



# V-Spark Management Guide

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Version 4.3

January 2022

## **Abstract**

This document provides an overview of how to manage V-Spark settings, audio files, and folders, and organizational architecture at the company, organization, and user levels.

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# V-Spark Overview

Voci V-Spark™ is an all-inclusive speech analysis application that enables you to visualize audio using state-of-the-art speech recognition, transcription, and text analysis technologies. V-Spark automatically transcribes audio into searchable text, then organizes and archives the data, and finally provides both intuitive graphical web and representational state transfer (REST) API interfaces through which you can examine and explore that data. The information is stored in a database where the audio can be searched and analyzed for compliance, customer insights, and agent performance. V-Spark has the most complete set of speech technologies in a single solution on the market today.

The current version of the V-Spark server is supported on Red Hat Enterprise Linux (RHEL) and Community Enterprise Operating System (CentOS) versions 7.8 and greater, within the version 7 family.

This document provides an overview of how to manage your customizable V-Spark interface. For information on how to analyze audio and call statistics using V-Spark, please see the **V-Spark Review and Analysis Guide**. For information on how to utilize the V-Spark Application Programming Interface please see the **V-Spark API Reference**.

## Managing V-Spark

The V-Spark web server provides a powerful yet intuitive solution for transcribing, storing, and analyzing audio. V-Spark can host multiple clients on a single server instance (referred to as "multitenancy"), and provide different configuration access to users. This document introduces the hierarchical account management feature within V-Spark for administrators to be able to manage user accounts. The focus is to set up a secure environment where each user has the access they need to efficiently and effectively accomplish their objectives.

## Tools You'll Need

Here's what you need to get started:

- Desktop or laptop computer with secure power supply, and with the latest version of Google Chrome installed
- Fast and reliable network connection
- The network address (URL) of your V-Spark server, and your login information



### NOTE

You may need system administrator user account access to V-Spark to perform some of the instructions in this guide. Other instructions only require write access to a company or organization account.

## Multitenancy

V-Spark supports both on-premise and cloud deployments. In both of these instances, setting up an organized and configurable multitenant solution is important for the security and functionality of the tool. Multitenancy enables multiple “tenants” or groups of users to have access to the same engine instance of V-Spark although configurations and data are kept separate.

In the cloud, multitenancy enables multiple companies to use the same V-Spark interface without each company knowing about one another. Alternatively, an on-premise deployment allows groups within a company to view audio independent of other groups, keeping private data separate from the larger set of company users.

### Companies, Organizations, and User Accounts

V-Spark uses a 3-level hierarchical structure to define the entities that represent each distinct tenant. At the top level, each user account is associated with a single **Company**, generally defined as the company the user works for. A **company** must have at least one **Organization**, which generally represents a group or department within a company. At the lowest level, a **User Account** has configurable company- and organization-oriented permissions. For more information about user permissions see [User Account Settings, Permissions, and Administration](#).

### Monitored Folders and Applications

In V-Spark, audio is categorized by its source into folders and managed in the **Folders** section under **Settings**. Each folder is associated with one Organization within a Company. **Applications** are customized analytics tools set up in the **Applications** section also under **Settings**. Each Application can be associated with multiple folders of an Organization and cannot be shared across Organizations. These will be discussed in more detail in [Folder Management](#) and [Application Management](#).

## Company and Organization Management

*Companies* are the highest-level administrative group in V-Spark. Companies contain *organizations*, which are separate logical groups within a company.

To create or modify a company or organization, log into V-Spark, and navigate to the **Settings** page by using the **Main Menu**. Then use the breadcrumb menu to select the company and organization you want to view. The following example shows the **Dashboard Menu** and how to navigate it:



- ❶ Main menu
- ❷ Breadcrumb menu
- ❸ Submenu

If you are a system administrator or a user with company- or organization-level **Create/Edit** permissions, you will see the **Accounts** section in the **Submenu**. There you can view or modify companies, organizations, and user accounts.



Company

Show 10 entries

Search companies

Company	Short Name	Usage (hours)	Data Retention (days)	Auth Token	Cloud Token	Registration	Permissions	Created
Doc Test Co	DocTestCo	0.0 of	Unlimited	Show...	None	Register...	View users	2018-10-02
Test	Test	19.6k of	Unlimited	Show...	None	Register...	View users	2018-09-18
Test2	Test2	0.0 of	Unlimited	Show...	None	Register...	View users	2018-09-20
Testing	Testing	112.0 of	Unlimited	Show...	None	Register...	View users	2018-09-20

Showing 1 to 4 of 4 entries

Previous 1 Next

Organizations

Show 10 entries

Search organizations

Organization	Company	Short Name	Data Retention (days)	Timezone	Created
Test	Test	Test-Test	Unlimited	US/Eastern	2018-09-18
Test3	Test	Test-Test3	Unlimited	US/Eastern	2018-09-21
Test2	Test2	Test2-Test2	Unlimited	US/Eastern	2018-09-20
Sept2018	Testing	Testing-Sept2018	Unlimited	US/Eastern	2018-09-21

Showing 1 to 4 of 4 entries

Previous 1 Next

User Accounts

Show 10 entries

Search users

Username	Email	Full name	Company	
abaker	abaker@doctestco.com	Albert Baker	Doc Test Co	
cdanforth	cdanforth@doctestco.com	Carol Danforth	Doc Test Co	System admin
efalken	efalken@doctestco.com	Eric Falken	Doc Test Co	
a.disableduser	a.disableduser@doctestco.com	Alfred DisabledUser	Doc Test Co	

- ❶ Create a new company
- ❷ Edit a company
- ❸ Delete a company
- ❹ View the breakdown of usage by organization and folder
- ❺ Edit an organization
- ❻ Create a new organization
- ❼ Delete an organization
- ❽ Choose the number of entries per page
- ❾ Delete a user

The next few sections explain how to create, view, modify, and delete a Company (if you are a system administrator) or Organization (if you have **Create/Edit** company-level permissions for its parent company). For information on User accounts and permissions, see [User Account Management](#).

## Create or Modify a Company



### IMPORTANT

Only **System administrator** accounts have access to modify the **Companies** section.

Click **Add +** on the **Companies** section of the **Accounts** page to create a company. The **Create New Company** dialog displays:

**Create New Company** ✕

---

**Company Name**

**Short Name**  
  
*Alphanumeric characters and underscores only; no spaces; maximum of 25 characters;*

**Limit Hours**  
 ☐ Unlimited

**Data retention limit (days)**  
*Limits the data retention Maximum for organizations within this company. Lowering the limit will NOT automatically update the retention period for organizations.*  
 ☐ Unlimited

Enable SSO via OpenID  
 Use Cloud Transcription

**Servers**  
  
*Separate host names or IP addresses with ";" (semicolon).*

---

Next

**Create New Company** ✕

---

**Models**  
All selected (2) ▾

**Application Templates**  
All selected (4) ▾

- Agent Scorecard
- Call Categorization
- Call Drivers
- Customer Experience

---


Back
Next

The **Create New Company** dialog has multiple screens. The company's transcription service must be specified and authenticated before language models and application templates can be configured.

This dialog contains the following fields:

- **Company Name** – The name of the company.
- **Short Name** – Short name reference of the actual company name, used because company names may be lengthy and may include spaces. Spaces are not valid in the company short name. The company short name *cannot* be edited after the company has been created.
- **Limit Hours** – Limit the number of audio hours that the company can process through V-Spark. Once that limit has been reached, the company can no longer process new audio, but can still use V-Spark to examine existing calls.
- **Data retention limit (days)** – Limits the maximum data retention days for organizations within this company. For more information about data retention limits and their implications, see [Data Retention Limits for Companies and Organizations](#).
- **Enable SSO via OpenID** – If checked, shows a third dialog screen with additional options for the configuration of single sign-on (SSO) authentication for users associated with this company. For more information on configuring and using SSO, refer to [SSO-Enabled Companies](#).
- **ASR transcription type** – Choose between appliance-based or cloud transcription, as described in [Appliance-based Transcription](#) and [Cloud-based Transcription](#).
- **Models** – Select the language models to be used for transcribing audio. The models listed will vary depending on the company's ASR transcription service licensing and configuration.
- **Application Templates** – Choose the application templates that will be available to company folders. See [Application Management](#).

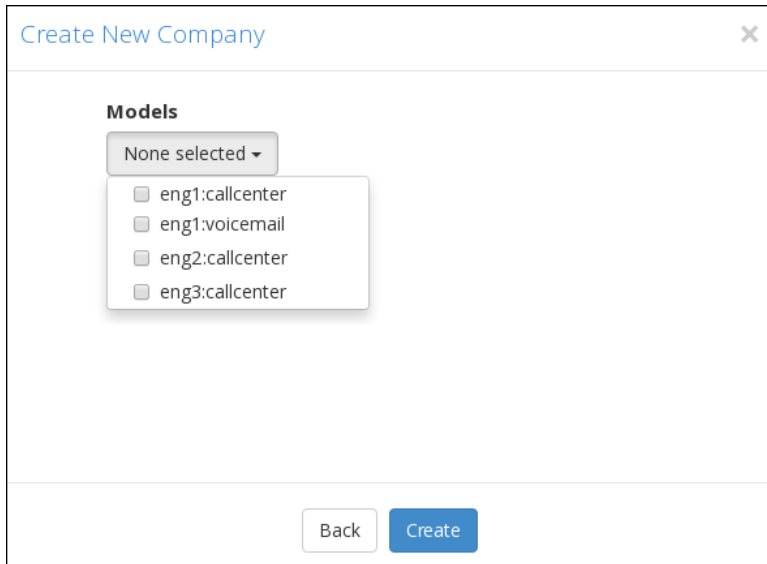
Once you are satisfied with the company's information, press the **Create** button. The company is created, and can be viewed in the **Company** section of the **Account Settings** page. Organizations and users can then be associated with the company.

To modify an existing company, click its **Edit**  icon on the **Accounts** page. The **Update Company** dialog appears with the same fields as the **Create New Company** dialog; however, the company's **Short Name** field is disabled because that value may not be modified.

## Appliance-based Transcription

For appliance-based transcription, configure the following settings.

- **Servers** – This field, shown on the first page of the **Create New Company** dialog shown in [Create or Modify a Company](#), enables you to enter the name(s) of the server(s) that can be selected during the folder creation process. Enter the name(s) of the company's server(s) here. If you are entering the names of multiple machines, separate the machine names with semicolon (";") delimiters. For example, if there were two V-Spark appliances named `product-demo` and `asrsrvr1`, the correct entry is `product-demo;asrsrvr1`. If the servers are not found in the local area network, you will not be able to select models.
- **Models** – On the second page of the **Create New Company** dialog, you can select the different language models that are available when creating new folders using the **Models** drop-down menu:

**IMPORTANT**

To set up folders within the company, you must select at least one model in the **Models** dropdown.

**NOTE**

The models listed in the preceding example are shown for example purposes only. The list of models licensed for the current company may be different. For more information about language models, refer to [Voci's language model documentation](#).

## Cloud-based Transcription

[Create or Modify a Company](#) shows an option to **Use Cloud Transcription**. This option is only relevant for customers using the Voci V-Cloud transcription service. All other users should leave this box unchecked. When this option is selected the following settings must be configured:

- **Cloud Token** — A V-Cloud token or alias will be provided by your Voci representative. This token authorizes the system to submit and bill transcription jobs to your V-Cloud account.
- **Custom Models** — Leave this field blank to use the system's default models. Contact your Voci representative for information about using additional or custom models. For more information about language models, refer to [Voci's language model documentation](#).

## Delete a Company



### WARNING

Deleting a Company permanently removes all information associated with it, including the Company's Users, Organizations, Folders, and Applications.

To delete a Company, select the **x** button to the right of the Company information in the **Accounts** section. A red pop-up warning screen displays that highlights the data that will be deleted when the company is deleted:

**!** Are you sure?
✕

You are about to delete the following company:

**Company:** Doc Test Co **1**

This will delete all the company's data, including users, organizations, and folders. **This cannot be undone.** If you want to save any of these, please hit cancel and move them before proceeding.

The following users will be deleted:

cn **2**

The following organizations will be deleted:

Doc Testing **3**

Are you sure you want to continue?

- 1** The name of the Company that will be deleted
- 2** The users associated with that Company whose accounts will be deleted
- 3** The names of the Organizations associated with that Company that will also be deleted
- 4** Type the name of the Company here to confirm
- 5** Select **Cancel** to return to the Company list
- 6** Select **Yes, delete this company** to confirm the deletion

Before the Company is deleted, you must confirm the deletion by entering the name of the Company that will be deleted, and selecting **Yes, delete this company**.

The company name is shown near the top of the dialog. For security reasons, you cannot delete the company to which your account belongs (your home company), regardless of your permissions.

Confirm deletion by typing the name of the company

**4**

**5** 
**6**

## Create or Modify an Organization

**NOTE**

Only **System admin** users, or users with company **Create/Edit** permissions, can modify a company's Organizations.

Click **Add +** on the **Organizations** section of the **Accounts** page to create an organization. The **Create New Organization** dialog displays:

**Create New Organization** [Close]

**Organization Name**  
Call Center

**Company**  
New Company

**Short Name**  
NewCompany- CallCenter  
*Can only contain alphanumeric characters and underscores; no spaces. Prefixed with the company's short name.*

**Retain data for # days**  
[ ] Unlimited

**Time Zone**  
US/Eastern

**Create**


This dialog contains the following fields:

- **Organization Name** — The name of the organization within a company.

- **Company Name** – The name of the company of which the organization is a member.
- **Short Name** – Short name reference of the actual organization name, since organization names may be long with spaces. An organization's short name defaults to *company short name-organization name* in the dialog box. However, you may modify the organization portion of the short name before the organization is created.
- **Retain data for # of days** – Specifies how long calls will be retained in the system. For more information about data retention limits and their implications, see [Data Retention Limits for Companies and Organizations](#).
- **Time Zone** – Each organization is assigned a time zone. This allows users of that organization to have customized dates and times specific to that time zone.

**NOTE**

Choose your organization's time zone carefully! The time zone associated with an organization cannot be modified after that organization is created.

To modify an existing organization, click its **Edit**  icon on the **Accounts** page. The **Update Organization** dialog appears with the same fields as the **Create New Organization** dialog; however, the company's **Short Name** and **Time Zone** fields are disabled because those values may not be modified.

## Delete an Organization

**WARNING**

Deleting an Organization permanently removes all information associated with that organization, including all of the Organization's Folders and Applications.

To delete an Organization, select the **x** button to the right of the Organization information in the **Accounts** section. A red pop-up warning screen displays that highlights the data that would be deleted when the Organization is deleted:



The screenshot shows a confirmation dialog box with a red header bar containing an exclamation mark icon and the text "Are you sure?". Below the header, the text reads "You are about to delete the following organization:". Underneath, two lines of information are listed: "Company: Doc Test Co" with a circled '1' next to "Co", and "Organization: Doc Testing" with a circled '2' next to "Testing". Below this, a warning message states: "This will delete all folders and files in this organization. Once deleted, these cannot be recovered. Are you sure you want to continue?". At the bottom of the dialog, there is a section titled "Confirm deletion by typing the name of the organization" followed by a text input field with a circled '3' to its left. Below the input field are two buttons: "Cancel" with a circled '4' to its left, and "Yes, delete this organization" with a circled '5' to its right.

- ❶ The name of the Company associated with the Organization that will be deleted
- ❷ The name of the Organization that will be deleted
- ❸ Type the name of the Organization here to confirm
- ❹ Select **Cancel** to return to the Organization list
- ❺ Select **Yes, delete this organization** to confirm the deletion

Before the Organization is deleted, you must confirm the deletion by entering the name of the Organization that will be deleted, and selecting **Yes, delete this organization**.

The Organization name is shown near the top of the dialog.

## Data Retention Limits for Companies and Organizations

V-Spark data retention limits specify the maximum number of days that calls will be retained before being automatically removed from the system. This automated data cleanup mechanism prevents unneeded call information from accumulating on the system, consuming storage space.

**NOTE**

The data lifetime is measured against call "datetime" metadata, which is not necessarily when the call was loaded into the system. If historical data is to be loaded, ensure that the retention limit is sufficient to retain the historical data as desired.

A company's **Data retention limit (days)** setting (shown in [Create or Modify a Company](#)) restricts the maximum data retention limit for that company's organizations, whereas an organization's **Retain data for # days** setting (shown in [Create or Modify an Organization](#)) sets the actual retention period that is used for scheduled data cleanup.

**NOTE**

If a company's data retention limit is *decreased*, the data retention limits for organizations within that company are not checked to see if they are still valid. However, when an organization is updated, its data retention limit is checked to ensure that it does not exceed the data retention limits for its parent company.

If an organization's data retention limit is *decreased* to a period that would cause calls to be removed the next time data cleanup is executed, a message like the following displays:

**i** Your recent data retention change for AutoTests-AutoTests will delete **16 files** at next scheduled cleanup (3:00 AM EST). [Click to cleanup now instead of waiting](#) **x**

This dialog provides a **Click to cleanup now instead of waiting** option that enables the user to remove the designated files from the system immediately.

The data retention cleanup schedule for an organization is based on its time zone and is configurable at the system level by system administrators.

## View Usage Information

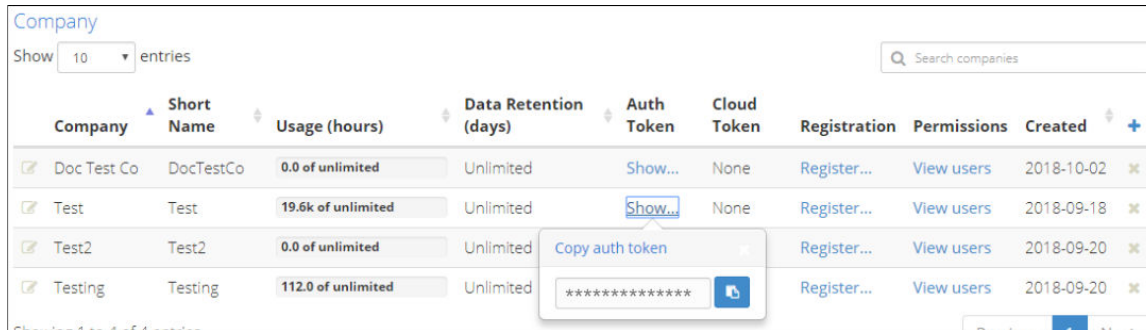
The **Accounts** page shown in [Company and Organization Management](#) displays information about the number of hours of audio that the company has used and the maximum number of hours that the company can process. The usage metrics displayed here describe the amount of data analyzed by V-Spark, and these values are not necessarily tied to ASR processing.

On the **Accounts** page, click the **Usage** value of a company, shown in [Company and Organization Management](#), to display a **Company Usage Details** dialog. This dialog shows detailed information about processed audio broken down by organizations and folders.

## Viewing the Company Authorization Token

To use the V-Spark REST API, you will need to provide the Company authorization token along with any API calls. If you are a system administrator, or have write permission for a company, an **Auth Token** column is displayed within the table of companies.

To view a Company's authorization token, select the **Show...** link in the **Auth Token** column of that Company's row of the **Company** table. V-Spark will display a pop-up that shows the Company's token in a text box, as in the following example of an example **Company** table:



The screenshot shows a table with columns: Company, Short Name, Usage (hours), Data Retention (days), Auth Token, Cloud Token, Registration, Permissions, and Created. A pop-up window is open over the 'Auth Token' column for the 'Testing' row, displaying a text box with a masked token '\*\*\*\*\*' and a 'Copy' button. A small note 'Copy auth token' is visible above the text box.

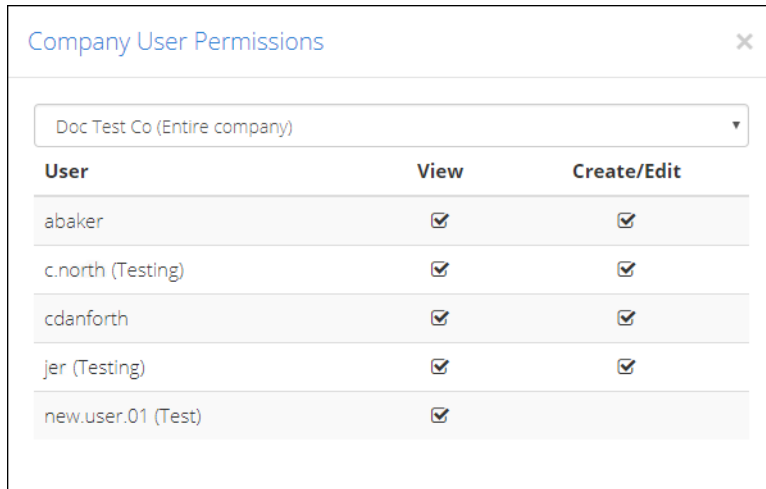
Company	Short Name	Usage (hours)	Data Retention (days)	Auth Token	Cloud Token	Registration	Permissions	Created
Doc Test Co	DocTestCo	0.0 of unlimited	Unlimited	Show...	None	Register...	View users	2018-10-02
Test	Test	19.6k of unlimited	Unlimited	Show...	None	Register...	View users	2018-09-18
Test2	Test2	0.0 of unlimited	Unlimited	Show...	None	Register...	View users	2018-09-20
Testing	Testing	112.0 of unlimited	Unlimited	Show...	None	Register...	View users	2018-09-20

To copy the authorization token to the clipboard, so that you can use the token in another window, select the **Copy** button to the right of the text box. A small note will display when the token is copied successfully to the clipboard.

When you are finished viewing the Company's authorization token, close the pop-up by selecting the **x** button in the upper right corner of the pop-up, or by clicking anywhere else on the page.

## Viewing Company User Permissions

To view a list of all users who have permissions that apply to a company and its organizations, select the **View users** link on that company's row of the company table. V-Spark will display the **Company User Permissions** dialog:



This dialog shows all user accounts with permissions relevant to the company, whether those permissions are explicit to the company or implicit in the permissions those users have elsewhere in V-Spark. By default, permissions for the entire company are displayed.

To show permissions for a specific organization within the company, choose the name of the organization from the drop-down menu above the list. If a user has permissions in this company or organization, but their user account belongs to another company, the name of the user account's home company is displayed in parentheses next to their username.

The permissions displayed in this dialog are read-only. To modify a user account's permissions for a company, you must set that user's permissions individually. For information on modifying the permissions of a specific user, see [User Account Settings, Permissions, and Administration](#).

When you are finished viewing the company's user permissions, click **✕ Close**.

## View Information about a Company

If you have only organization-level write permissions to V-Spark you cannot view any company information. If you have only company-level write permissions for V-Spark, you will be able to view information about the companies for which you have permission in the **Company** section. If you have System admin permissions for V-Spark, you will be able to view more detailed information about company V-Spark accounts.

If you are a system administrator, V-Spark displays edit icons next to the company names in the **Company** section. To view general information about an existing Company, select the edit icon to the left of the name of the Company you want to view, as shown in [Company and Organization Management](#). An **Update Company** dialog displays. This dialog is identical to the **Create New Company** dialog shown in [Create or Modify a Company](#). You may view the information in this dialog and close it without modifying any settings.

## User Account Management

User accounts are created within a single company and can have customized permissions for both entire companies and individual organizations. This section explains how to create, configure, and manage V-Spark user accounts.



### IMPORTANT

Most user accounts have permissions limited to specific companies or organizations. The **Account Settings** page displays only entities that the active account has permission to view; similarly, these settings may only be changed by accounts with permission to modify.

To be able to set permissions for any user in any company or organization, you must be logged in as a system administrator.

Select **Accounts** in the **Settings** menu to create, modify, and delete user accounts using the **User Accounts** section at the bottom of the **Accounts Settings** screen.

The **User Accounts** section displays a list of all V-Spark user accounts associated with companies that the active account has permission to edit. For each account, the list shows the user's username, email address, full name, and company.

Select the icon to the left of each entry to display the **User Settings** page for that user account. Select the **x** button at the right of each entry to delete the user account.

If an account has been created but not verified, its username will have a warning icon next to it. If a user account has been disabled, the entry for that account is displayed in an italic typeface. If the active account has system administrator privileges, the last column of the list will display the words "System admin" for other user accounts that also have system administrator permissions.

The size of the list is limited by the number of lines chosen in the **Show entries** menu. If there are more entries in the list than are being displayed, use the **Previous**, **Next**, or page number buttons to navigate to the other pages of the list.

Company

Show 10 entries

Company	Short Name	Usage (hours)	Data Retention (days)	Auth Token	Cloud Token	Registration	Permissions	Created	
<input type="checkbox"/> Doc Test Co	DocTestCo	0.0 of	Unlimited	Show...	None	Register...	View users	2018-10-02	<input type="checkbox"/>
<input type="checkbox"/> Test	Test	19.6k of	Unlimited	Show...	None	Register...	View users	2018-09-18	<input type="checkbox"/>
<input type="checkbox"/> Test2	Test2	0.0 of	Unlimited	Show...	None	Register...	View users	2018-09-20	<input type="checkbox"/>
<input type="checkbox"/> Testing	Testing	112.0 of	Unlimited	Show...	None	Register...	View users	2018-09-20	<input type="checkbox"/>

Showing 1 to 4 of 4 entries  1

---

Organizations

Show 10 entries

Organization	Company	Short Name	Data Retention (days)	Timezone	Created	
<input type="checkbox"/> Test	Test	Test-Test	Unlimited	US/Eastern	2018-09-18	<input type="checkbox"/>
<input type="checkbox"/> Test3	Test	Test-Test3	Unlimited	US/Eastern	2018-09-21	<input type="checkbox"/>
<input type="checkbox"/> Test2	Test2	Test2-Test2	Unlimited	US/Eastern	2018-09-20	<input type="checkbox"/>
<input type="checkbox"/> Sept2018	Testing	Testing-Sept2018	Unlimited	US/Eastern	2018-09-21	<input type="checkbox"/>

Showing 1 to 4 of 4 entries  1

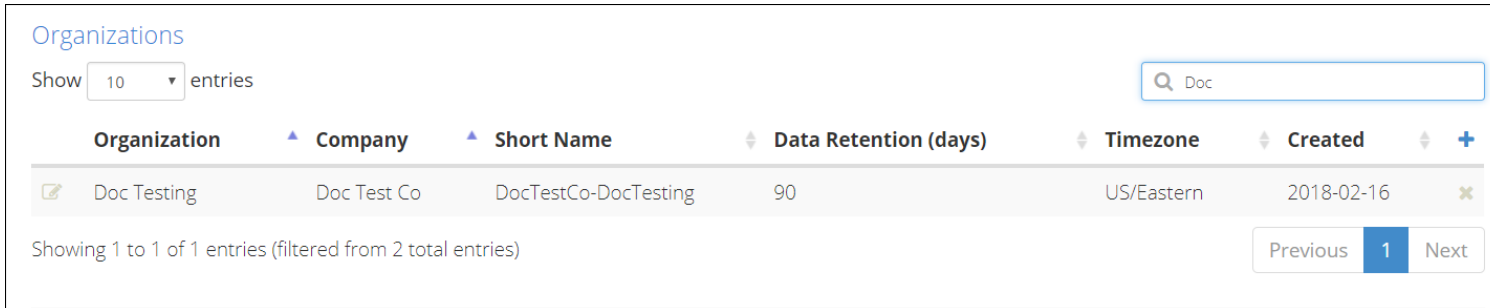
---

User Accounts

Show 10 entries

Username	Email	Full name	Company	
<input type="checkbox"/> abaker	abaker@doctestco.com	Albert Baker	Doc Test Co	<input type="checkbox"/>
<input type="checkbox"/> cdanforth	cdanforth@doctestco.com	Carol Danforth	Doc Test Co	System admin <input type="checkbox"/>
<input type="checkbox"/> efalken	efalken@doctestco.com	Eric Falken	Doc Test Co	<input type="checkbox"/>
<input type="checkbox"/> a.disableduser	a.disableduser@doctestco.com	Alfred DisabledUser	Doc Test Co	<input type="checkbox"/>

Each subsection of the page can be filtered to view just those items that you wish to see. For example, typing *Doc* into the "search organizations" filter returns only those organizations that contain "doc" in their name:



Organizations

Show 10 entries

Doc

Organization	Company	Short Name	Data Retention (days)	Timezone	Created	
Doc Testing	Doc Test Co	DocTestCo-DocTesting	90	US/Eastern	2018-02-16	

Showing 1 to 1 of 1 entries (filtered from 2 total entries)

Previous 1 Next

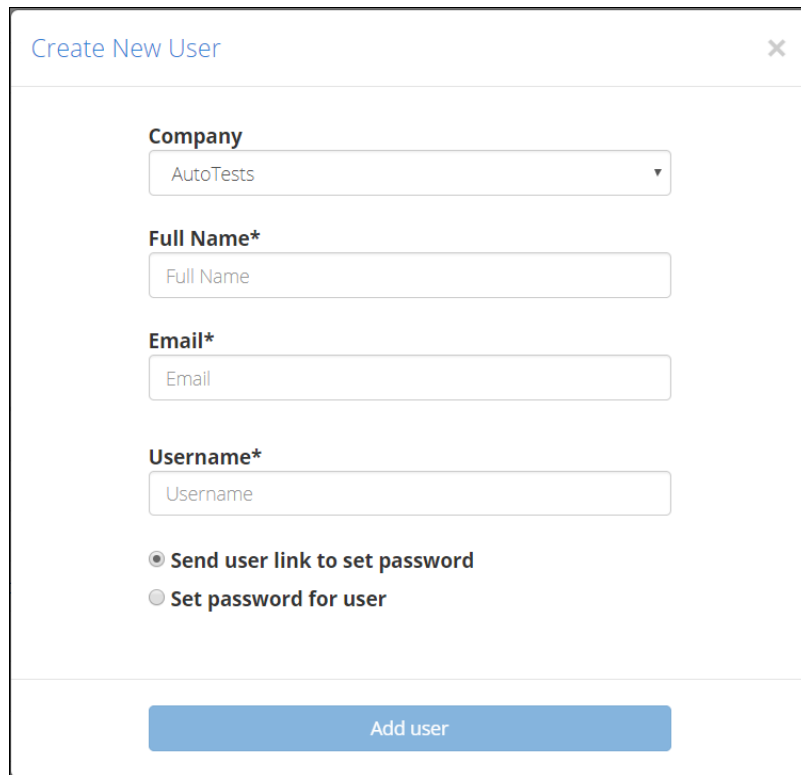
These filters can also be used for folders and applications under that tab of the Settings page.

## Creating a User Account

V-Spark user accounts can be created manually using the GUI, and manually or programmatically using the REST API's `/config/users/` endpoint. For more information about using the API, see the API reference. Users may also [request a new account](#) if the installation has this feature enabled.

1. Click **+ Add** at the far right of the **User Accounts** section of the **Account Settings** screen.  
The **Create New User** window appears:





**Create New User** [Close]

**Company**  
AutoTests

**Full Name\***  
Full Name

**Email\***  
Email

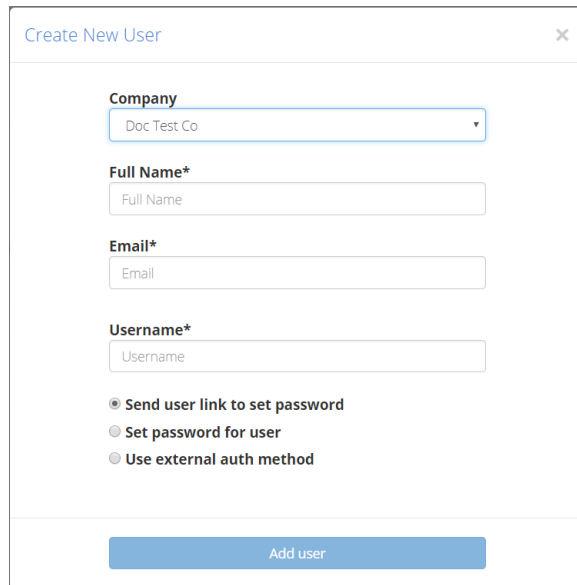
**Username\***  
Username

**Send user link to set password**  
 **Set password for user**

**Add user**

2. Use the **Company** drop-down menu to select the company that will be the account's home company.
3. Enter the user's **Full Name**, **Email** address, and **Username** (the user's login name for V-Spark). The username and email address for each user must be unique.
4. Specify the source for the new user's password. You must choose one of the available options:
  1. **Send user link to set password** — sends the new user an email with a link that can be used to set an initial password. When the password has been successfully set, V-Spark sends an additional email confirmation to the user.
  2. **Set password for user** — displays a **Password** field that can be used to set an initial password. Passwords must adhere to the installation's [password requirements](#).
  3. **Use external auth method** — integrates the user's account with an external authentication method so that they do not need a V-Spark-specific username and password.

This option displays only if the installation has been configured to use external authentication, as in the following example:



The screenshot shows a "Create New User" dialog box. It features a title bar with the text "Create New User" and a close button (X). The form contains the following elements:

- Company:** A dropdown menu with "Doc Test Co" selected.
- Full Name\*:** A text input field with "Full Name" as a placeholder.
- Email\*:** A text input field with "Email" as a placeholder.
- Username\*:** A text input field with "Username" as a placeholder.
- Authentication Method:** Three radio button options:
  - Send user link to set password
  - Set password for user
  - Use external auth method
- Buttons:** A blue "Add user" button at the bottom.

Selecting **Use external auth method** displays a drop-down list of the external authentication mechanisms with which your installation has been integrated. The only currently supported external authentication method is OpenID Connect (OIDC) using single sign-on (SSO). Refer to [Using Single Sign-On \(SSO\) with V-Spark](#) for more information.

5. Click **Add user**.

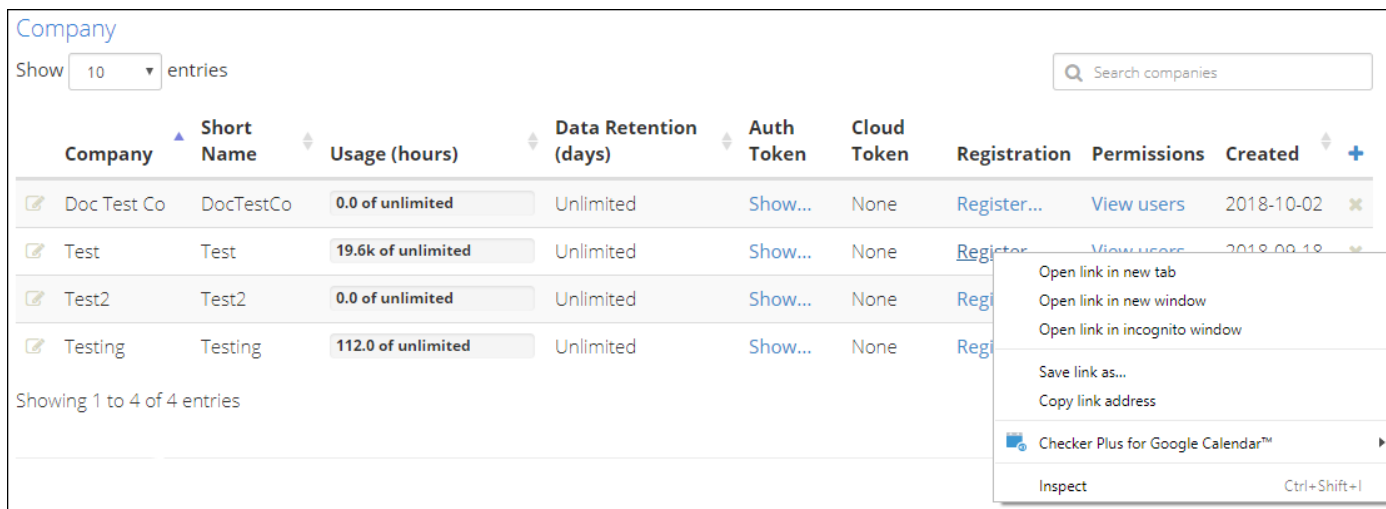
## User-Requested Accounts

New V-Spark users may request accounts on the system from the login page. Requested accounts must be verified by a system or company administrator before they are enabled.

## Enabling Users to Request a V-Spark Account

A company account must already exist before users can register for an account associated with that company. If a company exists in V-Spark, a user can request an account by following the registration link for that company.

Copy the registration link for that company by right-clicking **Register...** in the **Company** section of the **Accounts Settings** page:

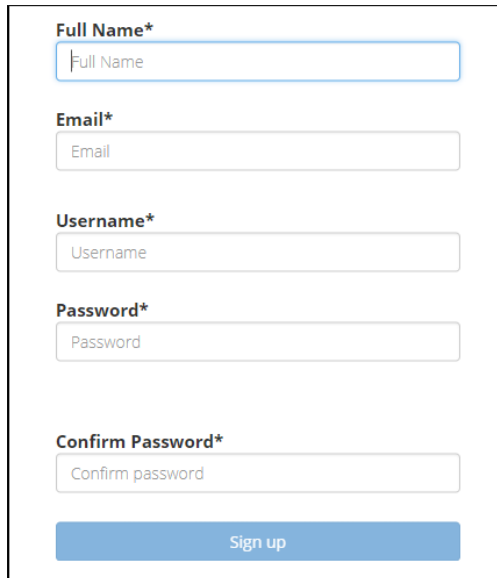


The screenshot shows the 'Company' section of the Accounts Settings page. It features a table with columns for Company, Short Name, Usage (hours), Data Retention (days), Auth Token, Cloud Token, Registration, Permissions, and Created. A context menu is open over the 'Register...' link for the 'Test' company, showing options like 'Open link in new tab', 'Open link in new window', 'Open link in incognito window', 'Save link as...', 'Copy link address', 'Checker Plus for Google Calendar™', and 'Inspect'.

Company	Short Name	Usage (hours)	Data Retention (days)	Auth Token	Cloud Token	Registration	Permissions	Created
Doc Test Co	DocTestCo	0.0 of unlimited	Unlimited	Show...	None	Register...	View users	2018-10-02
Test	Test	19.6k of unlimited	Unlimited	Show...	None	Register...	View users	2018-09-19
Test2	Test2	0.0 of unlimited	Unlimited	Show...	None	Register...		
Testing	Testing	112.0 of unlimited	Unlimited	Show...	None	Register...		

Provide this link to unregistered users so that they can request a V-Spark account.

When an unregistered user uses the link, the **Sign Up** screen displays:

A user registration form with five input fields and a submit button. The fields are labeled: Full Name\*, Email\*, Username\*, Password\*, and Confirm Password\*. Each field contains a placeholder text matching its label. Below the fields is a blue button labeled 'Sign up'.

Users must log in with the account's username (and not with its email address).



#### NOTE

Users can also request V-Spark accounts by clicking **Sign up** on the V-Spark home page. A system or company administrator must verify the account. The account must be assigned to a company before the account can be fully verified.

## Verifying User-Requested Accounts

When a user account is created using the **Sign Up** page, that account must be verified before the associated user can log in. A user who has **Create/Edit** permissions for the company with which the user is associated must validate the new account. That user can also assign user permissions for the new user across companies and organizations.

The following example shows the section of the **Accounts** page where you can update user accounts:

User Accounts

Show 10 entries

Search

Username	Email	Full name	Company	
a.disableduser	a.disableduser@doctestco.com	Alfred DisabledUser	Doc Test Co	
abaker	abaker@doctestco.com	Albert Baker	Doc Test Co	
cdanforth	cdanforth@doctestco.com	Carol Danforth	Doc Test Co	System admin
efalken	efalken@doctestco.com	Eric Falken	Doc Test Co	

Showing 1 to 4 of 4 entries

Previous 1 Next

To verify a new user account:

1. Log into V-Spark using an account that has **Create/Edit** permissions for the company with which the new account will be associated
2. Select the **Accounts** section of the **Settings** menu
3. Scroll down to view the **User Accounts** section
4. Click the edit icon to the left of the unverified user. The **User settings** page is displayed.
5. Assign the account to a company if it is not already associated with one.
  1. In the **Profile** portion of the page, check the **Company** field. If the user account is not associated with a company, select **Set user company**. If the user has already been assigned to a company, the name of the company will display, and no action is required.
  2. Select a company name from the drop-down menu to assign the user to a company.
  3. Click the check mark to proceed.
6. Verify the account
  1. In the **Auth** portion of the page, select the **Unverified** field. (If the user has already been verified, the field will be labeled **Verified**, and no action is required.) A **Verify user** pop-up displays.
  2. Select **Verified** from the left-hand drop-down menu.
  3. Select the check mark to close this pop-up and proceed.
7. To set a user's permissions, select the icon to the left of the entry for that user.
8. Select the check mark to close this pop-up and proceed.

## User Account Settings, Permissions, and Administration

The **User Settings** screen shows general user account information, and also displays permissions. System administrators can use this screen to manage individual account permissions, and to disable and delete accounts.

### User Permissions

The **Permissions** section at the bottom of the of the **User Settings** screen contains a row for each company or organization that has been defined in a V-Spark installation, as in the following example:

The screenshot shows the 'User settings' interface. It is divided into three main sections: Profile, Auth, and Permissions.

**Profile Section:**

- Username: manual.user.01
- Full Name \*: Manual User 01
- Email \*: manual.user.01@tec.com
- Company: [Doc Test Co](#)

**Auth Section:**

- User is...: [Verified](#) [Enabled](#)
- Auth type: Standard
- Update Password:
  - Enter new password:
  - Re-enter new password:
  - 
  - ...or [Send password reset link](#)

**Permissions Section:**

	View	Create/Edit
System admin		<input checked="" type="checkbox"/>
<b>Doc Test Co</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Doc Testing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Each company or organization is listed with checkboxes that specify the user's permissions for that entity. Enabling **View** allows the user to see dashboards for that company or organization. Enabling **Create/Edit** allows the user to create new or modify existing data under that entity.

## User Permission Levels

The **Permissions** section of the screen enables you to modify the user account's permissions for the entire system, as well as for each company and organization with which the account is associated.

1. **System admin** — gives a user **Create/Edit** permissions to all configurable settings. This level enables the user to create, delete, and modify users, companies, and organizations, and to [view system status and modify system-wide settings](#). Giving a user **Create/Edit System admin** permissions automatically selects both **View** and **Create/Edit** permissions for all companies and organizations in the installation. There is no **View** permission in the **System admin** section because the **View** permission is inherently available at the system level when a user already has the privilege to **Create/edit** any part of V-Spark's configuration data.
2. **company-level permissions** — grants permissions within the specified company. **Create/Edit** permission enables the user to manage other users in that company, and to create and modify organizations. **View** permission enables the user to view dashboards and transcripts for any existing or newly created organization within the specified company.
3. **organization-level permissions** — grants permissions within the specified organization. **Create/edit** permission enables a user to create and modify folders and applications that are associated with that organization. **View** permission enables a user to view dashboards and transcripts for that organization.

Company- and organization-level permission settings allow users to see (and, if enabled, to edit) organizations and associated folders outside their home company. As a result, specific users can serve as administrators across multiple organizations in a company, while securing the overall system against tampering.

## Disabling a User Account

The **Auth** portion of the **User Settings** screen provides a field that enables you to temporarily disable an account. This field is either labeled **Enabled** or **Disabled**.

Selecting this field displays a pop-up from which you can select **Enabled** or **Disabled** for this account. Click the check mark button to accept the new value or click the x button to close the pop-up without making changes.

## Deleting a User Account

1. Click **Accounts** on the the **Settings** menu and scroll to the **User Accounts** section.
2. Click the **x** at the far right of the user entry.
3. Click **Yes, delete this user** to confirm the deletion.

## Password Management and Requirements

System administrators can change individual user passwords and configure password requirements for a V-Spark installation. Users can also [change their own passwords](#).

### Updating a user password from the system settings page

The **Auth** portion of the **User Settings** screen includes a section to **Update Password**, where an administrator can change an individual user's password.

This section also contains a **Send password reset link** button, which sends the user an email with a password reset link to be used in case that password is lost or must be changed.

### Configurable Password Requirements

V-Spark may be configured to require that user passwords be a certain length, to require that users change their passwords within a certain timeframe, or to disable a user account after a certain number of consecutive failed login attempts. These settings are defined in the system configuration file `02sizing.cfg`, they are global to a V-Spark installation, and they apply to all of its company entities.

Details for these options are described in the following table:

**Table 1. Password configuration fields**

Name	Values	Notes
<code>min_passwd_len</code>	default 7  -1 or any integer from 1 to 255 (inclusive)	<ul style="list-style-type: none"> <li>Defines the minimum string length of the password.</li> <li>Specifying a value of -1 deactivates the length requirement.</li> <li>Invalid values are ignored, and the default value 7 is used instead.</li> </ul>
<code>max_passwd_lifetime</code>	default -1  -1 or any integer from 1 to 9007199254740991 (inclusive)	<ul style="list-style-type: none"> <li>Defines the number of days after which the password must be changed.</li> <li>Default value of -1 deactivates the password age policy.</li> <li>Invalid values are ignored, and the default value -1 is used instead.</li> </ul>
<code>max_passwd_failed_attempts</code>	default 6  -1 or any integer from 1 to 2147483647 (inclusive)	<ul style="list-style-type: none"> <li>Defines the maximum number of consecutive failed login attempts a user may perform before the user's account is locked. Exceeding this attempt limit disables the user account, and it cannot be used until it is reactivated by a system administrator.</li> <li>Specifying a value of -1 deactivates the attempt limit.</li> <li>Invalid values are ignored, and the default value 6 is used instead.</li> </ul>



## Other Password Requirements

Some password requirements are not configurable and will be active in any V-Spark installation running version 4.0.2-1 or higher. These requirements include the following:

- A user may not change the account password to any of the previous four used.
- Passwords must contain both letters and numbers.
- A user must provide the current password to change the account's email address.


## Password Policy Enforcement

Users whose passwords don't meet the requirements will be prompted to change their passwords on next login. If password policy criteria change, either because of reconfigured or newly added settings, users will be prompted to change their passwords if those passwords fail to meet policy criteria as a result of those changes. This behavior also applies in the case of upgrades from V-Spark systems without password policy functionality to a version with these policies active.

Note also that:

- Password rules are not configurable using the UI; they must be specified in the installation's config file.
- When users change passwords manually via the GUI, passwords that do not meet the length rule will be rejected.
- When passwords are set manually or programmatically via the API, passwords that do not meet the length rule will trigger a password change when the user next logs in.

## Changing the Active Account's User Settings

1. Click the active account's  **Username** at the top of the screen.
2. Click **Profile** from the drop-down menu. The **User Settings** screen displays.
3. Modify the active account's attributes as described in the following sections.

## User Information and Passwords

The **Profile** section of the user settings page shows fields to update the active account's user details and password, as in the following example:

## User Settings

### Profile

Username

Full Name

Email

Company

Current Password

### Update Password

Confirm your current password

Enter new password

Re-enter new password

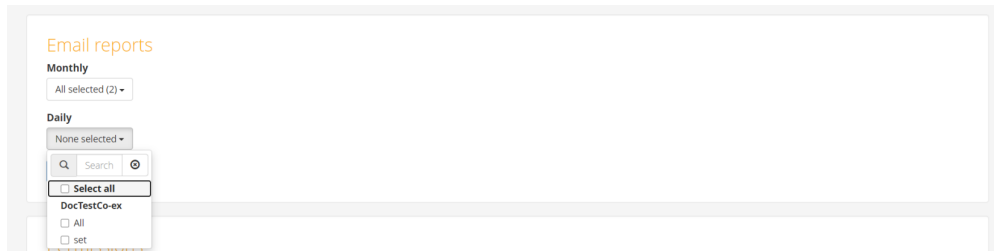
**NOTE**

The account's username cannot be changed after being set during account creation.

Click **Save Changes** after altering any profile fields before navigating away from this page. When updating the account password, click **Change password**.

## Email Report Settings

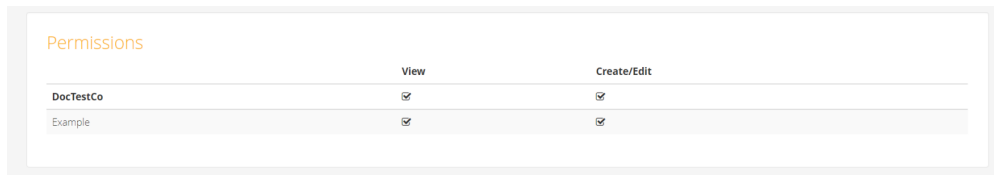
The **Email reports** section has two drop-down menus used to specify the folders to be included in monthly or daily reports, as in the following example:



Folders are grouped by organization under the organization's short name. If the active account has permission to view an organization, it can select and receive email reports from any of that organization's folders, or from all of that organization's folders.

## Permissions

The last section of the **User Settings** screen displays all entities the active account has permission to view or modify, as in the following example:



	View	Create/Edit
DocTestCo	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Example	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

# Folder Management

A V-Spark folder is an abstract container that defines a set of ASR, application, and metadata configuration settings for processing and transcribing audio and analyzing transcription results.









A folder is associated with and controlled by a single organization, and contains a subset of that organization's audio files and transcription records. Folders might be used, for example, to store audio and transcription records associated with an organization from a specific source or time period.

Click **Settings > Folders** to view and configure folders. The **Monitored Folders** list displays a sortable table of all folders that updates every minute. The following example shows the **Monitored Folders** page and lists its functionality:

The screenshot displays the 'Monitored Folders' page. At the top, there are navigation links for 'Dashboard', 'Settings', and 'Help', along with a user profile 'anewuser'. Below the navigation, there are filters for 'Company: All' and 'Organization: All'. The main content area is titled 'Monitored Folders' and shows a table of folders. The table has columns for 'Name', 'Organization', 'Server', 'Model (Channel #)', '# Speakers', 'Audio Type', and 'Created'. Each row represents a folder, and the 'Created' column shows the date '2021-04-22'. The table is annotated with numbered callouts (1-10) pointing to various UI elements: 1. Refresh icon, 2. Search bar, 3. Create folder icon, 4. Edit folder icon, 5. ASR processing status indicator (green circle), 6. Server field, 7. Play/Pause icon, 8. Copy icon, 9. Download icon, 10. Close icon.

Name	Organization	Server	Model (Channel #)	# Speakers	Audio Type	Created
folder1	orgA (co1)	https://asr.office.vocitec.com	eng1:callcenter (all)	1	Mono	2021-04-22
folder2	orgA (co1)	https://asr.office.vocitec.com	eng1:callcenter (all)	1	Mono	2021-04-22
folder3	orgB (co1)	https://asr.office.vocitec.com	eng1:callcenter (all)	1	Mono	2021-04-22
folder4	orgB (co1)	https://asr.office.vocitec.com	eng1:callcenter (all)	1	Mono	2021-04-22
folder5	orgC (co1)	https://asr.office.vocitec.com	eng1:callcenter (all)	1	Mono	2021-04-22

1. **Refresh** the ASR Server fields for all folders.
2. **Search** all folders. Search terms are queried against the text of data fields shown on the **Monitored Folders** page.
3. **+** **Create a new folder.**
4. **Edit** the folder's configuration settings or **View** the folder's analytics reports and individual audio records on the **Dashboard**.
5. **Shows ASR processing status.** A green circle ● indicates that the folder has successfully processed files. A black circle ● indicates that it has been more than one month since the folder last processed files. Hover over the indicator to display the time at which the last file was successfully processed.

6. **Shows the folder's ASR server name and authorization status.** Green  indicates an active, authorized connection. Red  indicates that connection or authorization failed.
7.  **Pause** or  **Resume** file processing for all files in the folder.
8.  **Show processing log and ASR status** for the folder.
9.  **Upload audio, metadata, or transcript files** to the folder, or  **Download a zip archive of audio, metadata, and transcript files** in the folder.
10.  **Delete the folder.**

## Create a Folder

Folders may be created using the UI, or [with the API using the /config endpoint](#). Before using either method, V-Spark must have at least one company and one organization configured for ASR processing. Refer to [Company and Organization Management](#) for information about configuring companies and organizations.

### Create a Folder with the UI

1. Click **Settings > Folders** to navigate to the **Monitored Folders** screen.
2. Click **+ Add**. The **Create New Folder** dialog displays.
3. Specify the settings displayed on the first page of the dialog, as in the following example:

Create New Folder ×

---

**Organization**  
co1 ▾ / orgA ▾

**Folder Name**  
  
Can only contain A-Z 0-9 with **no spaces**

**Servers**

**# of speakers**       **Audio Type**

PCI Redact Text       PCI Redact Audio

---

**IMPORTANT**

Settings configured on the first page of the **Create New Folder** dialog can't be changed after the folder is created, except for options in the **Servers** dropdown. Processing audio with different settings requires creating a new folder.

Use the first page of the **Create New Folder** dialog to configure the following options:

1. **Organization** – Select the folder's company and organization. A folder's company and organization determine the availability of some of its ASR configuration settings.
2. **Folder Name** – Enter a name for the new folder. Folder names are case sensitive, and must not be longer than 100 characters.
3. **Servers** – Select the servers to be used for ASR processing. Multiple servers may be selected from the dropdown if available. Server options are based on the folder's company and organization configurations.

**NOTE**

Configuring a folder to use multiple ASR servers that do not use the same language models may result in an error message indicating that "One or more servers does not have this model anymore." This error will only impact ASR processing if the language model has been removed from all of the folder's servers.

4. **# of speakers** – Select the number of speakers in the audio, either 1 or 2.
5. **Audio Type** – Select either mono (single-channel) or stereo (two-channel) audio. Use results from [the Audio Evaluator](#) to verify the audio's properties.

**NOTE**

If a folder is configured with the **# of speakers** field set to **2** and the **Audio Type** field set to **Mono**, that folder's processed audio is separated, or diarized, into 2 channels. Each speaker is assigned to a different channel. Speakers in the resultant transcript are classified as either **Agent** or **Client** using side classification.

To prevent diarization of audio with more than two speakers, configure the folder for **Mono** audio with **1** speaker.

6. **PCI Redact Text** – **Optional**. Select to enable redaction for text transcripts processed by this folder. Enabling text redaction causes the ASR engine to remove payment card information (PCI) and other sensitive numbers from text transcripts.
  7. **PCI Redact Audio** – **Optional**. Select to enable redaction for audio processed by this folder. Enabling audio redaction causes the ASR engine to remove PCI and other sensitive numbers from the processed audio file.
4. Click **Next**. The dialog displays additional folder configuration options, as in the following example:

## Create New Folder

**Link to Applications**

None selected ▾

Please be aware that applications with **custom metadata filters** may result in scores of 0 if linked folders do not share the custom metadata fields used.

**Model**


Channel 0 / Left eng1:callcenter ▾

Channel 1 / Right eng1:callcenter ▾

**Which channel is the agent on?**

Channel 0 / Left ▾

[Advanced settings](#)

- Configure callback delivery method 
- Add/remove custom metadata fields
- Add/remove ASR options
- Reject duplicate records by filename

Back

Next

Use the second page of the **Create New Folder** dialog to configure the following options:


1. **Link to Applications** — Select the applications to be used for analysis on the transcription output for all audio processed by the folder. Refer to [Linking and Unlinking Folders and Applications](#) for more information.
2. **Model** — Select the language models to be used for audio transcription requested by the folder. One model must be selected for each audio channel, and channels may use either identical or distinct language models. Model selection greatly impacts transcription accuracy because they are tuned to specific audio scenarios and environments, like voicemail or call centers. Refer to the [language models documentation](#) for more information.



3. **Which channel is the agent on?** – Select the audio channel for agent speech. This option is used only with stereo audio folder configuration. A value of **0** refers to the left audio channel, and a value of **1** refers to the right audio channel.

**IMPORTANT**

The agent channel value must be set accurately for transcription analysis, and it cannot be changed after the folder is created.

4. **Advanced settings** – Enable and configure settings for callbacks, custom metadata, ASR options, and duplicate file rejection. Enabling **Reject duplicate records by filename** prevents the folder from accepting any file with the same name as one that has already been uploaded. The remaining advanced settings must be configured after being enabled. To configure advanced settings, enable them and click **Next**. An additional **Create New Folder** dialog displays for each enabled setting except for duplicate file rejection. The last page of the configuration dialog has a **Create** button. Refer to the following topics for more information about configuring other advanced settings:
  - [Configure Callbacks](#)
  - [Configuring Custom Metadata Fields](#)
  - [Configure ASR Options](#)
5. Click **Create** to close the configuration dialog and create the folder.
6. View the ASR server status field for the newly-created folder on the **Monitored Folders** screen. A green circle  in the server status field indicates an active and authenticated connection which means the folder is ready to process audio.

## Configure Callbacks

V-Spark folders use callbacks to send transcription and analysis results to a pre-configured location when processing is complete.


For more information on callbacks, including information about retry logic when a callback fails, refer to [Using Callbacks](#) in V-Spark in the **V-Spark API Reference**.

The following is a general workflow for configuring callbacks for V-Spark folders:

1. Navigate to the **Create New Folder** or **Update Folder** dialog. Refer to the following topics for more information on configuring new or existing folders:
  - [Create a Folder](#)
  - [Modify a Folder](#)

2. Enable the **Configure callback delivery method** option on the second page of the **Create New Folder** or **Update Folder** dialog.
3. Click **Next** to navigate to callback configuration options.
4. Configure callbacks for the folder using the following fields:
  1. **Automatically send...** – Enable any of the following output types:
    - JSON** Sends a JSON version of the transcript and its associated metadata. JSON output is enabled by default.
    - MP3** Sends a post-transcription MP3 version of the transcribed audio file. This MP3 contains redacted audio if redaction is enabled for the folder.
    - Text** Sends a plaintext version of the transcript.
  2. **Callback Delivery Method** – Use the dropdown to select a delivery method, and enter its path in the textbox. V-Spark supports the following delivery methods:

Table 2. Callback Delivery Types

Delivery Method	Description	Required Parameters
<b>http://</b> and <b>https://</b>	Standard hypertext transfer protocol. Callbacks are sent to a web server listening on a specified or default port. HTTPS runs over Secure Socket Layer (SSL).	Delivery path
<b>File system</b>	Callback data is written to a specified location on the host system on which V-Spark is installed.	Local filesystem directory path
	 <b>IMPORTANT</b> When using the file system method, V-Spark's user group must be set to <b>vocisrv</b> , and that user group must have write permissions for the specified directory path.	
<b>SFTP</b>	Callbacks are sent to a server using the Secure File Transfer Protocol (SFTP).	Username and password  <b>OR</b> SSH private key
<b>AWS S3</b>	Callback data is written to the Amazon Web Service (AWS) Simple Storage Service (S3).	AWS access key ID and secret

Delivery Method	Description	Required Parameters
<b>OAuth https://</b>	As with standard HTTPS, callbacks are sent to a web server listening on a specified or default port, but the callback is authenticated with OAuth credentials instead of a username and password.	Client ID, client secret, grant type, and token URL

## Delete

### Configure ASR Options

Use the ASR options dialog screen to pass additional request parameters to the ASR engine that V-Spark uses for transcription. The options that may be specified here depend on the license and configuration of the ASR sources enabled for the folder. Parameters are represented as key-value pairs, such as the `numtrans:false` option in the following example:

Update folder9
×

---

subst : false +

ASR options:

numtrans: false ×

---

Back
Update

The following is a general workflow for adding ASR tags to V-Spark folders:

1. Enter the key for the ASR parameter to be included with transcription requests.
2. Enter the value. The value for ASR option keys may be a literal JSON string or a redirect to a file on the V-Spark host system. To redirect to a file, enter < and the directory path.
3. Click **+ Add** to add the key-value pair to the ASR options viewer. Pairs that are not displayed here are not saved when the folder is created or updated.
4. Click **Create** or **Update**.

Refer to the following topics for more information about parameters used with V-Blaze and V-Cloud ASR, and for examples of configuring specific ASR options for V-Spark folders:

- [V-Blaze Transcription Parameters](#)
- [V-Cloud Transcription Parameters](#)
- [Substitutions Overview](#)
- [Redaction Overview](#)

## Create a Folder with POST and /config

The following is an example workflow for using POST with /config to create or modify a folder:

1. Acquire the authorization token, along with the company and organization short names for the folder to be created or modified. The following must be supplied with any POST call to /config:

Token	A company token with write permissions for the target organization. Refer to <a href="#">V-Spark API Permission Requirements</a> for more information about V-Spark API tokens.
Company short name	The reference configured for a company when it is first created. Click <b>Settings &gt; Accounts</b> to view the list of company short names in the <b>Company</b> section of the <b>Accounts Settings</b> screen.
Organization short name	The reference configured for an organization when it is first created. Click <b>Settings &gt; Accounts</b> to view the list of organization short names in the <b>Organization</b> section of the <b>Accounts Settings</b> screen.

Company and organization information may also be retrieved using GET with /config. Refer to [Using GET with cURL and the /config API](#) and [Using GET with Python and the /config API](#) for more information.



2. Prepare a JSON file with the folder's configuration parameters. Using POST to create folders with the /config endpoint requires the configuration of many folder properties; as a result, it is strongly recommended to POST a JSON file with the folder's required properties. Refer to [Sample /config/folders JSON Output for a Folder](#) for the information required to assemble a folder configuration JSON file.
3. Make a POST request to the /config endpoint with the JSON file as a parameter. Refer to the following topics for more information:

- [Using POST with cURL and the /config API](#)
  - [Using POST with Python and the /config API](#)
4. If the folder exists, its configuration is changed to the submitted parameters. If the folder does not exist, it is created with the submitted parameters.
  5. Verify the folder's configuration using the **Monitored Folders** UI or a GET request to the `/config` endpoint. Refer to the following topics for more information:
    - [Folder Management](#) shows how to view a list of folders on the **Monitored Folders** screen.
    - [Using GET with cURL and the /config API](#) demonstrates how to retrieve a folder's configuration settings using the API.
    - [Reference for the /status API](#) and [Sample /status JSON and CSV Output for a Folder](#) demonstrate how to retrieve a folder's ASR processing status using the API.


## View a Folder

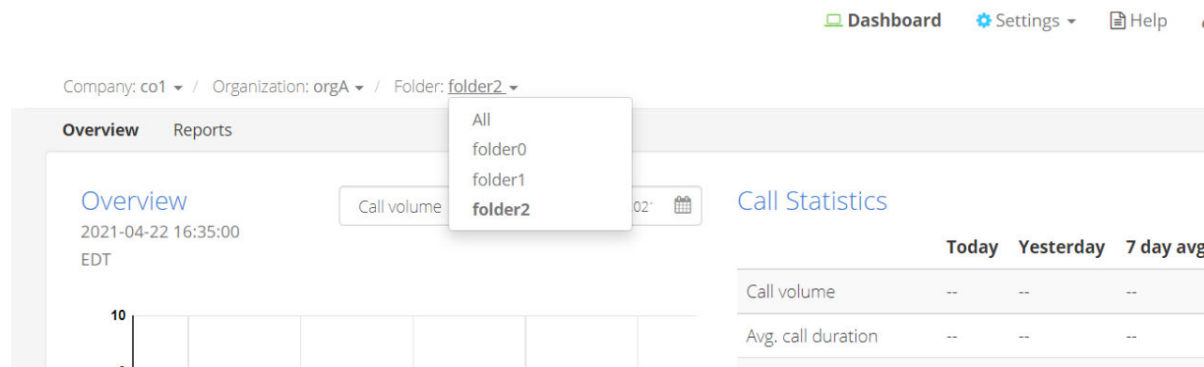
Use either of the following procedures to view a folder on the dashboard:

### View a Folder from the Monitored Folders Screen

1. Click  **Settings** > **Folders** to view the **Monitored Folders** screen.
2. Click  **View on Dashboard**.

### View a Folder from the Dashboard

1. Click  **Dashboard**.
2. Use the **Company**, **Organization**, and **Folder** dropdowns in the breadcrumb menu to select the folder to be viewed, as in the following example:



Dashboard Settings Help

Company: co1 / Organization: orgA / Folder: folder2

Overview Reports

Overview  
2021-04-22 16:35:00 EDT

Call volume

Call Statistics



	Today	Yesterday	7 day avg.
Call volume	--	--	--
Avg. call duration	--	--	--

The dashboard provides a list of audio records in the specified folder, along with application summaries, charts, and reports for those records. For more information, refer to the **Review and Analysis Guide**.

## Modify a Folder

Modifying a V-Spark folder uses the same configuration dialog and process flow as creating a folder, although some fields cannot be modified after the folder is created. These fields are disabled in the dialog.

The following is a general workflow for modifying V-Spark folders:

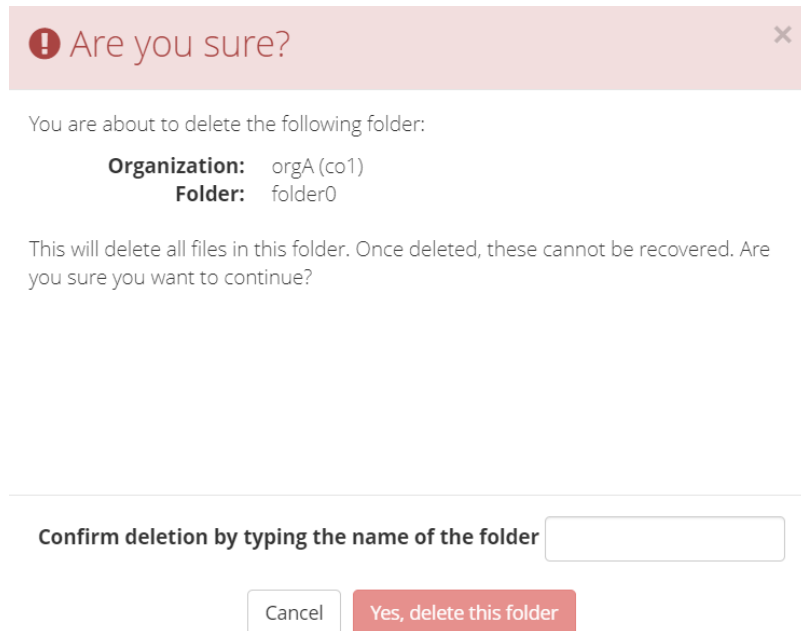
1. Click  **Settings** > **Folders**. A list of all monitored folders displays.
2. Click the  **Edit** icon next to the folder you want to modify.
3. Use the **Update Folder** dialog to modify the folder configuration. Configuration options are documented in [Create a Folder](#).
4. Click **Update** to save changes.

## Delete a Folder

Deleting a V-Spark folder queues all the audio, transcription, and analytics data it contains for deletion. This action cannot be undone. Summary charts and reports are not updated when folders and their files are removed.

The following is a general workflow for deleting V-Spark folders:

1. Click **⚙ Settings > Folders** to navigate to [the Monitored Folders screen](#).
2. Click **✕ Delete** next to the folder to be deleted. A confirmation dialog appears, as in the following example:



3. Verify the dialog shows the company, organization, and name for the correct folder before you confirm deletion.
4. Enter the name of the folder and click **Yes, delete this folder** to queue the folder and its contents for deletion.

## Linking and Unlinking Folders and Applications

Linking a folder to an application means that the the folder uses the application to analyze the text transcripts of all of that folder's processed audio. Only folders and applications within the same organization can be linked. A single folder may be linked to multiple applications, and a single application may be linked to multiple folders.


A folder-application link may be configured in either the folder's or the application's settings. Use the **Link to Applications** dropdown described in [Create a Folder](#), or use the **Link to Folders** dropdown described in [Create an Application](#).

Once a folder is linked to an application, new files uploaded to that folder will be scored by that application. Existing files may be reprocessed as described in [Reprocessing an Application](#).

When a folder-application link is removed, a **Delete** job appears in the **Application Jobs Queue**, and all of the scores for that application and folder pair are scheduled for deletion. See [Application Jobs Queue](#) for more information.



## Folder Processing Status

Click  **Show process log** on the **Monitored Folders** screen to display the **Folder processing status** window, as shown in the following example:


Folder processing status ✕

ASR processing status ↻

Queued <span style="font-size: small;">i</span>	Converting <span style="font-size: small;">i</span>	Transcribing <span style="font-size: small;">i</span>	Analyzing <span style="font-size: small;">i</span>	Analysis error <span style="font-size: small;">i</span>	Last completion <span style="font-size: small;">i</span>
0	0	0	0	0	2021-07-15T18:15:39.000Z

Processing log

Log Content ↻

2021-07-15 

Show  entries

Transcript ID	File name	Request ID	Size	Request start	Analyzed	Status
20	a2.mp3	943ce3cb-e128-4ac1-bbf7-c60fdd9ca809	201.744 KB	2021-07-15T18:15:11.000Z	2021-07-15T18:15:39.000Z	OK
19	a.mp3	2f7b598c-e626-4eb3-888f-bd2b7aeb06d9	201.744 KB	2021-07-15T18:10:09.000Z	2021-07-15T18:10:39.000Z	OK

Showing 1 to 2 of 2 entries Previous **1** Next

Close

## ASR Processing Status

The **ASR processing status** section displays the following information:

**Queued**                      The number of requests waiting to be transcribed.

<b>Converting</b>	The number of files being converted to the format required for transcription.
<b>Transcribing</b>	The number of files being transcribed.
<b>Analyzing</b>	The number of files being analyzed.
<b>Analysis error</b>	The number of files that were processed by the ASR engine but could not be ingested for analysis. Use the mouse pointer to hover over the <b>Analysis error</b> value to show the date and time of its most recent increment. If this number is nonzero or increasing, contact support for assistance.
<b>Last completion</b>	Displays the date and time at which the system last analyzed files for this folder.

## Processing Log

The **Processing log** section displays the following filter options and processing information:

<b>Show [number of] entries</b>	Select a value from the dropdown to change the number of entries displayed at one time. Use the paging controls below the table to shift between sets of entries.
<b>Date picker</b>	Limits the results to only entries with particular <b>Request start</b> dates. Dates with processing data are highlighted on the calendar. Request dates correspond to when the files were uploaded to the system, and may contain data from previous days.
<b>Transcript ID</b>	The identifier associated with the transcription results for the audio listed in the <b>File name</b> column. Transcript ID is useful for finding a specific audio record after its transcript has been analyzed. Records that fail text analysis do not receive a transcript ID.
<b>File name</b>	The name of the uploaded audio file.
<b>Request ID</b>	The identifier associated with the upload that contained the processed file. Multiple audio files uploaded together share a request ID.
<b>Size</b>	The size of the uploaded audio file. Size is displayed only if it can be determined from the data or metadata in the file.
<b>Request start</b>	The date and time that the upload completed and its contents were queued for processing.
<b>Analyzed</b>	The date and time that conversion, transcription, and analysis were all completed and processing finished.
<b>Status</b>	Indicates a file's post-processing status with one of two values: <ul style="list-style-type: none"><li>• <b>OK</b> indicates that the file was processed without error.</li><li>• <b>Analyze_ERROR</b> indicates that file processing failed and shows the error returned.</li></ul>

# Audio Management


Before uploading files to a folder, make sure the audio format is supported. V-Spark's **Audio Evaluator** can help with this verification.

## The Audio Evaluator

Voci recommends analyzing sample audio with the audio evaluator before submitting audio files to V-Spark or configuring folders for that audio. This ensures that V-Spark can use the audio for transcription and analysis, and that folder settings match audio properties.

The audio evaluator shows audio properties for the uploaded file, including the number of channels, and whether the audio is supported by V-Spark. Files submitted for evaluation are not saved.

Use the following procedure to check audio with the audio evaluator:

1. Click **Will my audio work?** on the V-Spark homepage or in the **General** section of the  **Help** page.
2. Click **Choose File** and select the file to be analyzed.
3. Click **Evaluate**. The file uploads and evaluation results display. The following example shows the results for a compatible file:

## Will my audio work?

350+ audio and video formats are supported.

To ensure that your audio is compatible, you may upload a sample for inspection.

Using the "Choose File" button below, select a single audio file and click "Evaluate".

### Congratulations!

Your file is supported.

<b>File</b>	Test1.wav
<b>Channels</b>	2 (Stereo)
<b>Sample rate</b>	8.000 KHz
<b>Bit rate</b>	256.00 Kbps
<b>Duration</b>	428 sec
<b>Format</b>	PCM
<b>Supported</b>	<b>Yes</b>

[Test another file](#) or [Upload audio](#).

**IMPORTANT**

The values displayed for **Supported** and **Channels** must match the configuration of the V-Spark folder that will process the audio the evaluated sample represents. If your audio is not supported, contact the Voci support team.

## Audio Requirements

An audio file's format and other properties have a significant impact on the accuracy of ASR transcription, and the level accuracy for a given transcript affects analytics performance. The best format for audio submitted for transcription and analysis is a lossless G.711 WAV (PCM, uLaw, or aLaw). V-Spark supports a wide variety of audio types because it converts audio before passing it to the ASR engine for transcription. The best way to check audio file compatibility is with [the Audio Evaluator](#).

Although V-Spark converts audio for transcription, that conversion cannot account for voice data lost due to suboptimal recording and encoding practices. Refer to the [Improving Transcription Accuracy](#) section of the [V-Blaze User Guide](#) for more information about how an audio file's channels and other properties impact ASR transcription.

The number of channels in an audio file also has significant impact on transcription and analysis. Audio submitted for transcription and analysis must have one or two channels. The number of channels in source audio, along with how those channels are used, affects V-Spark's ability to distinguish between speaker roles. In most cases, these roles are agent and client, and distinguishing between the two is critical for transcript analysis.

Transcription and analysis work best with two-channel (stereo) audio that has each speaker role on a separate channel. Audio with more than one speaker on the same channel may be diarized, a process that separates the audio into two channels and assigns each speaker to a different channel.

**IMPORTANT**

V-Spark does not support audio with more than 2 channels.

## Filename Characters

The names of uploaded audio files and zip archives must adhere to the installation's filename requirements whether they are uploaded through the GUI, or with the API's `/transcribe` endpoint. When uploading a zip file, only the name of the zip file is validated against this expression; files inside the zip are not checked. This feature was first implemented with version 4.0.1-3 to help protect against remote code executions. By default, these characters are not permitted in uploaded filenames: `#* < > : ? / \ | { } $ ! ' ` " = ^`

To disable filename validation, set the `filename_validation` system configuration setting to **off**. To define custom filename character requirements, specify a regular expression for the `filename_validation_pattern` system configuration setting.

## Rejecting Duplicate Audio by Filename

Files are not required to have unique names at a system level, but as of V-Spark 4.2.0-1, individual folders may be configured to reject files with duplicate filenames. In either case, filenames should be unique as a best practice. Consider adding the file's timestamp, call ID, or a UUID to create a unique filename. Duplicate filenames make some processing take longer.



### NOTE

Independently of the duplicate rejection setting, if two files with identical names are submitted to the same folder at the exact same second, only one of those files will be processed.

When a folder has the deduplication setting enabled, that folder will reject file uploads in the following scenarios:

- A file is uploaded with the same name as a previously uploaded file.
- A zip file contains a file with the same name as a previously uploaded file.
- A zip file contains two or more files with the same name.

Filename-based deduplication may fail if the first file is still in the Job Manager queue waiting to be processed.

The entire zip file is rejected when a duplicate file is detected inside the zip. Duplicate file rejection for zip files nested inside other zip files is not supported. When folder-level deduplication causes a file to be rejected, V-Spark generates a **WARNING**-level message in **server.log** and the **Activity Log**.

A request submitted to the `/transcribe` API endpoint with an invalid filename parameter fails and returns HTTP error code 422.

## Upload Audio to a Folder

There are 2 ways to upload audio files to V-Spark. The first is a convenient, manual method using the web browser. The second method can be used for uploading audio via web services.

The types of files that are uploaded using the V-Spark web interface can be:

- zip files containing one or more audio files and optional metadata files in JSON or XML format
- Any single file with or without a file extension. These should generally be audio files, but any type of file can be uploaded, with or without a file extension. Files that are not supported by V-Spark will show in the processing log as being **UNSUPPORTED**.

**NOTE**

Previously processed JSON transcripts can be re-uploaded to any folder in V-Spark using these methods without the ASR engine needing to re-transcribe the files. If you want to maintain the association between the audio and transcript files, both files must be uploaded in a zip file and must share the same file name except for the extension. (For example, an audio file called *File1.wav* should have a corresponding JSON transcript file called *File1.json*).

See [Folder Processing Status](#) for more details about checking the status of processed and pending files.

Once you have successfully uploaded your audio, you can then download transcripts of all the audio files contained in a folder by going to the Folders section and using the download button shown in [Folder Management](#).

## Web-based Audio Upload

As shown in [Folder Management](#) item 6, there is a blue upload icon to the right of each folder that enables you to upload a single audio file or a zip of multiple audio files to be ingested into V-Spark. File size is limited to 1 GB. Once your file has been uploaded, you can navigate to the **Dashboard** page and select your folder from the breadcrumb menu. After a few minutes you will start to see your audio data appear.

Whenever you upload audio files, you will see a **Request ID** in the **Upload Audio Files** pop-up window after your upload has been confirmed, as shown in the following example:

Upload Audio Files Testing-Testing-test

Select a single audio file or a zip file containing audio files.

Choose File Set 1.zip

File size must not exceed 1GB

**Upload complete.**

Request ID: 8c0dfd22-2763-4e0a-9ea6-3553b521405d

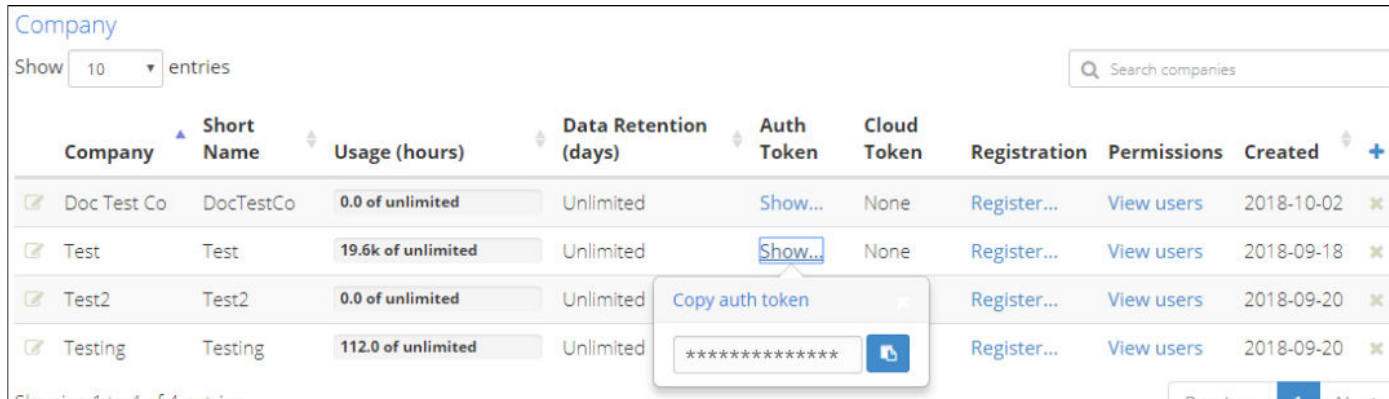
Upload

This **Request ID** will also appear in the JSON transcript, enabling you to track each transcript back to the original upload, view the Request ID on the **File details** page, and use the Request ID in search terms in the UI.

## Web Services Audio Upload

Audio files can also be uploaded using a POST request made to V-Spark's `/transcribe` API with the audio data to be decoded. **File size is limited according to your system's configuration. The default limit is 250 MB.** POST must be encoded as a multi-part/form-data request, with the audio to be decoded in a file field and the V-Spark Authorization token in the token field.

The **V-Spark Authorization Token** can be found on the Settings page with Company information, as shown in the following example:



Company	Short Name	Usage (hours)	Data Retention (days)	Auth Token	Cloud Token	Registration	Permissions	Created
Doc Test Co	DocTestCo	0.0 of unlimited	Unlimited	Show...	None	Register...	View users	2018-10-02
Test	Test	19.6k of unlimited	Unlimited	Show...	None	Register...	View users	2018-09-18
Test2	Test2	0.0 of unlimited	Unlimited	Show...	None	Register...	View users	2018-09-20
Testing	Testing	112.0 of unlimited	Unlimited	Show...	None	Register...	View users	2018-09-20



The following is an example POST to a V-Spark installation on the host `example.company.com` made using the `curl` command:

```
curl -F token=00112233445566778899aabbccddeeff \
-F "file=@path/to/sampleaudio.zip;type= application/zip" \
-X POST http://example.company.com:3000/transcribe/org_shortname/samplefolder
```

Note that `org_shortcode` in this sample `curl` command refers to the Short Name assigned to the target organization, which can be found on the Settings page containing the Organization information, as shown in the following example:

Organizations

Show  entries

Organization	Company	Short Name	Data Retention (days)	Timezone	Created	
 Doc Testing	Doc Test Co	DocTestCo-DocTesting	90	US/Eastern	2018-02-16	

Showing 1 to 1 of 1 entries (filtered from 2 total entries)

Previous **1** Next

Users who have Amazon Web Services (AWS) Simple Storage Service (S3) configured can also import zipped input directly from S3 via the V-Spark API, such as in this example:

```
curl -F token=0123456789abcde0123456789abcde01 \
-F aws_id=012345678901234567890 \
-F aws_secret=01234567890123456789012345678901234567890 \
-F s3key=s3://example.company.com/documentation-TEST.zip \
-F region=us-east-1 \
-X POST http://example.company.com:3000/transcribe/Test-Testing/Test01
```

9700fc31-f608-48b5-aaaf-bd264e811d9a

For more detailed information on using the V-Spark API, refer to the [V-Spark API Reference](#).

## Bulk File Download

Bulk download of MP3s, JSON files, and text transcripts are available via the orange download icon shown in item 7 in [Folder Management](#). Downloads are sent as one or more zip file(s), with up to 10,000 files per zip file.



### NOTE

The maximum size of this zip file is 2 GB. Trying to download files that produce a zip file larger than 2 GB will fail with an error message. To work around this issue, you can download multiple sets of files, using a smaller date range for each or by downloading specific types of files together.



## Deleting Audio Files from a Folder

Delete audio files from V-Spark using the UI or with the API using the `/search` endpoint's **DELETE** HTTP method. Once the deletion is confirmed or the API call is made, V-Spark queues the file for deletion.

Deletion entails the removal of the audio file, its transcript and transcription results, and the rest of its system record. Summary charts and tables are not updated when an individual file is removed, but the file will no longer be available in the [Dashboard Files View](#), nor will it appear in search results. A system under heavy load may take several minutes to fully delete the file and its record details, but this situation is unlikely.

## Deleting Audio Files with the UI



### NOTE

To delete audio using the UI, users must have write permissions for that audio record's organization.

1. Navigate to the [Dashboard Files View](#).
2. Click the **✕ Delete** icon for the audio file to be deleted. A confirmation dialog displays.
3. Once confirmed, V-Spark queues the file for deletion.

## Using DELETE with /search

Files to be deleted with the `/search` endpoint must be filtered by company and organization, and may also be filtered by folder. Each file to be deleted must be specified individually by `tid`.

### Synopsis - deleting single files

```
DELETE /search/CO_SHORT/ORG_SHORT?token=TOKEN&terms.tid=TID
DELETE /search/CO_SHORT/ORG_SHORT?token=TOKEN&tid=TID
DELETE /search/CO_SHORT/ORG_SHORT/FOLDER?token=TOKEN&terms.tid=TID
DELETE /search/CO_SHORT/ORG_SHORT/FOLDER?token=TOKEN&tid=TID
```

Multiple files may be deleted with a single request by specifying the `multi=true` parameter in addition to the `tids`. By default, the maximum number of audio files that can be deleted at once is 1000. This maximum can be changed by updating the `simultaneous_tid_deletion_max` system configuration option.

### Synopsis - deleting multiple files

```
DELETE /search/CO_SHORT/ORG_SHORT?tid=TID1,TID2&token=TOKEN&multi=true
DELETE /search/CO_SHORT/ORG_SHORT/FOLDER?terms.tid=TID1,TID2&token=TOKEN&multi=true
DELETE /search/CO_SHORT/ORG_SHORT/FOLDER?terms.tid=TID1,TID2&token=TOKEN&multi=true
DELETE /search/CO_SHORT/ORG_SHORT/FOLDER?tid=TID1,TID2&token=TOKEN&multi=true
```

Using the API to delete files requires the following variables and parameters:

<i>CO_SHORT</i>	The short name of the company by which the file is filtered.
<i>ORG_SHORT</i>	The short name of the organization by which the file is filtered.
<i>FOLDER</i> (optional)	The name of the folder by which the file is filtered.
<i>TOKEN</i>	Either the root authorization token, or a company authorization token with write permissions for the folder containing the file to be deleted.
<b>tid</b> = <i>TID</i> or <b>tid</b> = <i>TID1,TID2,...</i>	The <b>transcriptID</b> of the file or files to be deleted. The <code>terms.tid</code> and <code>tid</code> parameters are equivalent and interchangeable.
<b>multi</b> =true	If multiple <b>transcriptIDs</b> are provided for the <code>terms.tid</code> or <code>tid</code> parameters, <b>multi=true</b> must be specified, or the request will return a 400 error.

The following is an example cURL call using the `/search` endpoint's **DELETE** method to delete a single file:

```
curl -X DELETE 'http://vspark-example.com:3000/search/docs-co/docs-org?token=12345678&tid=999'
```

The preceding example deletes an audio file that is associated with the `docs-co` company and `docs-org` organization, using the token parameter `12345678` and a **transcriptID** of `999`.

The following cURL example uses the `/search` endpoint's **DELETE** method to delete three files:

```
curl -X DELETE 'http://vspark-example.com:3000/search/docs-co/docs-org?token=12345678&tid=9991,9992,9993&multi=true'
```

The preceding example deletes three audio files associated with the `docs-co` company and `docs-org` organization, using the token parameter `12345678` and the **transcriptIDs** `9991`, `9992`, and `9993`.

## Metadata Management

Audio files may include standard metadata, such as agent identification and recorded date. Audio files may also include custom metadata; usually, this metadata is defined by the customer using the recording system.

The following is a general workflow for using custom metadata when processing audio files:

1. Establish metadata requirements for your processing flow. Take note of how special fields (**agentid**, **datetime**) are populated during processing and whether any additional custom fields will be required for your use case.
2. [Configure a folder's custom metadata](#) fields individually using the UI or in a batch by uploading a file.
3. Prepare the metadata files in JSON or XML format, noting [metadata restrictions](#) and [formatting and syntax requirements](#).
4. Upload metadata files—either individually or with audio files—using the same methods as audio files:
  - with the V-Spark UI as explained in [Web-based Audio Upload](#), or
  - with the `/transcribe` API endpoint and web services as explained in [Web Services Audio Upload](#).
5. [Search or view the custom metadata](#) using the UI or in transcription output.

## Configuring Custom Metadata Fields

When you create or edit an existing folder, you can configure custom metadata fields for that folder as shown in the following example of the **Update Metadata field names** screen:

Update customMetadata

Enter metadata field name +

Custom metadata field names:

client name phone number

Back Update

To add custom metadata fields to a folder:

1. Click **Settings > Folders**. A list of all monitored folders displays.
2. To update an existing folder, click the **Edit** icon on the row with the folder you want to edit. To create a new folder, click the **+ Add** icon.
3. On the second page of **Create/Edit Folder** window, enable **Add/remove custom metadata fields** and click **Next** to display the **Update Metadata field names** dialog.
4. To add a metadata field name, type it into the **Enter metadata field name** field and click the **+ Add** button or press enter. To upload a file with multiple field names, click the **Upload** button and add the file from the browser. The file should contain the name of one metadata field in plain text on each line. For example:

```
client-phone
client-name
account-number
agent-name
```

All added field names are listed under **Custom metadata field names**. To remove a field name, click its ✕ **Delete** icon.



#### IMPORTANT

Custom metadata field names should not begin with =, +, -, or @ because these characters may cause unexpected system behavior.

Custom metadata field names beginning with + or - are not included in search results. Field names beginning with any of the aforementioned characters are prefaced with an apostrophe ' in exported CSV reports to prevent spreadsheet applications from interpreting these labels as formulas.

5. Save the list of custom metadata tags by clicking the **Create** or **Update** button. Changes will not be saved if you navigate away from the window before saving.

## Metadata Restrictions

All metadata uploaded to V-Spark has the following restrictions:

- **All metadata field names are case-insensitive**, including reserved and custom field names. For example, **AgentID**, **agentid**, and **AGENTID** are equivalent metadata fields.
- Custom metadata values and field names may be composed of any valid Unicode characters, except for the reserved non-alphanumeric characters : (colon, Unicode 003A) and = (equals sign, Unicode 003D).
- If you upload metadata via XML rather than JSON, your **metadata field names cannot contain spaces**. Metadata *values* can contain spaces in both XML and JSON.



#### IMPORTANT

Custom metadata field names should not begin with =, +, -, or @ because these characters may cause unexpected system behavior.

Custom metadata field names beginning with + or - are not included in search results. Field names beginning with any of the aforementioned characters are prefaced with an apostrophe ' in exported CSV reports to prevent spreadsheet applications from interpreting these labels as formulas.

## Reserved Metadata Field Names

The following field names are reserved for V-Spark functions. Key values for these fields may be submitted as metadata, but they **cannot** be configured as custom metadata fields for folders.

_all	call_tag	file	sentiment
_id	caller	filenamelowercase	sentiment_scores
agent	caller_v3	gender	source
agent id	client	jm_version	speakers
agent_v3	client_data	model	started
agentid	confidence	nchannels	streamtags
all	datetime	nsubs	tag
app_data	diarization_score	performance_stats	tid
asr	doc id	recvdate	transcript id
audio_duration	done date	recvtz	utterances
audio_properties	duration	request id	
audiosecs	ended	requestid	

Although reserved field names may not be configured for folders, metadata **values** for those fields may be submitted in uploaded JSON as part of a reprocessing request. With the exception of the **agentid**, **datetime**, and **duration** fields, any submitted metadata values appear in the **client\_data** section of the audio record's JSON output whether or not those metadata values were indexed.



### WARNING

Key values supplied for **audio\_properties**, **diarization\_score**, and **jm\_version** are overwritten by the system. Any submitted values for these fields may be lost.

## Special Usage Considerations for Fields in the Reserved List

The key values for some reserved metadata fields may be client-supplied. For call center environments, values for **agentid** and **datetime** should be submitted as a best practice as they are very commonly used. Two additional fields, **audio\_duration** and **duration**, may also be submitted, but should not be as a best practice. Overriding or failing to provide values for these fields as a part of processing flow may result in abnormal behavior as noted in the following list:

### **agentid**

- Variable length string limited to 100 characters.
- The only searchable identifier for a single agent; required for applications to create and reference agent scorecards.
- If a value is supplied for **agent id**, its value is interpreted in the same manner and stored in the **agentid** field.

**datetime**

- If blank ("" or **NULL**), **agentid**'s value displays as **None**.
- Represents the audio's recording date and time.
- If this value is not provided with audio data, the system ingestion time becomes the call's date of record.
- String that may be expressed in any format compatible with the [dateutil](#) module for the standard Python module **datetime**.
- In V-Spark examples, expressed as *YYYY-MM-DD HH:MM:SS*.
- Always assumed to be in the organization's time zone.

**audio\_duration** and **duration**

- Represents the audio recording's duration in seconds.
- Users may override the system-generated value by providing any plain integer value for either the **audio\_duration** or **duration** fields. The **duration** field takes precedence if both fields are provided.
- Overriding this field is not recommended. Doing so is usually not necessary, and updating the field to the actual duration value requires reprocessing the audio.
- To ignore client-supplied **duration** metadata values by default, enable the **ignore\_client\_duration** system configuration option.

**NOTE**

The **agentid**, **audio\_duration**, **datetime**, and **duration** fields cannot be configured as custom metadata fields for a folder in any case because they are used by the system.

## Preparing Metadata Files

Once you have configured your metadata fields, you can upload your audio along with one metadata file per call. Currently V-Spark accepts JSON or XML files that have the same filename as the audio file, but with **.xml** or **.json** extension in place of the original extension.

For example, an audio file named **ABC.wav** could be uploaded with a metadata file named **ABC.json** or **ABC.xml**. If you are uploading JSON metadata files along with previously processed transcripts, your metadata files must use the **.jsonmeta** extension. Your JSON or XML file must be 100% valid; V-Spark does not do any error correction on metadata files.

**NOTE**

Metadata timestamps without time zone information are interpreted with the organization's time zone and *not* the system time zone.

The following is an example of the XML format:

```
<?xml version="1.0" encoding="UTF-8" standalone="no" ?>
  <metadata>
    <agentid>10005</agentid>
    <datetime>2015-06-02 13:29:20</datetime>
    <agentname>John Smith</agentname>
    <client-phone>123-456-7890</client-phone>
  </metadata>
```

The following is an example of the JSON format:

```
{
  "metadata": {
    "agentid": "10005",
    "datetime": "2015-06-02 13:29:20",
    "agentname": "John Smith",
    "client-phone": "123-456-7890"
  }
}
```



#### NOTE

A leading - in custom metadata is reserved for exclude phrases. As a result, any leading - at the beginning of your custom metadata values will be replaced with #. For example, if you have a fieldname for Call Direction with a metadata value of -inbound, the metadata value will be changed to #inbound.

## Uploading Metadata and Audio

Metadata can be uploaded by the same methods as audio files: via [web-based interface](#) or via [web services](#), as described in [Upload Audio to a Folder](#). Metadata values for a particular transcript may also be replaced using the `/metadata` API endpoint as described in the `/metadata` section of the [V-Spark API Reference](#).

Processing metadata with audio ensures that, with [some restrictions and exceptions](#), client-submitted metadata fields and their key values will be listed in the `client_data` portion of the audio record's JSON transcript. Client-submitted metadata keys will not be indexed and searchable for that record **unless** those fields are configured as custom metadata fields for the audio record's folder, or unless they are standard system metadata fields needed for processing.



To upload metadata and audio together, place both sets of files in the same zip file and import the zip file using the upload method of your choice. The audio and metadata file must have the same name, not including the file extension. You **must** use zip files to upload metadata and audio together in a clustered V-Spark implementation.

**NOTE**

If you upload JSON metadata files along with previously processed transcripts, your metadata files must use the extension `.jsonmeta`.

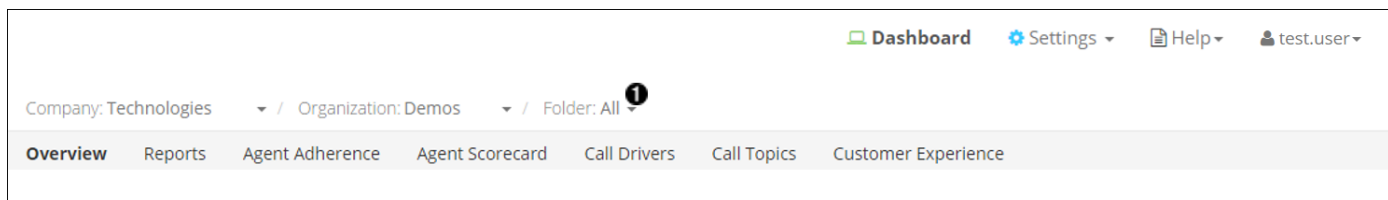
## Viewing Custom Metadata

Custom metadata for individual transcripts can be viewed in four places:

- Search results in the [Dashboard Files View](#)
- CSV reports created using the [Dashboard Files View](#)
- A transcript's File Details page
- A transcript's JSON output

## Viewing Custom Metadata in Search Results

1. Navigate to the [Dashboard](#) and select the folder whose metadata you want to view from the breadcrumb menu shown in the following example:



2. Use the **Term** dropdown to select the metadata field for the search, and enter the field values to search for in the textbox. Custom metadata field names appear at the end of the **Term** list, as with the **agentpk** and **ani** entries in the following example:

The screenshot shows a search interface titled "Term". At the top right, there are two buttons: "Plain" (highlighted in green) and "Regex". Below this is a search bar with a dropdown menu currently set to "Speakers". The search bar contains the placeholder text "Enter text to search" and a "+" icon. A dropdown menu is open, listing the following metadata fields: "Speakers", "Agent", "Client", "File", "Agent ID", "Transcript ID", "Request ID", and "Tag". Below these are two custom entries: "agentpk" and "ani". The "ani" entry is highlighted with a blue bar. To the right of the dropdown menu, there is a checkbox labeled "Max" which is checked, and another "Max" label below it. A blue horizontal bar is positioned below the "ani" entry, extending to the right.

- Files that contain metadata fields and values matching the search display with the metadata field and value listed at the bottom of each search result entry, as with the **field0** entries in the following example:

The screenshot shows a search interface with a search bar containing 'field0: usa'. Below the search bar is a table with the following columns: File Name, Agent ID, Time (US/Eastern), and Duration. The search results are as follows:

File Name	Agent ID	Time (US/Eastern)	Duration
759925783659.wav	701	2021-11-22 2:38:28 pm	0:01:18
759925733067.wav		2021-11-18 5:16:34 pm	0:01:07

Each search result entry has a 'field0: usa' tag at the bottom. The interface also includes a 'Term' dropdown menu with options like Speakers, Agent, Client, File, Agent ID, Transcript ID, Request ID, and Tag. There are also sliders for field0 through field5, with field0 set to 'Max' and field4 set to '100%'.

### Viewing Custom Metadata in Search Results and CSV Reports

- Navigate to the **Dashboard** and select the folder whose metadata you want to view from the breadcrumb menu shown in the following example:

The screenshot shows a dashboard breadcrumb menu with the following structure: Company: Technologies / Organization: Demos / Folder: All. Below the breadcrumb menu is a navigation bar with the following options: Overview, Reports, Agent Adherence, Agent Scorecard, Call Drivers, Call Topics, and Customer Experience. The dashboard also includes a top navigation bar with links for Dashboard, Settings, Help, and a user profile for test.user.

- Use the **Show/hide columns** dropdown in the **Files View** to enable the metadata fields to display. The dropdown shows all standard and custom metadata fields for the selected folders, as shown in the following example:

The screenshot displays the V-Spark Files View interface. On the left, there are search filters for Term, Gender, Emotion, Call Duration, Call Silence Time, and Client Voice Clarity. The main area shows a table with columns: File Name, Agent ID, Time (US/Eastern), Duration, Request ID, Score, field0, and field1. Two entries are shown. On the right, the 'Show / Hide columns' dropdown menu is open, listing 'Standard metadata' and 'Custom metadata' fields with checkboxes to toggle their visibility.

File Name	Agent ID	Time (US/Eastern)	Duration	Request ID	Score	field0	field1
759925733067.wav		2021-11-19 4:27:46 pm	0:01:07	f34d7902-d351-451c-bbd6-2e0c765faca9	1.0000	usa	sela
759925783659.wav		2021-11-19 4:27:46 pm	0:01:18	f34d7902-d351-451c-bbd6-2e0c765faca9	1.0000	usa	swla


- Columns for each enabled field appear in search results and in CSV report exports. To export results for the files shown, click **Export (CSV)**.
- The **Download Export CSV** dialog appears, as shown in the following example:

The screenshot shows the 'Download Export CSV' dialog box. It has a title bar with a close button. Inside, there are two sections: 'Select fields' with a dropdown menu showing '12 selected', and 'Select file range' with a dropdown menu showing '1 - 10000'. At the bottom, there is a blue button labeled 'Generate export'.

- Verify the enabled metadata fields and alter them as needed, select the file range to be included in the report, and click **Generate export**.

## Viewing Custom Metadata on the File Details page

1. Navigate to the File Details page of a transcript whose metadata you want to view.
2. The File Details page lists all file metadata, with custom fields at the end of the list, as with the **agentpk** and **ani** fields in the following example:

<b>Duration</b>	0:16:01
<b>Silence</b>	34.8 %
<b>Overtalk</b>	<b>3.1 %</b>
<b>Agent Clarity</b>	88.4 %
<b>Client Clarity</b>	86.3 %
<b>Agent Gender</b>	male
<b>Client Gender</b>	female
<b>Overall Emotion</b>	<b>Improving</b>
<b>Agent Emotion</b>	<b>Improving</b>
<b>Client Emotion</b>	<b>Improving</b>
<hr/>	
<a href="#">Expand all</a> 	
<b>agentpk</b>	043
<b>ani</b>	0000000419

## Viewing Custom Metadata in JSON output

1. Navigate to the File Details page of a transcript whose metadata you want to view.
2. Click the **JSON** link to download a JSON version of the transcript.
3. Custom metadata will appear in the **client\_data** section of the JSON transcript. It will resemble the following example:

```
"client_data": {  
  "manager_name": "Melissa Thompson",  
  "total_hold_time": "25",  
  "skill": "0",  
  ...  
}
```

# Application Management

Applications score audio for particular sets of phrases that correspond to various categories. The next few topics explain how to configure new applications, how to manage applications, and how to view application scores.

Choose **Applications** from the **Settings** menu to display a list of defined applications. In the **Applications** list, you can create and delete applications, monitor the application queue, modify application settings, access the application configuration editor, and reprocess an application. This list is shown in the following example:

The screenshot shows the 'Applications' management page. At the top, there are tabs for 'Accounts', 'Folders', and 'Applications'. Below the tabs, there is a search bar and a 'Show 10 entries' dropdown. The main content is a table with columns: Name, Folders, Organization, Template, and Created. Each row represents an application and includes several action buttons: a blue plus sign (2), a green play button (6), a blue square with a plus sign (4), a green play button (6), and a red X (7). A legend at the bottom explains these buttons.

Name	Folders	Organization	Template	Created	Actions
Agent Scorecard	1 folder	Demos (Technologies)	Agent Scorecard	2017-06-23	[Blue +] [Green Play] [Red X]
Agent Adherence	2 folders	Demos (Technologies)	Custom	2017-06-23	[Blue +] [Green Play] [Red X]
Customer Experience	1 folder	Demos (Technologies)	Customer Experience	2017-06-23	[Blue +] [Green Play] [Red X]

- ① View application jobs queue
- ② Create a new application
- ③ Edit application settings
- ④ Edit application categories and phrases
- ⑤ View application on dashboard
- ⑥ Reprocess an application
- ⑦ Delete an application

## Create an Application

Create a new application by pressing the blue + button. The **Create New Application** dialog displays:

**Create New Application** [X]

**1 Organization**  
Technologies ▾ / Demos ▾

**2 Application Name**  
testapp  
Can only contain A-Z 0-9

**3 Default Score Type**  
 Hit/Miss  Coverage

**4 Template Options**  
Use preset template ▾

**5 Templates**  
Agent Scorecard ▾  
Please be aware that applications with **custom metadata filters** may result in scores of 0 if linked folders do not share the custom metadata fields used.

**6 Link to Folders**  
Demos ▾

**Create**

- 1 Organization** – Dropdown list of companies and organizations to which the application belongs.
- 2 Application Name** – The application name, which is limited to numbers, uppercase letters, and lowercase letters.
- 3 Default Score Type** – Choose the default score type to be *displayed* on graphs. **Hit/Miss** is selected by default. See the **V-Spark Application Development Guide** for a detailed explanation of scoring.
- 4 Template Options** – Offers three options for template generation:



- **Build from scratch** — create a custom application
  - **Use preset template** — use a defined template, if any have been provided with V-Spark
  - **Copy from existing organization** — enables users to create a new application based on any existing application
- 5 **Templates** — Depending on the template option selected, this is a list of either preset templates or existing applications from other organizations to copy.
  - 6 **Link to Folders** — The name(s) of the folder(s) this application will score.

## Modify an Application

Modify an application by selecting the **Edit** icon to the left of the application in the **Settings, Applications** section. The fields in the dialog display that results are the same as the **Create New Application** window.

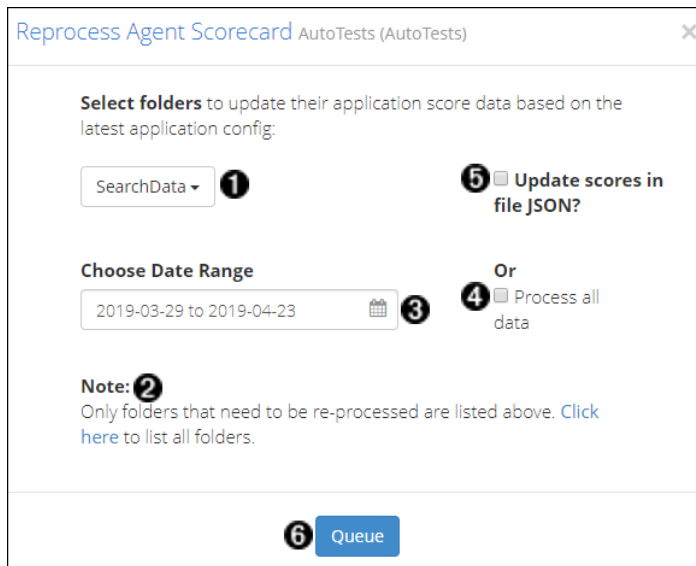
## Reprocessing an Application

Reprocessing an application consists of scoring a folder's *existing transcripts* against an application configuration. Reprocessing an application is necessary when a folder that already contains transcribed audio is linked to a new application, or when the application's configuration is modified.

Applications can be reprocessed from the **Applications** page found in the **Settings** menu. A reprocess button is available for every application listed in the **Applications** table. The reprocess button appears **active** (green) when the application has been modified, even if changes do not result in new scores.

Name	Folders	Organization	Template	Created	
Agent Adherence	1 folder	Demo (Technologies)	Custom	2019-01-25	
Agent Scorecard	2 folders	Demo (Technologies)	Agent Scorecard	2019-01-25	1
Customer Experience	No folders	Demo (Technologies)	Custom	2019-01-25	

1. Locate the application in the **Applications** table and select the green **Reprocess Application** button on the right-hand side of the table to view the "Reprocess Agent Scorecard" dialog.



Reprocess Agent Scorecard AutoTests (AutoTests)

Select folders to update their application score data based on the latest application config:

SearchData 1

Choose Date Range 3

2019-03-29 to 2019-04-23

Note: 2  
Only folders that need to be re-processed are listed above. [Click here](#) to list all folders.

5  Update scores in file JSON?

Or

4  Process all data

6 Queue

Use the dialog to choose which folder and transcripts should be rescored using the current application configuration.

1. **Select folders** for reprocessing. By default, this drop-down will only list folders with transcripts that have not been scored against the application's current configuration.
2. **List all folders** that are linked to the selected application in the folder selection drop-down.
3. **Choose Date Range** for transcripts to be reprocessed. This action will rescore all transcripts starting from the chosen start date through the chosen end date.
4. Select to **process all data** in the selected folders
5. Select to **update scores** in JSON transcript files. This option will slow reprocessing and should only be used if you use the bulk download feature or APIs to extract JSON transcripts for analysis.
6. **Queue** application reprocessing for the selected date range

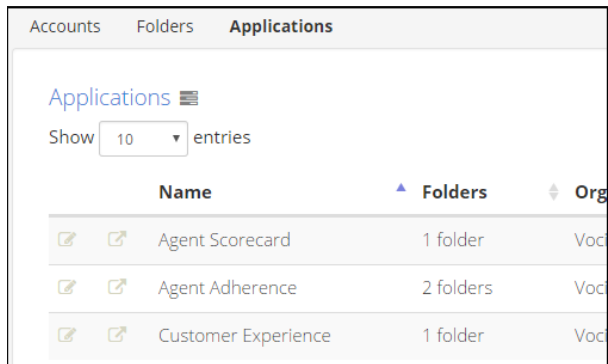
Once application reprocessing jobs have been queued, the progress of scoring can be monitored by viewing the Application Jobs Queue.

## Delete an Application

To delete an existing Application, select the delete icon on the right side of the Application, as shown in [Application Management](#). You will then be prompted to verify the deletion.

## Application Jobs Queue

The Application Jobs Queue enables you to monitor the progress of various jobs including application reprocessing and folder application score deletion. It will display automatically after submitting a reprocessing or delete request, or can be displayed using the queue button found at the top of the Application Settings page.



Name	Folders	Org
Agent Scorecard	1 folder	Voc
Agent Adherence	2 folders	Voc
Customer Experience	1 folder	Voc



The queue displays **Application**, **Folder**, and **Organization** names as well as the **Type** of job (Reprocess, Summarize, or Delete), the **Date range** that was selected for reprocessing, **Queue Start**, and the **Status** of each job. **Queue Start** is a timestamp of when a job starts reprocessing after that job has been added to the queue.

All reprocessing jobs remain in the application queue for 30 minutes. The **Status** column indicates the status of the job.


- **Waiting...** — In the queue to be reprocessed.  
Waiting jobs will also have a **stop** button visible. Use the stop reprocessing function to remove this waiting job from the queue.
- **Percent Completed** — Reprocessing has started, and is partially complete.  
Reprocessing jobs will also have a **stop** button visible. Applications that are reprocessing cannot be edited in the application editor. Use the stop reprocessing function if you need to make an application configuration change for improved scoring. A reprocessing job that is stopped early may have incomplete or inaccurate file scores which may or may not be displayed on the dashboard.
- **Completed** — Processed successfully.
- **WARNING** — Processed, but difficulties were encountered.
- **ERROR** — Not processed successfully.

If there is a warning or error, contact your system administrator for more information.

Application Jobs Queue ✕

Application	Folder	Organization	Type	Date range	Queue Start	Status	
AppStatsGold	StatsGold	AutoTests-AutoTests	Reprocess	2017-09-03 to 2017-09-09	15:13:56	Waiting...	
AppStatsGold	SearchData	AutoTests-AutoTests	Summarize	2017-09-03 to 2017-09-09	15:13:56	Completed	
AppStatsGold	SearchData	AutoTests-AutoTests	Reprocess	2017-09-03 to 2017-09-09	15:13:56	Completed	
Agent Scorecard	SearchData	AutoTests-AutoTests	Reprocess	2016-08-30 to 2016-09-02	15:12:57	0%	

## System Status, Settings, and Activity


V-Spark system administrators may manage [system-wide settings](#), and may view system status, processing and performance information, and [user activity and system events](#) by using two options in the  **Settings** menu: **System** and **Activity Log**. These options are available only to system administrator accounts.

### System and Performance Monitoring



#### NOTE

The **System Status** page was revamped with V-Spark version 4.0.2-1. Systems using any 4.0.1 release will see data laid out differently from how it is described on this page. Systems using any release prior to 4.0.1-7 do not have access to the **System Status** page.

Click  **Settings** > **System** to view the **System Status** page. Data on this page can be used to view system attributes, service status, and data processing flows.

System information is divided into two tabs: **System Status** shows basic information about host system hardware, along with service uptimes, usage, and other metrics. **Processing & Performance** shows audio call, folder, ASR, and callback queue and processing metrics. The data fields displayed in each tab are listed in the following tables:


**Table 3. System Status Tab Fields**

Section	Description
<b>System</b>	
<b>CPU</b>	Displays host CPU attributes, including the number of CPUs, threads per core, cores per socket, and model name.
<b>Load Averages</b>	Displays the average system load over the last minute, 5 minutes, and 15 minutes.
<b>Memory</b>	Displays memory usage, including slab and sreclaimable memory.
<b>Services Overview</b>	
<b>Uptimes</b>	Displays the active status for each V-Spark component, and if it is active, indicates how long it has been running.

Section	Description
<b>Elasticsearch</b>	Displays the attributes of each Elasticsearch node, along with the number of objects stored, the space consumed, the latest and oldest documents, and the total number of calls stored.
<b>Redis</b>	Displays the memory usage and number of objects stored in Redis.
<b>SQL</b>	Displays the space consumed (in MB) and number of objects stored in SQL.
<b>(Local) Storage</b>	Displays the size, usage, availability, use percentage, and mount location of each local storage filesystem.

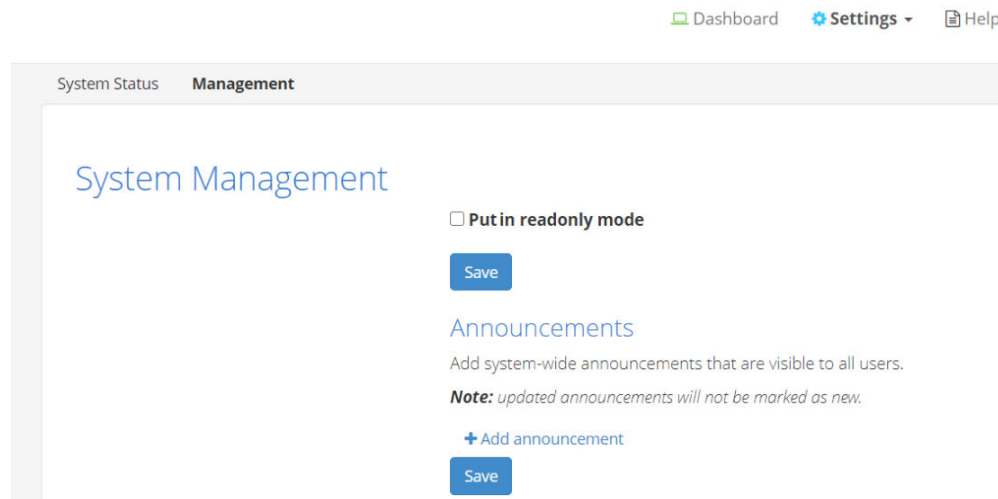
Table 4. Processing &amp; Performance Tab Fields

Section	Description
<b>Queue Status</b>	Displays metrics for call submission and processing queues.
<b>Calls</b>	Lists how many calls (audio files) there are at various points of system data flow: <ul style="list-style-type: none"> <li><b>Submitted</b>                      The number of calls submitted but not yet active in the ASR processing flow.</li> <li><b>Active in ASR</b>                      The number of calls submitted for ASR transcription, but not yet complete.</li> <li><b>ASR Complete</b>                      The number of calls successfully transcribed by the ASR engine.</li> <li><b>Analysis</b>                              The number of calls with transcription results in active analysis.</li> <li><b>Waiting for Callbacks</b>              The number of calls with enqueued callback results.</li> <li><b>Callbacks</b>                            The number of callbacks completed.</li> <li><b>Total</b>                                  The total number of calls processed by the system.</li> </ul>

Section	Description
<b>Time to Analysis Completion</b>	<p>Displays the minimum, average, and maximum audio processing turnaround times over the following time increments:</p> <ul style="list-style-type: none"> <li>• the last 15 minutes</li> <li>• the last hour</li> <li>• the last 4 hours</li> <li>• the last day</li> <li>• the last week</li> </ul>
	<p> <b>NOTE</b> Analysis completion time values do not include callback processing time.</p>
<b>Submitted Queue</b>	Displays the number of calls submitted to each folder for transcription and analysis.
<b>Active in ASR Queue</b>	Displays the number of calls in active processing in each folder.
<b>Folder Activity</b>	Displays a data table of all system folders sortable by the following activity fields:
<b>Files Ingested</b>	The total number of audio and metadata files added to Elasticsearch and assigned a <b>transcriptID</b> in each listed folder. Files deleted after ingestion are not represented in this count.
<b>Audio Duration</b>	The total duration of the folder's audio data in seconds.
<b>Files Completed</b>	The total number of folder audio files that have been successfully processed.
<b>Last Active Date</b>	The last date on which there was activity in the folder.

## System Settings

System administrators can modify system-wide settings by selecting **Settings > System** and then selecting the **Management** tab, as in the following example:



### Read-only Mode

The **Readonly** section of the **System Settings** page allows you to enable or disable read-only mode, which allows administrators to perform maintenance or diagnose performance problems while a V-Spark installation is still running.

While in read-only mode, V-Spark cannot process new data, and user, folder, company, organization, and system settings cannot be changed. V-Spark may still be used to examine existing data that has already been processed.



#### NOTE

Enabling read-only mode affects only V-Spark processes. The host system's other processes will continue to operate normally.

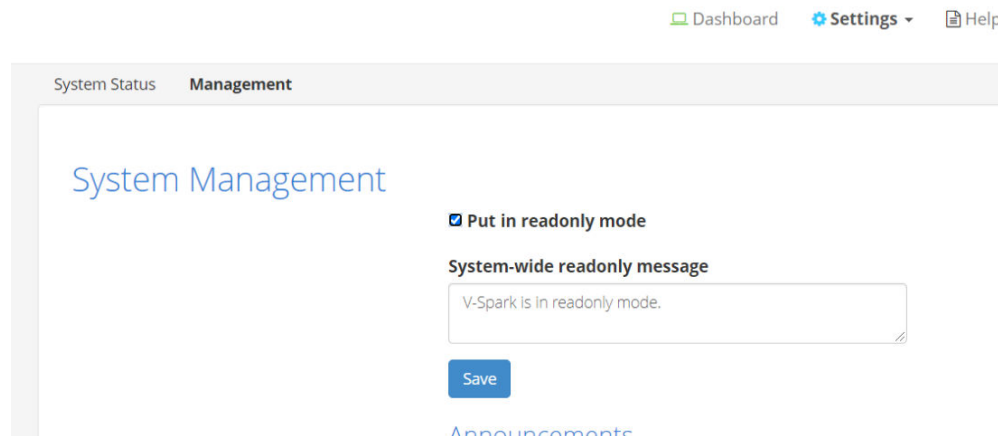
To enable or disable read-only mode:

1. Click **Settings > System** and select the **Management** tab.
2. Select the **Put V-Spark in readonly mode** checkbox.



A text box containing the default announcement displays. This message may be edited, and it appears when any user logs in while read-only mode is enabled.

3. Click **Save** to save the message and enable read-only mode.
4. To disable read-only mode, deselect the **Put V-Spark in readonly mode** checkbox and click **Save**.



#### NOTE

Read-only mode can also be managed programmatically using the API. For more information, refer to *Using POST with cURL and the /config API* and *Using POST with Python and the /config API* in the **V-Spark API Reference**.

## Safe Mode and Low Storage Conditions

If V-Spark does not have sufficient storage, it will automatically enter safe mode, which is similar to read-only mode. Any file processing when safe mode activates will complete, but no new data can be added to the system.

All users will see a notification banner indicating that the system is in safe mode. Users can still use V-Spark to examine data that has already been processed, and can reprocess applications against that existing data.

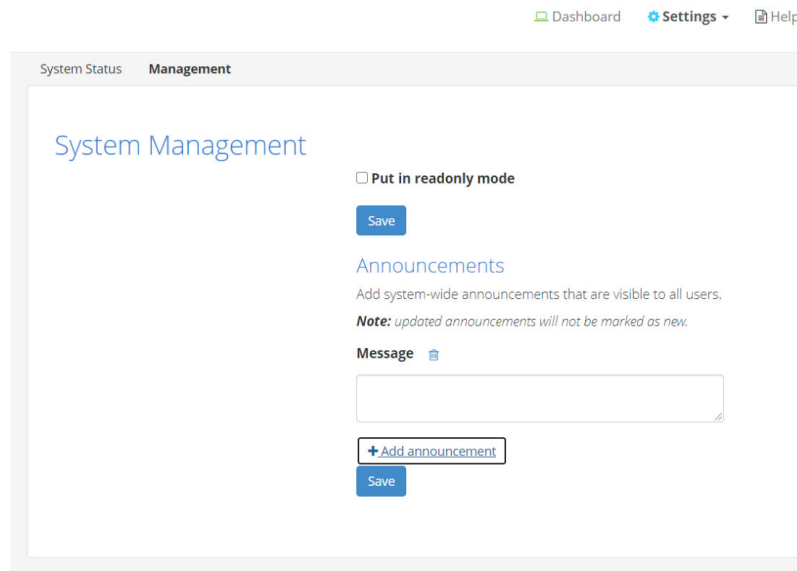
V-Spark may not be taken out of safe mode until it has sufficient storage.

## Announcements

The **Announcements** section of the **System Settings** page enables system administrators to add, change, and remove system-wide announcements. New announcements are displayed to all users the first time that they log in after an announcement is created.

Use the following procedure to create an announcement:

1. Click **+ Add announcement**. The following textbox displays:



2. Enter the text of your announcement in the textbox and click **Save**.

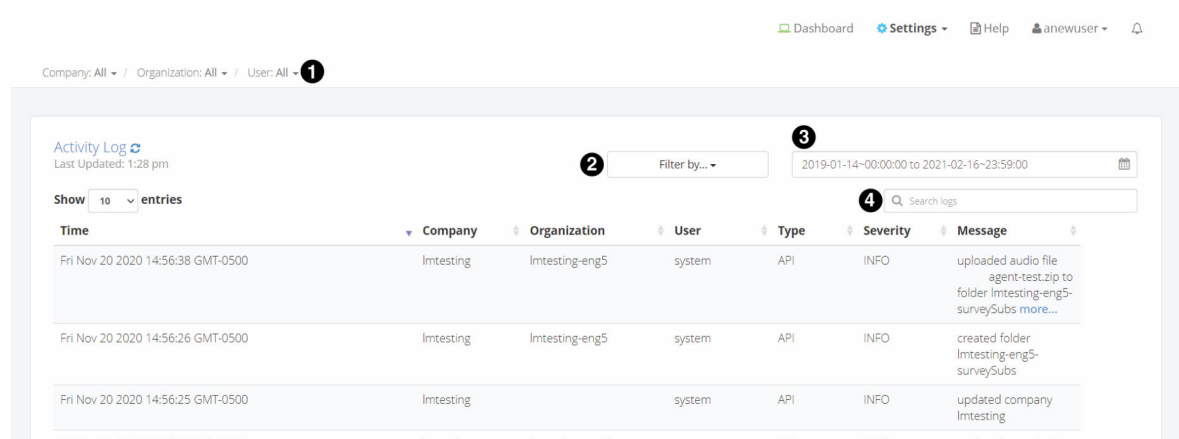
When a user logs in, all announcements created since that user's last login will be identified as **New**. Announcements are only identified as new the first time that a user logs in after the announcement was created. Afterward, announcements are displayed without the **New** identifier until they are deleted. Announcements can also be hidden by users during their login sessions.

To modify an existing announcement, edit the text for that announcement and click **Save**. Updated announcements are not displayed as **New** when users log in. To cause an existing announcement to be identified as new, delete the old announcement and create a new one with the updated text.

To delete an announcement, click **Delete**. The **Undo** icon will restore the deleted announcement until you click **Save**.

## Activity Log

System administrators can use the **Activity Log** to view user activity and system events. Click **Settings > Activity Log**. The **Activity Log** screen displays:



Select any column heading to sort log entries according to the values in that column. Entries can be filtered by any or all of the following fields:

- ❶ Filter results by **Company**, **Organization**, and **User**. Select a filter option from the dropdown menu for each entity type. Only one filter per entity type may be active.
- ❷ Filter results by activity type or severity. Click the **Filter by...** button. The following **Types** and **Severity** levels display:
  - **API** – Operations made using the API to create, delete, or update values for companies, organizations, folders, and applications.
  - **Application** – Operations related to application summaries, processing, linking, and reprocessing.
  - **Audio evaluator** – File uploads made using the audio evaluator to check for file format support.
  - **Callback** – Warnings and errors that occurred during file callbacks.
  - **Data management** – File deletion events, whether files were deleted manually or automatically due to an organization's retention policy. Also includes low space warnings.
  - **Login** – User logins, logouts, and invalid login attempts. Only explicit user login and logout actions are captured, and not session timeouts that force a user logout.
  - **Setting** – Operations made using the UI to create, delete, or modify companies, organizations, folders, and applications. Also includes warnings created when file processing is paused due to invalid company server configuration.
  - **System** – Operations that start or check back-end and front-end services; check licensing status; or change the system to normal, read-only, and safe modes.
  - **Update** [deprecated] – Operations related to updating Elasticsearch records without transcript IDs.

- **Upload** – File uploads made for initial transcription.
- **User management** – Operations that create, verify, delete, or change the company, organization, or permissions associated with a user account.
- **Tag** – Operations for adding or removing file tags.

Events of all types can be filtered by the following **Severity** levels:

- **Info** – Operations that constitute basic system activity, such as user logins and logouts, file uploads, or company and organization updates.
  - **Warning** – Company processing limit notifications and issues that caused file processing to pause, such as invalid company configurations.
  - **Error** – Events that caused processing to fail altogether.
- ③ **date** – Filter results by the specified date and time range. Click the date range box, then use the calendars to find and click the beginning and end dates.
  - ④ **key word search** – Filter results by the specified key words. Enter the search terms; results will update automatically as terms are entered. Key words are checked against the **Company**, **Organization**, **User**, and **Message** fields associated with an event.

## Using Single Sign-On (SSO) with V-Spark

Single sign-on (SSO) authentication is a form of external authentication that allows users to forego the typical account creation process and log in to V-Spark using their SSO identity provider (IDP). A single V-Spark system can support multiple companies, and each company uses its own SSO configuration.

The following is a general workflow for configuring and using SSO with V-Spark:

1. **Configure the IDP to communicate with V-Spark.** This requires the creation of a client application for V-Spark on the IDP using the values specified in V-Spark's `hostname` and `pref_port` system configuration settings to create sign-in and sign-out redirect URIs. Refer to [Configuring SSO for V-Spark](#) for more details.
2. **Configure the V-Spark system to communicate with the IDP.** This requires some information from the IDP configuration. Refer to [Configuring SSO for V-Spark](#) for more details.
3. **Create a V-Spark company with the Enable SSO option enabled.** Refer to [Create or Modify a Company](#) and [SSO-Enabled Companies](#) for more details.
4. **Create, configure, and verify SSO-based user accounts.** User accounts created with SSO must be verified and have their read and write permissions set by an administrator before they can be used. SSO account creation, requesting, and verification follow most of the standard account maintenance procedures described in [Creating a User Account](#) and [User-Requested Accounts](#). Refer to [SSO-Enabled User Accounts](#) for information about differences between standard and SSO-enabled user accounts.

### Configuring SSO for V-Spark

Before companies or user accounts can use SSO, it must be enabled at the system level. Enabling SSO requires configuration in two places: V-Spark's system configuration settings, and configuration settings for the IDP that V-Spark communicates with for authentication. The topics below apply to all identity providers; the [Troubleshooting V-Spark SSO](#) topic addresses IDP-specific issues that may be encountered while configuring V-Spark SSO with certain providers.

#### Required Endpoints for IDP Configuration

Create a client application in the IDP to configure it for communication with V-Spark. As part of this process, the IDP displays the application's **Client ID**, **Client Secret**, and **Discovery Endpoint**. These are required to configure V-Spark companies for SSO authentication.

The IDP application requires sign-in and sign-out redirect URIs specific to the V-Spark system and company that will use SSO. At least one endpoint URL must be provided for each field in the IDP application.

In V-Spark, resource locations for sign-in and sign-out redirect URIs use the host's external IP address (`$HOST_IP`) and the company's short name (`$CO_SHORTNAME`) as shown in the following format:

Sign-in Redirect URI	<code>http://{ \$HOST-IP }/login/authenticate/sso/company/callback/{ \$CO_SHORTNAME }</code>
Sign-out Redirect URI	<code>http://{ \$HOST-IP }/logout/callback</code>

**NOTE**

Some identity providers may require HTTPS for redirect URIs.

Note the following information about redirect URI components:

- The value for `{ $HOST-IP }` is case-sensitive and must match the value specified in V-Spark's **hostname** system configuration setting, which must include the protocol (**http** or **https**).
- If an external port must be provided, that port number must match the number specified in the **pref\_port** system configuration setting.
- The value for `{ $CO_SHORTNAME }` must match the short name assigned to the V-Spark company that will use SSO.

## SSO-Related System Configuration Settings

The following configuration settings must be specified in V-Spark's `/opt/voci/vspark/config/vspark.config.d/` configuration settings:

<b>login_methods</b>	Specifies all login methods available to the system. Multiple methods may be specified using a comma-separated list. As of version 4.1, the only supported method is OpenID Connect, which is specified with the value <b>oidc</b> . Example: <b>login_methods=oidc</b>
<b>hostname</b>	Specifies the V-Spark system URL for external access. The <b>hostname</b> setting is already configured for most V-Spark installations. Protocol must be included. The value for <b>hostname</b> must match the value configured in the IDP. Example: <b>hostname=https://3.123.123.123</b>
<b>pref_port</b>	Specifies the V-Spark port number to be used with the configured <b>hostname</b> described above. The <b>pref_port</b> setting is already configured for most V-Spark installations. The value for <b>pref_port</b> must match the value configured in the IDP. Example: <b>pref_port=3000</b>
<b>login_with_sso_link_label</b>	<b>Optional.</b> Specifies the label for the SSO login button on login pages. The default value is <b>Sign in with SSO</b> .
<b>signup_with_sso_link_label</b>	<b>Optional.</b> Specifies the label for the SSO signup button on the signup page. The default value is <b>Sign up with SSO</b> .

## SSO-Enabled Companies

Before companies or user accounts can use single sign-on (SSO) authentication, it must be enabled at the system level. Refer to [Configuring SSO for V-Spark](#) for detailed steps on SSO system configuration. Once enabled for the system, SSO can be enabled for individual companies as described in [Configuring SSO for a Company](#).

A company in an SSO-enabled system is not required to use SSO. Similarly, user accounts associated with an SSO-enabled company may still use username-password authentication, although the authentication method cannot be changed for an existing account. Additionally, some account functionality and profile fields are disabled when the account uses SSO. Refer to [SSO-Enabled User Accounts](#) for more information.

### Configuring SSO for a Company

Before configuring a V-Spark company to use SSO authentication, ensure that the appropriate system and IDP configuration settings are in place. Additionally, configuring SSO for a company requires using the **Client ID**, **Client Secret**, and **Discovery Endpoint** obtained while configuring the IDP application. Some IDPs use unique parameters for each of multiple applications on the same SSO implementation, and this may affect the parameters required for company configuration. Refer to [Configuring SSO for V-Spark](#) for more information on configuring SSO at the system level.

To enable or configure SSO authentication for a company, enable the **Enable SSO via OpenID** option shown in the **Create New** or **Update Company** dialogs as described in [Create or Modify a Company](#) and shown in the following example:

### Create New Company ×

---

**Company Name**

**Short Name**  
  
*Alphanumeric characters and underscores only; no spaces; maximum of 25 characters;*

**Limit Hours**  
  
 Unlimited

**Data retention limit (days)**  
*Limits the data retention Maximum for organizations within this company. Lowering the limit will NOT automatically update the retention period for organizations.*  
  
 Unlimited

Enable SSO via OpenID  
 Use Cloud Transcription

**Servers**  
  
*Separate host names or IP addresses with ";" (semicolon).*

---

When the SSO option is enabled in the **Create** or **Update** dialogs, the third page displays the fields shown in the following example:



Create New Company
×

---

**SSO Protocol**

OIDC

**Client ID**

Client ID from Identity Provider

**Client Secret**

Client Secret from Identity Provider

Use Discovery Endpoint (recommended)

**Discovery Endpoint**

https://example.idp.com

Back

Create

**SSO Protocol**

This field is not configurable because V-Spark supports only the [OpenID Connect \(OIDC\)](#) SSO protocol. The field is displayed for clarity and to show any other protocols included with future versions.

**Client ID**

The V-Spark client identifier to be used for OpenID communication with the identity provider (IDP). The value for **Client ID** is provided by the IDP.

**Client Secret**

The secret associated with the **Client ID** used to prove the client's identity to the IDP. The value for **Client Secret** is provided by the IDP.

**Use Discovery Endpoint**

A discovery endpoint returns a JSON object containing advanced configuration endpoints required for communication with the IDP. **Use Discovery Endpoint** is enabled by default. Disabling the **Use Discovery Endpoint** option displays several specific endpoint fields that must be entered manually for successful communication with the IDP. Using the discovery endpoint is strongly recommended to minimize configuration issues.

Every IDP uses its own requirements and syntax for base URLs and endpoints. Refer to your IDP's documentation for the location and construction of its discovery endpoint.

**Discovery Endpoint**

Returns a JSON object containing advanced configuration endpoints required for communication with the IDP. The value for **Discovery Endpoint** is provided by the IDP.

If not using a discovery endpoint, the endpoints in the following list must be specified manually:

**NOTE**

These fields are provided by the IDP, though some IDPs only provide them in the JSON object returned from the discovery endpoint.

<b>IDP Issuer</b>	Root URL for the IDP.
<b>Introspection Endpoint</b>	URL for IDP endpoint that returns information about the security token.
<b>JWKS URI</b>	URL for IDP endpoint that returns the JSON Web Key Set object used to verify security signatures in OIDC.
<b>Authorization Endpoint</b>	URL for IDP endpoint that is used to interact with the resource owner and to obtain an authorization grant.
<b>Token Endpoint</b>	URL for IDP endpoint that returns access and ID tokens when presented with authorization grants or refresh tokens.
<b>UserInfo Endpoint</b>	URL for IDP endpoint that returns user profile information when presented with an access token.
<b>End Session Endpoint</b>	URL for IDP endpoint that ends the IDP session associated with the ID token.

## SSO-Enabled User Accounts

Before user accounts can use single sign-on (SSO) authentication, SSO must be enabled at the system level and for at least one company. Refer to [Configuring SSO for V-Spark](#) and [Configuring SSO for a Company](#) for more information.

Once SSO is enabled, SSO-enabled user accounts can be created and requested in the same ways as non-SSO accounts. Standard procedures for these methods are described in [Creating a User Account](#) and [User-Requested Accounts](#); however, note the following before specifying profile fields when creating SSO accounts:

**IMPORTANT**

V-Spark uses the email address associated with a user's SSO IDP account to authenticate that user. As a result, any V-Spark SSO user must have an IDP account with an email address specified.

When administrators create or end-users request a user account, the address specified in the **Email** field must be identical to the email address associated with the user's SSO IDP account.

- If the **Full Name** and **Username** fields are neither specified when the account is created nor populated by the IDP, they will be assigned the same value as the **Email** field. Whichever value is supplied first will be assigned to the user profile. When an account is created by an administrator, all fields must be supplied by the administrator. When an account is requested using the **Sign Up with SSO** button or created by an SSO login attempt, V-Spark will populate any field not provided by the IDP with the value of the **Email** field.

- The company specified in the **Company** dropdown during user account creation must have SSO enabled for that account to use SSO. User accounts associated with a company that does not have SSO enabled cannot use SSO regardless of overall system configuration.
- User accounts created with an SSO-enabled company may still use the standard username-password authentication method, but it is recommended that administrators use SSO whenever possible to improve security and reduce account maintenance.

When a user account is created with an SSO-enabled company specified, the company and authentication method for that user account may not be changed. A user may be associated with additional companies, but only the initial company's configuration affects whether SSO may be used.

**IMPORTANT**

Username-password authenticated accounts cannot be converted to SSO accounts. To use SSO, the user account must be deleted and recreated.

The functionality of SSO-enabled user accounts varies from standard accounts. The name and email user profile fields are disabled because these fields are populated with information from the SSO identity provider (IDP). SSO users may not change their passwords on the profile page or reset their passwords with the **Forgot Password?** link on the sign-in page.



Use the **Login with SSO** button on the homepage to log in using SSO. This button will not appear unless the system has been configured to use SSO; note also that the label for the button may be customized. Users are prompted for the short name of their company, then redirected to the IDP. If not already logged in, users enter their IDP credentials. After being authenticated by the IDP, users are redirected back to V-Spark.

## Troubleshooting V-Spark SSO

Configuring V-Spark SSO for use with certain IDPs may lead to special configuration requirements as described in the following sections.

### Global IDP Logout with Okta

When V-Spark is configured for use with Okta, users may be logged out of the entire Okta system when they log out of V-Spark. In this case, the global logout may be avoided by specifying an incorrect URL for the end session endpoint. This requires the discovery endpoint to be disabled and for individual endpoints to be specified manually. To implement this workaround, use the following procedure:

1. Click  **Settings** > **Accounts**.
2. Click  **Edit** next to the company to be modified. The **Update Company** dialog displays.
3. Click **Next** until the dialog page with SSO options appears.
4. Copy the discovery endpoint and open it in a separate browser tab. The data returned from the discovery endpoint displays. For easier reading, copy and paste this data into a JSON viewer.

5. The discovery endpoint's output includes, among other data fields, seven fields with endpoint URLs used for V-Spark company SSO configuration. The field names for endpoint URLs required by V-Spark are:

- **issuer**
- **introspection\_endpoint**
- **jwtks\_uri**
- **authorization\_endpoint**
- **token\_endpoint**
- **userinfo\_endpoint**
- **end\_session\_endpoint**

**IMPORTANT**

Although it is required by V-Spark under normal circumstances, the **end\_session\_endpoint** URL provided by the IDP must not be used for this workaround.

6. In V-Spark, disable the **Use Discovery Endpoint** option. Seven text fields for required IDP endpoints appear, as in the following example:

Update Company

Client Secret from Identity Provider

Use Discovery Endpoint (recommended)

**IDP Issuer**

https://www.example-idp.com/issue

**Introspection Endpoint**

https://www.example-idp.com/intro

**JWKS URI**

https://www.example-idp.com/jwks

**Authorization Endpoint**

https://www.example-idp.com/auth

**Token Endpoint**

https://www.example-idp.com/token

**UserInfo Endpoint**

https://www.example-idp.com/users

**End Session Endpoint**

https://www.example-host.com/login

Back Update

7. Enter the **issuer**, **introspection\_endpoint**, **jwt\_uri**, **authorization\_endpoint**, **token\_endpoint**, and **userinfo\_endpoint** URLs in the corresponding text fields.
8. Enter an invalid URL in the **End Session Endpoint** field. For this workaround, the value for **End Session Endpoint** must not be equal to the value supplied by the discovery endpoint. For simplicity, using the URL for the V-Spark login page is recommended.
9. Click **Update**.

## Missing Email Address Error with Azure Active Directory



Users may encounter a V-Spark error that says SSO verification failed because the email address is missing from the credentials returned from the IDP, even though the **email** field has been configured for the IDP client application scope. This error happens because some IDPs such as Azure Active Directory may not include the **email** field as a supported claim by default. For more information, refer to the external [Active Directory documentation](#).

In this case, the **email** field must be added manually to the **claims\_supported** list in the IDP's client application configuration. Otherwise, SSO authentication fails and V-Spark logs an event in `/var/log/vspark/server.log`.

When configuring the IDP to communicate with V-Spark, the **openid**, **profile**, and **email** fields must be included in the IDP's **scopes\_supported** list.

The **email** field must also be included in the **claims\_supported** list. In addition, the **sub**, **iss**, **aud**, **exp**, **iat**, and **at\_hash** claims must be included in the **claims\_supported** list.

To confirm that the lists contain the required elements, use the following procedure:

1. Click  **Settings** > **Accounts**.
2. Click  **Edit** next to the company to be modified. The **Update Company** dialog displays.
3. Click **Next** until the dialog page with SSO options appears.
4. Copy the discovery endpoint and open it in a separate browser tab. The data returned from the discovery endpoint displays. For easier reading, copy and paste this data into a JSON viewer.
5. Confirm the **scopes\_supported** list includes **openid**, **profile**, and **email**.
6. Confirm the **claims\_supported** list includes **email**, **sub**, **iss**, **aud**, **exp**, **iat**, and **at\_hash**.
7. Add any missing fields using your IDP's client application configuration.



### NOTE

Your IDP configuration may contain additional scopes and claims not documented here, but these fields are not related to V-Spark.