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Schedule a Sync



Schedule a Sync

For organizations using the Directory Connector CLI, automatic syncs can be scheduled on defined intervals as an alternative to using the desktop app's **Interval** setting. This is particularly useful in headless environments, or in circumstances where a desktop app cannot be left running in the background.

To schedule syncs, use Cron in Unix-like environments including Linux and MacOS, and use Task Scheduler in Windows environments:

⇒Cron

Cron permissions

When running a cron job, we recommend doing so as a dedicated Directory Connector user. Create a bwdc user if you haven't already, and add that user to the etc/cron.allow list. This will allow a non-Root user to set up and run cron jobs.

In order to continue, you will also need your organization's API key client_id and client_secret, which can be obtained by an organization **owner** from the Web Vault by navigating to organization **Settings** \rightarrow **My Organization**.

Setup a sync script

In order avoid session timeouts, we recommend creating a shell script to run through cron. This script should securely read your client _secret to complete the login, and run a bwdc sync command that writes output to bwdc.log.

♀ Tip

Need to sync from multiple directories? In your sync script, you can specify multiple folders, each of which must contain a data. json file with your directory sync settings.

You can then specify each directory to sync by performing multiple bwdc sync operations, for example:

Bash

BITWARDENCLI_CONNECTOR_APPDATA_DIR="./instance-1" bwdc sync BITWARDENCLI_CONNECTOR_APPDATA_DIR="./instance-2" bwdc sync

Setup the cron job

As the permitted bwdc user:

- 1. Edit the user's crontab file by entering crontab -e in the terminal, or as edit the crontab file as any user by entering crontab -u

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 -e.
- 2. Add a line to the crontab that includes:
 - A scheduling expression that will determine the time/recurrence interval on which to execute the desired command (for example, 0 0 * * 2 to run every Tuesday at midnight).
 - The command to execute at the specified time/recurrence interval. In this case, execute the previously created sync script (for example, bwdcSyncService.sh):

For example, to run the sync script every Monday at 12:00:



```
# 0 12 * * 1 bwdcSyncService.sh
```

Cron job scheduling expressions

Use the following reference when scheduling syncs via cron to ensure you're scheduling them for the desired time:

```
# _____ minute (0 - 59)

# | _____ hour (0 - 23)

# | | _____ day of the month (1 - 31)

# | | | _____ month (1 - 12)

# | | | | day of the week (0 - 6) (Sunday to Saturday;

# | | | | | 7 is also Sunday on some systems)

# | | | | | | # * * * * * <command to execute>
```

∏ Tip

If you're not yet comfortable with cron job scheduling expressions, check out https://crontab.guru/ for help.

Please note, this is a third-party resource that is not operated or maintained by Bitwarden.

⇒Task Scheduler

Task Scheduler permissions

When running a task, we recommend doing so as a dedicated Directory Connector user. Create a bwdc user if you haven't already.

In order to continue, you will also need your organization's API key client_id and client_secret, which can be obtained by an organization owner from the web app by navigating to organization Settings → My Organization.

Setup a sync script

In order to avoid session timeouts, you will need to create a script to run as the Task Scheduler action. This script should securely read your client_secret to complete the login, and run a bwdc sync command that writes output to bwdc.log.



∏ Tip

Need to sync from multiple directories? In your sync script, you can specify multiple folders, each of which must contain a data. json file with your directory sync settings.

You can then specify each directory to sync by performing multiple bwdc sync operations, for example:

Bash

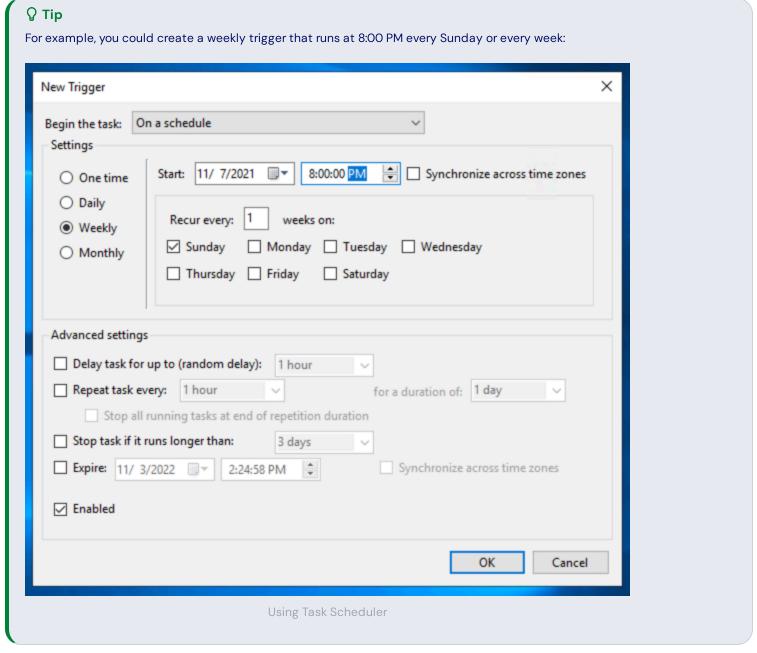
```
BITWARDENCLI_CONNECTOR_APPDATA_DIR="./instance-1" bwdc sync BITWARDENCLI_CONNECTOR_APPDATA_DIR="./instance-2" bwdc sync
```

Create a task

As the dedicated bwdc user:

- 1. Open Task Scheduler and select **Create Task** from the Actions menu.
- 2. Configure the task with the following security options:
 - Set the task to use the created bwdc user.
 - Set the task to Run whether user is logged on or not.
- 3. Select the Triggers tab and select the New... button to create a trigger that fits your directory sync needs.





- 4. Select the **Actions** tab and select the **New...** button to create an action that runs the created sync script.
- 5. Select **OK** to finish creating the scheduled task.