System

V-Spark 4.4.0-1

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Contents

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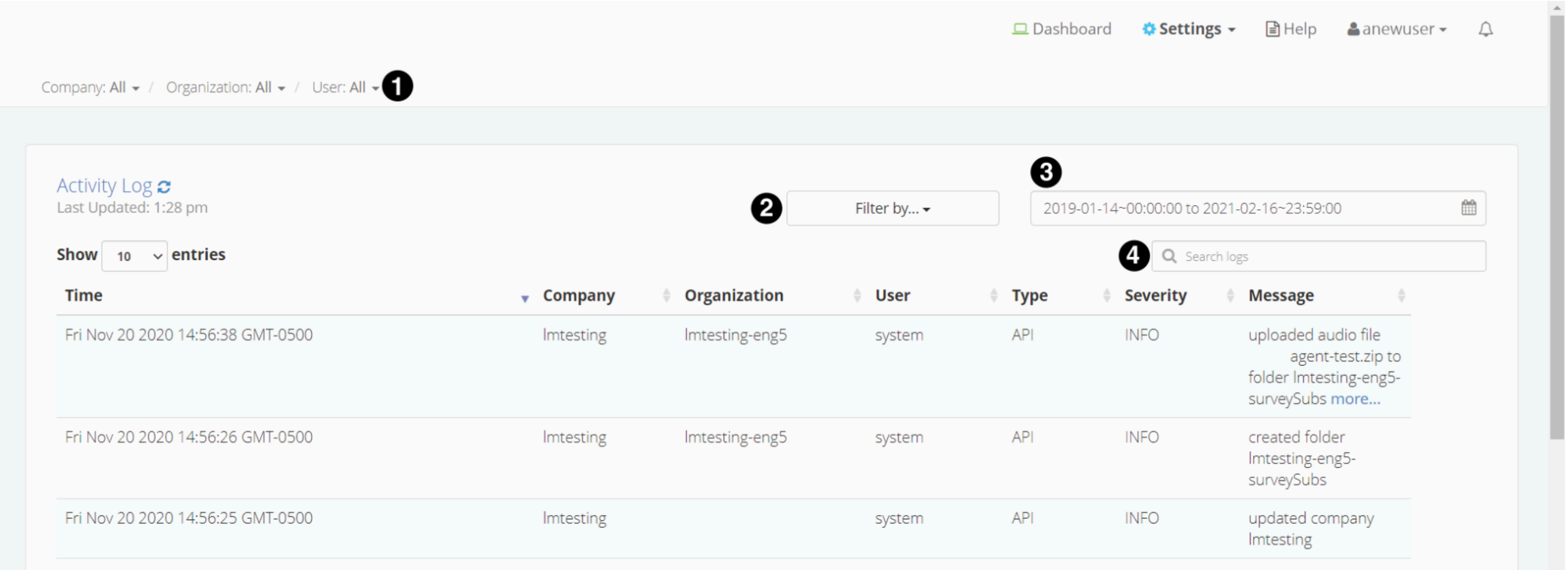
System

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.

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:

1. 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.

2. 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.

Companies and organizations

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

V-Spark systems may have multiple companies, and companies may have multiple organizations. Companies are typically used to represent individual clients and administrated by a single managed service provider.

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Administration

To create or modify a company or organization, log into V-Spark as a system or company admin, and click **`Settings`** > **`Accounts`**. 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:

1. Main menu
2. Breadcrumb menu
3. Submenu

IMPORTANT:

Account permissions have a significant impact on the company, organization, and user information available on the `Accounts` screen.

Remember:

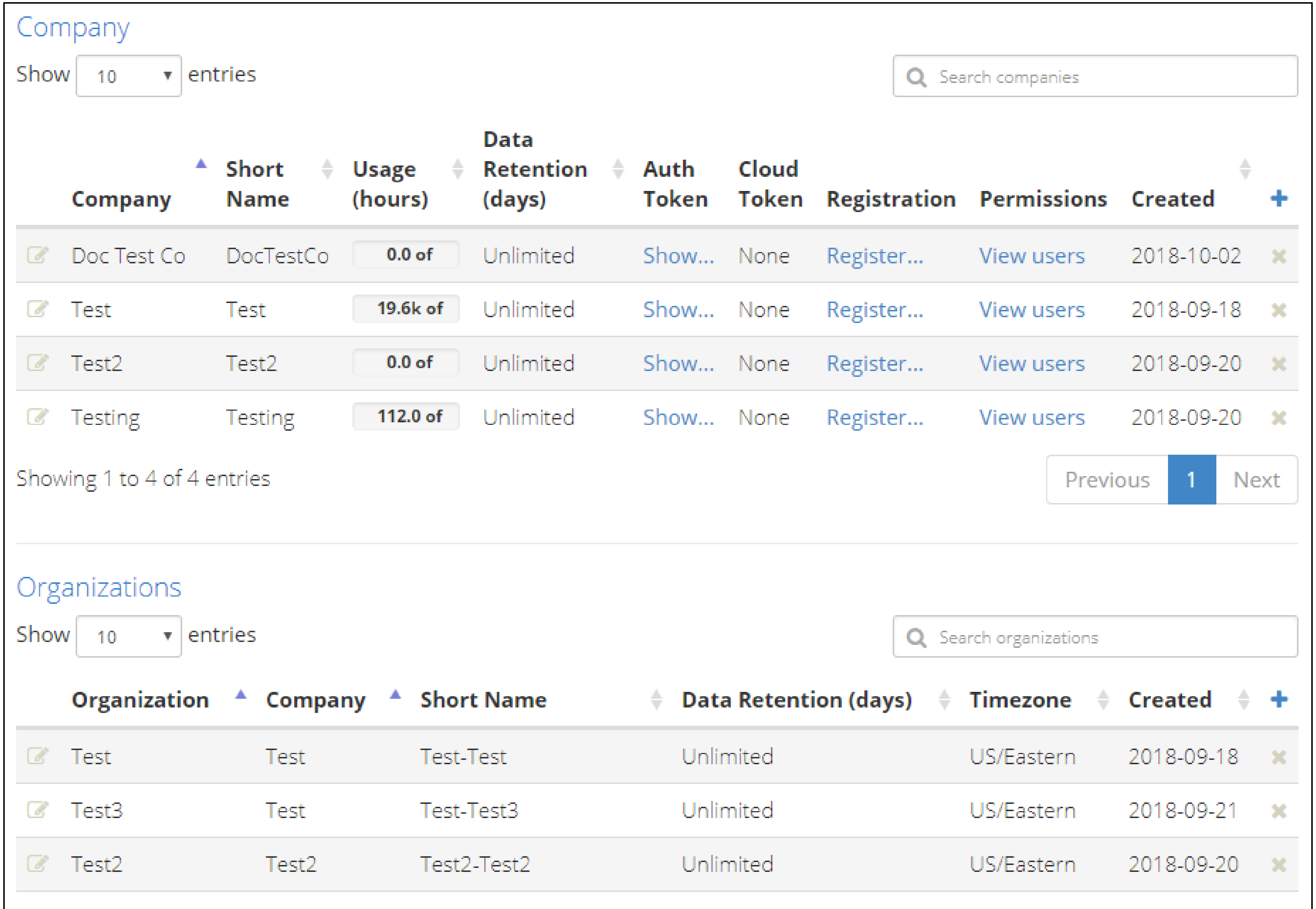
- Most user accounts have permissions limited to specific companies or organizations. The `Account Settings` page displays only entities that the **active, currently logged-in account** has view permission. Those entities may only be modified if the active account has edit permission.
- Attributes for companies and organizations may only be edited if the active account has permission to modify them.
- Attributes for other user accounts may only be changed if the active account has permission to modify those accounts' companies.

Also note that:

- If the active account has only organization-level view and write permissions, that account cannot view any company information.
- To be able to set permissions for any user in any company or organization, you must be logged in as a system administrator.

Manage

The `Company` and `Organization` sections of the `Settings` > `Accounts` screen display lists of all V-Spark entities the current user may edit, as in the following example:



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The `Accounts` screen offers the following options for managing companies and organizations:

`Company` operations

- Click ✚`add` to create a new company.
- Click `edit` to change the company's settings.
- Click ✖`Delete` to delete the company.
- Click the meter in the `Usage` column to see details about company usage.
- Click `View Users` to view the company's user list and their permissions.
- Click `Show...` to show the company-level API token.
- Click `Register...` to invite a new user to register using that company.

`Organization` operations

- Click ✚`add` to create a new organization.
- Click `edit` to change the organization's settings.
- Click ✖`Delete` to delete the organization.

Usage

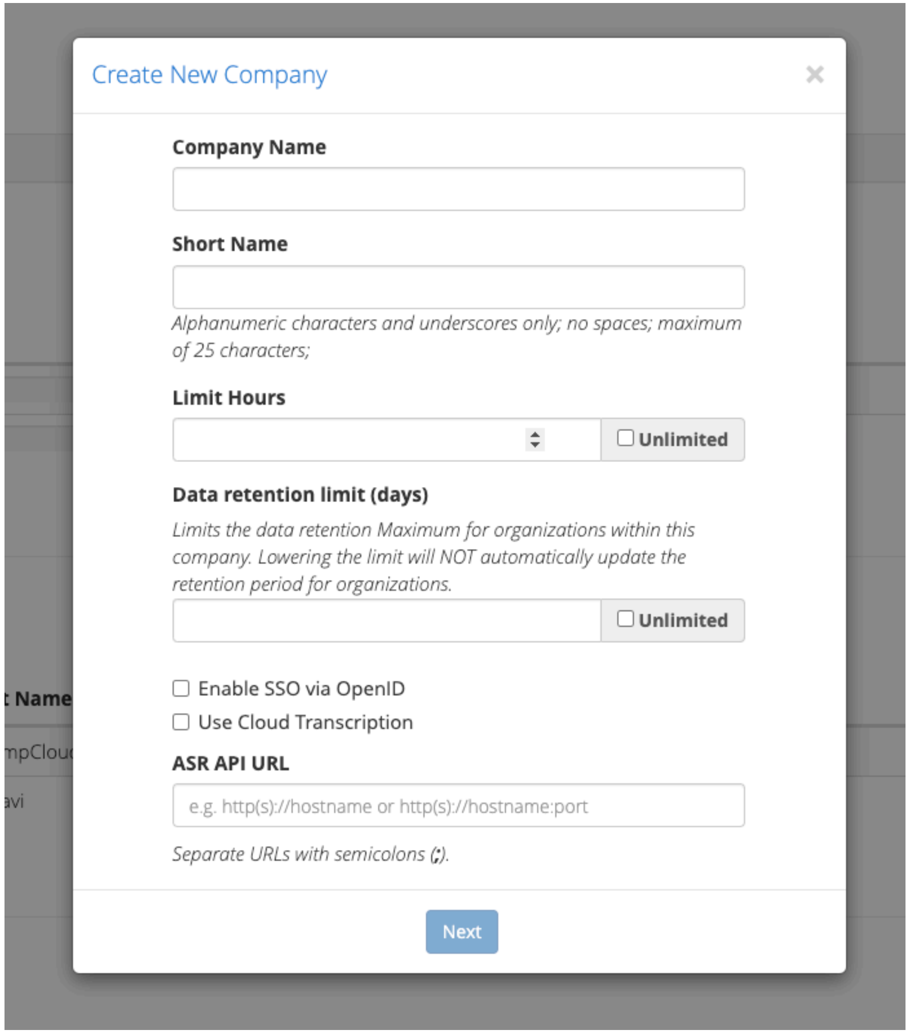
The `Usage` column in the `Company` section of the `Accounts` screen shows the number of hours the company has consumed and its usage limit. Click a company's usage value to display a `Company Usage Details` dialog with detailed information about processed audio.

Create or modify a company

> **IMPORTANT:** Only system admins can modify companies.

Create

Click ✚ **`Add`** on the **`Companies`** section of the **`Accounts`** screen. The **`Create New Company`** dialog displays:



This first dialog page displays the following fields:

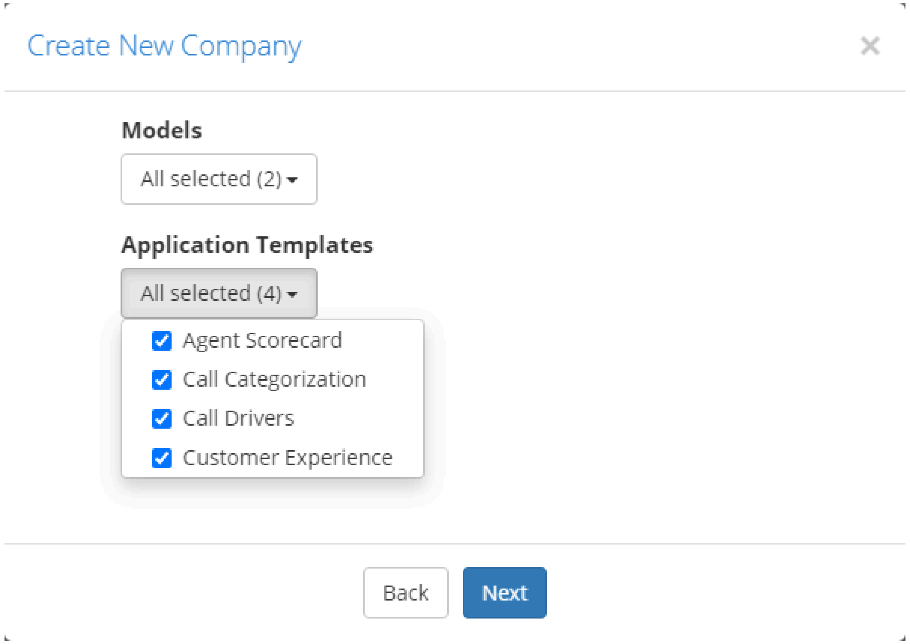
- `Company Name` — The name of the company.
- `Short Name` — Short name reference of the full company name. Used for the API because full company names may be lengthy and may

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.
- `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. ASR type availability varies by license.

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.

Once the initial company configuration is set, a second dialog displays:



The second dialog displays the following fields:

- `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 Administration.

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.

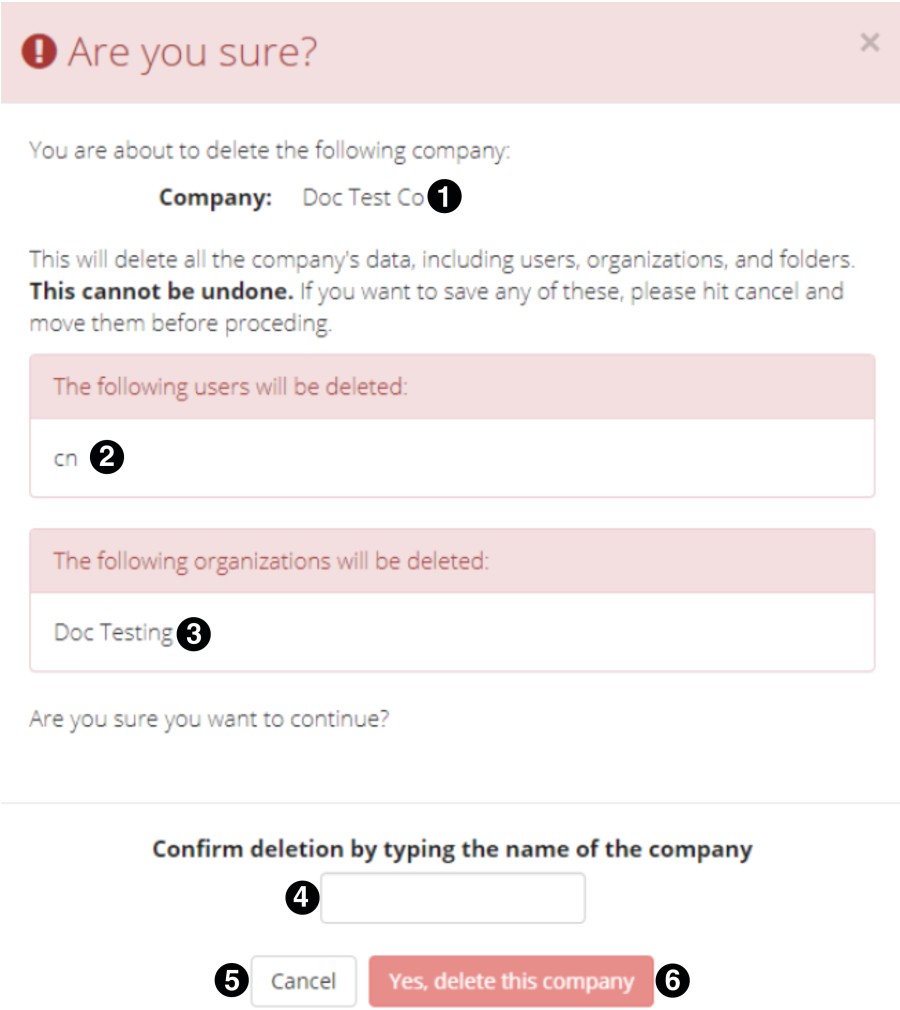
Modify

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.

Delete a company

> **WARNING:** Deleting a V-Spark entity permanently removes all data associated with it, including all data and entities at lower levels in its hierarchy. For example, deleting a company deletes all users below that company, and deleting a folder deletes all the audio records in that folder.

To delete a company, click ✖ `Delete` next to the company to be deleted on the ⚙`Settings` > `Accounts` screen. A warning and confirmation dialog displays:



1. The name of the company to be deleted.
2. The company users whose accounts will be deleted.
3. The company organizations that will be deleted.

4. The company name confirmation field.
5. `Cancel` returns the user to the `Accounts` screen without deleting the company.
6. `Yes, delete this company` deletes the company if the confirmation field is correct.

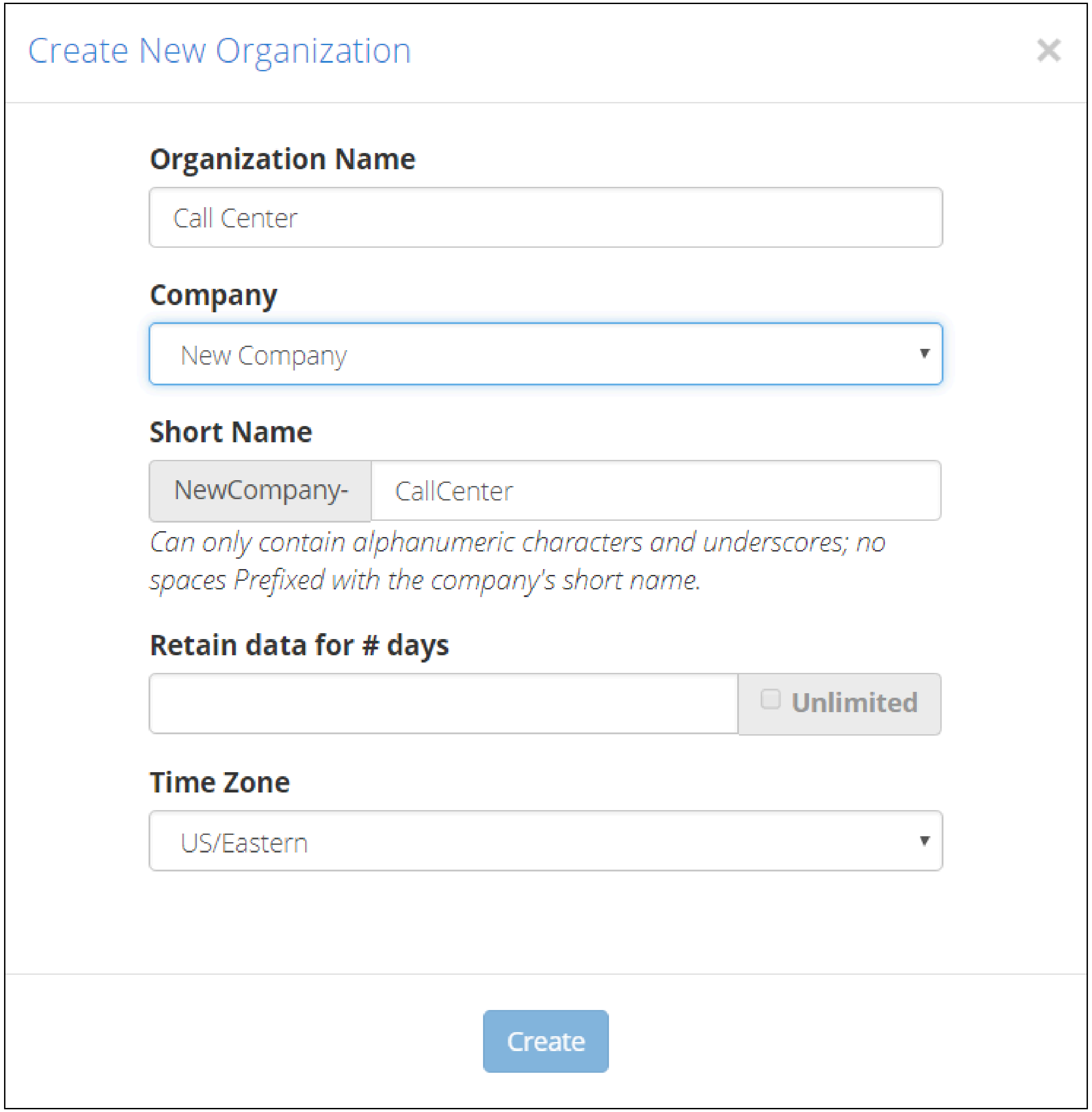
For security reasons, the active, currently logged-in account cannot delete its own primary company, regardless of permissions.

Create or modify an organization

> **IMPORTANT:** Only system or company admins can modify organizations.

Create

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


Create New Organization
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 full name of the organization. This field may include spaces.
- `Company Name` — The name of the company of which the organization is a member.
- `Short Name` — A shorter alias for the full organization name. 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.
- `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.

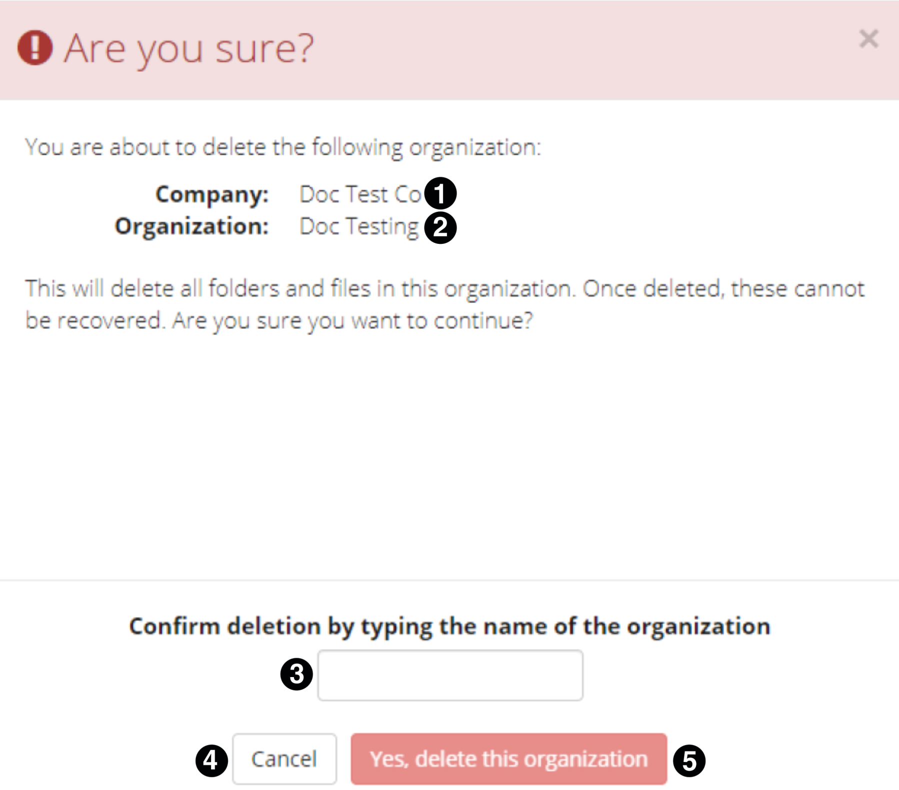
Modify

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 a V-Spark entity permanently removes all data associated with it, including all data and entities at lower levels in its hierarchy. For example, deleting a company deletes all users below that company, and deleting a folder deletes all the audio records in that folder.

To delete an organization, click ✖ `Delete` next to the organization to be deleted on the ⚙`Settings` > `Accounts` screen. A warning and confirmation dialog displays:

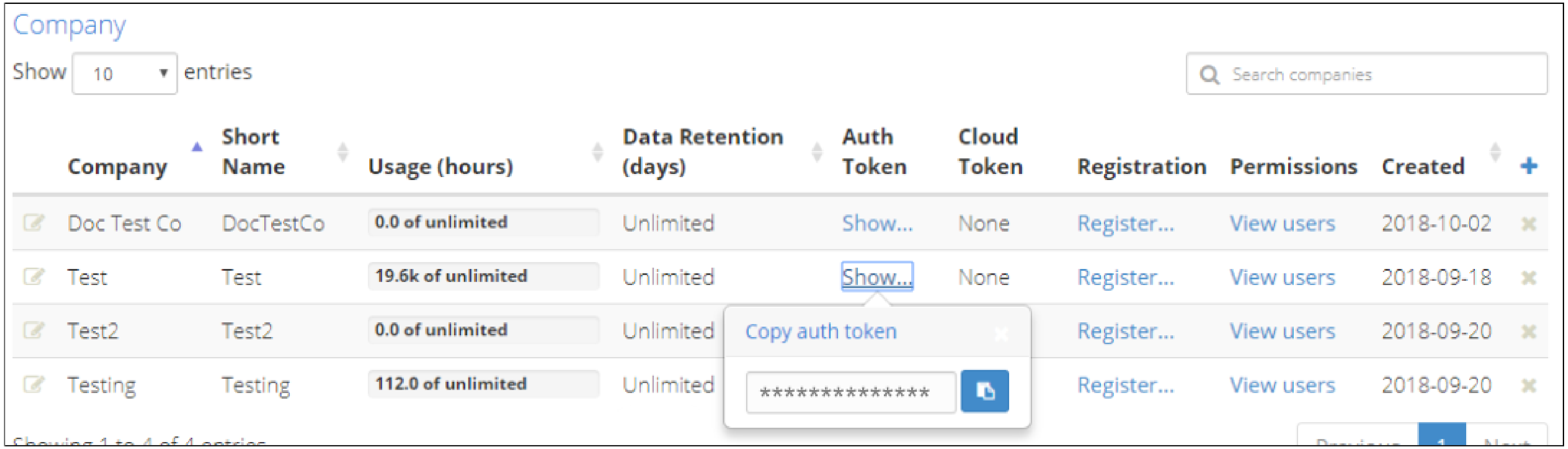


1. The organization's company name.
2. The name of the organization to be deleted.
3. The organization name confirmation field.
4. `Cancel` to returns the user to the `Accounts` screen without deleting the organization.
5. `Yes, delete this organization` deletes the organization if the confirmation field is correct.

API token

Most calls to the V-Spark REST API require a company- or system-level authorization token. If the active account is a system administrator, or if it has write permission for a company, the **`Company`** section of the ⚙**`Settings`** > **`Accounts`** screen displays an **`Auth Token`** column.

To view a company token, click **`Show...`** in the **`Auth Token`** column of that company's row. The company token displays in a small dialog with a text field and a copy button:



Data retention

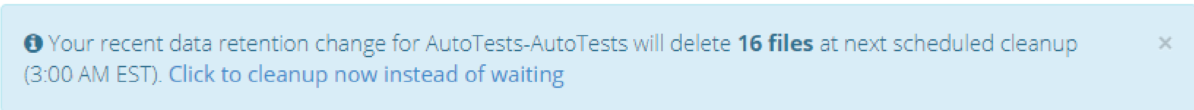
Data retention limits specify the maximum number of days that calls will be retained before being automatically removed from the system. This automated data cleanup mechanism prevents unneeded call information from accumulating on the system, consuming storage space.

> 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:



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.

ASR transcription

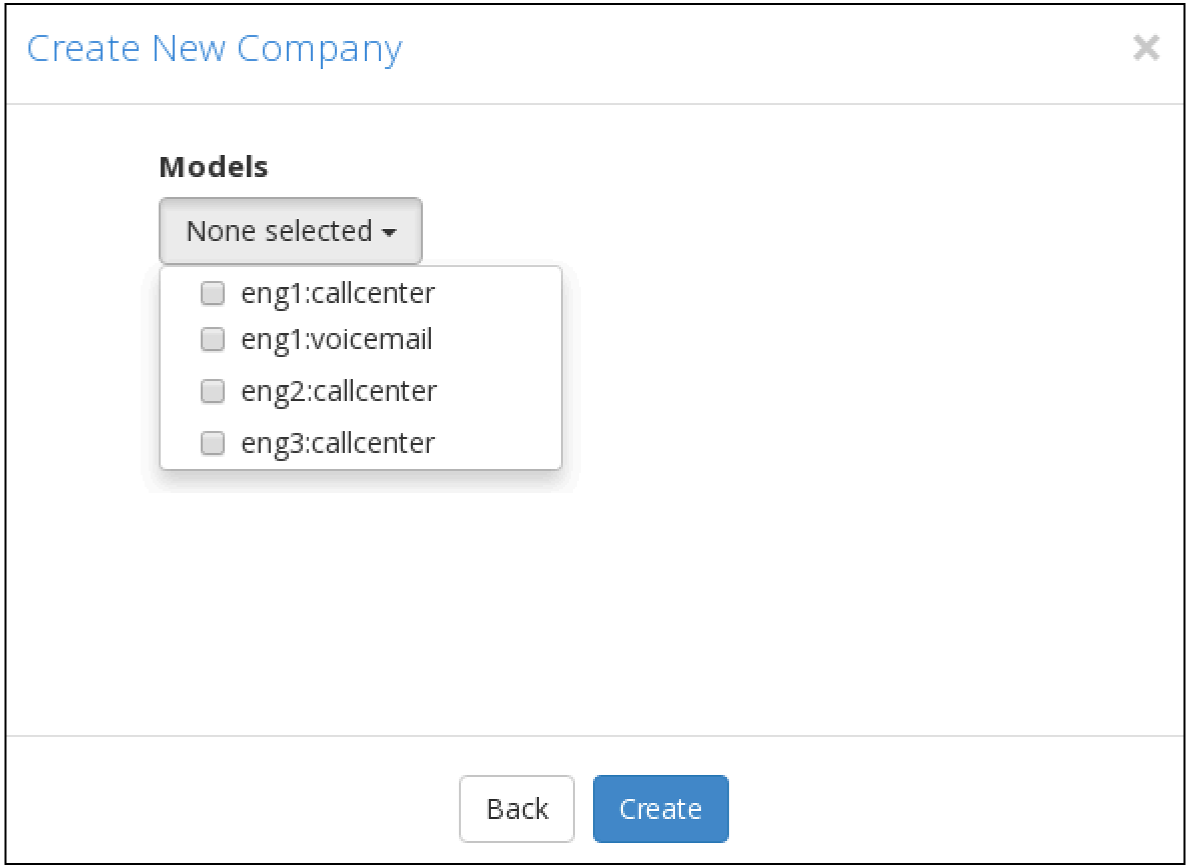
V-Spark connects to both of Voci's ASR products, V-Blaze and V-Cloud. Multiple ASR connections may be established for a company or organization, but a folder uses only one.

> **NOTE:** The models in the preceding example are shown for demonstration purposes only. Your model availability may vary.

V-Blaze ASR

For appliance-based transcription, use these settings in the company config dialog.

- `ASR API URL` — Specify URLs for the ASR engine(s) to be used by folders for transcription. Separate multiple URLs with semicolons (;).
- `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.

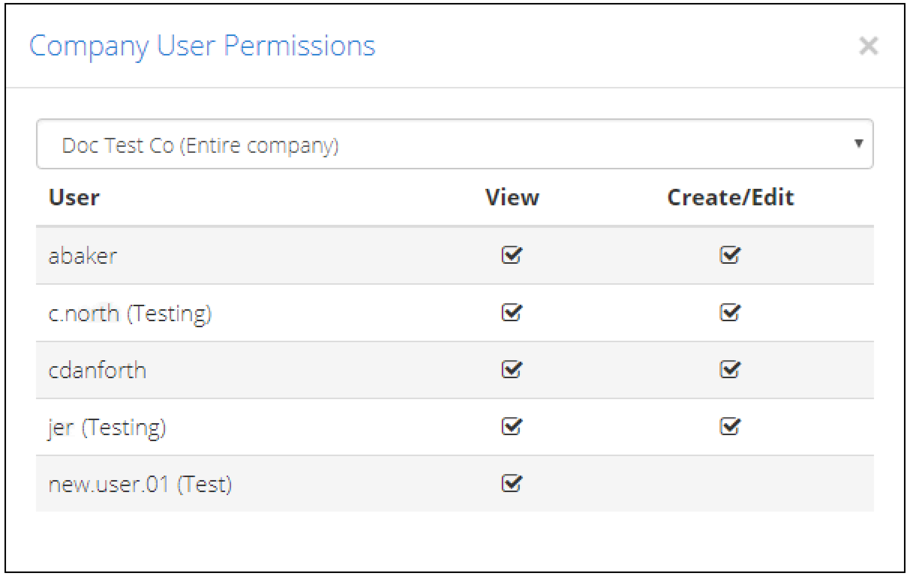
V-Cloud ASR

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.

User list

To view a list of all users who have permissions that apply to a company and its organizations, click **View users** on that company's row in the **Settings** > **Accounts** screen. The **Company User Permissions** dialog displays:


Company User Permissions

Doc Test Co (Entire company)

User	View	Create/Edit
abaker	☑	☑
c.north (Testing)	☑	☑
cdanforth	☑	☑
jer (Testing)	☑	☑
new.user.01 (Test)	☑	

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 Permissions.

To return to the **Accounts** screen, click ✖ **Close**.

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:

System Status Tab Fields

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

Section		Description
	`SQL`	Displays the space consumed (in MB) and number of objects stored in SQL.
	`(Local) Storage`	Displays the size, usage, availability, use percentage, and mount location of each local storage filesystem.

Processing & Performance Tab Fields

Section	Description
`Queue Status`	Displays metrics for call submission and processing queues.

`Calls`	Lists how many calls (audio files) there are at various points of system data flow:
	`Submitted`
	The number of calls submitted but not yet active in the ASR processing flow.
	`Active in ASR`
	The number of calls submitted for ASR transcription, but not yet complete.
	`ASR Complete`
	The number of calls successfully transcribed by the ASR engine.
	`Analysis`
	The number of calls with transcription results in active analysis.
	`Waiting for Callbacks`
	The number of calls with enqueued callback results.

Section	Description

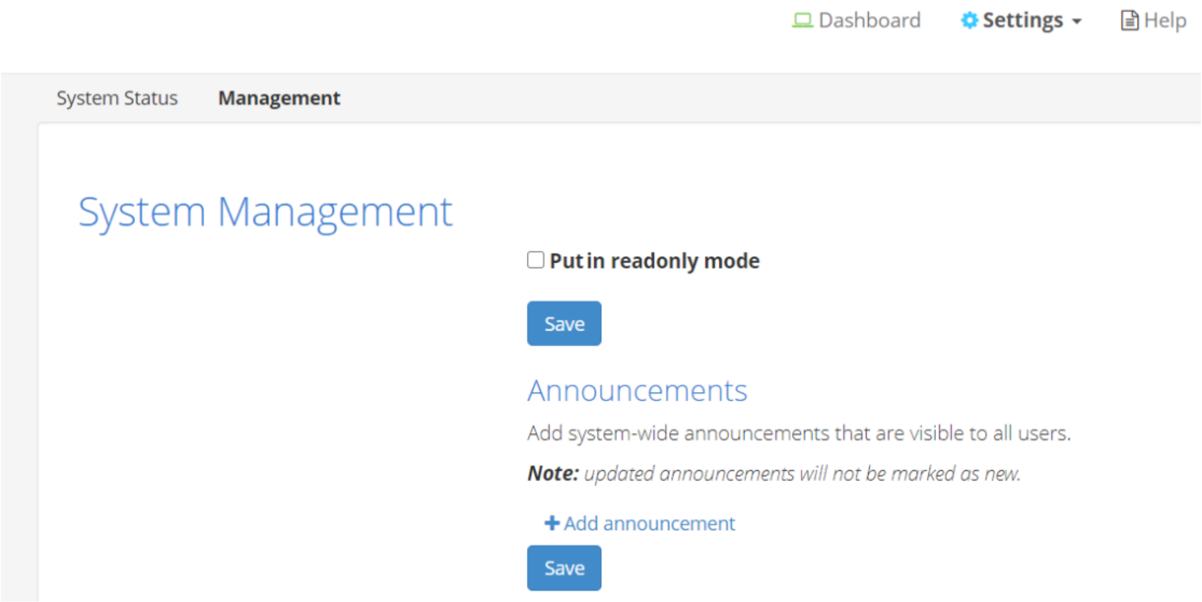
	`Callbacks`
	The number of callbacks completed.
	`Total`
	The total number of calls processed by the system.

`Time to Analysis Completion`	Displays the minimum, average, and maximum audio processing turnaround times over the following time increments: ▪ the last 15 minutes ▪ the last hour ▪ the last 4 hours ▪ the last day ▪ the last week NOTE: Analysis completion time values do not include callback processing time.
`Submitted`	Displays the number of calls submitted to each folder for transcription and analysis.

Section		Description
	`Queue`	
	`Active in ASR Queue`	Displays the number of calls in active processing in each folder.
`Folder Activity`		Displays a data table of all system folders sortable by the following activity fields:
	`Files Ingested`	The total number of audio and metadata files added to Elasticsearch and assigned a `transcriptID` in each listed folder. Files deleted after ingestion are not represented in this count.
	`Audio Duration`	The total duration of the folder's audio data in seconds.
	`Files Completed`	The total number of folder audio files that have been successfully processed.
	`Last Active Date`	The last date on which there was activity in the folder.

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

Context

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.

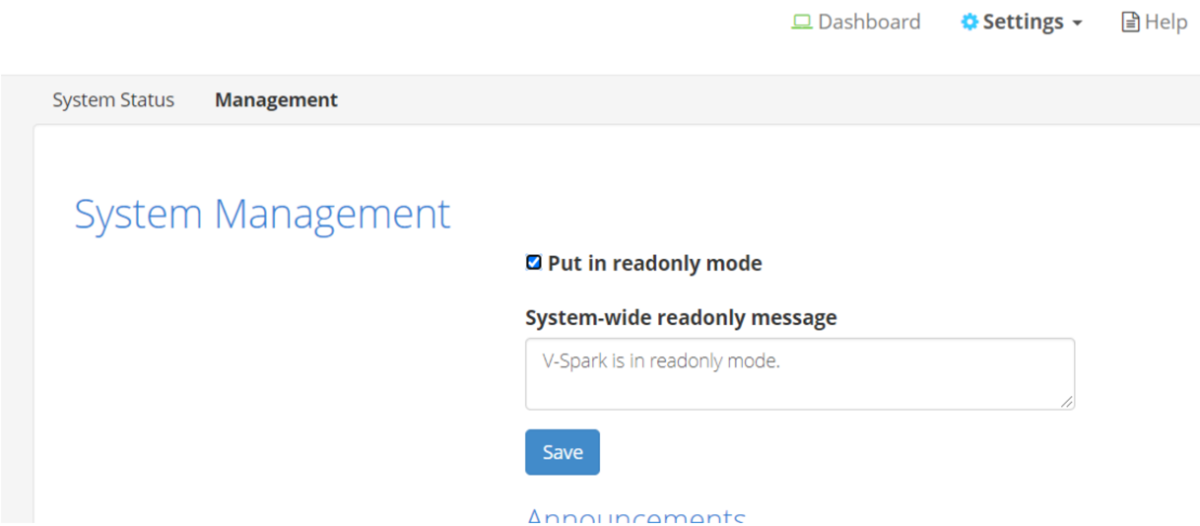
To enable or disable read-only mode:

Procedure

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`**.

Result



> **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

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.

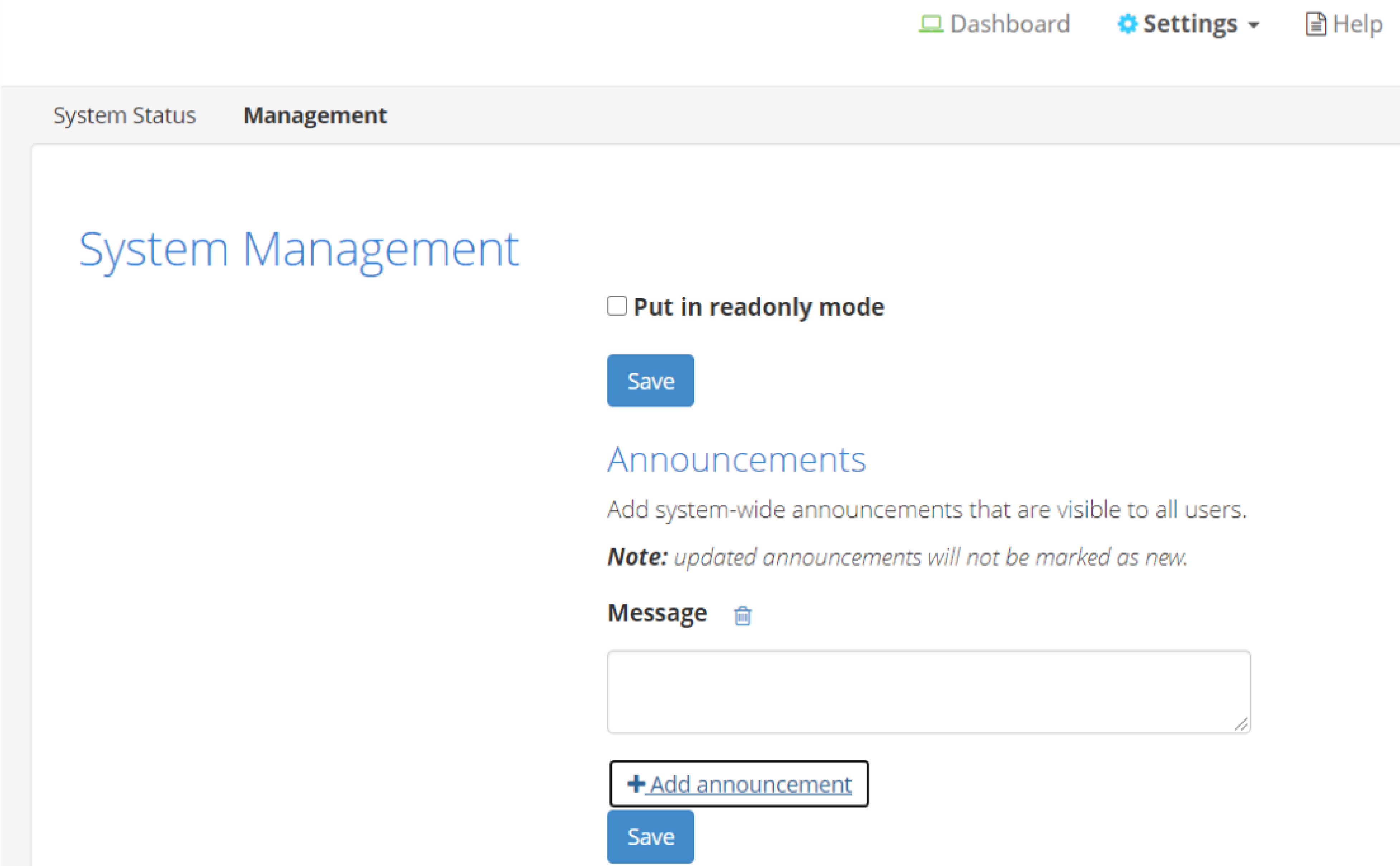
V-Spark may not be taken out of safe mode until it has sufficient storage.

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:


Dashboard
Settings
Help
System Status
Management
System Management
Put in readonly mode
Save
Announcements
Add system-wide announcements that are visible to all users.
Note: updated announcements will not be marked as new.
Message
+ Add announcement
Save

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**.

Single sign-on (SSO)

Context

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:

Procedure

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 Create a user account. 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

```
http:// {$HOST-IP} /login/authenticate/sso/company/callback/ {$CO_SHORTNAME}
```

> Sign-out Redirect URI

```
http:// {$HOST-IP} /logout/callback
```

> 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:

> **`login_methods`**

> 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 `oidc` .
>
> Example: `login_methods=oidc`

> **`hostname`**

> Specifies the V-Spark system URL for external access. The `hostname` setting is already configured for most V-Spark installations. Protocol must be included. The value for `hostname` must match the value configured in the IDP.
>
> Example: `hostname=https://3.123.123.123`

> **`pref_port`**

> Specifies the V-Spark port number to be used with the configured `hostname` described above. The `pref_port` setting is already configured for most V-Spark installations. The value for `pref_port` must match the value configured in the IDP.
>
> Example: `pref_port=3000`

> **`login_with_sso_link_label`**

> **Optional.** Specifies the label for the SSO login button on login pages. The default value is `Sign in with SSO` .

> **`signup_with_sso_link_label`**

> **Optional.** Specifies the label for the SSO signup button on the signup page. The default value is `Sign up with SSO` .

SSO-Enabled Companies

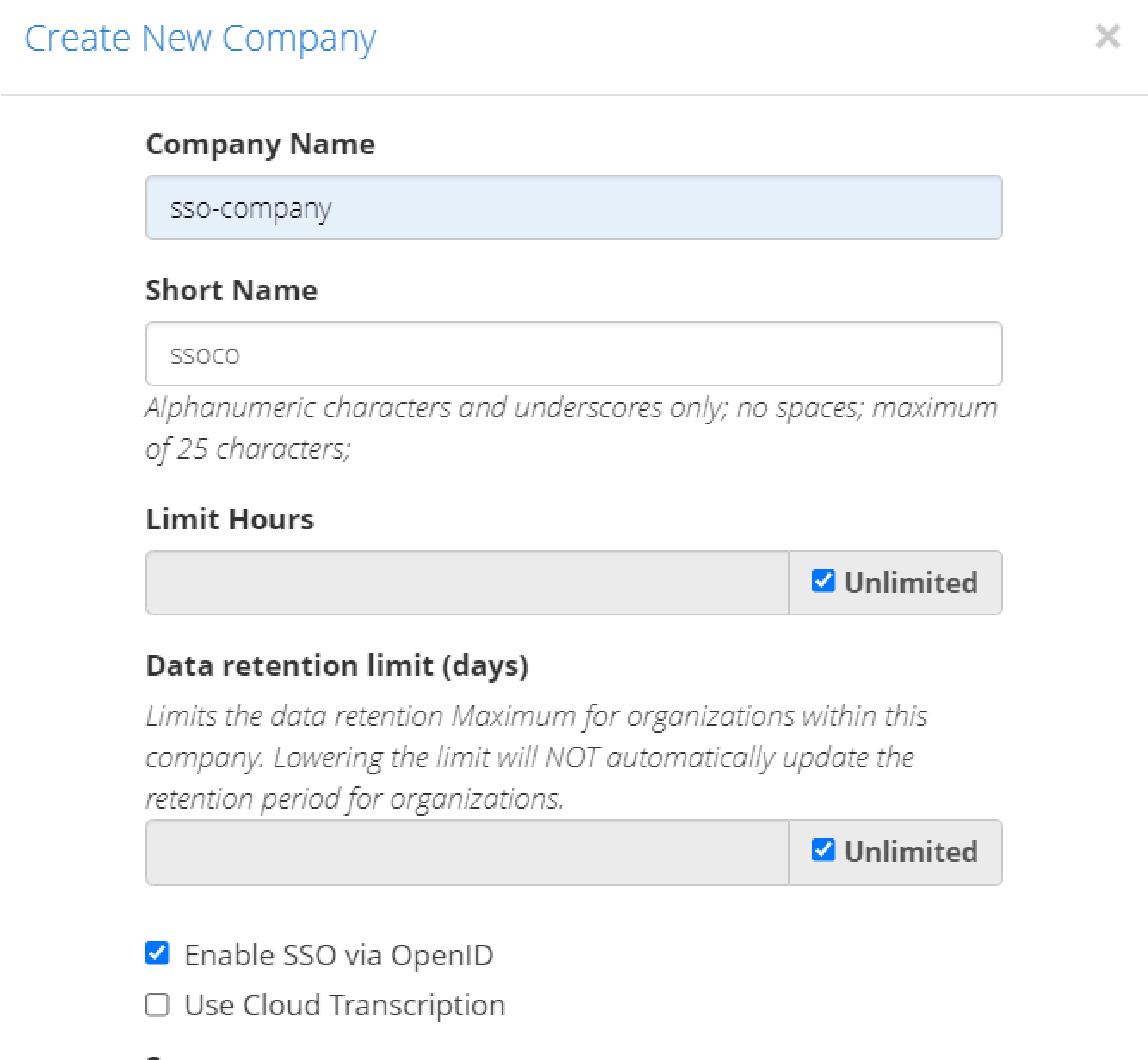
Before companies or user accounts can use single sign-on (SSO) authentication, it must be enabled at the system level. Refer to Configuring SSO for V-Spark for detailed steps on SSO system configuration. Once enabled for the system, SSO can be enabled for individual companies as described in Configuring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

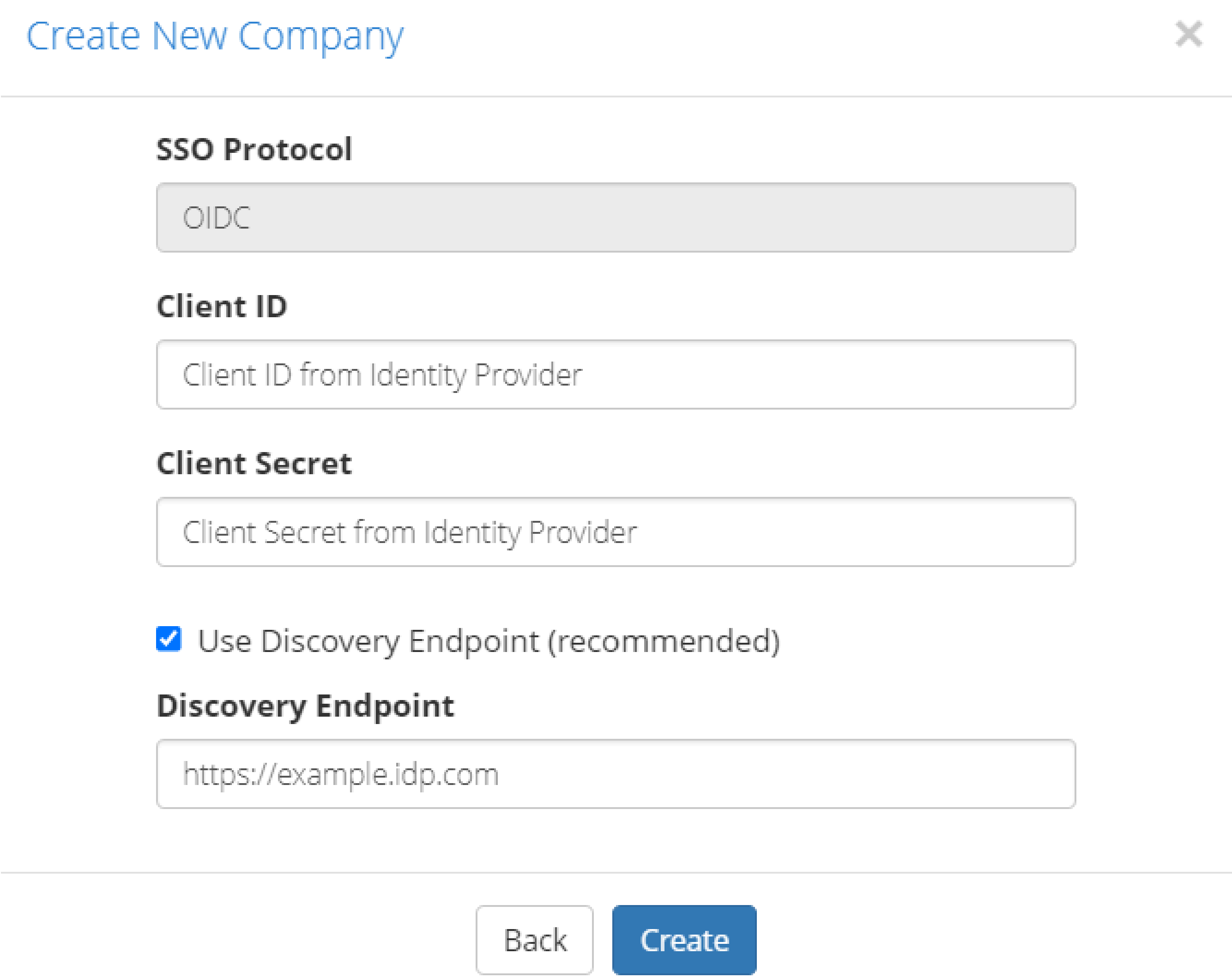
Configuring SSO for a Company

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
sso-company
Short Name
ssoco
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

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



> `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.

`IDP Issuer`

Root URL for the IDP.

`Introspection Endpoint`

URL for IDP endpoint that returns information about the security token.

`JWKS URI`

URL for IDP endpoint that returns the JSON Web Key Set object used to verify security signatures in OIDC.

`Authorization Endpoint`

URL for IDP endpoint that is used to interact with the resource owner and to obtain an authorization grant.

`Token Endpoint`

URL for IDP endpoint that returns access and ID tokens when presented with authorization grants or refresh tokens.

`UserInfo Endpoint`

URL for IDP endpoint that returns user profile information when presented with an access token.

> `End Session Endpoint`

> 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 Create a user account. 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

Context

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:

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`
- `jwks_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: 
7. Enter the `issuer`, `introspection_endpoint`, `jwks_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

Context

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:

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.

User accounts

V-Spark user accounts are associated with a single, primary company and can have customized permissions for both entire companies and individual organizations.

Users can change some of their own settings and profile fields, and they can subscribe to email reports. Company and system admins can manage other accounts in their permissions scope.

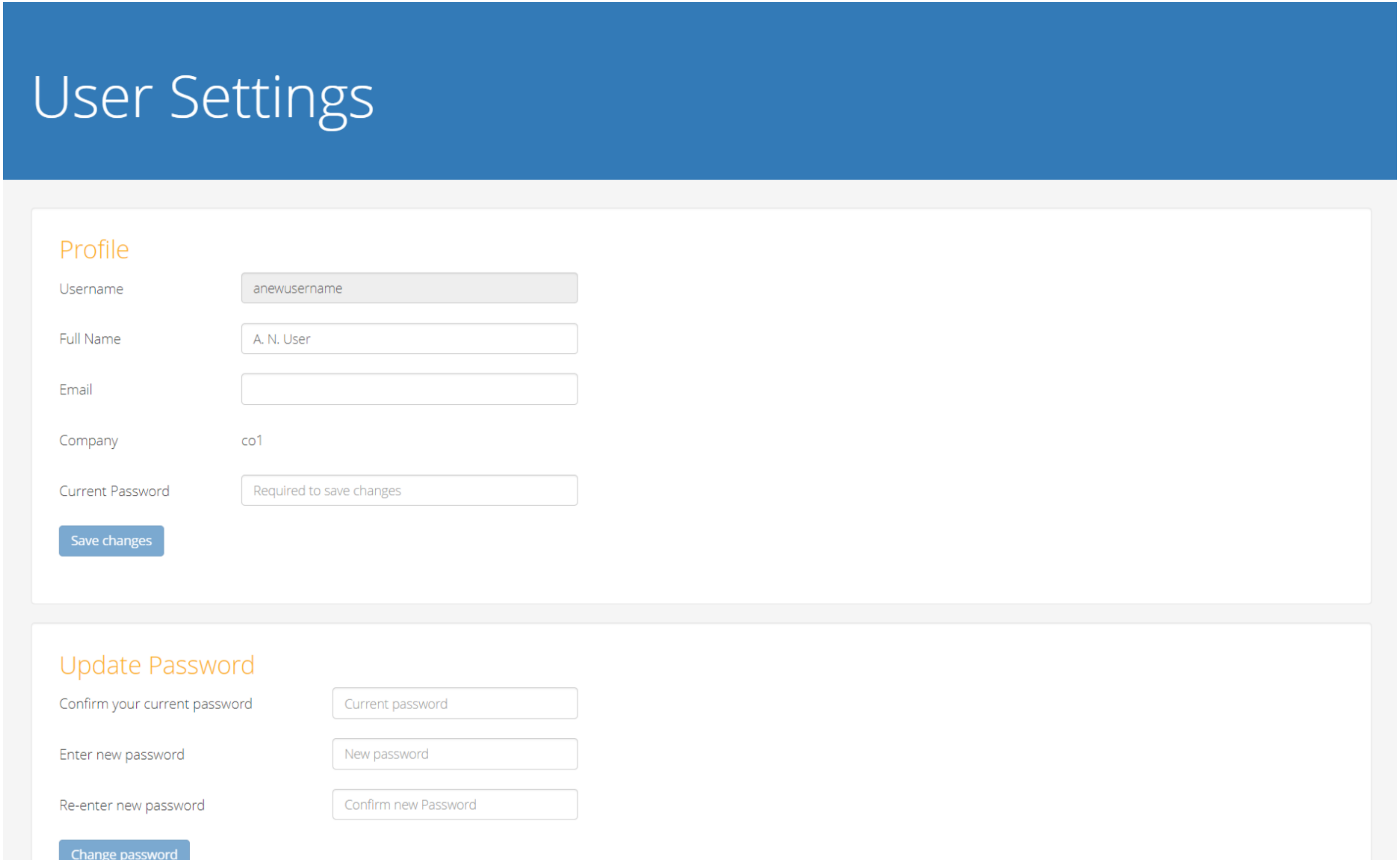
Profile

Changing user profile 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.

Profile settings

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:

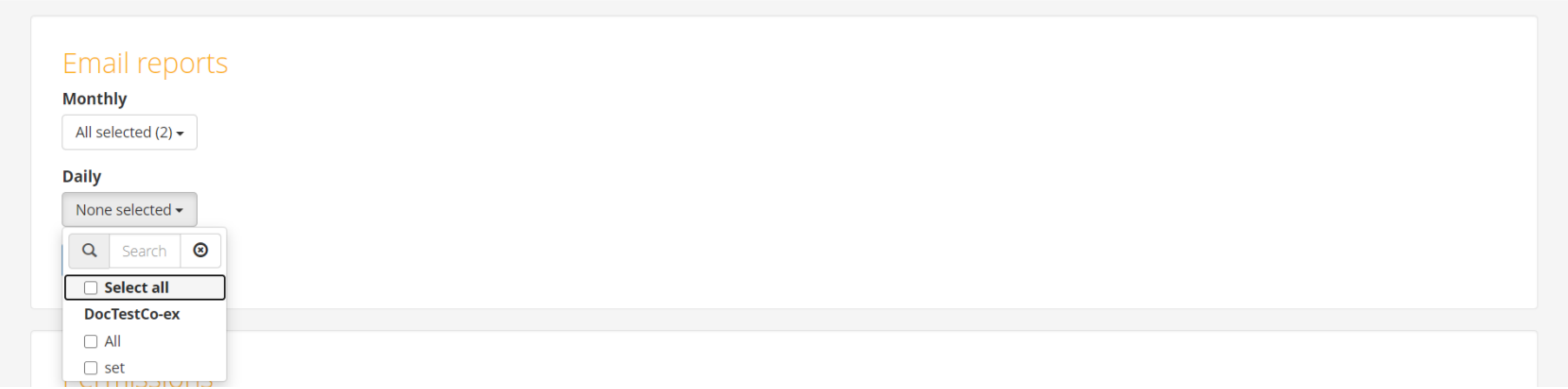

User Settings
Profile
Username
anewusername
Full Name
A. N. User
Email
Company
co1
Current Password
Required to save changes
Save changes
Update Password
Confirm your current password
Current password
Enter new password
New password
Re-enter new password
Confirm new Password
Change password

> 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 reports

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.

Administration

The `User Accounts` section at the bottom of the `Settings` > `Accounts` screen displays a list of all V-Spark user accounts the current user may edit. The accounts list shows each account's username, email address, full name, company, and system admin status, as in the following example:

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	✖

IMPORTANT:

Account permissions have a significant impact on the company, organization, and user information available on the `Accounts` screen.

Remember:

- Most user accounts have permissions limited to specific companies or organizations. The `Account Settings` page displays only entities that the **active, currently logged-in account** has view permission. Those entities may only be modified if the active account has edit permission.
- Attributes for companies and organizations may only be edited if the active account has permission to modify them.
- Attributes for other user accounts may only be changed if the active account has permission to modify those accounts' companies.

Also note that:

- If the active account has only organization-level view and write permissions, that account cannot view any company information.
- To be able to set permissions for any user in any company or organization, you must be logged in as a system administrator.

The `Accounts` screen indicates the following status information for user accounts:

- 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.

Manage

The `Accounts` screen offers the following user account management operations:

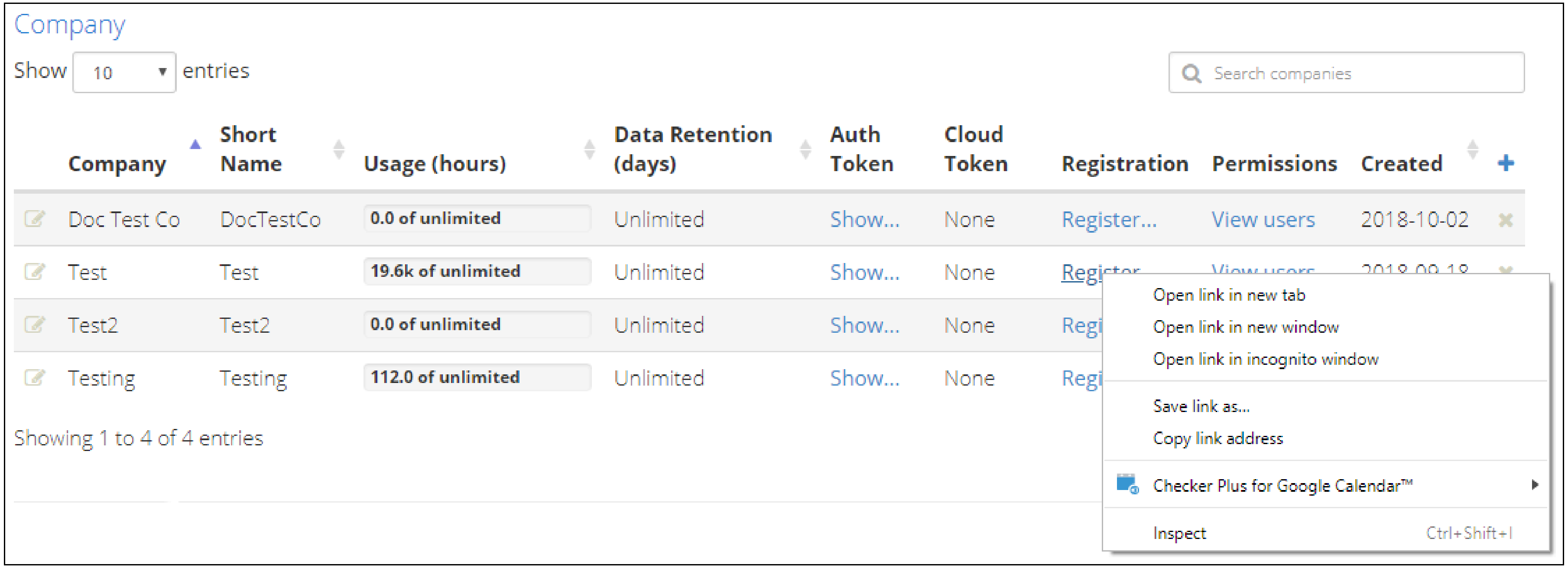
- Click ✚ `Add` to create a new account.
- Click `Edit` to change the settings and profile or the permissions for the user account.
- Click ✖ `Delete` and then `Yes, delete this user` to delete the user account.

Enable requests

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.

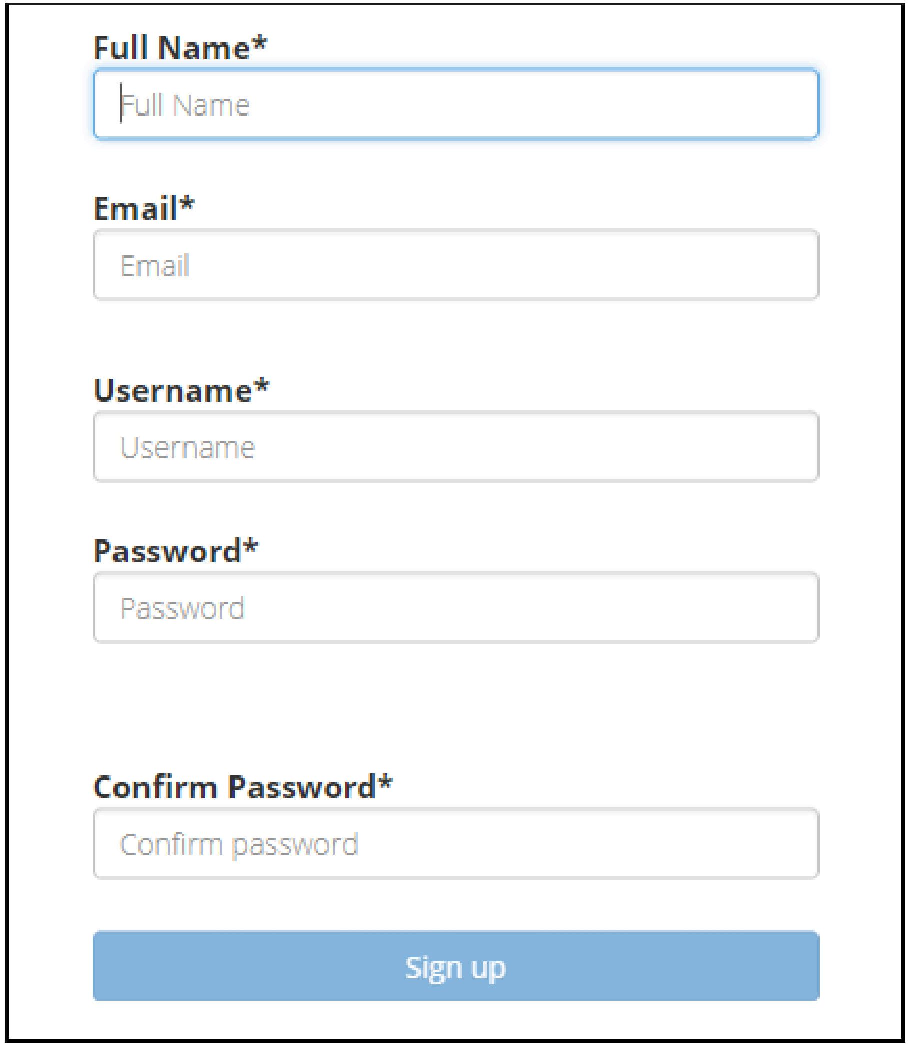
A company account must already exist before users can register for an account associated with that company. If a company exists in V-Spark, a user can request an account by following the registration link for that company.

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



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:



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.

Verify

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:

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.

    a. 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.

    b. Select a company name from the drop-down menu to assign the user to a company.

    c. Click the check mark to proceed.

6. Verify the account - 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.
7. Select `Verified` from the left-hand drop-down menu.
8. Select the check mark to close this pop-up and proceed.
9. To set a user's permissions, select the icon to the left of the entry for that user.
10. Select the check mark to close this pop-up and proceed.

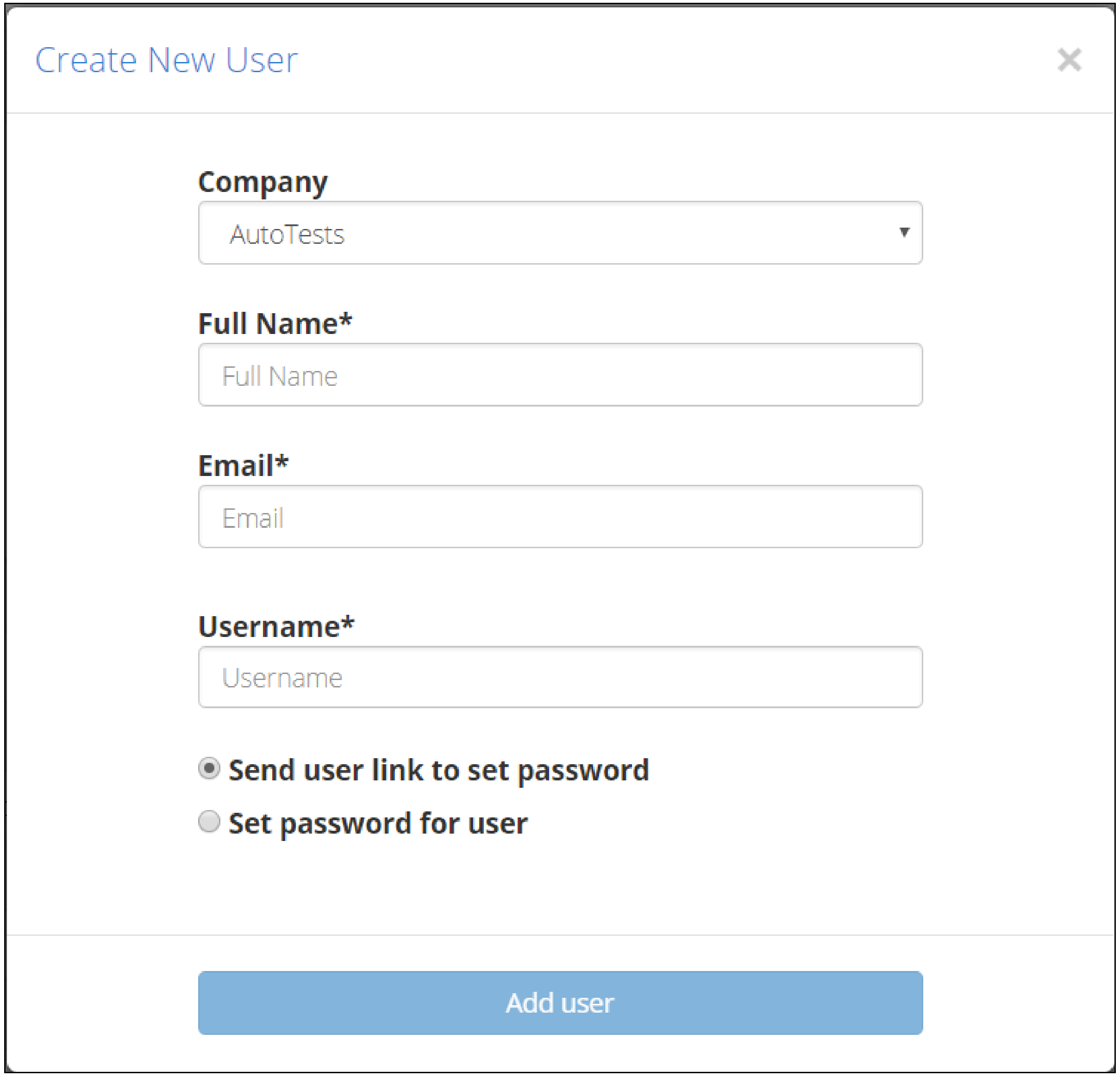
Create a user account

V-Spark user accounts can be created manually using the GUI, and manually or programmatically using the API's `/config/users/` endpoint. Users may also request a new account if that feature is enabled.

To create a user account:

1. Click **`Settings`**.
2. Click **`Accounts`**.
3. Click **`Add`** at the far right of the **`User Accounts`** section of the **`Account Settings`** screen.

   The **`Create New User`** window appears:



4. Use the **Company** drop-down menu to select the company that will be the account's home company.

5. 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.
6. Specify the source for the new user's password. You must choose one of the available options:

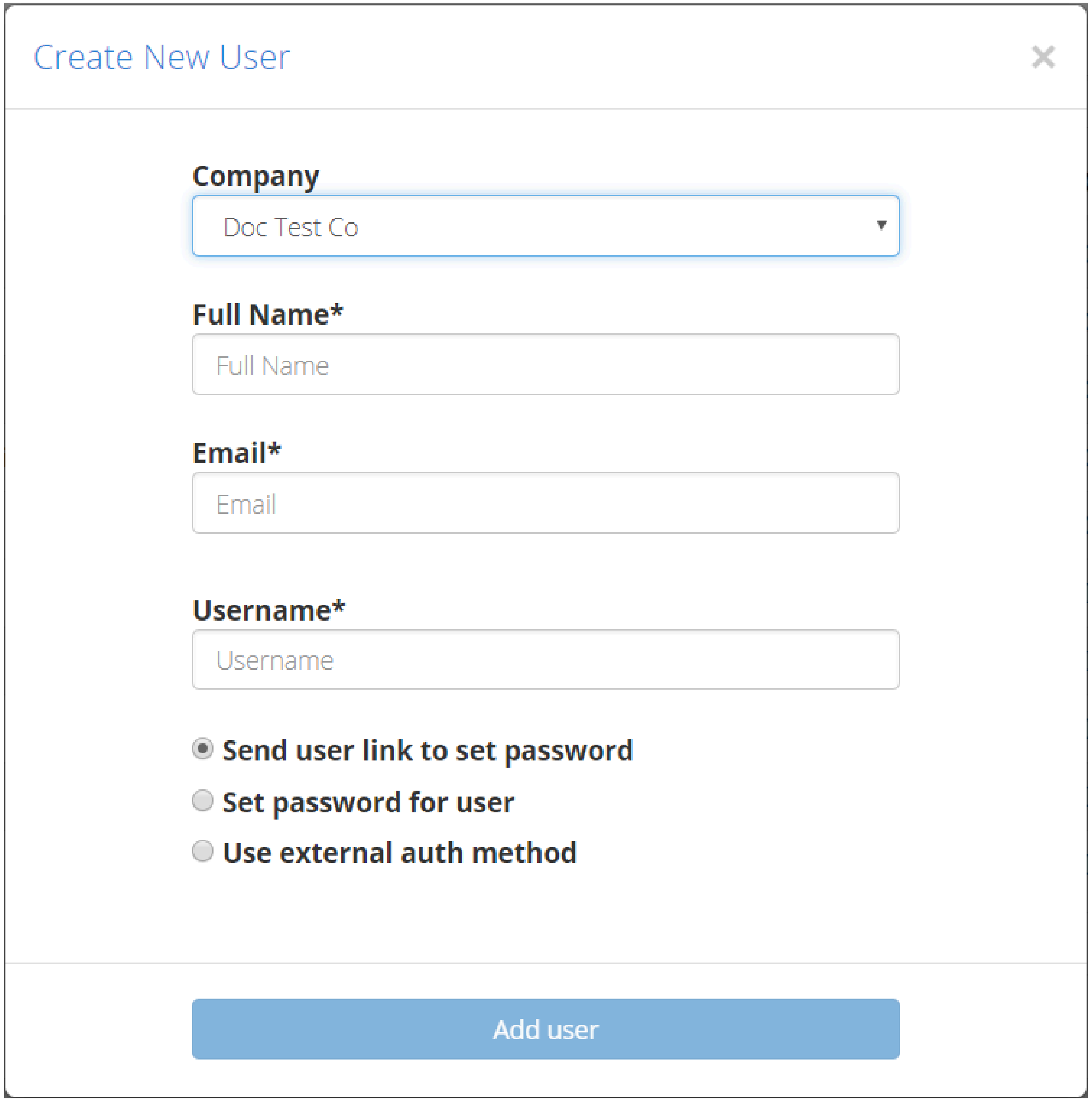
- `Send user link to set password` — sends the new user an email with a link that can be used to set an initial password.

  When the password has been successfully set, V-Spark sends an additional email confirmation to the user.

- `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.

- `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:

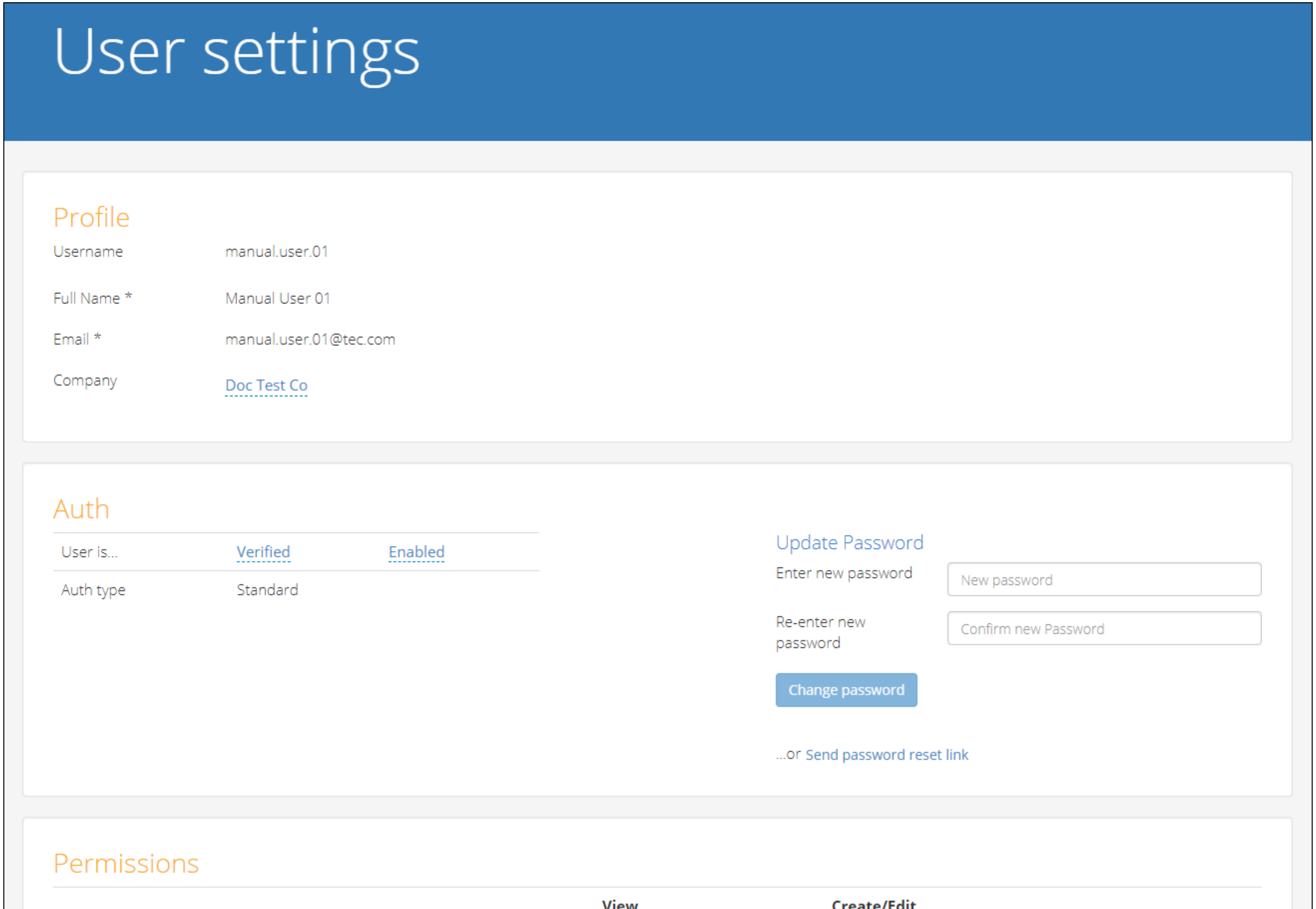

Create New User
Company
Doc Test Co
Full Name*
Full Name
Email*
Email
Username*
Username
Send user link to set password
Set password for user
Use external auth method
Add user

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).

7. Click `Add user`.

Configuration

The administrator-level view of the `User Settings` screen displays user profile, authentication, and permissions information. System administrators can use this screen to manage, disable, and delete individual accounts, as in the following example:


User settings
Profile
Username
manual.user.01
Full Name *
Manual User 01
Email *
manual.user.01@tec.com
Company
Doc Test Co
Auth
User is...
Verified
Enabled
Auth type
Standard
Update Password
Enter new password
New password
Re-enter new password
Confirm new Password
Change password
...or Send password reset link
Permissions
View
Create/Edit

Disabling Accounts

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**. Click ✔ **Accept** to save the new value or ✖ **Cancel** to close without saving changes.

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,

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:

Permissions

	View	Create/Edit
DocTestCo	☑	☑
Example	☑	☑

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.

Access 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.

Passwords

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

The administrator-level view 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 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:

Password configuration fields

Name	Values	Notes
`min_passwd_len`	default 7 -1 or any integer from 1 to 255 (inclusive)	▪ Defines the minimum string length of the password. ▪ Specifying a value of -1 deactivates the length requirement. ▪ Invalid values are ignored, and the default value 7 is used instead.

Name	Values	Notes
`max_passwd_lifetime`	default -1 -1 or any integer from 1 to 9007199254740991 (inclusive)	▪ Defines the number of days after which the password must be changed. ▪ Default value of -1 deactivates the password age policy. ▪ Invalid values are ignored, and the default value -1 is used instead.
`max_passwd_failed_attempts`	default 6 -1 or any integer from 1 to 2147483647 (inclusive)	▪ 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. ▪ Specifying a value of -1 deactivates the attempt limit. ▪ Invalid values are ignored, and the default value 6 is used instead.

Other 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.

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.