service activation code (i.e. the time between the last DTMF digit received to when BAX decides that the activation code was completely entered).
- **Announcement URLs:**
  - **'Service Welcome'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). This is the first announcement heard after the user enters the correct number and reaches the remote control service. It asks the user to enter its E.164 number to identify itself.
  - **'Enter Password'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). This announcement follows the 'Service Welcome' announcement and requests the user to enter a password.
  - **'Activate Service'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). The announcement specifies that the service was successfully modified.
  - **'Number does not exist'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). An error announcement indicating that the number entered does not exist on the BAX.
  - **'Invalid Password'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server). The password entered is invalid.
  - **'Service is not available'** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

The system administrator registers subscribers to the prepaid service by selecting this option when configuring or creating their Class of Service:



Figure 2-105: Remote Control Service Option

## Using the Service

**To use the remote control service:**

1. Dial the remote control access number.
2. Wait for a welcome announcement asking to enter the phone number to be controlled.
3. Enter the E.164 number or relative number (if locality based) or extension (if call is within the VPN) of the subscriber to be controlled, followed by # sign.
4. Wait for an announcement asking for password.
5. Enter the password of the subscriber to be controlled, followed by # sign.
6. Wait for an announcement asking to enter the activation/deactivation code for the controlled service.
7. Enter the activation code of the controlled service within the timeout specified by the administrator.
8. Once the timeout expires, an announcement is heard specifying the service was controlled successfully.

**Error scenarios while using the remote control service:**

1. Wrong number was entered
  - a. Announcement is heard asking to re-enter the number
  - b. Maximum three attempts are allowed
  - c. Failure on the third attempt terminates the call
2. Wrong password is used
  - a. Announcement is heard asking to re-enter the password
  - b. Maximum three attempts are allowed
  - c. Failure on the third attempt terminates the call
3. Activated service is not allowed for the user
  - a. Announcement is heard specifying this is an invalid service
  - b. Call is terminated

## SELECTIVE CALL FORWARD

The Selective Call Forward service allow the subscriber to define a list of up to 5 priority numbers and assign a behavior to them different then the behavior assigned to other numbers in case of CFU.

### Subscriber Benefits

- Allows customers to provide special treatment for 5 numbers in Call Forward scenarios.

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

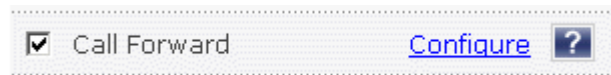


Figure 2-106: Call Forward Option

The system administrator clicks the *Configure* link to configure the service for this Class of Service as follows:

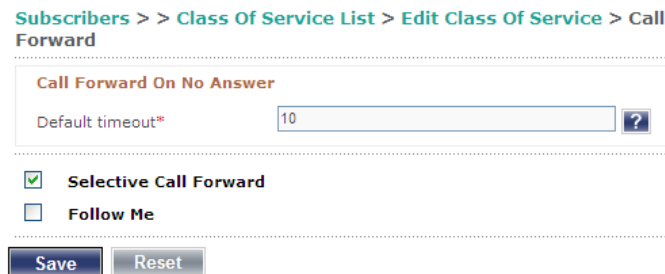


Figure 2-107: Selective Call Forward Configuration

- The system administrator does not have to perform any special configurations for this service.

## Using the Service

When the subscriber enables Call forward unconditionally and has the selective call forward service enabled and configured, calls from the specified numbers will be treated as configured in the service: forward to a different number than all other numbers, not forwarded at all, or forwarded to voice mail.

**Activate selective call forward service using the self care web portal:**

Figure 2-108: Selective Call Forward Subscriber Configuration

- **Selective settings override the regular settings**
  - **Don't forward** - Do not forward the selective numbers
  - **Voice mail** - Forward the selective numbers to voice mail.
  - **Phone number** - Forward the selective numbers to the specified number.

## SELECTIVE CALL REJECTION

This Selective Call Rejection prevent unwanted calls from specific phone numbers by enabling the subscriber to define certain numbers that incoming calls from these numbers will be rejected. All other calls terminate as usual.

## Subscriber Benefits

- Prevents unwanted calls
- Ensures the subscriber's privacy

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Figure 2-109: Call Screening Option

The system administrator configures the Call Screening parameters as defined in the Call Screening service description.

## Using the Service

The Selective Call Rejection service sends incoming calls from predefined numbers to the predefined option. For any telephone, the subscriber can activate Selective Call Rejection service via the Essentra BAX Self Provisioning web interface:

Figure 2-110: Selective Call Rejection Subscriber Configuration

- **Service Activation** - Select if you want to activate the call screening service.
- **Select how you want blocked calls to be handled** - Incoming calls can be handled in the following manners:
  - Disconnected with Busy Tone
  - Redirected to Voice Mail
  - Redirected to a standard message announcing the subscriber is not available.
- **Selective Call Rejection** - Select this option to enable/disable the Selective Call Rejection service
- **List of Phone numbers to reject** - List of phone numbers to reject incoming calls.
- Enter the phone number to reject incoming calls. The number format should be relative to your location or E164 format with a + sign (+E164).

## SELF CALL RESTRICTION

This service enables subscribers to place restrictions on outgoing calls from their own telephone to specific categories of destinations, as defined by the service administrator. The restrictions can be overridden by entering a secret code defined by the subscribers themselves via the self-provisioning web portal.

## Subscriber Benefits

- Subscribers can prevent unwanted or expensive calls from being made by people who have access to their phone.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-111: Call Restriction Option

The system administrator configures the Self Call Restriction service parameters from the Essentra BAX web administration services section:

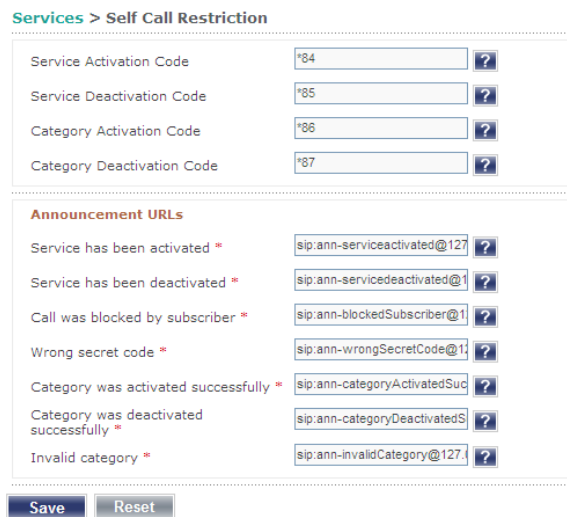


Figure 2-112: Self Call Restriction Administrator Configuration

- **Service Activation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to activate Self Call Restriction. Default is \*84.
- **Service Deactivation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to deactivate Self Call Restriction. Default is \*85.
- **Category Activation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to select a category from the Self Call Restriction category list. Can be up to 20 characters: digits, #, or \*. Default is \*86.
- **Category Deactivation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to remove a category from the Self Call Restriction category list. Can be up to 20 characters: digits, #, or \*. Default is \*87.
- **Enforce use of Password in service and category activation** - When checked, the user MUST use a Password when enabling the service or assigning a category for the service.
- **Announcement URLs:**
  - **Service has been activated** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Service has been deactivated** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

- **Call was blocked by subscriber** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
- **Wrong Password** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
- **Category was activated successfully** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
- **Category was deactivated successfully** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
- **Invalid Category** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

The VPN administrator defines the list of categories as defined in *Call Restriction* service. The list is ordered and a category ID is automatically assigned to each category. The numbers assigned for each category are available on the administrator call restriction category definition page as defined in *Call Restriction* service.

The subscriber can configure the service via the Essentra BAX Self Provisioning web interface or using the phone.

**To configure Self Call Restriction using the Essentra BAX Self Provisioning web interface:**

1. Access the subscriber Self Provisioning web page
2. Edit the self call restriction service by clicking *Edit*.

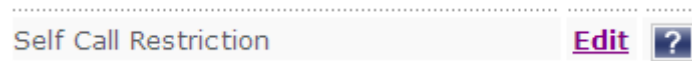


Figure 2-113: Self Call Restriction Edit Subscriber Configuration

3. Configure the service parameters you want to assign for the service.

Figure 2-114: Self Call Restriction Subscriber Configuration

- **I want to use this service** - Check the box to enable this service.
- **Category Assignment List**
  - **Available Categories** - The list of restriction categories the user can choose from and add as self restriction.
  - **Self Assignment** - The list of restriction categories already assigned by the subscriber.

4. To save the configuration click *Save*. Click *Cancel* to reset the settings.

**To configure Self Call Restriction using the service keys:**

1. Pick up the receiver and wait for dial tone.
2. Dial the following to assign a category for the service:  
<service prefix>\*<Password>\*<category number>, e.g. \*84\*1234\*2 will add, using the default password, category Id number 2 to the restriction list.
3. Wait for confirmation that the list was updated successfully.

## SELF RINGING

The feature enables the subscriber to test his phone and verify that it is working/ringing properly. To use the service the subscriber dials a predefined activation code and hangs up. The phone will ring within a few seconds.

### Subscriber Benefits

- Subscribers can test their phone autonomously without involving the operator; this is conducive to a friendlier user experience. This also serves to save OPEX for the operator.
- Subscribers can still accept incoming calls when service is used.

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



*Figure 2-115: Self Ringing Option*

The system administrator configures the self ringing parameters as defined in the self ringing service description.

### Using the Service

In order to activate the service the user needs to dial the related activation code and hang up. The phone will ring after a few seconds. When the call is answered, the subscriber will hear an announcement specifying that the self ringing test has passed successfully.

**To initiate a Self Ringing session:**

The subscriber dials <Self Ringing Activation Code> and hang up the phone, e.g. \*54.

## SERVICE NUMBERS

The service allows the root administrator to define a list of numbers that can be used globally across the BAX to define numbers for services. The service allows the root administrator to define these numbers and their equivalent E.164 numbers/routable numbers.

### Subscriber Benefits

- Subscribers can use services using star code numbers and other utilities to dial to services.

## Administrator Setup and Configuration

The root administrator defines the list of supported service numbers using the “Service Numbers” service:

Services > Service Numbers

**Configure service numbers use**

Enable service numbers

---

**New Record**

Service Number\*  ?

E.164 Number\*  ?

Service Number	E.164 Number	
*1234	97299703888	Delete

Figure 2-116: Service Numbers Configuration Screen

## Using the Service

The subscriber does not activate the service.

Once the root administrator enabled the service, the subscriber can dial the number as it is listed in the ‘Service Numbers’ list. The call is routed using the equivalent E.164 number.

## TIMED DO NOT DISTURB

The behavior of this service is similar to the *Do Not Disturb* service described above. When selecting Timed Do Not Disturb, the subscriber will be in Do Not Disturb mode for the time specified by the administrator. When selecting permanent Do Not Disturb, the subscriber will be in Do Not Disturb mode until he disables the service as described in *Do Not Disturb* service.

## Subscriber Benefits

- Subscribers can work, eat and sleep without being interrupted by unwanted calls for the specified time.
- Subscribers can still make outgoing calls.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Call Screening ?

Figure 2-117: Call Screening Option

The system administrator configures the Timed Do Not Disturb service parameters as defined in the *Call Screening* service description.

## Using the Service

The Timed Do Not Disturb service sends all incoming calls to the predefined option for the duration specified by the administrator. The subscriber can activate the Timed Do Not Disturb service via the Essentra BAX Self Provisioning web interface or by using the service keys.

To activate the Timed Do Not Disturb service using the self care web portal use the same mechanism described for the *Do Not Disturb* service.

**To activate the Timed Do Not Disturb service using the service key codes:**

1. Pick up the handset.
2. Dial \*90# to activate the Timed Do Not Disturb service for the specified hours.
3. Hang up.
4. The service will automatically deactivate after the specified time.

**To deactivate Timed Do Not Disturb service using the service key codes:**

1. Pick up the handset.
2. Dial #90# to deactivate the timed do not disturb service.
3. Hang up.

## THREE-WAY CALLING (CONFERENCING 3 WAY)

Three-Way Calling allows subscribers to add another party to an existing call, thus enabling a call between three parties. This applies to devices with support for three way calling.

### Subscriber Benefits

- Save time and effort with no phoning back and forth
- Create a 3 party conference anytime

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



Figure 2-118: Three-Way Calling Option

The system administrator configures the Three-Way Calling service parameters from the Essentra BAX web administration service section:



Figure 2-119: Three-Way Calling Administrator Configuration

- **Announcement URLs:**
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

While on a call press the conference call option and dial the number you want to conference with. After the party answers, connect him to the call on hold by pressing the conference option again.

For analog phones, press hook-flash during a call. After the initial hook-flash, dial the number you want to conference with and hook-flash again to bring the first party on the line. At any time you can press hook-flash again and return to the original caller.



**Note:** In order to use the Three-Way-Calling service, subscribers must have multi-line device support.

The subscriber can activate the Three-Way-Calling service via the Essentra BAX Self Provisioning web interface:

Figure 2-120: Three-Way Calling Subscriber Configuration

Megaco users may use the hook-flash follow by the digit '2' to switch between the two calls or use hook-flash followed by the digit 3 (or any other digit higher than 3) to perform a three way call.

In any state of the call the Megaco user can press hook-flash follow by the digit '2' to talk to one of the subscribers only or hook-flash follow by the digit '1' to disconnect the current conversation and connect to the one on hold.

## VIDEO CALLS

Subscribers can carry out peer-to-peer video calls without the need for any additional server/application.

### Subscriber Benefits

- You can see the person with whom you are speaking.

### Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:

Figure 2-121: Video Calls Option

## Using the Service

For subscribers to be able to participate in video calls, they need a multi-line endpoint device that supports video. The following endpoint devices can be used:

- Softphone - Eyebeam (from Xten)
- Hardphone

## VOICE MAIL

The Essentra BAX Voice Mail service supports an external voice mail platform for voice mail services. Essentra BAX's SIP Voice Mail Server is a Standard SIP UA Server that complies with RFC 3261.

Essentra BAX includes an integrated voice mail system, which runs on a dedicated server. The voice mail system includes support for the following functionality:

- Subscribers can define when to forward calls to their voice mail (no answer, busy, unconditional).
- System administrators have full control over the voice mail service.
- Subscribers can access their voice mailboxes by dialing an access number (defined by the system administrator). Access is available from endpoints registered to the BAX and from external lines.
- Support for DTMF control of the voice mail menu.
- Subscribers can personalize their greeting message.

## Subscriber Benefits

- Subscribers will never miss a call.
- Subscribers can check messages anytime, anywhere, even by using public phones, both locally and overseas.

## Administrator Setup and Configuration

The system administrator registers subscribers to the service by selecting this option when configuring or creating their Class of Service:



*Figure 2-122: Voice Mail Option*

The system administrator configures the Voice Mail service parameters from the Essentra BAX web administration services section:

**Services > Voice Mail**

Max servers to try on failure*	<input type="text" value="3"/>	<a href="#">?</a>
Time to wait before trying the next server (seconds) *	<input type="text" value="3"/>	<a href="#">?</a>
Voice mail access number	<input type="text" value="*151"/>	<a href="#">?</a>
Voice mail access number from PSTN	<input type="text"/>	<a href="#">?</a>

---

**Announcement URLs**

Service is not available*	<input type="text" value="sip:ann-Serviceunavailable@01"/>	<a href="#">?</a>
Voice Mail has been activated *	<input type="text" value="sip:ann-serviceactivated@127."/>	<a href="#">?</a>

---

**Voice Mail Server List**

Calls will be distributed randomly between the voice mail servers.

---

Figure 2-123: Voice Mail Administrator Configuration

- **Max. servers to try on failure** - Define how many servers BAX attempts to connect to when the initial request fails.
- **Time to wait before trying the next server** - The number of seconds before alternative voice mail server is contacted.
- **Voice mail access number** - Enter the access number to be dialed by BAX subscribers in order to reach the voice mail system.
- **Voice mail access number from PSTN** - Enter the access number to be dialed from an external telephone number in order to reach the BAX voice mail system. This service enables BAX subscribers access to their voice mail even when they do not have access to their BAX line.
- **Announcement URLs:**
  - **Service is not available** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
  - **Voice Mail has been activated** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).
- **Voice Mail Server List** - Any number of alternate voice mail servers can be configured in the system. When diverting a call to voice mail, BAX randomly selects a voice mail server from the list. If the call to the voice mail server receives a busy response, BAX tries another voice mail server, until it reaches the defined number of servers to try. Enter the servers' IP address in the text box and click *Add* to add them to the list.



**Note:** The availability of this service assumes that the optional integrated voice mail system has been installed. In this version of BAX, provisioning and management of the voice mail system itself is carried out in a separate GUI. Refer to the accompanying documentation for managing the voice mail system.

## Using the Service

For different criteria's defined by the subscriber i.e. Call Forward, Do Not Disturb and others incoming calls will be redirected to the Voice Mail service.

Message retrieval can be done by pressing the message button on the phone or dialing the Voice Mail access number.

## VPN SPEED DIAL

The VPN Speed Dial service enables VPN administrators to store up to 100 short numbers for frequently-called destinations. To call a number using VPN speed dial, the VPN subscriber must dial the VPN Speed dial prefix followed by the speed dial number assigned to the required destination.

## Subscriber Benefits

- Speed dial numbers save the time it takes to look up and call commonly used numbers.

## Administrator Setup and Configuration

Prefixes for VPN Speed Dial numbers are configurable at the system level.

The system administrator configures the VPN Speed Dial service parameters from the Essentra BAX web administration services section:

Services > VPN Speed Dial

VPN Speed Dial prefix	<input type="text" value="*3"/>	?
URL *	<input type="text" value="sip:ann-SpeedDialNotRecogniz"/>	?

Figure 2-124: VPN Speed Dial Administrator Configuration

- **VPN Speed Dial prefix** - This prefix is dialed by the subscriber before entering a VPN speed dial number.
- **URL** - Enter the URL of the appropriate announcement on the media server (usually the BAX server's internal announcement server).

## Using the Service

The subscriber picks up any phone (IP, Digital, or analog with adapter) and dials \*2 followed by the speed dial digits. The number dialed is the number assigned to that speed dial code.

The system supports up to 100 speed dial codes per VPN.

The subscriber can view the VPN Speed Dial list of numbers via the Essentra BAX Self Provisioning web interface:

## Subscription List &gt; VPN Speed Dial

#	Description	VPN Speed Dial	Number to call
1	Home base	31	4258995342
2	Cell 4	4	6443427543
3	Cell 5	5	4138893524

## Learn More

- The VPN Speed Dial service contains speed dial numbers configured by the vpn administrator for frequently-called destinations.
- To call a number using VPN speed dial the VPN user must dial the VPN Speed dial prefix \*3 followed by the speed dial number assigned to that required destination.

Figure 2-125: VPN Speed Dial Subscriber Configuration

## WAKE UP CALL

This service enables to define callback from the BAX to the subscriber on a prescheduled time. The service is assigned to a VPN. Configuration of the service is done by VPN administrator. Activation/Deactivation is possible only through the user's phone.

### Subscriber Benefits

- Wake up call allow the subscriber to define callback calls at predefined time to remind him of events or act as a wake up call.

### Administrator Setup and Configuration

The VPN administrator configures the Wake up call service parameters from the Essentra BAX web administration services section:

Services > Wake Up Call

Activation Code*	<input type="text" value="*55"/>	<a href="#">?</a>
Deactivation Code*	<input type="text" value="*56"/>	<a href="#">?</a>
Subscription Check Code*	<input type="text" value="*57"/>	<a href="#">?</a>
Number of retry calls*	<input type="text" value="3"/>	<a href="#">?</a>
Interval between retries (min)*	<input type="text" value="5"/>	<a href="#">?</a>
Maximum number of scheduled times per user*	<input type="text" value="10"/>	<a href="#">?</a>
<b>Announcement URLs</b>		
Media server URL for announcing 'Service not available' *	<input type="text" value="sip:ann-Serviceunavailable@127.0.0.1:5060"/>	<a href="#">?</a>
Media server URL for announcing 'Service has been activated' *	<input type="text" value="sip:ann-serviceactivated@127.0.0.1:5060"/>	<a href="#">?</a>
Media server URL for announcing 'Service has been deactivated' *	<input type="text" value="sip:ann-servicedeactivated@127.0.0.1:5060"/>	<a href="#">?</a>
Media server URL for announcing 'Invalid input' *	<input type="text" value="sip:ann-invalidinput@127.0.0.1:5060"/>	<a href="#">?</a>
Media server URL for 'Wake Up' message *	<input type="text" value="sip:ann-wakeupmessage@127.0.0.1:5060"/>	<a href="#">?</a>

Figure 2-126: Wake Up Call configuration

- **Activation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to activate Wake Up Call. Default is \*55.
- **Deactivation Code** - Enter the sequence of digits to be keyed in by the subscriber in order to deactivate Wake Up Call. Default is \*56. The subscriber can deactivate only a specific wakeup call, by entering the deactivation code followed by the time of one of the pre-configured wakeup calls.

- **Subscription Check Code** - Enter the sequence of digits to be keyed in by the subscriber in order to check the currently configured wakeup calls. Default is \*57
- **Number of retry calls** - The Number of wakeup call retries when the original wakeup call is not answered. When the number of retry calls is reached, the specific wakeup call is erased.
- **Intervals between retries (min)** - The time period in minutes between wakeup call retries, in case the original wakeup call is not answered.
- **Maximum number of scheduled times per user** - Maximum number of configured wakeup calls per subscriber.
- **Announcement URLs:**
  - **Media server URL for announcing 'Service not available'** - Enter the URL of the 'Service Not Available' announcement on the media server (usually the BAX server's internal announcement server). The announcement will be played when the subscriber enters the activation code but service is disabled.
  - **Media server URL for announcing 'Service has been activated'** - Enter the URL of the 'Service has been Activated' announcement on the media server (usually the BAX server's internal announcement server). The announcement will be played when the subscriber successfully enters the activation code.
  - **Media server URL for announcing 'Service has been deactivated'** - Enter the URL of the 'Service has been Deactivated' announcement on the media server (usually the BAX server's internal announcement server). The announcement will be played when the subscriber successfully enters the deactivation code.
  - **Media server URL for announcing 'Invalid input'** - Enter the URL of the 'Invalid Input' announcement on the media server (usually the BAX server's internal announcement server). The announcement will be played when the subscriber enters the activation code with wrong time format, or the time specified already exists, or the number of scheduled wakeup calls exceeds the configured parameter.
  - **Media server URL for 'Wake Up' message** - Enter the URL of the 'WakeUp Message' announcement on the media server (usually the BAX server's internal announcement server). The announcement will be played when the subscriber answers the wakeup call.

## Using the Service

The subscriber uses the touch pad of the phone to enter the activation/deactivation codes for this service.

To configure a wakeup call for a specific time, the subscriber has to enter the activation code followed by the time in 24H format (e.g. \*552030, defines a wakeup call for 8:30PM).

To configure a wakeup call for a specific time with repetitions, the subscriber has to enter the activation code followed by the time in 24H format followed and the delimiter followed by the number of repetitions (e.g. \*552030\*09, defines a wakeup call for 8:30PM for the next nine days). If '00' is used as the number of repetitions, the wakeup call configured for indefinite number of repetitions.

To deactivate a specific wake up call, the subscriber has to enter the deactivation code followed by the time of one of the pre-configured wakeup calls.

To deactivate all wake up calls, the subscriber has to enter only the deactivation code.

The subscriber can check the current programmed wake-up calls by keying the Subscription Check Code.

## WEB SERVICES SECURITY

The Web Services provisioning interface is a north-bound interface for VPN and subscriber provisioning based on standard protocols such as HTTP, XML and SOAP.

Web Services Security enables the administrator to configure which clients can use the BAX web services.

### Subscriber Benefits

- Web Services Security gives the subscriber more control over the security aspects of the system, by allowing access only to authorized IPs and subscribers.

### Administrator Setup and Configuration

The system administrator configures the Web Services Security service parameters from the Essentra BAX web administration services section:

Figure 2-127: Authorized Clients List Administrator Configuration

- **Authorized Clients List:**
  - **Enable any client to use Web Services** - By checking this field, the system administrator allows each subscriber to have access to the BAX web services.

To add an IP address, enter the IP address (up to 15 characters), click *Add*. The IP address will be added to the above authorized clients list.

To delete an IP address, click *Delete*. You will be asked to confirm your deletion.

### Using the Service

The subscriber does not configure this service.

## SERVICE CODES

This service enables subscribers to activate the services via service codes (DTMFs).

### Administrator Setup and Configuration

The system administrator configures the service code for each service as part of the service configuration parameters. In the service section the service administrator can configure the service code for each service.



**Note:** The administrator **MUST** make sure that there is no overlapping between the used prefixes. In case of overlapping prefixes, one of the services might not behave as expected.

Services > Call Return

**Service Activation**

Activation Code\*  ?

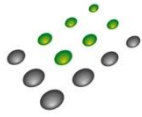
Figure 2-128: Call Return Administrator Configuration

## Using the Service

SERVICE NAME	SERVICE DEFAULT CODE
Call Waiting Activate	*58#
Call Waiting Deactivate	#58#
Automatic Redial	*66
Billing Codes	*50
Call Return	*69
Permanent Caller ID Blocking Activate	*62
Permanent Caller ID Blocking deactivate	*63
Caller ID Blocking	*67
Call Screening Activate (Activates the call screening selected)	*60
Call Screening Deactivate	*80
Do Not Disturb Activate	*99*
Do Not Disturb Deactivate	*99#
Timed Do Not Disturb Activate	*90#
Timed Do Not Disturb Deactivate	#90#
Call Forward Unconditional Activate	*72
Call Forward Unconditional Deactivate	*73
Call Forward on Busy Activate	*74
Call Forward on Busy Deactivate	*75
Call Forward on No Answer Activate	*76
Call Forward on No Answer Deactivate	*77

SERVICE NAME	SERVICE DEFAULT CODE
Call Forward on Offline Activate	*78
Call Forward on Offline Deactivate	*79
Call Forward on No Answer to Announcement	*71
VPN speed dial prefix	*3
Personal speed dial prefix	*2
Add Speed dial to memory	*51*
Delete Speed dial from memory	*51#
Camp on Busy	*4
Self Call Restriction Activate	*84
Self Call Restriction Deactivate	*85
Self Call Restriction - Add Category	*86
Self Call Restriction - Delete Category	*87
Wakeup call Activate	*55
Wakeup call Deactivate	*56
Wakeup call subscription check	*57
Hot Line Activate	*52*
Hot Line Deactivate	#52#
Self Ringing Activate	*54
Voice Mail Access number	*151
Mark Malicious Call	*43#
Password Modification	*88*
Off-group CFU	*41
Off-group CFB	*42
Off-group CFNA	*43

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## Chapter 3: Feature List by Software Package

The following table provides a brief description of the BAX features and indicates if the feature is available for residential subscribers and/or business subscribers.

Table 3-1: BAX Package Configuration

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
<b>Caller ID</b>				
Permanent caller ID Presentation (CLIP)	Presents the number of the calling party to the user	√	√	√
Caller ID presentation contact	Lets the user or corporate contact data provide the name associated with a phone number in the call logs and caller ID display	√	√	√
Permanent caller ID restriction (CLIR)	Restricts from presenting the number of the calling party to the user		√	√
CLI blocking per call	Caller ID can enabled/disabled on a per call basis using feature codes or feature buttons programmed on the phone		√	√
Calling Name Delivery	This service provides calling name delivery to destination parties based on data configured by user in self-provisioning portal	√	√	√
<b>Call screening</b>				
Anonymous call rejection	Lets the user refuse all calls from callers who have their caller ID blocked		√	√
Do not disturb	Lets the user specify 'do not ring this phone'		√	√
Timed do not disturb	Lets the user specify 'do not ring this phone' for the specified time		√	√
Selective Call Acceptance / Priority Call	This service lets the user define criteria that allows incoming calls overriding the do not disturb setting. All calls not meeting the criteria are rejected		√	√
Selective Call Rejection	This service lets the user define criteria that causes certain call to be rejected. All other calls terminate as usual		√	√

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
Rejected Call Handling	Allow the subscriber to define using the web portal if the rejected call will be forwarded to voicemail, gets busy tone or hear announcement		√	√
<b>Call Control</b>				
Call waiting	Notifies a user on an active call that there is a second incoming call. The user can switch between the two incoming calls using the Hold/Flash feature button on their phone	√	√	√
Call waiting cancel	This service allows users to disable call waiting persistently	√	√	√
Cancel Call waiting per call	This service allows users to disable call waiting for the next call	√	√	√
Call hold	Lets the user place an active call on hold using the hold/flash button	√	√	√
<b>Call Restrictions</b>				
Outgoing call barring	Calls to specified numbers or prefixes are barred for certain users or groups of users.	√	√	√
Self call restriction	The user can select to restrict dialing to specific numbers or prefixes. The restrictions can be activated, deactivated and temporarily overridden by entering a special code before dialing.		√	√
Incoming call barring	See call screening above		√	√
<b>Call Forward</b>				
Call forward unconditional	Lets the user forward all calls to an alternate number or voicemail		√	√
Call forward on busy	Lets the user automatically redirect all calls to another telephone number or voicemail, when the user's number is busy		√	√
Call forward on no answer	Lets the user automatically redirect all calls to another telephone number or voicemail, when the user doesn't answer. The user can control how long the phone rings with no answer before redirecting the call.	Voice mail only	√	√

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
Play announcement on no answer	Lets the user automatically play an announcement instead of a busy tone, when the user doesn't answer. The user can control how long the phone rings with no answer before playing the announcement.		√	√
Call forward on Offline	Lets the user automatically redirect all calls to another telephone number or voicemail, when the user is offline		√	√
<b>Virtual Private Networks (VPN) / Groups</b>				
Extension dialing	This service enables users to dial an extensions to call other members of their business group			√
Private Numbering Plans	The enterprise dialing plan allows users of the enterprise to call one another using location codes and extensions instead of full phone numbers			√
VPN group speed dial	Lets the administrator program speed dial entries from Web Interface for each corporate			√
VPN Off-net dialing	Ability to define and use VPN gateways to terminate off-net calls			√
<b>Calling Features</b>				
Call Return	Lets the user call the last incoming number where caller id was available. Feature is activated by dialing a feature code	√	√	√
Call Restrictions	Dialing restrictions such as local, long distance, international, international operator, long distance operator, information, and premium service (900 numbers)		√	√
Automatic Redial	Allows users to monitor a busy party and automatically establish a call when the busy party becomes idle		√	√
Personal speed dial list	Lets the user program up to 100 personal short dial numbers from Web portal		√	√
Find Me	Lets users specify a list of numbers that will ring simultaneously for an incoming call.		√	√

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
Follow me	Lets users specify a series of call forwarding locations when user don't answer the call.		√	√
Camp On busy	If an extension is busy, subscribers can transfer a call and camp it on the busy extension until it becomes available. Feature is activated using the blind transfer feature and transferring the call to the service activation code followed by the required extension.			√
Hot Line	When the user pick up the phone the call will be connected immediately to the preconfigured number		√	√
Delayed Hot Line	When the user pick up the phone the call will be connected to the preconfigured number after the preconfigured timeout		√	√
<b>Self Provisioning</b>				
Subscriber self provisioning*	Personal Communications Portal that consists of a series of Web-based portal interfaces that let the user personalizes their features. The Portal is Password protected and can be customized per VPN	√	√	√
Service keys	Set of prefixes used to activate, deactivate and configure a set of services	√	√	√
Password Modification	Allows the administrator or the subscriber to change the subscriber's password		√	√
<b>Conferencing</b>				
3-way calling	Lets the user add up to two additional parties to the call		√	√
Ad-hoc bridge conferencing	VPN Users can create on-the-fly multi-party conferences by dialing into predefined conference bridges			√
<b>Voicemail</b>				
Voice Mail	Users have access to a voicemail application server. The voice mail server supports voicemail to e-mail service.	√	√	√
Message waiting indication (MWI)	For IP and digital phones supporting MWI subscribe, notifies the user a message has been left on voicemail and a message button acts as a speed dial key to voice mail.	√	√	√

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
<b>Management</b>				
Web based management	Web based portal for system administration	√	√	√
Multi-level administration	Role based management for different levels in the BAX system	√	√	√
Class of service	Ability to create groups of users with identical service and feature settings		√	√
<b>Billing</b>				
CDR	CDR are recorded for every call made in the system.	√	√	√
RADIUS integration	Real time RADIUS interface is available for integration with prepaid and post paid billing systems	√	√	√
Prepaid	Using the RADIUS interface for billing prepaid subscribers	√	√	√
Call Logs	Provides users and administrators with call logs of all calls made and received. Call logs are searchable, can be filtered and exported.	√	√	√
<b>Auto Attendant*</b>				
Auto-attendant	IVR Menu for incoming calls			√
Auto Attendant Immediate Extension dialing	The caller to the Auto Attendant can dial the desired extension immediately from the first level of the Auto Attendant menu without having to first navigate to the second level, e.g. "Welcome to VT. If you know your party's extension, please dial it now. "			√
Auto Attendant name dialing	Support for name dialing. The list of names is constructed by concatenating the last name and first name for each person in the directory. Therefore, a caller can dial "Doe, John", or "John Doe".			√
Holiday Schedule for Auto Attendant	Define the company holidays and assign those holidays to different Auto Attendants per company			√
Auto Attendant business hours support	Define company business hours for auto attendant			√

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
<b>IP-Centrex</b>				
Attendant Console*	IP Telephony attendant console for use by telephone attendants. Intended to screen inbound calls for enterprises			√
Authorization Code	Entering an authorization code to override outgoing call restriction imposed on a subscriber's line			√
Billing Code / Account Code	Lets users enter a specific code each time they make a call so some or all of their calls can be associated with specific customers or groups. For example, billing codes can be used to identify all calls to a specific client.			√
Boss/Secretary Filtering	Allows secretary to answer and initiate calls on Boss' behalf. One Boss can have several secretaries and one secretary can serve several bosses			√
Boss/Secretary Filtering override	Allows the boss to define criteria when calls are forwarded to the secretary and when they go through.			√
Call Transfer - Supervised	Lets a user converse with a 3 <sup>rd</sup> party and then transfer the call to that party through a series of keystrokes on their business phone			√
Call Transfer - Unsupervised	Lets a user transfer an active call to another phone number through a series of keystrokes on their business phone or using hook flash and transfer on analog sets.			√
DID Direct Dialing	Allows IP Centrex users to receive calls using a standard numbering format from local, national, or international numbers.			√
Directed Call Pickup	Lets users retrieve a call that is ringing at another extension by dialing a code and the extension that is ringing.			√
DOD	Direct outward dialing (ability to call directly from your extension)			√
General Calling ID	Allow VPN administrator to define the Caller ID sent by the BAX for outgoing calls.			√
Group Call Pickup	Lets users retrieve a call that is ringing at another extension by dialing a code. The last call ringing at your company is the call that is picked up.			√

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
Hunt groups	Hunt groups that direct incoming calls to a group of users in series or parallel. In series, the first number in the hunt group rings when a call comes into the hunt group telephone number. If there is no answer at the first extension, the next extension rings. The incoming call rings all extensions in the hunt group until it is answered or forwarded to voice mail.			√
Music on hold	Provides incoming callers with a music selection while on hold for any reason (transfer, conference, hold, etc.)			√
Off-Group call forward	Allows the subscriber to set the call forward service only for call coming from outside the VPN.			√
Offnet call prefix	Allows the VPN administrator to simulate PBX dialing on the VPN and have for example extensions matching emergency numbers if required.			√
Remote control	Allows the subscriber to control, from a remote phone, the services on his account (e.g. call forward).			√
<b>Services</b>				
Call lists	Allow the user to see on the web portal the latest call lists for dialed numbers, received calls, and missed calls.		√	√
Click to Dial	Enables a user to dial an entered number, dial from phone list or dial a number appearing in the call logs in the web portal		√	√
Configurable Announcements	Internal announcement server with configurable announcements that can be recorded by the customer	√	√	√
Monitoring statistics per VPN	Allow the administrator to see call statistics on per VPN basis. Call statistics include general calls statistics, services statistics and Peaks.	√	√	√
Multiple Registrations	Allows a subscriber to register more than one device on his account and use all devices simultaneously to generate and receive calls		√	√

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
Repeated Wakeup call	Allow the subscriber to set and receive calls periodically at a specified time; this can be used to set a repeat wakeup call. The number of daily repetitions is set by the subscriber per wakeup call setting.		√	√
Self Ringing	Enables the subscriber to call/ring his own number by dialing a prefix.		√	√
Service Numbers	Enables subscribers to dial non E.164 numbers and the admin to translate them to their appropriate E.164 number.	√	√	√
Video peer-to-peer	Ability to initiate peer-to-peer video calls between users with compatible video IP endpoints.		√	√
Wakeup call	Allow the subscriber to set and receive call at a specified time; this can be used to set a wakeup call. The number of calls is configured by administrator.		√	√
<b>Regulatory</b>				
911 Services	Support for emergency calls. BAX analyzes the source of the call and translates the emergency number dialed into a legitimate public number of the appropriate emergency call center.	√	√	√
Carrier Pre Selection	Allows defining a default carrier per subscriber when calling international destinations.	√	√	√
Lawful interception*	Support for monitoring of calls by regulatory authorities via integration with 3 <sup>rd</sup> party mediation device.	√	√	√
Malicious Call	Allows the subscriber to mark a call as Malicious		√	√
<b>NAT Traversal</b>				
STUN Server built-in	Support for NAT Traversal using STUN protocol. Requires STUN support in endpoints.	√	√	√
Media relay built-in*	Support for NAT traversal for devices behind symmetric NATs where other solutions are not effective.	√	√	√
<b>Access Gateway support</b>				

FEATURE NAME	DESCRIPTION	INCLUDED IN BASIC PACKAGE	INCLUDED IN RESIDENTIAL PACKAGE	INCLUDED IN BUSINESS PACKAGE
Access Gateway integration	Support Megaco Line Side package for interfacing with access gateways	√	√	√

\* - Licensed feature