

Launch an Ubuntu OS based Vitis AMI

- Generate a new key pair if it is the first time you are creating an instance, otherwise you won't be able to connect to it.
- This will be the only chance to get the private key file, so you need to save the private key file in a safe location (e.g. ~/.ssh/<keyname>.pem on Linux or C:\Users\<username>\.ssh\keyname>.pem)
- Once the instance is run, get the Public DNS which you will need to connect to the Xilinx AMI instance.
- Links for getting started:
 - <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/launching-instance.html>
 - <https://aws.amazon.com/getting-started/tutorials/launch-a-virtual-machine/>

Connect to Vitis AMI without GUI

- **Connection through SSH:**
 - **NOTE:** Contact your sys admin before trying to connect through SSH to provide you with the correct command in case you need proxy setup.
 - Change the permissions of the private key file
 - \$ chmod 400 <keyname>.pem
 - \$ ssh -i <keyname>.pem ubuntu@<public_DNS_name>
 - The public DNS for your instance can be retrieved using the Amazon EC2 console. if Public DNS column is hidden, unhide using Show/Hide icon.
- Connect to Amazon EC2 Instance:
 - <https://docs.aws.amazon.com/quickstarts/latest/vmlaunch/step-2-connect-to-instance.html>

Connect to Vitis AMI Instance with GUI

- **Pre-requisite:**
 - Install and configure the desktop environment by connecting to instance through SSH as described above:
 - \$ sudo apt update
 - \$ sudo apt install ubuntu-desktop
- **Connection via VNC:**
 - **NOTE:** Contact your sys admin before trying to connect through SSH to provide you with the correct command in case you need proxy setup.
 - Change permissions of the private key file
 - \$ chmod 400 <keyname>.pem

- `$ ssh -L <HOSTNAME>:59XX:localhost:59XX -i <keyname>.pem centos@<public_DNS_name>`
 - where HOSTNAME is the same host where you are running ssh from.
 - where XX is the VNC port display to be used (e.g. 01)
- Install the pre-requisite desktop environment if not already installed
- `$ sudo apt install tigervnc-standalone-server tigervnc-common tigervnc-xorg-extension`
- `$ vncserver :XX`
 - Set a password when prompted
- `$ sudo passwd ubuntu`
 - Set a password when prompted
- Connect to the VNC session from the same host where you connected to the Xilinx AML using ssh.
 - `$ vncclient <HOSTNAME>:XX`

- **Connection via RDP:**
 - **NOTE:** Contact your sys admin before trying to connect through SSH to provide you with the correct command in case you need proxy setup.
 - Change permissions of the private key file
 - `$ chmod 400 <keyname>.pem`
 - `$ ssh -L <HOSTNAME>:3389:localhost:3389 -i <keyname>.pem ubuntu@<public_DNS_name>`
 - where HOSTNAME is the same host where you are running ssh from.
 - Install the pre-requisite desktop environment if not already installed
 - `$ sudo apt install xrdp`
 - `$ sudo systemctl enable xrdp`
 - `$ sudo systemctl start xrdp`
 - `$ sudo passwd ubuntu`
 - Set a password when prompted
 - Connect to the RDP session from the same host where you connected to the Xilinx AML using ssh
 - `<HOSTNAME>:3389`

Setting Up Environment and Launch Vitis

To configure the environment to run the Vitis software platform, run the following scripts, which set up the environment to run in a specific command shell.

```
#setup XILINX_VITIS and XILINX_VIVADO variables
source /tools/Xilinx/Vitis/2020.1/settings64.sh
#setup XILINX_XRT
source /opt/xilinx/xrt/setup.sh
export PLATFORM_REPO_PATHS=/opt/xilinx/platforms/
```

Launch Vitis

```
vitis
```

Additional Troubleshooting Tips for Amazon Instances:

- Most other questions can be answered here:
<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-troubleshoot.html>