

Device Communication Process

Connect to Device

- Telnet or SSH to device

Execute Command

- Send CLI command to device

```
session = pexpect.spawn('telnet ...')
...
session.sendline('show int brief')
...
show_int_output = session.before
interfaces = parse(show_int_output)
```

Parse Output

- Using string functions or regular expressions to identify and extract the data of interest to the application

Disconnect from Device

Sample application to telnet to a device:

```
import pexpect

ip_address = '10.30.30.1'
username = 'cisco'
password = 'cisco'

print '\n-----'
print '--- Attempting connection via telnet to: ', ip_address

# Create the pexpect session
session = pexpect.spawn('telnet ' + ip_address, timeout=20)
result = session.expect(['Username:', pexpect.TIMEOUT])

# Check for error, if so then print error and exit
if result != 0:
    print '--- FAILURE! creating session for: ', ip_address
    exit()

# Session expecting username, enter it here
session.sendline(username)
result = session.expect(['Password:', pexpect.TIMEOUT])
```

```
# Check for error, if so then print error and exit
if result != 0:
    print '--- FAILURE! entering username: ', username
    exit()

# Session expecting password, enter it here
session.sendline(password)
result = session.expect(['>', pexpect.TIMEOUT])

# Check for error, if so then print error and exit
if result != 0:
    print 'FAILURE! entering password: ', password
    exit()

print '--- Success! connecting to: ', ip_address
print '--- Username: ', username
print '--- Password: ', password
print '-----\n'
```