Work with Perfecto Connect

Let's have a quick look at the executable usage. Running `./perfectoconnect` without any command outputs the version number and information on the available commands and parameters.

```
usage: ./perfectoconnect [<flags>] <command> [<args> ...]

Perfecto Connect, Version xx.xx.x

Flags:
  --help     Show context-sensitive help (also try --help-long and --
help-man).
  --version  Show application version.

Commands:
  help [<command>...]
    Show help.

  start --cloudurl=<cloud> --securitytoken=<securitytoken> [<flags>]
    Start Perfecto Connect session

  stop
    Terminates existing Perfecto Connect sessions

  doctor --cloudurl=<cloud> --securitytoken=<securitytoken> [<flags>]
    Run connectivity tests
```

Create a Perfecto Connect tunnel

You create a Perfecto Connect tunnel by running the `start` command, including the mandatory parameters `cloudurl` and **securitytoken**.

The following table lists all available parameters.

Parameter	Description
`--help`	Shows context-sensitive help (also try --help-long and --help-man)
`--version`	Shows the Perfecto Connect version
`-c, --cloudurl=<cloud>`	The Perfecto Lab that you are registered on, for example demo.perfectomobile.com. Make sure to remove the following from the URL: - Protocol identifier (such as `http://` or `https://`) - `.app` (if part of the URL)
`-s, --securitytoken=<securitytoken>`	The security token required to use with Perfecto Connect. For more information, see Generate security tokens.
`-f, --foreground`	Runs Perfecto Connect in foreground mode. In foreground mode, all logs are displayed in your console. This is helpful for troubleshooting sessions with Perfecto Support. Backgroud mode is the default. It only outputs the tunnel ID.
`-l, --proxylog`	Enables bundled proxy logging. See also Work behind a proxy.
`-v, --verbose`	Enables verbose logging.
`-t, --skiptests`	Skips connectivity tests usually performed by the executable before initiating the session.
`--logfile=<full path>`	The full path to the location of the log file, for example `/tmp/log.out`.
`-d, --disable-proxy-detect`	Disables the auto-detection proxy. This is sometimes required for troubleshooting.
`--bridgeproxyip=<ip>`	The IP address of bridging proxy (optional).

`--bridgeproxyport=<port>`	The port of the bridging proxy (optional).
`--outgoingproxyip=<ip>`	The IP address of the outgoing proxy (optional).
`--outgoingproxyport=<port>`	The port of the outgoing proxy (optional).
`--outgoingproxyuser=<username>`	The username used to connect to the outgoing proxy (optional)
`--outgoingproxypass=<password>`	The password used to connect to the outgoing proxy (optional)

To create a Perfecto Connect tunnel:

1. In the command line, navigate to the directory of the Perfecto Connect client.
2. Run the following command to launch a tunnel:

```
$ ./perfectoconnect start -c <cloudURL> -s <security-token>
```

For example:

```
macosx:/usr/local/etc/perfecto$ ./perfectoconnect start -c demo.perfectomobile.com -s
eyJhbGciOiJSUz...DxAkAuw82Hao7qrA
```

The reply from the application is the **tunnel identifier (`Tunnel ID`)** that you insert into your Appium/Selenium scripts to associate devices with this tunnel.

> **Note**: Running the `perfectoconnect` application in the foreground causes the execution to send additional log information to the console. You may need to look for the `Tunnel ID`.
>
> ```
> 15:11:39.130 doStart   INFO 002 Using service url: https://demo.connect.perfectomobile.com
> 15:11:39.132 doStart   DEBUG 003 Session started, Tunnel ID: cb16e22d-64d3-4d9e-a000-e440ac4318ce
> 15:11:39.136 launchTunnels   DEBUG 004 Starting up channel on 62710 [vpn.demo-04.perfectomobile.com:443]
> 15:11:39.137 launchTunnels   DEBUG 005 Starting up channel on 62711 [vpn.demo-01.perfectomobile.com:443]
> 15:11:39.138 launchTunnels   DEBUG 006 Starting up channel on 62712 [vpn.demo-02.perfectomobile.com:443]
> 15:11:39.139 launchTunnels   DEBUG 007 Starting up channel on 62713 [vpn.demo-fra.perfectomobile.com:443]
> 15:11:39.140 launchTunnels   DEBUG 008 Starting up channel on 62714 [vpn.demo.perfectomobile.com:443]
> ```

3. Save the Tunnel ID.

Close a Perfecto Connect tunnel

When the Perfecto Connect client runs in background mode and you are done using a tunnel, you can terminate any existing Perfecto Connect sessions by using the `stop` command.

The following table lists all available parameters.

Parameter	Description
`--help`	Shows context-sensitive help (also try `--help-long` and `--help-man`).
`--version`	Shows the Perfecto Connect version.
`-v, --verbose`	Enables verbose logging.
`-d, --disable-proxy-detect`	Disables the auto-detection proxy. This is sometimes required for troubleshooting.

To close a tunnel:

- Run the `stop` command as follows:

```
$ ./perfectoconnect stop
```

For example:

```
macosx:/usr/local/etc/perfecto$ ./perfectoconnect stop
13:29:14.109 run  INFO 001 Perfecto Connect session terminated!
```

This will terminate any existing tunnels on your machine and disconnect all existing connections.

Diagnose connection issues

You can use the `doctor` command to troubleshoot connection issues with Perfecto Connect. The command checks if the client can connect to Perfecto services and servers. You run it with the cloud and security token parameters. This section explains how to use the command and lists the errors it might return, along with how to resolve them.

The following table lists all available parameters.

Parameter	Description
`--help`	Shows context-sensitive help (also try `--help-long` and `--help-man`)
`--version`	Shows the Perfecto Connect version
`-c`, `--cloudurl=<cloud>`	The Perfecto Lab that you are registered on, for example demo.perfectomobile.com. Make sure to remove the following from the URL: • Protocol identifier (such as `http://` or `https://`) • `.app` (if part of the URL)
`-s`, `--securitytoken=<securitytoken>`	The security token required to use with Perfecto Connect. For more information, see Generate security tokens.
`-d`, `--disable-proxy-detect`	Disables the auto-detection proxy. This is sometimes required for troubleshooting.
`--outgoingproxyip=<ip>`	The IP address of the outgoing proxy (optional).
`--outgoingproxyport=<port>`	The port of the outgoing proxy (optional).
`--outgoingproxyuser=<username>`	The username used to connect to the outgoing proxy (optional)
`--outgoingproxypass=<password>`	The password used to connect to the outgoing proxy (optional)
`-v`, `--verbose`	Enables verbose logging.

To diagnose connection issues:

- Run the `doctor` command as follows:

```
$ ./perfectoconnect doctor -c <cloud> -s <security-token>"
```

For example:

```
$ ./perfectoconnect doctor -c demo.perfectomobile.com -s eyJhbGciOiJSUz...DxAkAuw82Hao7qrA
```

A successful execution returns the following output:

```
10:53:31.800 INFO 001 > Perfecto Connect MacOS Client - v19.15.1
10:53:31.814 INFO 002 > Running connectivity tests
10:53:31.814 INFO 003 > Trying to reach Perfecto services...
10:53:52.261 NOTICE 004 > Perfecto services reached successfully
10:53:52.261 INFO 005 > Trying to reach Perfecto servers...
10:53:56.789 NOTICE 006 > Perfecto servers reached successfully
```

The following table lists possible errors and their resolution.

Error	Resolution
`wrong offline token, please make sure that the provided token is valid`	Invalid security token. Generate a new token and try again. For instructions, see Generate security tokens.
Post `https://demo.connect.perfectomobile.com/v2/client/session/start`: Forbidden	Failed to connect to services. Check the parameter values provided and try again. If the issue persists, contact your IT department to place the following on your allow list: `*.connect.perfectomobile.com`:443
`Forbidden response on <server-name>:443`	Failed to connect to servers. Check the parameter values provided and try again. If the issue persists, contact your IT department to place the following on your allow list: `vpn.*.perfectomobile.com`:443

For more help with resolving issues, see Troubleshoot Perfecto Connect.