

## Automated User Deletion with SCIM

How to use System for Cross-domain Identity Management for automated user deletion.

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Tags | [SCIM](#) |

Applies to: Free Basic Business Enterprise

### ADMIN PRIVILEGES REQUIRED

This documentation is for **Stack Overflow for Teams Enterprise**. Free, Basic, and Business users can access their documentation [here](#). [Find your plan](#).

## Overview

With the Stack Overflow for Teams Enterprise (SOE) System for Cross-domain Identity Management (SCIM) 2.0 implementation, you can perform automated deletion of users from your site. This method removes users permanently, just as if a site admin had deleted them using the **Admin settings** "Users and permissions" page.

This article details the user deletion process with an external identity provider (IdP) as well as direct API calls. To learn more about other SCIM 2.0 capabilities, such as user deactivation/reactivation and moderator access, read the [System for Cross-domain Identity Management \(SCIM\) 2.0 Support](#) article.

**NOTE:** The deletion of a user using this feature **CANNOT BE REVERSED**. Deletion is an irrevocable action that permanently removes the user and changes attribution of their content to a generic user (for example: User1527). Before you proceed, be aware of the differences between deactivation (which is reversible, does not remove the user, and retains their attribution to content) and deletion (which is **IRREVERSIBLE** and removes the user and their attribution).

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**THIS ARTICLE APPLIES TO STACK OVERFLOW FOR TEAMS ENTERPRISE ONLY.**

Other Stack Overflow for Teams users should read [this article](#) instead. [Find your plan](#).

## Enable SCIM user deletion

To help prevent unintentional user deletion with SCIM 2.0, Stack Overflow enables this functionality only for supported customers on a case-by-case basis. If you'd like to enable or disable this feature, open a [support ticket](#).

## Enable and authenticate SCIM on your site

**NOTE:** This guide assumes you've already enabled and configured SSO authentication on your site. For more information, read the [SSO Overview](#) article.

To configure SCIM support on your site, log into your site as an administrator. Click **Admin settings** in the main menu, then **SCIM**. If this is your first time configuring SCIM, create a token (password) and save it. The token should be something secure and unique, such as a randomly generated string. A password generator, such as the [NordPass Password Generator](#), can help.

If you've already configured SCIM, click **Show Password** to reveal the token. Copy the token and save it to a safe place for later use. Check both the **Allow Moderator Promotion via a userType property** and **Allow Admin Promotion via a userType property** boxes. Click **Save settings**.

Method 1: delete users via an IdP Most IdPs support user provisioning, deactivation, and deletion with SCIM 2.0. Refer to the "Configure the Identity Provider" section of the [System for Cross-domain Identity Management \(SCIM\) 2.0 Support](#) article for guidelines and examples for configuring an IdP application.

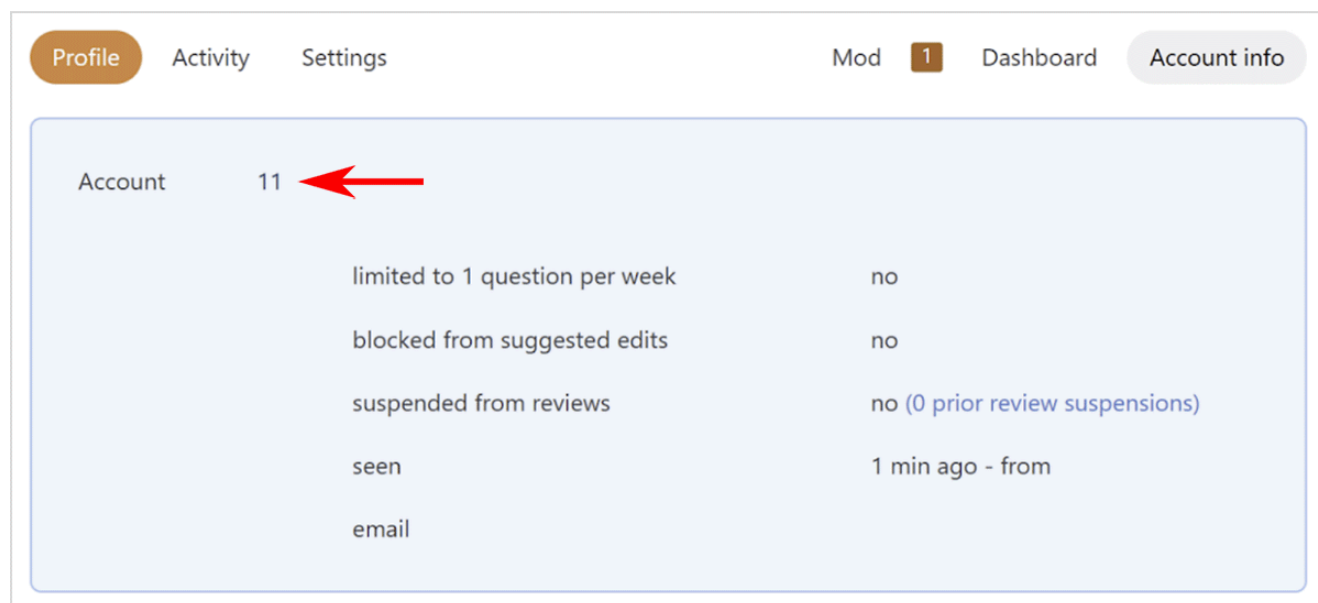
Depending on the IdP you use, you may need to configure the IdP to specify what action should trigger a user deletion rather than deactivation. This could be a change to a user attribute, change to user status, or deletion of the user from the IdP.

If your IdP does not support SCIM 2.0 user deletion, you can configure a separate application to issue the SCIM API calls to your site at [https://\[your\\_site\].stackenterprise.co/api/scim/v2](https://[your_site].stackenterprise.co/api/scim/v2) (see below).

## Method 2: make direct SCIM 2.0 API user delete calls

In addition to using an IdP to delete users, you can also make a direct delete call to your site's SCIM endpoint at [https://\[your\\_site\].stackenterprise.co/api/scim/v2/users/\[account\\_ID\]](https://[your_site].stackenterprise.co/api/scim/v2/users/[account_ID]).

The delete call must include the SCIM authorization bearer token as well as the user's account ID (which is not the same as user ID). Site admins can retrieve this value by clicking **Account Info** on the user profile page of the user to be deleted.



The screenshot shows a user profile page with tabs for Profile, Activity, and Settings. The Profile tab is active. On the right, there are links for Mod, Dashboard, and Account info. The Account info section is highlighted with a red arrow pointing to the account ID '11'. Below this, there is a table of account settings.

Account	11
limited to 1 question per week	no
blocked from suggested edits	no
suspended from reviews	no (0 prior review suspensions)
seen	1 min ago - from
email	

You can also retrieve a user's account ID with a get call to the base users SCIM endpoint at [https://\[your\\_site\].stackenterprise.co/api/scim/v2/users](https://[your_site].stackenterprise.co/api/scim/v2/users). The user's 'id' value will be in the 'Resources' section in the JSON response.

## Stack Overflow-provided user deletion script

Stack Overflow created a user deletion script that we make publicly available on Github. You can download and learn more about the script at [https://github.com/StackExchange/so4t\\_scim\\_user\\_deletion](https://github.com/StackExchange/so4t_scim_user_deletion).

### Script usage requirements

- Stack Overflow Enterprise or Business
- Python 3.8 or higher (download)
- Linux, MacOS, or Windows operating system

### Set up and install dependencies

1. Download and unpack the contents of the [user deletion script repository](#).
2. Open a terminal window or command prompt.
3. Navigate to the directory where you unpacked the files.
4. Install the dependencies if needed with these commands: `python3 -m pip install -r requirements.txt --trusted-host pypi.org --trusted-host pypi.python.org --trusted-host files.pythonhosted.org`

**NOTE:** Depending on your installation of Python, you may need to use `python` or `py` instead of `python3` in the command above. If `python3` is not a recognized command, you can check which command to use by running `python --version` or `py --version` to see which responds with the installed Python version.

### Usage

If you'd like to delete specific users, create a file named `users.csv` in the same directory as the script. Each line of the file should contain the email address of a user you'd like to delete. You can find a template [here](#).

In a terminal window or command prompt, navigate to the directory where you unpacked the script. Run the script with the `-csv` flag, replacing the URL, token, and CSV file name with the appropriate values. You'll also need to use the correct `py`, `python`, or `python3` command for the version you're using. For example:

```
python3 so4t_scim_user_deletion.py --url "<https://[your_site].stackenterprise.co>" --token "[your_token]" --csv "[csv_file_name].csv"
```

You can also use the script to delete all deactivated users. To do this, run the script with the `--deactivated` flag instead of the `--csv` flag. In a terminal window or command prompt, navigate to the directory where you unpacked the script. Run the script, replacing the URL and token with the appropriate values. You'll also need to use the correct `py`, `python`, or `python3` command for the version you're using. For example:

```
python3 so4t_scim_user_deletion.py --url "<https://[your_site].stackenterprise.co>" --token "[your_token]" --deactivated
```

### Errors

Upon completion, the script will create a JSON file named `failed_deletions_[date].json` in the script directory. This file will contain notes and/or error messages for every user the script could not delete. You can share this file with Stack Overflow

support to get help troubleshooting the problem.