4psa.com
PROVIDING SERVER SOLUTIONS

VOIPNOW ®

4PSA VoipNow ® 1.6.4

Interactive Voice Response (IVR)

Interactive Voice Response (IVR)

Manual Version 41859.10 at 2008/03/24 17:55:17

For suggestions regarding this manual contact:

docs@4psa.com

Table of Contents

Preface

Who Should Read This Guide

This Extension's Guide must be read by the 4PSA VoipNow extension owners.

Chapter 1
Edit Your Contact Information

In order to update your contact information click the ![icon] Edit extension icon available in the [Home](#) section, which can be accessed from the left panel Navigation area.

4PSA VoipNow allows you to update your account information:

- Update your contact information
- Change your login password

You can modify the following contact details:

- Company name
- Contact name
- Password – Use this textbox to change the password. The provided password should have at least six characters to be valid.
- Confirm Password
- Phone

- Fax

- Email – The email address where 4PSA VoipNow can send you notifications about events that occur in the system.

- Address
- City
- State/Province
- Postal/ZIP code
- Country

For submitting the data, click the OK button. If you choose not to change the information, the Cancel button will return you to the previous page without any modification.

Chapter 2
Account Overview

This type of extension allows the creation of an interactive menu that can be used by callers to get information without having to connect to a human operator.

- Extension type – The type of the extension, in this case IVR
- Public phone number(s) – If one or more public phone numbers are assigned to the extension, they will be displayed here with their corresponding monthly costs (e.g. `49932040495 (10.1 USD)`). Otherwise, 4PSA VoipNow displays '-'.
- Extension internal number – The phone number assigned when the extension was added to the system
- Billing plan – The billing plan assigned with the extension with its monthly fee
- Calls cost – The cost of the calls in current month
- Outgoing time spent on – The total duration of outgoing calls and the total number of calls in current month
- Incoming time spent on – The total duration of incoming calls and the total number of calls in current month

- Number of sound files – The total number of sound files and the disk space used by these

Chapter 3
View Your Billing Plan

4PSA VoipNow allows you to view detailed information about your account's current billing plan. To access this information, follow these steps:

1. Click the My billing icon available in the `Tools` area to view details about the prices charged for calls made by extensions on your account.

2. Depending on the billing plan type (prepaid or postpaid) and its settings, you can view one or more of the following sections:

   - Billing plan description

     ◦ Billing plan name — The name of the billing plan for your account

     ◦ Billing plan type — The type of the billing plan for the extension account: prepaid or postpaid.

     ◦ Allow incoming calls - Yes — 4PSA VoipNow displays this information only if the extensions on your account can receive calls from extensions that belong to the system as well as from extensions outside the system.

- Allow outgoing external calls - Yes – 4PSA VoipNow displays this information only if the extension can make calls to destinations outside the system.

- Allow outgoing local calls - Yes – 4PSA VoipNow displays this information only if the extension can call other extensions on the same client account.

- Allow outgoing extended local calls - Yes – 4PSA VoipNow displays this information only if the extension can call other extensions in the system (not on the same client account).

- Monthly charge – The monthly fee paid by the your account owner

> **Note**
>
> This information is available only for postpaid billing plans.

- Initial incoming credit – The credit that was granted for incoming calls when your account was created.

> **Note**
>
> This information is available only for prepaid billing plans.

- Initial outgoing credit – The credit that was granted for outgoing calls when your account was created.

> **Note**
>
> This information is available only for prepaid billing plans.

- Remaining incoming calls credit – The amount currently available for incoming calls.

> **Note**
>
> This information is available only for prepaid billing plans.

- Remaining outgoing calls credit – The amount currently available for outgoing calls.

> **Note**
>
> This information is available only for prepaid billing plans.

- Number of recharges

> **Note**
>
> This information is available only for prepaid billing plans.

> **Note**
>
> 4PSA VoipNow displays only sections that are enabled in the billing plan applied on your account.

- Available outgoing minutes - Number of outgoing minutes available, per time interval. The number of outgoing minutes is displayed for each time interval included in the billing plan in the format:

  - {m} available outgoing minutes in time interval {T} The number of remaining minutes in current month is also displayed in format:

  - {m} remaining in {month}

> **Note**
>
> This information is available only for postpaid billing plans.
>
> 4PSA VoipNow displays this section only if the extension can make calls to destinations outside the system.

- Outgoing calls charges – These are the charges applied to conversations after the user has exceeded the number of available minutes

  - Local calls are charged {money unit} / second – The fee charged for calls between extensions on the same client account.

> **Note**
>
> 4PSA VoipNow displays this information only if the extension can call locally.

If the charges for external calls are computed using a fixed prices method, 4PSA VoipNow displays the costs for each time interval in the following format:

- Calls made in time interval {T} are charged with {money unit} / second – The price charged for external calls made in time interval {T}.

4PSA VoipNow displays the costs for the calls outside the time intervals specified above:

◦ Calls made outside these time intervals are charged {money unit} / second – The price charged for external calls made outside time interval {T}.

3. External incoming calls charges – These charges apply to calls received from outside the system.

> **Note**
>
> 4PSA VoipNow displays this information only if the extensions are allowed to receive external calls.

View Your Billing Limits

4PSA VoipNow 1.5 allows you to view your billing limits when you have a postpaid billing plan. Billing limits are a form of extra credit, a special offer made to a particular extension.

> **Note**
>
> If you have a prepaid plan, you can only view *billing credits*.

View Your Billing Limits History

To view detailed information about your billing limits click the ![Billing limits icon] Billing limits icon available in the `Tools` area.

The table with billing limits history contains the following columns:

- **Incoming money limit** – Displays the supplementary credit for external incoming calls.

- Outgoing money limit – Displays the supplementary credit for external outgoing calls.
- Overusage minutes – Displays the supplementary overusage minutes limit.
- Every month – Displays whether the limits are offered monthly or only for the current month.
- Order number – Displays the number of the request for allocating the new billing limits.
- Date added – Displays the date when the billing limits were enforced.

Chapter 5
View Your Billing Credits

4PSA VoipNow 1.5 allows you to see your billing credits when you have a prepaid billing plan.

> **Note**
>
> If the you have a postpaid plan, you can only see *billing limits*.

View Your Billing Credits History

To view detailed information about the history of recharges for your billing credit, click the Billing credits icon available in the `Tools` area.

The table with billing credits history contains the following columns:

- Incoming calls credit — Displays the supplementary credit for incoming calls.

- Outgoing calls credit – Displays the supplementary credit for outgoing calls.
- Order number – Displays the number of the request for allocating the new billing credits.
- Date added – Displays the date when the billing credits were enforced.

Chapter 6
Manage Time Intervals

4PSA VoipNow allows you to manage time intervals, helping you to define the incoming and outgoing call rules.

You can access this page by clicking the Time intervals icon, in the `Tools` area.

You can view a list of all available time intervals on your account. You can also perform several operations on these time intervals:

- Add a new time interval
- Search for a specific time interval
- Edit an existing time interval
- Delete time intervals

4PSA VoipNow displays the following information about each time interval:

- T – This icon specifies the method used to define the time interval:
  - Individual days method

- ○ 🕐 Interval method
- Name – The descriptive name of the time interval. Click this link to edit the time interval information.
- Hours – The hours used as limits for the time slot
- Weekdays – The days of the week used as limits for the time slot
- Month Days – The month period when the time interval applies
- Month – The month when the time interval applies
- Created – The date when the time interval was created

> **Note**
>
> 4PSA VoipNow displays the `Full month` interval, covering the entire month, as a default setting.

> **Note**
>
> 4PSA VoipNow also displays the time intervals belonging to your parent account. You cannot edit or delete these time intervals.

Search the Interval List

When the time intervals list is too long and you are searching for specific time intervals, you can use the following features:

- Search – Write the text you are looking for in the textbox. Then click the 🔍 button or the `Search` label to display only the time intervals whose name, hours, weekdays or dates contain the text.
- Show all – Click this 📄 button or the `Show all` label to display the entire list.

Even if you navigate to other pages, the search criteria will be retained until a new search is performed.

You can change the number of records displayed on the page by clicking the `Number of entries per page` link. The number of entries per page is shown in the left side of the table along with the total number of time intervals.

Another way to simplify the listing is to sort the time interval list by clicking a table header link. The order criteria are marked by the highlight of the table

header and the arrow indicates the direction. The sort direction can be changed by another click on the respective header.

Add a New Time Interval

To add a new time interval, click the Time intervals icon available in the `Tools` area and follow these steps:

1. Click the Add time intervals icon. A new page opens allowing you to enter information on the new time interval.

    - Name – Use the textbox to fill in a descriptive name to identify the time interval.

    - Matching algorithm – A time interval can be described in two ways:
        ◦ Individual days – This method allows 4PSA VoipNow to match the same time interval in different days. See the example below.
        ◦ Interval – This method allows 4PSA VoipNow to match a continuous time interval that extends over several days. See the example below.

    - Start at hour and End at hour – Use the available textboxes to specify the hours that limit the time slot.

    - Start weekday and End weekday – Use these dropdown lists to select the days of the week that define the time slot.

    - Start date and End date – Use these dropdown lists to select the days of the month that define the time slot.

    - Month - Use this dropdown list to select the month that defines the time slot.

2. Use the 🔲 ➕ buttons to add several time intervals at the same time.

    - 🔲 removes the corresponding `Time interval`

    - ➕ adds another `Time interval`

3. Click OK to add the new time interval(s). Click Cancel to go back to the previous page without adding the interval(s).

    Example of a time interval defined in individual days

    In the time interval below, 4PSA VoipNow matches calls made or received between the hours 8:00 – 20:00 on Monday, Tuesday, Wednesday, Thursday, and Friday between 1 and 31 every month.

A time interval defined in individual days

Example of a continuous time interval

In the time interval below, 4PSA VoipNow matches calls made or received between Monday, 8:00 and Friday, 20:00, between 1 and 31 every month.

A continuous time interval

Edit a Time Interval

To access this page, click the Time intervals icon available in the Tools area and follow these steps:

1. In the time interval list, click the name link of the time interval you want to change.

    > **Note**
    >
    > 4PSA VoipNow also displays the time intervals belonging to your parent account. You cannot edit these time intervals.

2. A new page opens where you can rename the time interval and modify its start/end hours, days, dates. You can also change the matching algorithm.

    > **Note**
    >
    > For more information on these fields, see the <u>Add a New Time Interval</u> section.

3. Click OK to save the changes to the time interval. Click Cancel to return to the previous page without saving the changes.

Delete Time Intervals

To delete a time interval click the Time intervals icon available in the "Tools.

Choose the time intervals you want to delete by checking the corresponding checkbox in the time interval list. Then click the <u>Remove selected</u> link. You will be asked to confirm the removal.

> **Note**
>
> Time intervals can be removed only if they are not currently used.

> **Note**
>
> 4PSA VoipNow also displays the time intervals belonging to your parent account. You cannot delete these time intervals.

Chapter 7
Manage Incoming Call Rules

Incoming Call Rules Overview

4PSA VoipNow allows you to filter the incoming calls to an extension. As a result, when a caller is trying to reach the extension, 4PSA VoipNow can perform a set of predefined actions. For example, let's assume that from 9:00 to 17:00 the extension owner is working and he is waiting for an important call that will be made on another extension. All he has to do is to define a rule that transfers the calls from an extension to the other one.

In the Incoming Call Rules page, you can view the incoming call rules for your account. Multiple operations can be performed:

- Add new incoming call rules

- Change the priorities of the rules

- Delete existing incoming call rules

To view the incoming call rules for your account, click the ![icon] Incoming call rules icon available in the `Tools` area.

4PSA VoipNow displays the following information about each existing call rule:

- No – The position of the rule inside the group

- S – The status of the rule, displayed using an icon: ✅ enabled or ❌ Disabled. Click the icon to change the status of the rule.

> **Note**
>
> After you add a new rule, 4PSA VoipNow automatically sets its status as enabled. To disable the rule, click the corresponding ✅ icon.

- P – Use the available ▲ up and ▼ down arrows to change the position of the rule in the group.

> **Note**
>
> Any change made is countered in the left side of the list table: `{x} pending changes`. The counter is increased for each rule with a different position than the initial one.

- Action – The action performed when the caller's number matches the rule. The four possible actions are:

  ◦ Busy – 4PSA VoipNow plays a "busy signal" to let the caller know that the number he is trying to reach is engaged in another call.

  ◦ Congestion – 4PSA VoipNow plays a "fast busy signal" (known in telephony as a "congestion tone") to let the caller know that the call was unsuccessful.

  ◦ Hang up – 4PSA VoipNow hangs up the incoming call rule.

  ◦ Set call priority – 4PSA VoipNow sets a certain priority for the incoming call in order to be answered faster by the operators in a queue. This action is available only for extensions of type `Queue`. The value of the priority parameter is also displayed here.

  ◦ Transfer – 4PSA VoipNow transfers the call to another extension on the same client account; this option is available if the extension has `Multi-user aware` permission enabled and there are available phone terminal extensions on the client account.

- ◦ Transfer on event – If the extension user does not answer or the extension has not been registered in the system, 4PSA VoipNow transfers the call to another extension belonging to the same client account or an external phone number; this option is available if the extension has `Multi-user aware` permission enabled and there are available phone terminal extensions on the client account.

- ◦ Transfer to external – If the extension has assigned a billing plan that allows calls to external destinations, calls can be diverted to this destination. The called extension will be charged for these calls.

- ◦ Voicemail – If the extension is `Phone terminalcode>` type, calls can be directed to voicemail directly.

- Number check – 4PSA VoipNow can apply the rule to the calls that match or do not match the phone number specified by the rule. The two possible values of this field are:

  - ◦ Matches – The incoming call matches the number

  - ◦ Does not match – The incoming call doesn't match the number

  - ◦ Is anonymous – The incoming call does not have Caller-ID information

- Pattern – The caller's phone number for all actions except `Transfer on event` when the field displays the event. This field can also contain a regular expression that matches an entire set of numbers. The three possible values for the transfer event are:

  - ◦ No answer - The call is considered unanswered.

  - ◦ Not registered - The number that the caller is trying to reach is not registered.

  - ◦ Busy - The number that the caller is trying to reach is engaged in another call.

- In time interval – The time interval when the rule will be executed

> **Note**
>
> 4PSA VoipNow displays the time intervals belonging to you and the ones belonging to your parent account. You can choose any of these time intervals to define routing rules.

- To extension – In case the action is `Transfer`, this column displays an extension user name and number where the call will be redirected.

  In case the action is `Transfer to external`, this column displays an external phone number where the call will be redirected.

Add Incoming Call Rules

To add incoming call rules for your account, click the Incoming call rules icon available in the `Tools` area.

In the `Add call rules` section you can find buttons, textboxes, and dropdown lists allowing you to define one or more incoming rules. The following steps must be followed:

1. Use the first dropdown list to choose the action that will be performed, if the number is matched. The actions available are:

   - Busy – 4PSA VoipNow plays a "busy signal" to let the caller know that the number he is trying to reach is engaged in another call.

   - Congestion – 4PSA VoipNow plays a "fast busy signal" (known in telephony as a "congestion tone") to let the caller know that the call was unsuccessful.

   - Hang up – 4PSA VoipNow hangs up the incoming call.

   - Set call priority – 4PSA VoipNow sets a certain priority for the incoming call in order to be answered faster by the operators in a queue. This action is available only for extensions of type `Queue`.

   - Transfer – 4PSA VoipNow transfers the call to another extension on the same client account; this option is available if the extension has `Multi-user aware` permission enabled and there are available phone terminal extensions on the client account.

   - Transfer on event – If the extension user does not answer or the extension has not been registered in the system, 4PSA VoipNow transfers the call to another extension belonging to the same client account or an external phone number; this option is available if the extension has `Multi-user aware` permission enabled and there are available phone terminal extensions on the client account.

   - Transfer to external – If the extension has assigned a billing plan that allows calls to external destinations, calls can be diverted to this destination. The called extension will be charged for these calls.

   - Voicemail – If the extension is `Phone terminalcode>` type, calls can be directed to voicemail directly.

2. Use the second dropdown list to choose whether the action will be performed for incoming calls that match or do not match the expression you will specify later at Step 3.

   - Matches – The incoming call matches the number

- Does not match – The incoming call doesn't match the number
- Is anonymous – The incoming call does not have Caller-ID information

> ⚠ Caution
>
> Number matching is based on Caller-ID. If the remote party does not send a Caller-ID, no matching can be performed; however you can use the `Is anonymous` option to route anonymous calls.
>
> Pay attention to the `number` entry. You can specify the number as a combination of the digits 0-9 and the characters '+', 'X', 'Z', 'N', '[', ']', '.', '*' .
>
> The number entry supports the Asterisk number matching. You can enter an expression that matches multiple numbers. Remember that:
>
> X - matches any digit from 0-9
>
> Z - matches any digit form 1-9
>
> N - matches any digit from 2-9
>
> [] - matches any digit or letter in the brackets
>
> . - matches one or more characters
>
> * - matches 0, 1 or any number of the previous expression
>
> For example:
>
> - Number 0. will match any number starting with 0.
> - Number 1X[123]N will match any number starting with 1, followed by any digit between 0 and 9, followed by 1,2 or 3 and followed by any digit between 2 and 9.

3. Use the first textbox to specify the extension number or a regular expression that matches the incoming call.

4. Use the third dropdown list to choose the time interval when calls must be checked.

5. Use the `Add in position` textbox to specify the order of the rule in the list.

> ⚠ Caution
>
> The position of a rule in the group is very important because it defines the order in which 4PSA VoipNow verifies the call rules in case of an incoming call.
>
> The check is made in order and all rules are final (the program stops checking when the first rule is matched).

6. The actions `Set call priority`, `Transfer`, `Transfer to external` and `Transfer on event` have additional parameters.

- When you select the `Set call priority` action, 4PSA VoipNow displays an additional textbox. Use it to fill in the queue position where the call will be placed.

- When you select the `Transfer` action, 4PSA VoipNow displays an additional dropdown list. Use it to select the final extension destination of the call.

- When you select the `Transfer to external` action, 4PSA VoipNow displays an additional field. Use it to enter the number where you want the call diverted.

- When you select the `Transfer on event` action, 4PSA VoipNow displays several additional fields:

  ◦ Use the first dropdown list to select the event when the transfer will be performed.

  ◦ Use the second dropdown list to choose whether the call will be transferred to an internal or external number.

  ◦ Use the last control (dropdown list or textbox) to specify the final destination of the call.

The example below means that if a call from number 555122 arrives at 13:30, the call is transferred to extension 0006.

Example of a valid incoming rule

7. Use the ⊟ ⊞ buttons to add several new call rules at the same time. Click the ⊞ button to add a new set of buttons, textboxes, and dropdown lists allowing you to create an additional rule. Click the ⊟ button to delete its corresponding rule.

8. Click OK to add the new rule(s) to the list. Click Cancel to go back to the previous page without changing the incoming rules.

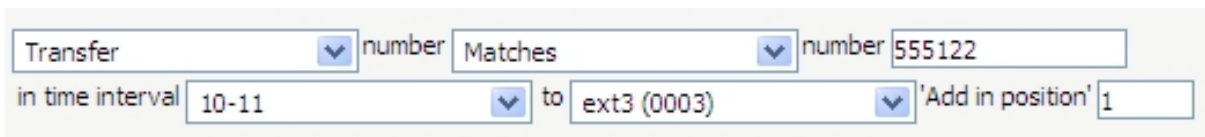## Change the Order of the Call Rules

The position of a rule in the group is very important because it defines the order in which 4PSA VoipNow verifies the call rules in case of an incoming call.

The program verifies the conditions of the rules and stops checking when it finds the first rule whose conditions are true.

If you want to change the order of the incoming call rules, click the Incoming call rules icon in the `Tools` area and follow these steps:

1. In the call rule list, use the ▲ up and ▼ down buttons to change the position of a certain rule inside the group.

2. To move a certain rule to a higher position, click the ▲ up arrow. To move a certain rule to a lower position, click the ▼ down arrow.

> 📝 **Note**
>
> When you change the order of the call rules in the list, 4PSA VoipNow displays the number of changes you have performed to remind you to save them before navigating away from the page. In the top left corner of the call list 4PSA VoipNow displays `{x} pending changes`.

3. Click the Apply changes link to save the changes you have made on the list of call rules.

Delete Call Rules

To remove incoming call rules from your account, click the Incoming call rules icon. Choose the rules you want to delete by selecting their corresponding checkboxes. Then click the Remove selected link. You will be asked to confirm the removal.

> 📝 **Note**
>
> There is an implicit rule that accepts ALL calls from ALL destinations in ANY time interval that is not shown!

Chapter 8
Manage Outgoing Call Rules

4PSA VoipNow allows extension users to block certain outgoing calls, based on the dialed number and the time interval when the call was placed. This feature is very useful when several people use the same phone but only one of them has access to the extension account in the 4PSA VoipNow interface.

View Extension's Outgoing Call Rules

To access extension's call rules, click the name of the extension in the Extension Management page, and then click the Outgoing call rules icon available in the `Tools` area.

In the Outgoing Routing Rules Management page, you can view a list of the routing rule groups available in the extension account.

4PSA VoipNow displays the following information on each group:

- S – The status of the rule, displayed using an icon: ✅ Enabled or ❌ Disabled. Click this icon to change the status of the rule.

- Action – The action performed when 4PSA VoipNow matches the number dialed by the user.

- Number – The number chosen to match the number dialed by the extension user.

- In time interval – The time interval when the rule will be executed.

Add an Outgoing Call Rule

To add outgoing call rules to the system, click the name of the extension in the Extension Management page, and then click the 🖥️ Outgoing call rules icon available in the `Tools` area.

In the Add new outgoing routing rules section you can find buttons, textboxes, and dropdown lists that allow you to define one or more routing rules for outgoing calls. Follow these steps:

1. Use the first dropdown list to choose the Block action.

   4PSA VoipNow blocks the call to that number if the number is matched.

2. Use the `number` textbox to match the number dialed by the extension user.

> ⚠️ Caution
>
> Pay attention to the `number` entry. The number supports the Asterisk number matching system. You can enter an expression that matches multiple numbers. Remember that:
>
> X - matches any digit from 0-9
>
> Z - matches any digit form 1-9
>
> N - matches any digit from 2-9
>
> [] - matches any digit or letter in the brackets
>
> . - matches one or more characters
>
> * - matches 0, 1 or any number of the previous expression
>
> For example:
>
> - Number 0. will match any number starting with 0.

- Number 1X[123]N will match any number starting with 1, followed by any digit between 0 and 9, followed by 1,2 or 3 and followed by any digit between 2 and 9.

3. Use the third dropdown list labeled `if in time interval` to select the time interval when this rule applies.

⚠ Caution

The `Block` rule is final. This means that when the rule is matched, other rules are no longer checked.

📝 Note

4PSA VoipNow displays the time intervals belonging to you and the ones belonging to your parent account. You can choose any of these time intervals to define routing rules.

4. Click OK to add the new routing group to the system. Click Cancel to go back to the previous page without adding the rule group.

Delete Outgoing Call Rule

To remove call rules from the system, click the Outgoing call rules icon in the Extension Management page, in the `Tools` area. Next, choose the rules you want to delete by selecting their corresponding checkboxes in Existing Rules section. Then click the Remove selected link. You will be asked to confirm the removal.

Chapter 9
Edit IVR

To edit the IVR, press the Edit extension button. 4PSA VoipNow displays the following options:

- Edit IVR
  - Name – A name that easily identifies the IVR
  - Clone IVR settings from – In case you want to replicate all the settings of an existing IVR, use this dropdown list to select the name of the IVR you want to copy.

  > **Note**
  >
  > Please check the IVR Report for structural errors after cloning an IVR.
  >
  > If you clone an IVR extension that belongs to a reseller, for use with another reseller, problems may arise: in case of an option transferring the call to an extension number, the system will not copy that extension number. Similarly in the case of options implying transfers to extensions in certain time intervals - the time intervals will not be copied.

> For more information on the report please read [View the IVR Structural Report](#) section.

- Default music on hold folder – Use the 📁 icon to view available folders and all the music on hold files inside the chosen folder.

- Timeout – Use this textbox to limit the time interval that an IVR caller can remain inactive when the IVR waits for his/her input. The allowed values range from 2 to 60 seconds. The default value is 8 seconds.

- IVR session lifetime – Use this textbox to limit the total time interval that an IVR caller can spend in the IVR menu. The allowed values range from 10 to 86400 seconds. The default value is 1800 seconds.

- If lifetime expires - Choose the action that will occur when IVR lifetime expires. The available options are:

  - Hangup - The call will be terminated when IVR lifetime expires.

  - Transfer to extension - The call will be transferred to an extension when IVR lifetime expires. Use the dropdown list to choose the extension the call will be transferred to.

  - Play sound - Choose a sound that will be played for the caller when IVR lifetime expires. Use the 📁 icon to view available sound files or write the address of the file in the text box.

- Description – Use this text area to associate some notes about the purpose and content of the IVR.

⚠️ Caution

This page only creates an extension of type IVR but does not define its functionality. For more information on how to design the behaviour of an IVR, see [Design an IVR's Behavior](#).

Chapter 10
Design an IVR's Behavior

4PSA VoipNow separates the IVR creation from the designing of the IVR's behavior. To define the IVR menu and the caller's possibilities to interact with the system, click the ![icon] IVR Setup icon in the IVR extension management page. The IVR Management page opens allowing you to perform the following operations:

- Manage IVR contexts
- Manage options and actions associated with the contexts
- Generate IVRs
- View and Correct IVR Structural Errors

IVR Components

In 4PSA VoipNow an IVR is made up of a group of contexts. There are two types of contexts: regular and entry contexts. A regular context is a container for

one or more options, each option consisting of a sequence of actions. An entry context is the context where the caller is directed when the IVR answers a call.

> **Note**
>
> There can be only one entry context for an IVR. The entry context must have one or more actions defined for its `start` option (the option that is executed automatically without caller intervention).

Add a New Context

1. In the `Tools` area, click the Add context button.

2. In the new page that opens use the available controls to configure the basic settings of the context:

   - Name – Fill in this textbox a descriptive name for the new context

   - This is the entry context – Enable this checkbox if you want to set the new context as the entry context for the IVR

     > **Note**
     >
     > If you have previously created and defined another entry context, 4PSA VoipNow will keep the new context as entry and set the initial context as regular.

3. Click OK to create the context. Click Cancel to abandon the operation and return to the previous page.

> **Note**
>
> The context you have just created is similar to an empty container. To fill it with options and actions, see the following sections.

Add options and actions

1. In the `Contexts` area, click the name of the context that you want to fill with options.

2. In the new page that opens, 4PSA VoipNow lists all the possible options. For each option, 4PSA VoipNow displays the following information:

- A – This column displays ■ if the option contains actions and ■ if the option is empty.

- Option – This column displays the names of the available options:

  ◦ start – The sequence of actions executed when the caller reaches the context.

  ◦ timeout – The sequence of actions executed when the caller remains inactive for the timeout time interval defined for the IVR

  ◦ invalid – The sequence of actions executed when the caller presses a key (0–9, *, #) that has no action associated with it.

  ◦ 0–9, *, # – The sequence of actions executed when the caller presses the corresponding key on his phone pad.

- Actions – This is the number of actions defined for the option.

- Created – This is the date when the first action was activated for the option.

3. To activate an option you must define the sequence of actions associated with it. To do this, click the name of the option. A new page opens allowing you to add a sequence of actions.

4. The controls on this page are grouped in several sections:

- Add action – Use this section to choose the action you want to add to the chosen option.

  ◦ Action – Use this dropdown list to select one of the available actions.

  ◦ Description – This is a description of the action you selected.

  ◦ Add in position – Use this textbox to specify the sequence of actions associated to the option.

- Action details – The content of this section depends on the action selected in the Add action section:

  ◦ Alter Caller-ID Name with recorded variable – Choose one of the available actions (Prepend, Append, Replace) to modify the Caller-ID Name by using the contents of a variable.

    {action} Caller-ID Name with recorded value {variable} – Use the dropdown list to select the action and the textbox to fill in the name of the variable you want to use.

  ◦ Alter Caller-ID Name with value – Choose one of the available actions (Prepend, Append, Replace) to modify the Caller-ID Name by using a static value.

{action} Caller-ID Name with value {number} – Use the dropdown list to select the action and the textbox to fill in the value you want to use.

◦ Alter Caller-ID with recorded variable – Choose one of the available actions (Prepend, Append, Replace) to modify the Caller-ID by using the contents of a variable.

{action} Caller-ID with recorded value {variable} – Use the dropdown list to select the action and the textbox to fill in the name of the variable you want to use.

◦ Alter Caller-ID with value – Choose one of the available actions (Prepend, Append, Replace) to modify the Caller-ID by using a static value.

{action} Caller-ID with value {number} – Use the dropdown list to select the action and the textbox to fill in the value you want to use.

◦ Caller-ID based jump - Jumps to another context based on the Caller-ID of the received call.

If Caller-ID is {relation} {number} Jump to context {context} at option {option} Else jump to context {context} at option {option} – Use the dropdown lists to select the destination of the jump (context and option). Use the other controls to define the condition of the jump. See the example below:

Action details

If CallerID is	equal to	⌄	555122498	
Jump to context	context10	⌄	at option	start ⌄
Else jump to context	context11	⌄	at option	start ⌄

Example of a valid 'Caller-ID based jump' action

◦ Caller-ID Name based jump - Jumps to another context based on the Caller-ID of the received call.

If Caller-ID Name is {relation} {number} Jump to context {context} at option {option} Else jump to context {context} at option {option} – Use the dropdown lists to select the destination of the jump (context and option). Use the other controls to define the condition of the jump. See the example below:

Action details

If CallerIDName is	equal to ▾	JohnSmith	
Jump to context	context10 ▾	at option	start ▾
Else jump to context	context11 ▾	at option	start ▾

Example of a valid 'Caller-ID Name based jump' action

- Digit to string association – Replaces the contents of a variable with a string.

  Associate variable {variable} with string {string} – Use the two textbox to fill in the name of the variable and the string to be used.

- Hangup after for X seconds – Terminates the call after a given time period.

  Hangup after for {x} seconds – Use the textbox to specify the time interval after which the call will be terminated.

- Jump to context – Jumps to another context based on the evaluation of a given condition.

  Jump to context {context} at option {option} if {variable} {relation} than {number} – Use the dropdown lists to select the destination of the jump (context and option). Use the other controls to define the condition of the jump. See the example below:

Action details

Jump to context	WelcomeContext ▾	at option	start ▾
If variable	userinput	greater or equal to ▾	9

Example of a valid 'Jump to context' action

- Play directory – Transfers the call to one of the extensions in the company directory. The caller selects the destination extension through the phone keypad.

- Play recorded variable – Plays one or more sound files to communicate the contents of a variable.

  Play recorded value {variable} as {style} – Use the textbox to fill in the name of the variable and the dropdown lists to select how the value will be pronounced. Use the {speaker} dropdown list to choose if the value will be pronounced as individual digits, as a number or as phonetics.

- Play sound file – Plays a given sound file for the caller.

Play in {style} the sound {folder} {sound}

◦ Play value – Plays one or more sound files to communicate a given value.

Play value {number} as {style} – Use the textbox to fill in the value. Use the {speaker} dropdown list to choose if the value will be pronounced as individual digits, as a number or as phonetics.

> **Note**
>
> The {speaker} dropdown list is enabled only when you select `Number` from the {style} list.

◦ Record digits to variable – Saves the digits typed by the caller on his/her phone pad into a given variable.

Record {number of digits} to variable {variable} – Use the textbox {number of digits} to specify the number of digits expected for the caller input. Use the {variable} textbox to fill in the name of the variable where the input will be stored.

Stop recording after {x} seconds of inactivity – Use the textbox to specify. The values allowed range from 1 to 9. The default value is 5 seconds.

Play before starting recording {sounds} – This option allows you to play a sound file before recording the caller's input.

◦ Set language to chosen language – Sets the language of the call. All the sounds played for the caller will be in the selected language.

Set language to code {language} – Use the dropdown list to select the language.

◦ Set language to recorded language {language} – Sets the language of the call by using the contents of a given variable. All the sounds played for the caller will be in the chosen language.

Set language to recorded value {variable} – Use the textbox to fill in the name of the variable that contains the code of the language.

◦ Time interval based call transfer – Transfers the call to another extension on the client account based on the time interval when the call is received.

If in {time interval} transfer to {extension}, else transfer to {extension} – Use the dropdown lists to select the time interval and the destination extensions.

◦ Time interval based jump – Jumps to another context based on the time interval when the call is received.

If in {time interval} jump to {context} at option {option}, else jump to {context} at option {option} – Use the dropdown lists to select the time interval, the destination contexts and options.

◦ Transfer to extension – Transfers the call to another extension on the client account.

Transfer to extension {extension} – Use the dropdown list to select the destination extensions.

> **Note**
>
> The extensions that are disabled are displayed in grey colour in the dropdown list.

Play sound {folder} {sound} before transferring – Use this option if you want to play a sound file before transferring the call to another extension.

◦ Transfer to extension from variable {variable} – Use the textbox to fill in the name of the variable that contains the number provided by the caller.

Transfer to extension from variable – Transfers the call to another extension on the client account. The number of the extension is provided by the caller through the phone keypad.

◦ Text to speech – Plays a custom text to the caller.

Text to speech {text} with voice {voice} – Use the textbox to fill in the text you want to play for the caller; you can also use SSML tags to control how the text is read (for more information, see Using the Text To Speech Feature). Use the dropdown list to choose the voice that will pronounce the text.

> **Note**
>
> This action is available only if these two conditions are fulfilled:
>
> - The IVR has the limit "Maximum concurrent text to speech" set to a value greater than 0.
>
> - The option "Text to speech" is enabled in the **PBX preferences** page.
>
> - There is at least one Cepstral **voice** installed on your server

  ◦ Wait for X seconds – Used to introduce a delay between two actions.

  Wait for {x} seconds – Use the textbox to specify the delay. The values allowed range from 0 to 600 seconds.

- Actions – In this section you can view the actions that have been added for the option change the order in which these actions are executed.

5. Choose the action you want to add from the Add action section. Define its details and click OK to add it to the context. Click Cancel to reset the controls on the page.

6. Repeat Step 5 until the desired sequence of actions is complete.

Generate the IVR

After you have created your contexts, options and actions it is time to put it all together and physically generate the IVR. To do this, click the Generate IVR link that can be found in the upper right corner of the IVR Management page.

Note

The Generate IVR link becomes visible each time you modify the IVR version that you generated previously.

Generate the IVR

After you have created your contexts, options and actions it is time to put it all together and physically generate the IVR. To do this, click the Generate IVR link that can be found in the upper right corner of the IVR Management page.

Note

The Generate IVR link becomes visible each time you modify the IVR version that you generated previously.

Edit an IVR Context

1. In the Contexts table click the name of the context you wish to modify.

2. In the new page that opens, use the available controls to:

   - Change the name of the context – To do this, use the Name textbox and click the OK button to save your changes. Click Cancel to go back to the previous page.

   - Set the context as an entry or a regular context – To do this, use the This is the entry context textbox and click the OK button to save your changes. Click Cancel to go back to the previous page.

   - Edit the options and actions associated with the context – To do this, see section Edit options and actions.

Edit options and actions

1. In the Context options table click the name of the option you want to edit.

2. A new page opens allowing you to edit the sequence of actions. You can perform the following changes:

   - Change the order of the actions – To do this, use the available ▲ up and ▼ down arrows available in the P column. Then click the Apply changes link to save your changes.

     > **Note**
     >
     > The number of unsaved changes performed on the list is displayed on the left side of the table: `{x} pending changes`. The counter is increased for each rule with a different position than the initial one.

   - Change the details of an action – To do this, click the name of the chosen action. In the new page that opens use the available controls to edit the settings of the action as explained in the Add options and actions section, Step 4.

> **Note**
>
> To replace an action simply use the **Action** dropdown list to select a new one.

Delete actions

To delete one of the actions belonging to an option, in the Context options table click the name of the option. In the new page that opens, click the checkbox corresponding to the desired action. Then click the Remove selected link.

To delete all the actions associated with an option, in the Context options table click the checkbox corresponding to the desired option. Then click the Empty selected link.

Generate the IVR

After you have edited your contexts, options and actions you must re-generate the IVR. To do this, click the Generate IVR link that can be found in the upper right corner of the IVR Management page.

> **Note**
>
> The Generate IVR link is visible only if you have modified the IVR that you generated previously.

Generate the IVR

After you have edited your contexts, options and actions you must re-generate the IVR. To do this, click the Generate IVR link that can be found in the upper right corner of the IVR Management page.

> **Note**
>
> The Generate IVR link is visible only if you have modified the IVR that you generated previously.

Delete Context

To delete one or more contexts from an IVR, in the Contexts table select the checkbox corresponding to the desired contexts. Then click the Remove selected link. 4PSA VoipNow will ask you to confirm the removal.

View the IVR Schema

4PSA VoipNow can generate a graphical representation of the IVR context and the links between them (i.e. actions of type 'Jump to context' and 'Time interval based jump').

View the IVR Structural Report

When trying to generate an IVR, 4PSA VoipNow checks for structural inconsistencies and errors. In case it finds any, it displays warning or error messages in the IVR Management page.

In case structural inconsistencies are found, 4PSA VoipNow allows you to view and correct their causes. To view the causes you have two options:

- In the warning message that appears, click the available link.

- In IVR Management page, click the button.

In the report page, 4PSA VoipNow display the contexts, options and actions where the inconsistencies are located. It also provides links to easily access the pages where you can correct these inconsistencies.

Types of Errors

4PSA VoipNow check for the following structural errors:

- The IVR does not have an entry context.
- The IVR's entry context does not have actions defined for the start option.

> **Note**
>
> The IVR cannot be generated when structural errors are found.

4PSA VoipNow checks for the following structural inconsistencies:

- The IVR uses actions of type 'Time interval based call transfer' and 'Transfer to extension' that use destination extensions that no longer exist in the system.
- The IVR uses actions of type 'Time interval based jump' and 'Jump to context' that use destination contexts that no longer exist.
- The IVR uses actions that play sounds that no longer exist in the system.

If the structure of the IVR is correct, the page displays the following message: ' This IVR has no structural errors'.

Test the IVR

4PSA VoipNow gives you the possibility to verify a newly created IVR or an older IVR you modified, before making it public.

When you use the test function after modifying an IVR, 4PSA VoipNow will create a duplicate IVR which you can verify over the phone. If you accept the modifications, and generate the IVR, 4PSA VoipNow will overwrite the duplicate IVR on the old one. This way your changes will be saved. In case you find any inconsistencies, and you want to make further changes or corrections, you must not generate the modified IVR.

To test an IVR you have to follow these steps:

1. Click the chosen IVR extension name link in the Extension Management page.

2. In the new page that opens, click the IVR Setup icon available in the `Tools` area.

3. Make the desired modifications (e.g. creating new contexts etc.)

4. Click the Test IVR link placed top right.

   A message with instructions will be displayed on the top of the page:

   `Pick up the phone and dial {extno} from your phone in order to test this IVR.`

   `When you want to go live with this IVR, press the 'Generate IVR' button.`

   `If you want to modify the IVR, make changes to the IVR design in web interface and press on the 'Test IVR' button again.`

Chapter 11
Manage Your Sounds

View the Sound List

There are two types of sounds: `music on hold` and `announcements` sounds.

Music on hold sound files are played when a caller is on hold waiting for someone to answer his/her call. These sound files are not language specific because they are usually melodies. Music on hold files can only be uploaded, not recorded over the phone.

An announcement sound is played when the user is notified on an event or when information is requested from the user. These sounds have different files for different languages, so that a user can listen to the sound version according to his/her language preferences. If the files in the requested language do not exist, the default files will be played. This type of sound can be either uploaded or recorded over the phone.

To access your sounds page, click the Sounds icon available in the `Tools` area.

> **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

In the Sound Management page, you can view a list of the sounds available in your account. You can also perform multiple operations:

- Add and delete sounds from your account.
- Search for specific sounds in your account.
- Organize sound files by using sound languages and sound folders.

  4PSA VoipNow displays the following information about each sound:

- S – The status of the sound, displayed using an icon: ✅ Enabled and ❌ Disabled. Click the icon to change the sound's status.
- M – This field describes the purpose of the file by using an icon:
  - 🔵 specifies an `Announcement` sound
  - 🟢 specifies a `Music on hold` sound
- Name – The name of the sound. Click this link to edit the sound.
- Folder – The folder where the sound is located in the system.
- Languages – The number of languages for which this sound is defined.

  > **Note**
  >
  > If the sound is used as `Music on hold`, the field displays '-'.

- Modified – The date when the sound was last modified

Search the Sound List

When the sound list is too long and you are searching for specific sound, you can use the following features:

- Search – Insert the text you are looking for in the textbox. Then click the 🔍 button or the `Search` label to display only the sounds whose names contain the text.
- Show all – Click this 📄 button or the `Show all` label to display the entire list.

The search criteria will be retained even if you navigate to other pages until a new search is performed.

You can change the number of records displayed on the page by clicking the `Number of entries per page` link. The number of entries per page is shown in the left side of the table along with the total number of sounds.

Another way to simplify the listing is to sort the sound list by clicking a table header link. The order criteria are marked by the highlight of the table header and the arrow indicates the direction. The sort direction can be changed by another click on the respective header.

Add a New Sound

To access this page, click the Sounds icon available in the `Tools` area.

> **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

You can add a new sound associated to your account only if you have sound languages available. On extension creation, the default sound language is added

to the extension account. When there are no sound languages, click the Sound languages icon and follow the instructions in the [Add a New Language](#) section to add new languages.

To add a new sound to the extension account, follow these steps:

1. Click the Add sound icon available in the `Tools` area.

2. A new page opens allowing you to enter information on the new sound:

   - Sound form

     ◦ Name – The descriptive name for the sound.

     ◦ This is music on hold – Use this checkbox to specify the purpose of the sound. When this option is selected, the sound can be played to a caller that is on hold. Otherwise, the sound is used for announcement purposes only.

◦ Record sound over the phone – When this option is enabled, 4PSA VoipNow gives you the possibility to record the sound file over the phone rather than uploading it.

◦ Folder – Use this dropdown list to select the folder where the sound will be stored.

• Upload sound files

◦ Filename – Click the Browse button to locate the sound file on your computer and upload it.

> **Note**
>
> 4PSA VoipNow accepts the following extensions for sound files: `.mp3`, `.wav`, `.gsm` and `.raw`.

If you are creating an announcement sound (i.e. the checkbox `This is music on hold` is not enabled), the following options are visible:

◦ Default sound file – When this option is enabled, this file is set as default for the sound. The default file is played for the callers with a phone language that is unavailable for the sound.

For example, let's assume you have created a sound that announces callers that the extension user is on holiday. You have added versions of the announcement in English, French, and Dutch and set the English file as default. The English sound version will be played to any caller that has other phone language set.

> **Note**
>
> Each sound object must have one default sound file associated. When uploading several sound files at the same time, make sure you select only one default file. Otherwise, 4PSA VoipNow displays an error message.

3. You can use the ⊖ ⊕ buttons to remove/add versions of the sound in different languages.

• ⊖ removes the `Upload sound` section

• ⊕ adds another `Upload sound files` section

4. Click OK to add the new sound. Click Cancel to go back to the previous page without adding the sound.

Edit Sound Options

To access this page and edit the information on an existing sound, click the

Sounds icon available in the `Tools` area.

> **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

In the new opened page you can modify the properties of a sound. You can add and delete files containing versions of the sound for different languages.

To edit the properties of a sound from the extension account, follow these steps:

1. Click the name link of the sound you want to modify.

2. A new page opens allowing you to change the details of the sound. The content of this page depends on the purpose of the sound: `announcement` or `music on hold`.

If the sound is an announcement sound, the information is grouped in the following sections:

- Sound form

- Upload sound files – Use this section to upload files containing versions of the sound in different languages.

- Use the [−] [+] buttons to remove/add versions of the sound in different languages.

    ◦ [−] removes the corresponding `Upload sound files` section

    ◦ [+] adds another `Upload sound files` section

> **Note**
>
> When you upload a sound file associated with a language that already exists, 4PSA VoipNow replaces the old file with the new version. Before this operation is performed, 4PSA VoipNow asks you to confirm the replacement.

To manage the existing sound files associated with an announcement sound, follow the steps:

1. Click the name link of the sound you want to modify.

2. A new page opens allowing you to change the details of the sound.

   In the `Existing sounds` section, 4PSA VoipNow displays the following information on each file:

   - Filename – The name of the file. Click this link to download the file on your computer.

   - Sound file size – The size of the file in Kb

   - Folder – The folder where the file is located

   - Language – The language associated with the sound file

   > **Note**
   >
   > The default sound file of the sound object is displayed in **bold** format.

3. Click OK to save your changes. Click Cancel to go back to the previous page without changing the sound.

Search the File List

When the file list is too long and you are searching for specific sound files, you can use the following features:

- Search – Insert the text you are looking for in the textbox. Then click the 🔍 button or the `Search` label to display only the sound files whose names contain the text.

- Show all – Click this ▤ button or the `Show all` label to display the entire list.

The search criteria will be retained even if you navigate to other pages until a new search is performed.

You can change the number of records displayed on the page by clicking the `Number of entries per page` link. The number of entries per page is shown in the left side of the table along with the total number of sound files in the system.

Another way to simplify the listing is to sort the sound file list by clicking a table header link. The order criteria are marked by the highlight of the table header and the arrow indicates the direction. The sort direction can be changed by another click on the respective header.

Remove Files

Choose the files you want to delete by selecting their corresponding checkboxes. Then click the Remove selected link. You will be asked to confirm the removal.

> **Note**
>
> Default sound files cannot be deleted. You must replace a default sound file.

Manage Sound Folders

In the Sound Folder Management page, you can view a list of the sound folders available in the extension's account. Multiple operations can be performed:

- Add a new sound folder
- Delete sound folders and their content
- Search for specific folders

To access a sound folder page, click the Sounds icon available in the `Tools` area and the Folders icon.

> **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

4PSA VoipNow displays the following information on each folder:

- Folder name – The name of the sound folder
- Sound files – The number of sounds stored in the folder. Click this link to open a new page listing these sounds.
- Created – The date when the folder was added to the system

Search the Folder List

When the time folder list is too long and you are searching for specific sound folders, you can use the following features:

- Search – Insert the text you are looking for in the textbox. Then click the 🔍 button or the `Search` label to display only the folders whose names contain the text.

- Show all – Click this 📄 button or the `Show all` label to display the entire list.

The search criteria will be retained even if you navigate to other pages until a new search is performed.

You can change the number of records displayed on the page by clicking the `Number of entries per page` link. The number of entries per page is shown in the left side of the table along with the total number of sound folders in the system.

Another way to simplify the listing is to sort the sound folder list by clicking a table header link. The order criteria are marked by the highlight of the table header and the arrow indicates the direction. The sort direction can be changed by another click on the respective header.

Add a New Sound Folder

Each time you add new sound files in the system you must choose the folder name where you want them to be stored. If you want to store a sound in a specific folder, other than the ones already existent, you can add a new sound folder before adding sound files.

Follow the steps described below to add a new sound folder:

1. Click the 📢 Sounds icon in `Tools` area and the 📁 Folder icon.

   > 📝 **Note**
   >
   > The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

2. In the Sound Folder Management page, click the 📁➕ Add folder icon.

3. A new page opens allowing you to enter the name of the new folder. Use the available textbox to name the new folder.

4. Use the ➖ ➕ buttons to add several folders at the same time.

   - ➕ adds a new folder input textbox

- □ removes the corresponding textbox

5. Click OK to add the new sound folder(s). Click Cancel to go back to the previous page without adding the folder(s).

Delete Sound Folders

To remove sound folders from your account along with the sound files inside, click the Sounds icon available in the `Tools` area and the Folder icon.

> **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

A new page opens displaying all the sound folders available on your account. To delete sound folders follow these steps:

1. Choose the folders you want to delete by selecting their corresponding checkboxes.

2. Click the Remove selected link. A new page opens displaying the list of folders and the sounds located in the folders that will be deleted.

> **Note**
>
> When you delete a folder, you also delete all the sounds located in the folder.

3. Review the list. If you want to proceed with the removal, select the `Confirm the removal` checkbox and click OK. Otherwise click Cancel to return to the previous page without any removal.

> **Note**
>
> If the sounds inside the folder are currently used, these sounds cannot be deleted. The folder that contains them cannot be deleted either.

Manage Sound Languages

View the Language List

A sound file can be recorded in several languages so that the extension can listen to the specified announcement in his/her chosen language if available in the system. When the extension's language does not exist, the announcement will be played in the default sound language.

In the Sound Languages Management page, you can view a list of the languages available on your account. Multiple operations can be performed:

- View a detailed list of the system languages
- Add a new sound language
- Search for specific languages
- View the sounds that have files in different languages
- Delete sound languages from the system

To access Sound Language Management page, click the ![icon] Sounds icon available in the `Tools` area. In the new page that opens, click the ![icon] Sound languages icon.

> **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

4PSA VoipNow displays the following information on each sound language:

- Language name – The name of the language
- Sound files – The number of sound files in this language. Click this link to view the list of sound files.
- Created – The date when the language was added to the system

Search the Language List

When the language list is too long and you are searching for specific languages, you can use the following features:

- Search – Insert the text you are looking for in the textbox. Then click the 🔍 button or the `Search` label to display only the languages whose names contain the text.

- Show all – Click this ▤ button or the `Show all` label to display the entire list.

The search criteria will be retained even if you navigate to other pages until a new search is performed.

You can change the number of records displayed on the page by clicking the `Number of entries per page` link. The number of entries per page is shown in the left side of the table along with the total number of sound languages in the system.

Another way to simplify the listing is to sort the sound language list by clicking a table header link. The order criteria are marked by the highlight of the table header and the arrow indicates the direction. The sort direction can be changed by another click on the respective header.

Add a New Language

To add a new sound language, click the 📢 Sounds icon available in the `Tools` area.

> **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

In the new page that opens, click the 🌐 Sound languages icon and follow these steps:

1. In the Sound Language Management page, click the 🌐 Add Sound Language icon.

2. A new page opens allowing you to enter the name of the new sound language. Use the dropdown list to add one of the available languages to your account.

3. Use the ➖ ➕ buttons to add several languages at the same time.

   - ➕ adds another dropdown list so you can create another language

- $\boxed{-}$ removes the corresponding dropdown list
4. Click OK to add the new sound language(s). Click Cancel to go back to the previous page without adding the language(s).

Edit Language Details

To change the details of a sound language, click the Sounds icon available in the `Tools` area.

> 📝 **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

In the new page that opens, click the Sound languages icon and follow these steps:

1. Click the name link of the language you want to modify.
2. A new page opens in which you can use the `Name` dropdown list to choose another name for the language.
3. Click OK to save your changes. Click Cancel to return to the previous page without renaming the language.

Delete Sound Languages

To remove sound languages from your account, click the Sounds icon available in the `Tools` area.

> 📝 **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

In the new page that opens click the Sound languages icon and follow the steps:

1. Choose the languages you want to delete by selecting their corresponding checkboxes.
2. Click the Remove selected link. A new page opens displaying the list of languages and their associated sounds that will be deleted.
3. Review the list. If you want to proceed with the removal, select the `Confirm the removal` checkbox and click OK. Otherwise click Cancel to return to the previous page without deleting anything.

Delete Sounds

To delete sounds on your account, click the Sound icon available in the `Tools` area.

> **Note**
>
> The **Sounds** section is available only if the permission "Sound Management" has been activated for your account. If this permission hasn't been activated for your account, you will not be able to see the **Sounds** icon in the `Tools` area.

Choose the sounds you want to delete from the available list by selecting their corresponding checkboxes. Then click the Remove selected link. You will be asked to confirm the removal.

You cannot remove sounds that are currently used.

You cannot remove a sound object of type `music on hold`, if the following conditions are met:

- The folder where the sound is located is used.
- The sound is the only one left in the folder.

Chapter 12
View Your Call Costs

View Extension's Call Costs

4PSA VoipNow offers an easy way to keep track of each extension's calls and their costs.

In Call Costs page, you can view a detailed list of calls for the current and previous months. Multiple operations can be performed:

- Search for specific calls.
- Export the call list to a Microsoft Excel file.
- Export the call list to a CSV file.

To view your call costs, click the Call costs icon available in the `Tools` area.

4PSA VoipNow displays a table containing the calls registered in the current month. To view the calls from a previous month, use the dropdown list available at the top of the table.

The table includes the following details about each call:

- F – The flow of the call displayed using an icon: incoming call, outgoing call.

- T – The type of the call displayed using an icon: local call, extended local call, external call.

- A – The call application type displayed using an icon: Dial, Queue, IVR, Voicemail, Conference, Park, Unpark, Callback, Calling Card.

- From – The short extension number (if the call is initiated from inside the system) of the person who made the call.

- To – The short extension number (if the call is to an inside extension) of the person who answered the call.

- Call started – The date and time when the call was started

- Call duration – The duration of the call

- CallID – The unique number that Asterisk generated to identify the call.

- Call cost – The cost of the call for the extension owner

Search the Call List

4PSA VoipNow automatically displays only the calls of the current month. If you want to view the call list of previous months or search for specific calls, perform the following steps:

1. Use the following options for an advanced search:

   - From number - Use this textbox to fill in the phone number of the person who made the call.

   - To number - Use this textbox to fill in the phone number of the person who answered the call.

   - CallID – Use this textbox to fill in the unique number that Asterisk generated to identify the call.

- Call duration – Use this section to specify the call duration limits by filling in the fields in rule:

  higher than { } seconds and/or lower than { } seconds

- Call cost – Use this section to specify call cost limits by filling in the fields in rule:

  higher than { } and/or lower than { } seconds

- Call ended with – Use the dropdown list to choose a certain ending for the call. Possible values are: answered, no answer, busy, failed, unknown.

- Start search on/ End search on - Use these textboxes or click the corresponding 📅 calendar icon to specify the period you want to search.

- Display - Use these radio buttons to filter the search results:

  ◦ All – Select this option to display all the types of calls in the list.

  ◦ Incoming calls – Select this option to display only the calls that were received.

  ◦ Outgoing calls – Select this option to display only the calls that were placed.

- Limit search by call context – Use these radio buttons to filter the search results:

  ◦ All – Select this option to display all calls.

  ◦ Local calls – Select this option to display only calls made to local numbers (between extensions belonging to the same client).

  ◦ Extended local calls – Select this option to display only calls made to extended local numbers (between extensions belonging to different clients).

  ◦ External calls – Select this option to display only calls received from outside the system or sent to external destinations.

- Limit search by application – Use these checkboxes to filter the search results by the application used by Asterisk to handle the call:

  ◦ Dial – Select this option to display calls between two phone terminals.

  Queue – Select this option to display calls targeted at queue extensions.

  Conference – Select this option to display conference calls.

  Voicemail – Select this option to display calls that ended in the voicemail mailbox.

Voicemail Center – Select this option to display calls to an extension of type voicemail center.

IVR – Select this option to display calls targeted at IVR extensions.

Park – Select this option to display calls that were parked.

Unpark – Select this option to display calls that were picked up form the parking lot.

Callback - Select this option to display calls that were made using an extension of type callback.

Calling Card - Select this option to display calls that were made using an extension of type calling card.

2. Click OK to display only the records that fit your search criteria.

3. Use the dropdown list in the top left side of the call costs list to search for calls made in a specific month. Choose the `'--'` option to display the entire call costs list.

Note

In the top left corner of the calls table, 4PSA VoipNow displays the total cost of the calls found as a result of the search operation.

Export to an Easy-to-edit Format

- Export to Excel – Click this button to export the call costs report to a Microsoft Excel file.

- Export to CSV – Click this button to export the call costs report to a CSV file.

You have the possibility to customize the exported call cost report by choosing the columns you want to include in your report. To select the relevant columns that will appear in the exported report, click the `Show export` button in the upper right corner of the screen. Enable the checkboxes corresponding to the column names you want to export. Disable the checkboxes corresponding to the column names you want to leave out.

This is the list of all possible columns you can export in your customized report:

- Call flow
- Call type

- Application

- To number

- From number

- Call started - The date and time when the call started ringing on the destination phone.

- Call answered - The date and time when the call was answered. If the call was not answered, 4PSA VoipNow records the value: `0000-00-00 00:00:00`

- Call duration

- Call disposition - The way the call was terminated: it was either answered, not answered, failed, etc

- Billing plan - The billing plan that generated the call cost.

- Call cost The cost of the call as charged by the reseller account owner.

- Money unit

- Call ID - The unique ID of the call generated by 4PSA VoipNow.

- Transfer source - If the call was transferred to another extension, this column will list the source extension.

- Transfer destination - If the call was transferred to another extension, this column will list the destination extension.

- Initially called extension - If the call was picked up from another extension, this column will display the extension that was originally called.

- Callback caller-ID - If the caller used a callback extension to route its call to a remote destination, this column displays the authorized Caller-ID (the number from which the user dialed the system).

- Calling card code - If the caller used a calling card to call a destination number, this column displays the code introduced to authenticate and charge the call.

Chapter 13
Manage Your Interface Preferences

4PSA VoipNow allows you to customize the look and feel of the control panel in the Interface Preferences page. On this page, you can define the interface language, the skin of the application, and the number of rows in records list.

To access this page click the Interface preferences icon available in your account page. You can adjust the following preferences based on your needs:

- Rows in table – Use this textbox to set the number of rows that will be displayed in your control panel.
- Interface skin – Use this dropdown list to choose the skin used in your control panel.
- System language – Use this dropdown list to choose the language used in your control panel.

> ⚠ Caution
>
> 4PSA VoipNow does not allow you to use language packs that were created for earlier versions of the interface. The following warning message is displayed:

Impossible to switch to preferred interface language `{outdated language}`, because an outdated language pack is installed on the system. Please contact your provider to correct this situation.

Only the system administrator can fix this problem.

Chapter 14
Manage Email Notifications

4PSA VoipNow can send you email notifications when standard events occur. The text of the notifications can be customized.

To access this page, click the ![icon] Email templates icon available in your homepage.

You can set the notification preferences for a series of events displayed on the first column.

Notification emails can also be sent to an email address specified in the `E-mail address` column. This email address can be different for each selected event.

> **Note**
>
> To enable all the checkboxes in a column, click the column's header. For example, if you want to enable all the checkboxes in the `Extension` column, click the `Extension` header.

The events that can trigger an email notification are displayed in `Email templates` section:

- Extension expiration warning – Email notification triggered by this event is sent {days} days `in advance` as specified in `Send expiration notices` field.

- Extension expired

- Extension billing limit warning – Email notification triggered by this event is sent when the available number of minutes is below {minutes} minutes as specified in `Send billing limit warnings when the account is below` field.

- Extension billing limit exceeded

- Voicemail message notification – When the extension receives a voicemail message, the extension user and a custom email addressed can be notified of the event.

- Fax message notification – When the extension receives a fax message, the extension user and a custom email addressed can be notified of the event.

- Forgot password – For this event, 4PSA VoipNow will send to the user who forgot his/her password and requested a new one an email message containing a temporary password. This password is valid only the amount of time specified in Login Preferences page in the `Expiration time for new password` field.

> **Note**
>
> `Voicemail message notification` and `Fax message notification` are displayed for `Phone terminal` extensions only if the respective features are enabled.

In `Preferences` section the reseller can specify the conditions in which the warning emails will be sent:

- Send expiration notices {x} days in advance – Use this textbox to specify how many days before the account expiration a notifications is dispatched to the users.

- Send billing limit warnings when the account is below {x} minutes or {y} {money unit} – A billing limit warning is generated in one of the following cases:

  - The minutes remaining in `Available external outgoing minutes` plus the minutes remaining in `External over usage` go below a certain limit.

Use the first textbox to specify this minutes limit.

- The credit remaining in `Limit for external outgoing calls` goes below a certain limit.

  Use the second textbox to specify this money limit.

- The credit remaining in `Limit for external incoming calls` goes below a certain limit.

  The money limit you introduced for external outgoing calls in the above textbox, includes the external incoming calls money limit.

To enable notifications for your account, follow the steps:

1. From the available checkboxes, select the ones corresponding to the events you want to receive notifications for.

2. Click OK to save your options. Click Cancel to return to the previous page without saving the changes you have made.

Customize Email Content

To customize the subject and content of an email notification, follow these steps:

1. Click the 🖉 icon corresponding to the chosen event.

2. A new page opens allowing you to edit the email subject and email body. Modify the text, keeping in mind the following rules:

   - You may use only plain text when writing the email subject and content. The email is also sent in plain text format.

   - You can include tags that will be automatically replaced by the system with the appropriate content. Examples:

   - `[recipient_name]` is replaced with the name of the person receiving the notification.

3. Click OK to save the changes to the email. Click Cancel to return to the previous page without saving the changes.

Restore the Default Settings

To restore the default notification settings and email contents, click the Default button.

> **Note**
>
> When you click the **Default** button, 4PSA VoipNow will not overwrite the other email address destination.

Chapter 15
Global Account Management

The Single Sign On (SSO) mechanism was designed to provide a centralized point of login for a user in multiple applications. The user creates a special account (Global Account) that will be used later by other applications to make the connection between the interfaces.

To access the Global Account Setup page, click the Global Account link located on the left frame navigation area.

Connecting To A Global Account

You can connect to a global account with an existing user, or you can create a new global account.

Click the Connect to global account icon.

In the new page that opens, make sure that the Use existing global account checkbox is selected, specify the global account username and password and click OK to connect to the global account.

> **Note**
>
> If several local accounts are connected to a global account, when logging in to the VoipNow interface using the global account, the user will be asked to select from the local accounts connected to the same global account.

To create a new global account, select the Create new global account checkbox, set the username and password for the new account and click OK to create the new global account.

> **Note**
>
> When creating a new global account, the respective account will be created on the SSO server.

Changing the password for a global account

You can change the password for the connected global account by pressing the Change password icon.

In the new page that opens. submit the existing password and set a new one.

Disconnecting from a global account

If you are connected to a global account and wish to disconnect, click the Disconnect from global account icon. In the new page that opens, select the Confirm disconnection from global account checkbox and click OK.

Appendix A. Using the Text To Speech Feature

The text to speech feature allows you to convert written text into speech. 4PSA VoipNow uses the text to speech engine developed by Cepstral.

Controlling How the Text is Read

The Cepstral engine allows you to control the voice reading the text by specifying attributes such as rate, pitch, and volume or inserting pauses. This can be achieved by using a set of HTML-like tags; the tags make up the Speech Synthesis Markup Language (SSML).

This section offers a set of SSML examples that can be used with the Cepstral engine. For more detailed descriptions of the elements and attributes of the markup language, see the official W3C SSML Specification: http://www.w3.org/TR/speech-synthesis/

Inserting silence / pauses

You can insert pauses between words, sentences or paragraphs by using the `<break>` empty tag. To control the length of the break, you can use two attributes: `strength` and `time`.

"There is no `<break strength='none' />` pause here."

"This is a `<break strength='x-weak' />` pause between words."

"This is a `<break strength='weak' />` longer pause between words."

"This is a `<break strength='medium' />` pause between sentences."

"This is a `<break strength='strong' />` pause between paragraphs."

"This is a `<break strength='x-strong' />` longer pause between paragraphs."

"This is a `<break time='2s' />` two second pause."

"This is a `<break time='4500ms' />` 4.5 second pause."

"This is a `<break />` pause between sentences."

Controlling Speech Rate

You can control the rate of the speech by using the `prosody` element and specifying a value for its `rate` attribute.

"I am now `<prosody rate='x-slow'>`speaking at half speed.`</prosody>`"

"I am now `<prosody rate='slow'>`speaking at 2/3 speed.`</prosody>`"

"I am now `<prosody  rate='medium'>`speaking at normal speed.`</prosody>`"

"I am now `<prosody rate='fast'>`speaking 33% faster.`</prosody>`"

"I am now `<prosody rate='x-fast'>`speaking twice as fast`</prosody>`"

"I am now `<prosody  rate='default'>`speaking at normal speed.`</prosody>`"

"I am now `<prosody rate='.42'>`speaking at 42% of normal speed.`</prosody>`"

"I am now `<prosody rate='2.8'>`speaking 2.8 times faster than normal`</prosody>`"

"I am now `<prosody  rate='-0.3'>`speaking 30% more slowly than normal.`</prosody>`"

"I am now `<prosody rate='+0.3'>`speaking 30% faster than normal.`</prosody>`"

Controlling Voice Pitch

You can control the pitch of the speech by using the `prosody` element and specifying a value for its `pitch` attribute.

"`<prosody pitch='x-low'>`This is half-pitch`</prosody>`"

"`<prosody pitch='low'>`This is 3/4 pitch.`</prosody>`"

"`<prosody pitch='medium'>`This is normal pitch.`</prosody>`"

"`<prosody pitch='high'>`This is twice as high.`</prosody>`"

"`<prosody pitch='x-high'>`This is three times as high.`</prosody>`"

"`<prosody pitch='default'>`This is normal pitch.`</prosody>`"

"`<prosody pitch='-50%'>`This is 50% lower.`</prosody>`"

"`<prosody pitch='+50%'>`This is 50% higher.`</prosody>`"

"`<prosody pitch='-6st'>`This is six semitones lower.`</prosody>`"

"`<prosody pitch='+6st'>`This is six semitones higher.`</prosody>`"

"`<prosody  pitch='-25Hz'>`This has a pitch mean 25 Hertz lower.`</prosody>`"

"`<prosody  pitch='+25Hz'>`This has a pitch mean 25 Hertz higher.`</prosody>`"

"`<prosody pitch='75Hz'>`This has a pitch mean of 75 Hertz.`</prosody>`"

Controlling Output Volume

You can control the volume of the speech by using the `prosody` element and specifying a value for its `volume` attribute.

"`<prosody volume='silent'>`This is silent.`</prosody>`"

"`<prosody volume='x-soft'>`This is 25% as loud.`</prosody>`"

"`<prosody volume='soft'>`This is 50% as loud.`</prosody>`"

"`<prosody volume='medium'>`This is the default volume.`</prosody>`"

"`<prosody volume='loud'>`This is 50% louder than normal.`</prosody>`"

"`<prosody  volume='x-loud'>`This is 100% louder than normal.`</prosody>`"

"`<prosody volume='default'>`This is the default volume.`</prosody>`"

"`<prosody volume='-33%'>`This is 33% softer than normal.`</prosody>`"

"`<prosody volume='+33%'>`This is 33% louder than normal.`</prosody>`"

"`<prosody volume='33%'>`This is 33% louder than normal.`</prosody>`"

"`<prosody  volume='33'>`This is 33% of normal volume than normal.`</prosody>`"

Adding Emphasis to Speech

You can control the stress placed on certain pieces of text by using the `emphasis` element and specifying a value for its `level` attribute.

> **Note**
>
> The nature of emphasis differs between languages, dialects or even voices. Languages indicate emphasis using a possible combination of pitch change, timing changes, loudness and other acoustic differences

"This is `<emphasis  level='moderate'>`stronger`</emphasis>` than the rest."

"This is `<emphasis level='strong'>` even stronger`</emphasis>` than the previous."

"This is `<emphasis level='none'>`the same as`</emphasis>` than the rest."

"This is `<emphasis level='none'>`the opposite of`</emphasis>` emphasis."

> **Note**
>
> The **none** level is used to prevent the synthesis processor from emphasizing words that it might typically emphasize.

Spelling Words Phonetically

The `phoneme` element provides a phonemic/phonetic pronunciation for the contained text. The `ph` attribute is a required attribute that specifies the phoneme/phone string.

"You say <phoneme ph='t ah0 m ey1 t ow0'>tomato</phoneme>, I say <phoneme ph='t ah0 m aa1 t ow0'>tomato</phoneme>"

For a complete list of available phonemes for your language, please see the Cepstral page Editing the Lexicon.