Text to Speech Driver

This driver lets you create dynamic announcements and integrate variables into the announcements easily. We also have a web interface & media service integration for you to enter whatever text to be announced whenever you want! You can also use our voice message system to broadcast your own voice around the house!

This driver also comes with the ability to play an announcement in different rooms which can be specified.

Installation

1. Install Driver Central Cloud Driver and set it up as per the documentation.

2. Add this driver to your project to activate the driver.

3. Setup an API key for a Text to Speech Engine (see below for comparisons) and select which one you are using in the driver properties after entering the API key.

4. Go to Agents Announcements and create a new announcement with the rooms you want the announcement to play in.

5. Check Play Audio File and for the audio file select the audio file which is shown in the driver properties.

6. Go to Programming and find the driver event for **Audio File Updated**. When this event occurs, execute the announcement you just created.

7. If you want to make use of the custom buttons to allow for multi room support look at the **Multi Room Support** section in this documentation file.

Troubleshooting

If you are unable to install this driver please contact shivam@shivampaw.com with details

Text to Speech Engines

The driver currently supports two Text to Speech engines – VoiceRSS and Google Cloud.

You can setup API keys for either one or both of these services to use the driver. VoiceRSS is very quick to set up and allows for 350 free requests a day. Google Cloud takes a few extra minutes to setup and get an API key for but once setup the voices are more natural. Google Cloud allows for up to 4 million free characters to be spoken a month.

Both engines support different speeds and languages which can be configured in the driver properties. Google Cloud allows you to choose whether you want to have a female or male voice make the announcement.

Voice RSS

Visit VoiceRSS and press the blue Get Started button and sign up for a free account. Once you have signed up you will see your API Key displayed. Be sure to check your emails and activate your account or your requests won't work.

Google Cloud

You can view our guide on how to create your Google Cloud API keys by clicking here.

Programming Usage

When you wish to make an announcement all you need to do is a few lines of programming! The driver has 5 commands. The **Text to Speak** property is what is spoken when you use the **Execute Announcement** command. The Text to Speech engine that is used will be what is selected as **Text to Speak Engine** property.

Clear Text to Speak

This command clears out the text to speak that is showing in the driver properties.

Concatenate Text to Text to Speak

This command concatenates the given text to the current Text to Speak property.

Concatenate Variable to Text to Speak

You can use this command to concatenate any variable in your Control4 project to the Text to Speak property. This command requires the driver Proxy ID and the Variable Name. You can find the Proxy ID by hovering over the driver in System Design.

Set TTS Engine

This allows you to programmatically change the driver property in regard to which Text to Speech Engine you wish to use.

Execute Announcement

This command will execute an announcement based of the current driver **Text to Speak** property and the **Text to Speech Engine** property. If you have added custom buttons to the driver properties, you can select which custom button you want to use for this announcement. If you don't select one, then the **Submit Announcement Button Type** variable value will be set to "**No Custom Button**" when the announcement is executed.

Simple Mode

As of Version 8 there is a new property in the driver settings called **Simple Mode**. When this is set to **On** then loading the media service will take the user straight to the text to speech screen and bypass the menu which contains extra settings. This mode can be useful for customers who just want the simple functionality

to work quickly and properly.

Multi Room Support

The **Custom Submit Announcement Buttons** property can be used to send an announcement to different rooms depending on a button press. You should enter a comma separated string which will be the button names. For example: **Whole House, Downstairs, Upstairs, Garden, All Bedrooms**

You should then create a separate announcement within the Announcements Agent for these buttons. You should choose to play the audio file shown in the driver properties for these announcements.

Now you can go to Programming in composer and go to the Announcement File Updated event that this driver makes use of. Instead of executing an announcement straight away, you can make use of the Submit Announcement Button Type driver variable which will store the name of which button was pressed. For example, "Whole House" or "All Bedrooms". You can then use conditionals on the variable to execute the correct announcement for the given button press. For some example programming and property settings, click here.

The custom buttons will show on the media service, web interface and can be used as part of the **Execute Announcement** programming action.

Notes

If no button is chosen, the **Submit Announcement Button Type** variable is set to "**No Custom Button**". You should take this into consideration when programming by having a default announcement to execute if that is the variable value (or if no other condition was met). You should also avoid using a button with that name.

Voice Messages

The web interface provides you with a button called **Record Voice Message**. You can press it and you are taken to our secure site to record a voice message which is then sent back to your driver. Your voice message is deleted from our server when it has been played once. The voice message functionality comes with multi room support so you can broadcast your voice to specific rooms in your house. Voice messages are supported on most modern browsers.

When executing a voice message, the **Last Announcement Type** variable is set to **Voice** and the **Last Message** variable will be set to **[Voice Message]**. If you execute a text to speech message, the **Last Announcement Type** variable value is set to **Text** and the **Last Message** variable is set to the text converted to speech.

Media Service

The driver makes use of the Control4 Media Service which means that if you go to the Listen menu in any room which has digital audio support you can access this driver. You can execute an announcement and type in your own text or view the last announcement that was executed via the driver.

If the Custom Submit Announcement Buttons property is left blank, a single "Submit Announcement" button will be shown by default and the **Submit Announcement Button Type** variable value will be "**No Custom Button**" when it is pressed.

Settings

The media service allows for customers to change the speed & language of the chosen text to speech engine. These settings can be changed without breaking the driver.

Web Interface

The web interface can be accessed via the URL shown in the driver properties. All you need to do is visit that URL and enter the text you wish to have announced. It is currently not possible to change the Text to Speech Engine through the Web Interface, but this is being looked into for the future.

It is worth noting that this URL changes when the driver is reloaded. You can get around this by setting a Web Service Port in the driver properties. 0 means a random port will be chosen.

If you have entered custom buttons in the driver properties these will appear as a drop down in the web interface. If you haven't entered any custom buttons, the **Submit Announcement Button Type** variable value will be set to "**No Custom Button**" when the announcement is executed.

Settings

The web interface has a settings page that can be accessed at **/settings** and it includes options to change the Text to Speech Engine API keys as well as the selected engine. Changing these settings could result in breaking the driver and it is recommended to only give this URL to customers who know what they are doing.

Special character replacements

The driver has some built in character replacements which are as follows:

- %date% Returns the current date

- %time% Returns the current time

These replacements are run when an announcement is executed.

Variable Injection

You can also include variables within normal text with the following syntax: **{ ProxyID::Variable Name }** This syntax can be useful when using the media service or web interface. You can find the Proxy ID by hovering over the driver in System Design. For custom variables you should use 100001 as the Proxy ID.

Uninstallation

If you wish to uninstall this driver then you can just remove it as you normally would. Whilst not strictly necessary, we recommend going to Agents Announcements and deleting the audio file which is shown in driver properties as well as the announcement you created for this driver.

Multiple Instances

Multiple instances of this driver in a project should work fine and you can follow the exact steps listed in this documentation.

Disclaimer

This driver makes use of 3rd party APIs for the conversion of Text to Speech. Should these APIs be unavailable at any time we will do our best to come up with a suitable alternative, but this may not be possible and no guarantee to uptime is given.

Support

You can report any bugs and suggest features to shivam@shivampaw.com