Basic remoting

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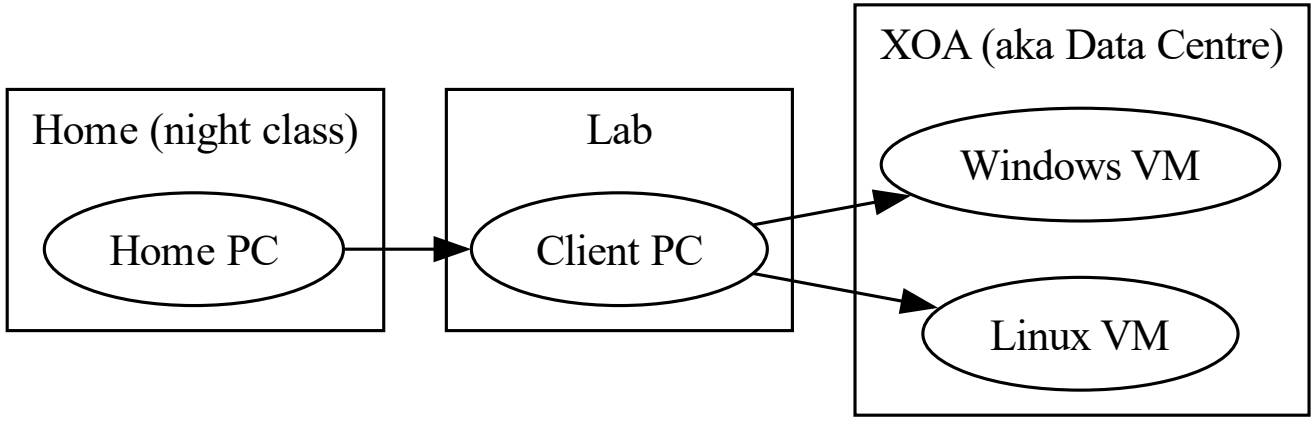
1 Lab scenario



Night class only

We will set up the Windows and Linux VMs now on XOA!

2 Remoting

Remoting refers to a general pattern where we execute commands:

Participants

- from a **local** (or source) system
- on a **remote** (or target) system

Unlike SSH or Telnet remote login, remote command execution is usually driven by the source end.

The source and target systems may differ significantly from each other:

Heterogenous participants

Provisioning on bare-metal/VM in local/DC, cloud instances, mix.
Operating system on each

3 SSH capabilities

SSH (TCP Port 22) is often used as the means to provide remoting.

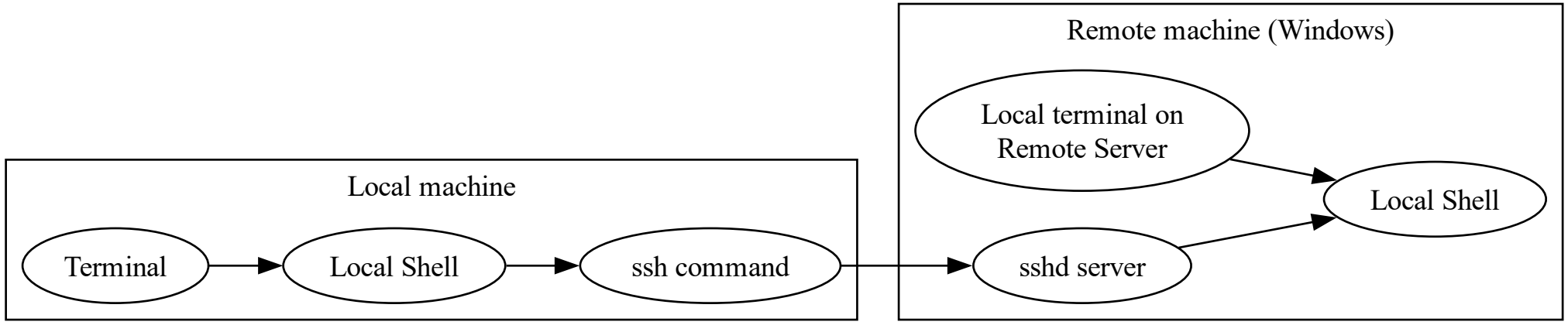
SSH usage patterns

- Running a full remote shell session (most common usage)
- Running a single command
- Transferring files (using SFTP)
- Port forwarding

The environment exposed over SSH is completely dependent on the **target** system.

3.1 SSHD

SSH is provided by the **SSH daemon** (`sshd`) on the remote server.



3.2 Default Shell

Normally a connection over SSH invokes a command shell depending on:

- Default settings in the SSH daemon
  - In `sshd_config` file
  - Powershell or CMD in Windows via Registry
- Connecting user's default shell setting
  - Defined in `/etc/passwd`

3.3 Authentication

Every SSH connection is associated with a particular user account on the remote system.

The username is passed in the SSH command string:

In hostname after the @ sign:

- `ssh joe@10.2.3.2`

Using the -U parameter in the command options:

- `ssh -U joe 10.2.3.2`

4 Key-based authentication