Quickstart guide

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This topic provides collects basic commands for installed Katzenpost server components in a single convenient place. All system commands require superuser privileges.

The commands in this topic do not apply to the Katzenpost Docker image, which has its own controls. For more information, see Using the Katzenpost Docker test network [https://katzenpost.network/docs/admin_guide/docker.html].

Systemd commands

These commands match the suggested systemd setup described in Installing Katzenpost [https://katzenpost.network/docs/admin_guide/install.html].

Table 1. Systemd control commands for Katzenpost

Task	Command
Start a mix node.	**systemctl start pq-katzenpost-mixserver**
Stop a mix node.	**systemctl stop pq-katzenpost-mixserver**
Restart a mix node.	**systemctl restart pq-katzenpost-mixserver**
Start a diectory authority node.	**systemctl start pq-katzenpost-authority**
Stop a diectory authority node.	**systemctl stop pq-katzenpost-authority**
Restart a diectory authority node.	**systemctl restart pq-katzenpost-authority**

Server CLI commands

The primary Katzenpost server binaries are **pq-katzenpost-mixserver**, which instantiates a mix node, gateway node, or service provider depending on its configuration, and **pq-katzenpost-authority**, which instantiates a directory authority.

Table 2. Command options for the Katzenpost server binaries

Task	Command

Control a mix node.	Run **pq-katzenpost-mixserver -h** for options.
	
	```$ pq-katzenpost-mixserver -h```
	```Usage of pq-katzenpost-mixserver:```
	``` -f string```
	``` Path to the authority config file. (default "katzenpost.toml")```
	``` -g Generate the keys and exit immediately.```
	``` -v Get version info.```
	
	The **-f** parameter can be used to specify a customized path and filename for the server configuration file, which is typically /etc/pq-katzenpost-mixserver/katzenpost.toml.

Task		Command
		The `-g` option is used to generate the public and private signing and link keys. By default, these must be manually copied to the directory defined by the `DataDir` parameter in `/etc/pq-katzenpost-mixserver/katzenpost.toml`.

Control directory authority.	a	Run **pq-katzenpost-authority -h** for options.
		
		`$ pq-katzenpost-authority -h`
		`Usage of pq-katzenpost-authority:`
		`  -f string`
		`     Path to the authority config file. (default "authority.toml")`
		`  -g Generate the keys and exit immediately.`
		`  -v Get version info.`
		
		The **-f** parameter can be used to specify a customized path and filename for the server configuration file, which is typically `/etc/pq-katzenpost-authority/authority.toml`.
		
		The `-g` option is used to generate the public and private signing and link keys. By default, these must be manually copied to the directory defined by the `DataDir` parameter in `/etc/pq-katzenpost-authority/authority.toml`.

Management interface

Katzenpost provides a management interface that is accessed through a unix domain socket. The interface supports run-time changes to nodes without requiring a restart. By default, the management interface is disabled. To enable it, change the `Management` section of the node's configuration file so that `Enable = true`:

```
[Management]
   Enable = true
   Path = "/node_datadir/management_sock"
```

For more information about management configuration, see the details for your node type in Components and configuration of the Katzenpost mixnet [https://katzenpost.network/docs/admin_guide/components.html].

Use the socat [https://manpages.org/socat] command-line utility to connect to the management socket and issue commands, with the following syntax:

```
# socat unix:/path-to-datadir/management_sock STDOUT
```

The following commands are supported.

- QUIT - Exit the management socket session.

- SHUTDOWN - Shut down the server gracefully.

- ADD_USER - Add a user and associate it with a public link key provided in either hexadecimal or Base64 format.

  ```
  ADD_USER user key
  ```

- UPDATE_USER - Update a user's link key.

  ```
  UPDATE_USER user key
  ```

- REMOVE_USER - Remove a user.

  ```
  REMOVE_USER user
  ```

- SET_USER_IDENTITY - Set a user's identity key.

    `SET_USER_IDENTITY` *user key*

- REMOVE_USER_IDENTITY - Remove a user's identity key. This command must be followed up with a `REMOVE_USER` command.

    `REMOVE_USER_IDENTITY` *user*

- USER_IDENTITY - Retrieve a user's identity key.

    `USER_IDENTITY` *user*

- SEND_RATE - Set the packet rate limit to a per-minute integer value.

    `SEND_RATE` *value*

- SEND_BURST - Set the packet burst-rate limit to a per-minute integer value.

    `SEND_BURST` *value*

Monitoring

Katzenpost logging information can be viewed in real time with the following commands:

```
# journalctl -u pq-katzenpost-mixserver -f -n 2000
```

or

```
# journalctl -u pq-katzenpost-authority -f -n 2000
```

Logging levels include ERROR, WARNING, NOTICE, INFO, and DEBUG, with INFO as the default. For information about setting the log level, see the documentation for each node type in Components and configuration of the Katzenpost mixnet [https://katzenpost.network/docs/admin_guide/components.html].