Configuring MacPorts Kerberos for Duo Authentication

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Below are some helpful guidelines for configuring MacPorts Kerberos for Duo authentication on a Mac OS 10.8 or later...

Also see How do I login to MIT services that leverage Duo two-factor authentication?

Installing MacPorts Kerberos and OpenSSH on Mac OS 10.8+

Step 1: Install Xcode command line tools

- Launch **Terminal.app**
- In Terminal, type:

```
xcode-select --install
```

- In the pop-up window, click on **Install**
- Once complete, verify that you have installed the needed components by typing:

```
gcc --version
```

Output should look something like this, depending on OS version:

```
placebo@B12H87RFNE5L ~ % gcc --version
Apple clang version 14.0.0 (clang-1400.0.29.202)
Target: x86_64-apple-darwin22.1.0
Thread model: posix
InstalledDir: /Applications/Xcode.app/Contents/Developer/Toolchains/XcodeDefault.xctoolchain/usr/bin
```

Step 2: Install MacPorts

- Visit The MacPorts Project.
- Download the package corresponding to your OS release and install it.
- Once installed, open a new Terminal and type:

```
type port
```

You will see:

```
placebo@B12H87RFNE5L ~ % type port
port is hashed
```

Step 3: Install necessary ports

- From Terminal.app, open a privileged shell by typing the command below in Terminal and providing the admin password for the logged in user:

```
sudo -s
```

- Your prompt should change from...

```
placebo@B12H87RFNE5L ~ % sudo -s
```

to

```
root@B12H87RFNE5L ~ #
```

- Type the following:

```
port selfupdate
```

Let it run. It will take a few minutes.

- Then type:

```
port install kerberos5
```

This may take a half-hour to run.

- Then type:

```
exit
```

Step 4: Install MIT Kerberos Extras for Macintosh package if not already installed

- Available from the IS&T Software Grid

Step 5: Configure OpenSSH

- Create ssh directory: `mkdir ~/.ssh/`
- Execute the following command to add "GSSAPIAuthentication yes" to `~/.ssh/config` for the user:

```
echo "GSSAPIAuthentication yes" >> ~/.ssh/config
```

Step 6: Test!

> On MacOS Big Sur and later, you need to explicitly configure where the ticket cache is; in .bashrc, either
> export KRB5CCNAME=KCM:uid (to use the built in ticket cache)
> or
> export KRB5CCNAME=/tmp/tkt_username (a valid file name)

- User should now be able to `kinit username/root` at Terminal prompt and be prompted for both password and Duo authentication

> *If your root instance is not working after following these steps, please move the directories for MacPorts (`/opt/local/bin` and `/opt/local/sbin`) to the front of your PATH so that they are evaluated first.*

> *If it's still not working after moving the directories for MacPorts, please add 'Host *' above 'GSSAPIAuthentication yes' in the ~/.ssh/config file.*