

canarie



Technical Guide

How to Use DAIR Cloud Resources: Linux/Windows/GPU

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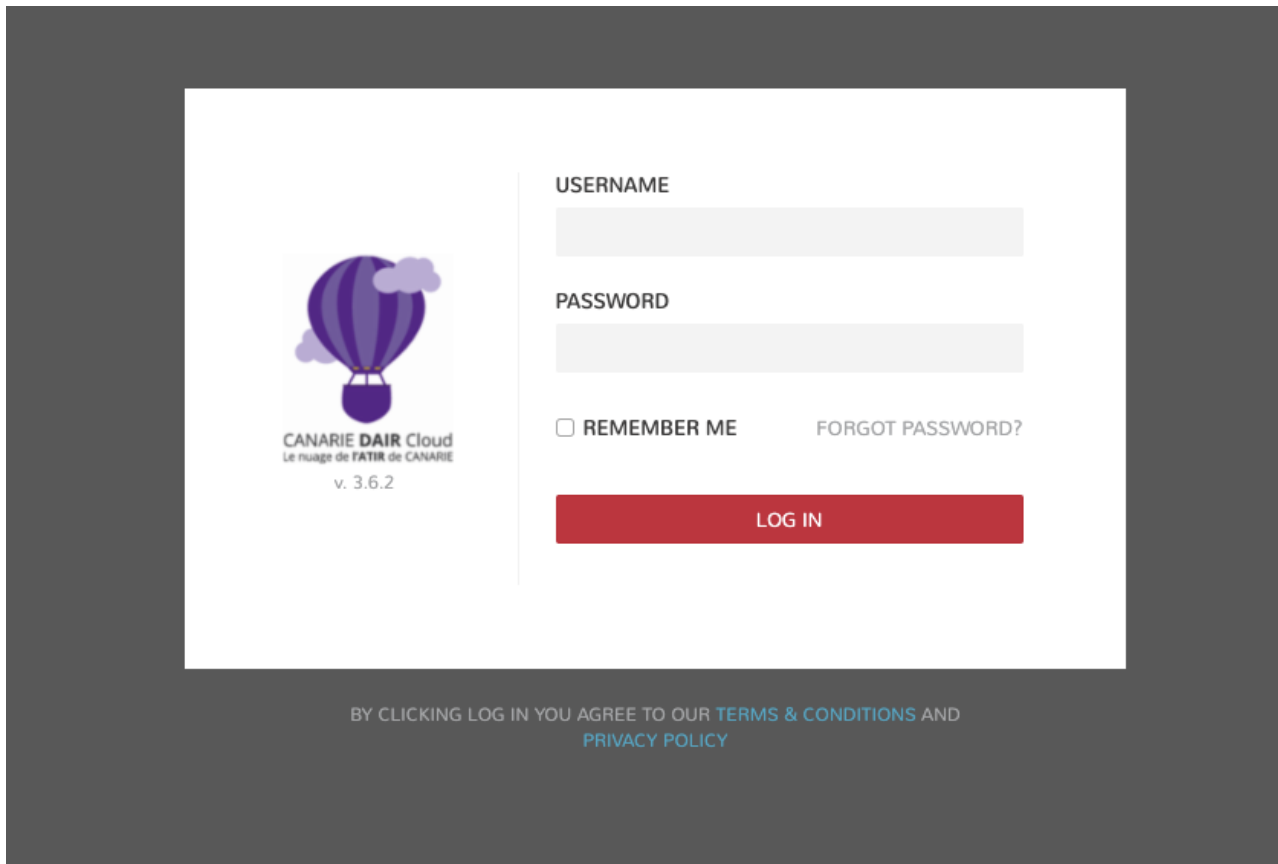
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Security and Account Defaults: Creating and Using Your SSH Key (SSH key logins are required in DAIR)



Web Login to the DAIR Cloud:

- > <https://cloud.canarie.ca/login/auth>
- > Use credentials emailed to you



CANARIE DAIR Cloud
Le nuage de FATIR de CANARIE
v. 3.6.2

USERNAME

PASSWORD

REMEMBER ME FORGOT PASSWORD?

LOG IN

BY CLICKING LOG IN YOU AGREE TO OUR [TERMS & CONDITIONS](#) AND [PRIVACY POLICY](#)

Adding your SSH key to DAIR

Instructions for creating a key follow.

Return to this page to add your key once created.

The screenshot displays the canarie DAIR Cloud management interface. The top navigation bar includes 'Operations', 'Provisioning', 'Infrastructure', 'Backups', 'Logs', 'Monitoring', 'Services', and 'Administration'. The 'Infrastructure' menu is open, showing options like 'Groups', 'Hosts', 'Network', 'Storage', and 'Keys & Certs'. A red circle with the number '1' highlights the 'Keys & Certs' option. Below the menu, the 'KEYS & CERTS' section is visible, with a '+ ADD' button circled in red and labeled with a red circle and the number '2'. The 'ADD KEY PAIR' dialog box is open, showing fields for 'NAME', 'PUBLIC KEY', 'PRIVATE KEY', and 'PASSPHRASE', each with a red circle and the number '3' highlighting the input area. A 'Browse' button is next to the 'PRIVATE KEY' field. A 'SAVE CHANGES' button is circled in red and labeled with a red circle and the number '4'. The background shows a table of 'KEY PAIRS' with columns for 'NAME' and 'FINGERPRINT', and a 'DATE CREATED' column.

How to Create an SSH Key (Mac or Linux)

1. On MacOS

- Open a terminal and go to Step 3

2. On Windows 10

- Add the Linux subsystem for windows
(see <https://docs.microsoft.com/en-us/windows/wsl/install-win10>)
- Install Ubuntu or CentOS from the app store
- Open Linux command shell window from Start menu

3. On the command prompt run this command:

```
$ ssh-keygen -t rsa -m PEM -C "your email address"
```

- Follow the directions and name your Key something memorable
- Add a passphrase if you want a more secure key, just don't forget it!

4. This will create 2 files; "Name"(private key) and "name.pub"(public key)

5. Run the "cat" command on each file so you can copy and paste keys into your key-pair fields (Step 3 on previous slide)

How to Create an SSH Key (Win-8.x or earlier)

- > Download “Putty” tool, the MSI complete installer, or:
- > Download putty.exe and puttygen.exe
 - <https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

Package files			
You probably want one of these. They include versions of all the PuTTY utilities. (Not sure whether you want the 32-bit or the 64-bit version? Read the FAQ entry .)			
MSI (‘Windows Installer’)			
32-bit:	putty-0.71-installer.msi	(or by FTP)	(signature)
64-bit:	putty-64bit-0.71-installer.msi	(or by FTP)	(signature)
Unix source archive			
.tar.gz:	putty-0.71.tar.gz	(or by FTP)	(signature)

Alternative binary files			
The installer packages above will provide versions of all of these (except PuTTYtel), but you can download standalone binaries. (Not sure whether you want the 32-bit or the 64-bit version? Read the FAQ entry .)			
putty.exe (the SSH and Telnet client itself)			
32-bit:	putty.exe	(or by FTP)	(signature)
64-bit:	putty.exe	(or by FTP)	(signature)
pscp.exe (an SCP client, i.e. command-line secure file copy)			
32-bit:	pscp.exe	(or by FTP)	(signature)
64-bit:	pscp.exe	(or by FTP)	(signature)
psftp.exe (an SFTP client, i.e. general file transfer sessions much like FTP)			
32-bit:	psftp.exe	(or by FTP)	(signature)
64-bit:	psftp.exe	(or by FTP)	(signature)
puttytel.exe (a Telnet-only client)			
32-bit:	puttytel.exe	(or by FTP)	(signature)
64-bit:	puttytel.exe	(or by FTP)	(signature)
plink.exe (a command-line interface to the PuTTY back ends)			
32-bit:	plink.exe	(or by FTP)	(signature)
64-bit:	plink.exe	(or by FTP)	(signature)
pageant.exe (an SSH authentication agent for PuTTY, PSCP, PSFTP, and Plink)			
32-bit:	pageant.exe	(or by FTP)	(signature)
64-bit:	pageant.exe	(or by FTP)	(signature)
puttygen.exe (a RSA and DSA key generation utility)			
32-bit:	puttygen.exe	(or by FTP)	(signature)
64-bit:	puttygen.exe	(or by FTP)	(signature)

Create an SSH Key with Puttygen (Cont'd)

On Windows 8.1 and earlier versions:

> Start Puttygen – Generate and copy public key

The image displays two screenshots of the PuTTY Key Generator application. The left screenshot shows the main window with the 'Generate' button circled in red and a red arrow labeled '1' pointing to it. The right screenshot shows the 'Key' section with the public key text area circled in red and a red arrow labeled '1' pointing to it. A context menu is open over the text area, with the 'Copy' option circled in red and a red arrow labeled '2' pointing to it. A red arrow labeled '3' points to a red banner at the bottom right that says 'Paste public key in Morpheus'.

Create an SSH Key with Puttygen (Cont'd)

> Export your private key...

1

2

3

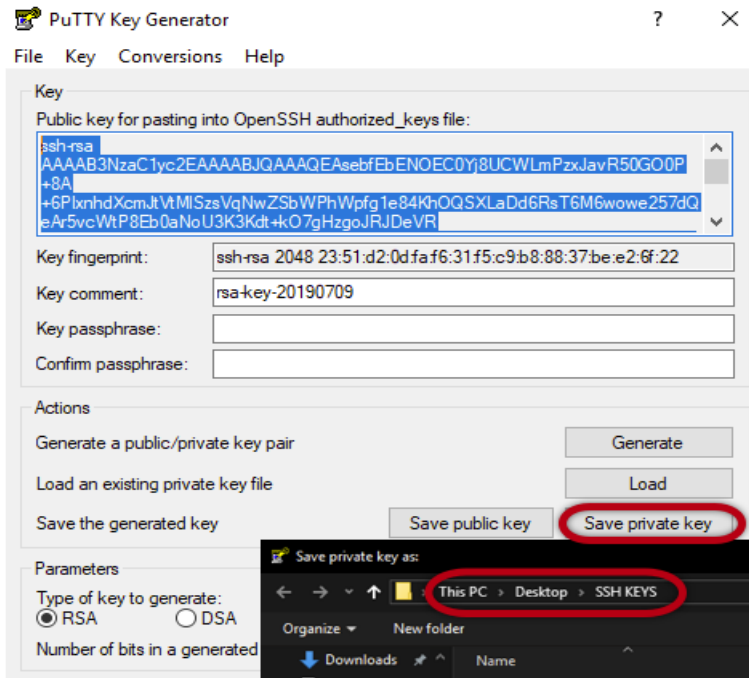
1

2

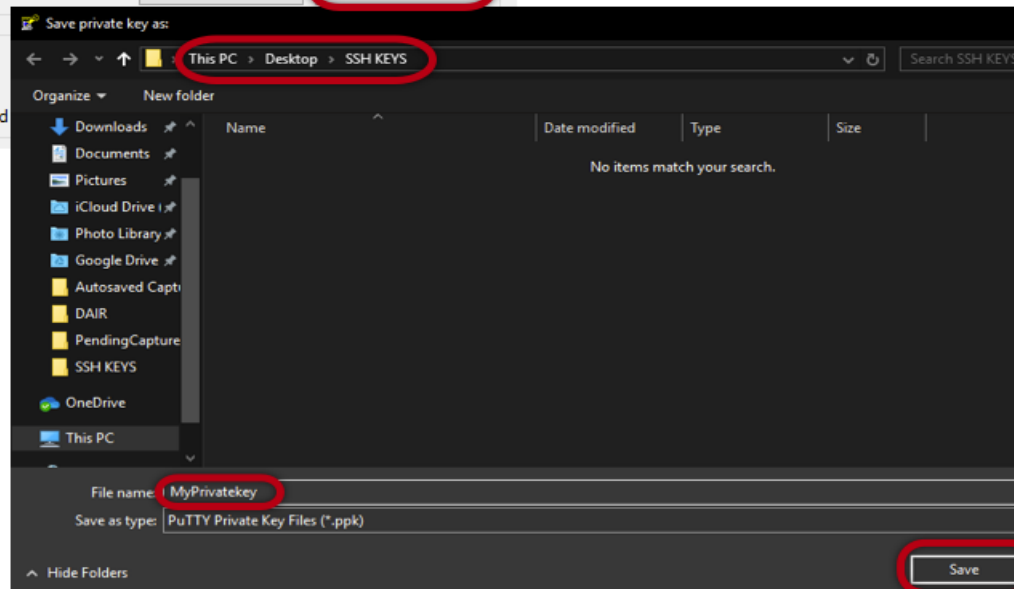
3

> Copy private key and paste in Morpheus (see [Slide 5](#))

Create an SSH Key with Puttygen (Cont'd)



> Save your Private Key on your local Windows machine for use in Putty



Once complete, return to page 5 for instructions on entering your key.

Security and Account Defaults: Setup Security Groups / Firewalls



Avoid Getting Hacked!

- > Security group rules for SSH connections **must not have a CIDR of 0.0.0.0/0**
 - The CIDR value specifies the allowable source IP address range for computers connecting to an instance
 - All-zeroes allows any computer in the world access and makes your instance highly vulnerable to attacks
- > You must know the public IP address of the computer(s) you would like to permit access to your VMs in DAIR
 - You can determine your IP by searching Google for “what is my IP” on each machine you want to give access to
 - For example, to enable only a single IP address, make the CIDR **aa.bb.cc.dd/32** (where aa.bb.cc.dd is your public IP numeric value)
- > Create a new rule for each IP address that you wish to grant SSH access (see details on next slide)

Configure/Edit your Firewall Rules

A

Operations Provisioning Infrastructure Backups Logs

Instances Apps Blueprints Automation Virtual Images Libraries

INSTANCE COUNT: 4

INSTANCE STATUS: Running 3, Stopped 1

INSTANCES

Search [] SELECT.GROUP [] SELECT.TYPE []

Select All

1 TESTInstance1

SSH: 10.1.19.5:22
Version: 16.04
Virtual Machines: 1

Group: AWS-Canada
Clouds: AWS-Canada

Click to go to Instance View

B

STATUS HEALTH LAST BACKUP AVAILABILITY RESPONSE TIME MAX CPU MEMORY STORAGE

100.000% OMS 0% 55% 19%

▼ INFO

Group: AWS
Created By: testy tester
Cores: 1
Price: CAD6.1159 / Month

Cloud: AWS
Layout: Ubuntu
Memory: 512.0MiB
Source Image: ubuntu/images/hvm-ssd/ubuntu-bionic-18.04-amd64-server-20190212.1

Date Created: 07/22/2019 08:49 AM
Version: 18.04
Total Storage: 10.0GiB
Provision Time: 2 minutes 8 seconds

▼ VMS

STATUS	NAME	TYPE	CLOUD	LOCATION	COMPUTE	MEMORY	STORAGE	ACTIONS
●	TESTInstance1	Ubuntu	AWS	99.79.30.140	0	55	19	

SUMMARY **2** NETWORK LOGS BACKUPS SETTINGS ENVIRONMENT HISTORY CONSOLE

NETWORK

INTERFACES	PEAK BANDWIDTH	AVG BANDWIDTH	PEAK RX	AVG RX	PEAK TX	AVG TX
1	0.0MiB/s	0.0MiB/s	825.0B/s	448.4B/s	684.0B/s	285.7B/s

TESTINSTANCE1

PRIMARY	IP ADDRESS	LABEL	TYPE	NETWORK	DHCP
✓	10.1.0.5	eth0	standard	DAIR-Lab-Tenant-az1 (subnet-03962077afbc540a0)	✓

SECURITY GROUPS

NAME	DESCRIPTION
DAIR-Lab_Tenant 3	Managed by Terraform

EDIT SECURITY GROUPS

Managed by Terraform

Default Rules **C**

▼ INFO

Description: Managed by Terraform
Scoped Cloud: AWS-Canada
Source: SYNCED

▼ RULES

4 + ADD RULE

NAME	DIRECTION	SOURCE	DESTINATION	RULE TYPE	PROTOCOL	PORT RANGE
	egress	All	Instance	Custom	ALL	
	ingress	All	Instance	Custom	ICMP	
DAIR ACCESS - do not delete 443	ingress	Network: 208.75.74.185/32	Instance	Custom	TCP	443
DAIR Access - do not delete 22	ingress	Network: 208.75.74.185/32	Instance	Custom	TCP	22
DAIR Access - do not delete 5901	ingress	Network: 208.75.74.185/32	Instance	Custom	TCP	5901
DAIR Access - do not delete 80	ingress	Network: 208.75.74.185/32	Instance	Custom	TCP	80

4

Allows your Instances to talk to the internet

4

22 & 5901 Allows Console to work
443 & 80 is for agent updates

To Add a Firewall Rule

Name your Rule

NAME Tenant SSH Access

Range #-#

DIRECTION ingress

RULE TYPE Custom Rule

PROTOCOL TCP

PORT RANGE 22

Other Options

SOURCE TYPE network

SOURCE 242.334.123.23/32

/32 after IP allows only source IP access (not a range of IPs)

DESTINATION TYPE instance

SAVE CHANGES

Security and Account Defaults: Creating Default Accounts for Your VMs



Configure Your Tenant Account

This must be done before deploying an instance

The screenshot displays the Canary Cloud management interface. The main navigation menu includes Operations, Provisioning, Infrastructure, Backups, Logs, Monitoring, and Services. The 'USER SETTINGS' page is open, showing fields for User Photo, User Settings, Linux Settings, and Windows Settings. A 'SAVE' button is visible at the bottom right.

Callout 1: Points to the user profile dropdown menu in the top right corner, which is currently set to 'TESTY THETESTER'.

Callout 2: Points to the 'USER SETTINGS' button in the top navigation bar.

Callout 3: Points to the 'Linux Settings' section, which includes fields for Username (testy), Password (masked with dots), Confirm, and SSH Key (testy).

Callout 4: Points to the 'Windows Settings' section, which includes fields for Username, Password, and Confirm.

Callout 5: Points to the 'SAVE' button at the bottom right of the configuration form.

Callout B: Points to the user profile dropdown menu in the top right corner of the configuration page.

Callout Text: A red speech bubble next to callout 3 contains the text: "Set default user ID, password and SSH key which will be used for any new Linux instance you create under your account".

Callout Text: A red speech bubble next to callout 4 contains the text: "Create a user ID and password on any new Windows instance created".

Dashboard Data:

- STATUS:** 0.2% (2 Instances)
- MY INSTANCES:**

NAME	TYPE	IP/PORT
aDATv3	Docker	99.79.90.103:10
mysql	Docker	99.79.90.103:10

- MONITORING:** 100.000% AVAILABILITY
- LOGS TODAY:** -

Configure Your Tenant Account for successful Provisioning

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Support | TESTY THETESTER

Operations Provisioning Infrastructure Backups Logs Monitoring Services Administration

PROVISIONING SETTINGS

SETTINGS ENVIRONMENTS LICENSES

Provisioning Settings

Deployment Archive Store

Buckets can be configured and managed in the [Infrastructure Storage](#) section.

Cloud-Init Settings

Username

Password

Key Pair

Windows Settings

Administrator Password

PXE Boot Settings

Default Root Password

App Blueprint Settings

Default Blueprint Type

Usage

- Roles
- Users
- Integrations
- Provisioning**
- Monitoring
- Backups

Backups

Successful

Failed

TY

VR2

successfully

TSample

successfully been created.

ttester

11 [deleted]

successfully been deleted by 'DAIR-Testing-

LOGS TODAY ▾

LIST

Set Administrator Password for Windows here!

The Basics:

Creating an Instance or Virtual Machine (VM)



Creating your First Instance



Support | TESTY THETESTER

Operations **Provisioning** 1 Infrastructure Backups Logs Monitoring Services Administration

Dashboard

STATUS

- Instances
- Apps
- Blueprints
- Automation
- Virtual Images
- Library
- Migrations
- Deployments

2

Guidance Budgets Scheduling Approvals Usage

Operations Provisioning Infrastructure Backups Logs Monitoring Services Administration

Instances Apps Blueprints Automation Virtual Images Library Migrations Deployments

3

Running	3
Stopped	0

INSTANCE COUNT: 3

INSTANCE STATUS

MAX CPU: 0% STORAGE: 0% MEMORY: 17%

INSTANCES

Search [] SELECT: GROUP SELECT: TYPE

Select All AC 3 + ADD

Creating an Instance: Platform and Cloud

New instances may be provisioned based on OS type.

CREATE INSTANCE

TYPE GROUP CONFIGURE AUTOMATION REVIEW

Search

TECHNOLOGY

- CentOS**
A popular Linux flavor operating system. Easily provision CentOS vms for various engines including Docker.
- debian**
DEBIAN
- docker**
DOCKER
An open platform for distributed applications for developers and sysadmins. Deploy any container from any docker registry.
- ubuntu**
UBUNTU
Ubuntu images
- WINDOWS**
Windows Server

1

Choose your Platform

NEXT 2

CREATE INSTANCE

TYPE GROUP CONFIGURE AUTOMATION REVIEW

Instance Summary

GROUP AWS-Canada DAIR-ATIR GPUs 3

CLOUD AWS-Canada

NAME Instance name 4

ENVIRONMENT TAG Select: Environment

TAGS

PREVIOUS NEXT 5

Choose your Group

GPU Specific Details

CREATE INSTANCE **A**

TYPE > GROUP > CONFIGURE > AUTOMATION > REVIEW

Instance Summary

GROUP: **DAIR-ATIR GPUs**

CLOUD: DAIR-ATIR GPUs

NAME: instance name

ENVIRONMENT TAG: Select: Environment

PREVIOUS NEXT

CREATE INSTANCE **B**

TYPE > GROUP > CONFIGURE > AUTOMATION > REVIEW

Configuration Options

VERSION: 16.04

LAYOUT: Ubuntu

PLAN: g1.vgpu
Cores: 2 Memory: 4 GB Price: No pricing configured

VOLUMES: 40 **Local**

NETWORKS: default DHCP

AVAILABILITY ZONE: nova

SECURITY GROUP: **DAIR-Test-Tenant**

SERVER GROUP (AFFINITY): Select

FLOATING IP: public

Expose Ports Add Port

User Config

DNS Options

Advanced Options

Metadata

Environment

PREVIOUS NEXT

Select OS Versions

You will see resources with your tenant name for these

Select if you want an Public IP (Internet)

ALWAYS SET VOLUMES TO LOCAL!

Creating a Windows Instance:

Provision configuration options for your instance.

CREATE INSTANCE [X]

TYPE > GROUP > CONFIGURE > AUTOMATION > REVIEW

Configuration Options

VERSION: 2016

LAYOUT: Windows

PLAN: Amazon T2 Small - 1 Core, 2GB Memory
Cores: 1 Memory: 2 GB Price: CAD33.2034 / Month

RESOURCE POOL: DAIR-TEST-TENANT

VOLUMES: root | 20 GB gp2 +

NETWORKS: DAIR-TEST-TENANT-az1 (subnet-05a) DHCP +

SECURITY GROUPS: DAIR-TEST-TENANT +

PUBLIC IP: Assign EIP

Expose Ports

NAME	PORT	LB
		None

▸ User Config

▸ DNS Options

▸ Advanced Options

▸ Metadata

▸ Environment

PREVIOUS NEXT

Select OS Versions

Select Plan
Notice: price changes:

You will see resources with your tenant name for these

Select if you want an Public IP (Internet)

Create security rules to open ports for your instance.

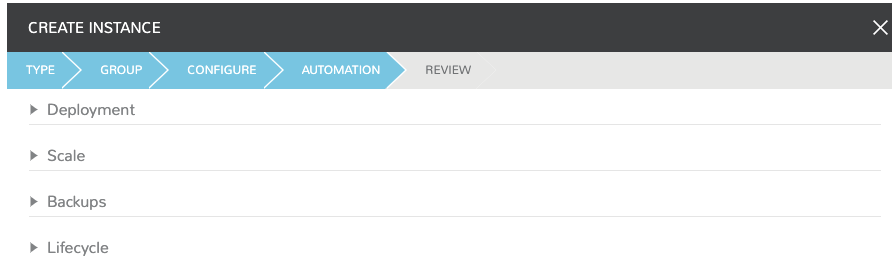
For Azure you can create or select an availability set for an instnace

AVAILABILITY SET: No Availability Set

ASSIGN PUBLIC IP

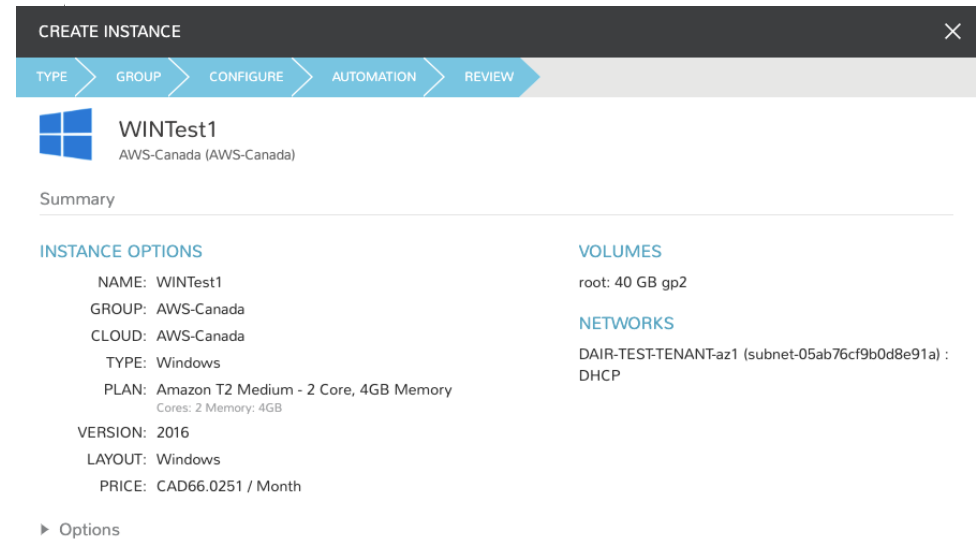
Creating a Windows Instance:

Some advanced configuration options:



PREVIOUS NEXT

> Review and Complete



PREVIOUS COMPLETE

Creating a Windows Instance:



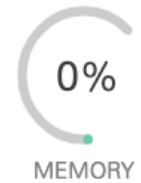
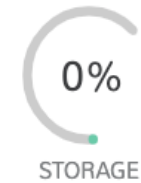
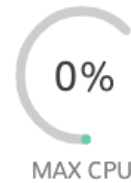
Operations Provisioning Infrastructure Backups Logs Monitoring Services Administration

Instances Apps Blueprints Automation Virtual Images Library Migrations Deployments



Running	0
Stopped	1

INSTANCE STATUS



INSTANCES

Search [SELECT: GROUP] [SELECT: TYPE] [Icons]

Select All [ACTIONS] + ADD

<input type="checkbox"/> WINTest1	Version: 2016 Virtual Machines: 1	Group: AWS-Canada Clouds: AWS-Canada					
-----------------------------------	--------------------------------------	---	--	--	--	--	--

Click to go to Instance View



Creating a Windows Instance:



Created By: TESTY THETESTER
Cores: 2
Price: CAD66.0251 / Month

Layout: Windows
Memory: 4.0GiB
Source Image: [Windows Server 2016](#)

Version: 2016
Total Storage: 40.0GiB
Provision Time: 1 hour 46 minutes

RDP to this IP using Microsoft Remote Desktop Using the admin password or the user account you setup.

	STATUS	NAME	TYPE	CLOUD	LOCATION	COMPUTE	MEMORY	STORAGE	ACTION
<input type="checkbox"/>		WINTest1	Windows	AWS-Canada	99.79.166.107	0	20	48	

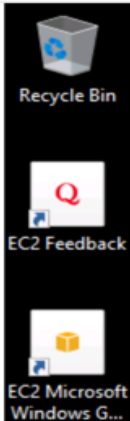
SUMMARY STORAGE NETWORK LOGS BACKUPS SETTINGS ENVIRONMENT SCALE HISTORY **CONSOLE**

(Connected)

Paste Text Here

SEND CTRL+ALT+DELETE

WIN16_333 - WINTEST1



If you are prompted for a login in the console tab, you have not properly provisioned your account settings. See Pages 16-17.

Networks

Network 2

Do you want to allow your PC to be discoverable by other PCs and devices on this network?

We recommend allowing this on your home and work networks, but not public ones.

Yes

No

Creating a Linux Instance:

> Provision configuration options for your instance.

CREATE INSTANCE

TYPE GROUP CONFIGURE AUTOMATION REVIEW

Configuration Options

VERSION 16.04

LAYOUT Ubuntu

PLAN Amazon T2 Medium - 2 Core, 4GB Memory
Cores: 2 Memory: 4 GB Price: CAD50.17117/Month

RESOURCE POOL DAIR-TEST-TENANT

VOLUMES root 40 GB gp2

NETWORKS DAIR-TEST-TENANT-faz1 (subnet-05a) DHCP

SECURITY GROUPS DAIR-TEST-TENANT

PUBLIC IP Assign EIP

Expose Ports

NAME	PORT	LB
		None

Add Port

PREVIOUS NEXT

Select OS Versions

Select Plan
Notice: price changes:

You will see resources
with your tenant name
for these

Select if you want an
Public IP (Internet)

Create security rules
to open ports for your
instance.

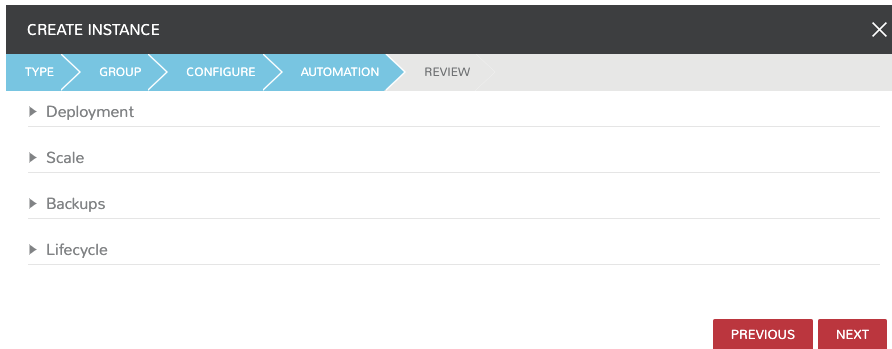
For Azure you can create or select
an availability set for an instance

AVAILABILITY SET No Availability Set

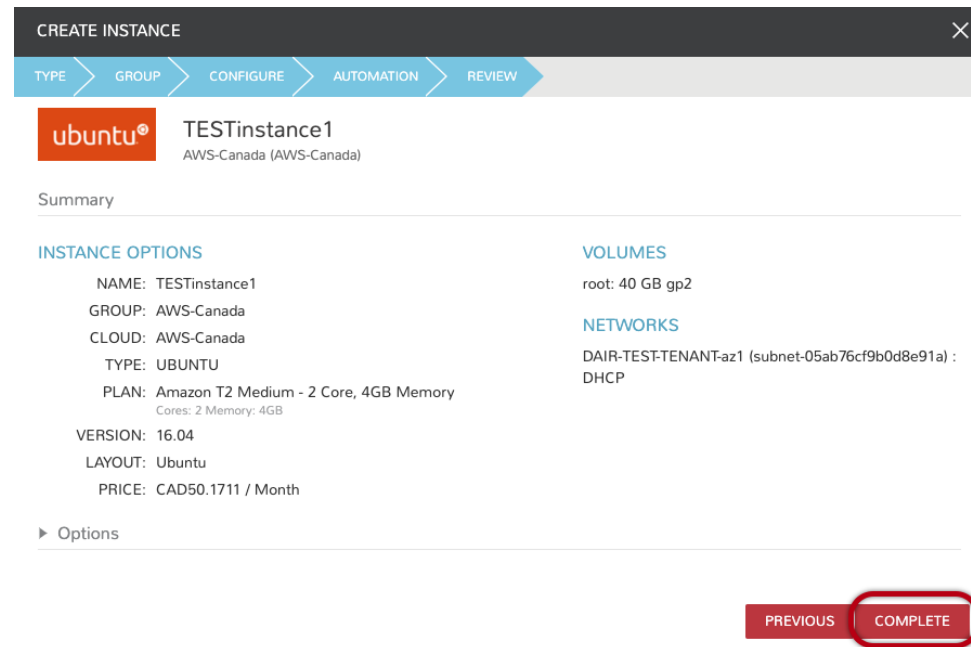
ASSIGN PUBLIC IP

Creating a Linux Instance:

Some advanced configuration options:



> Review and Complete



Creating a Linux Instance:

The screenshot displays the Canary Cloud dashboard. At the top, the navigation bar includes the Canary logo, a search icon, and the user name 'TESTY THETESTER'. Below this is a menu with categories: Operations, Provisioning, Infrastructure, Backups, Logs, Monitoring, Services, and Administration. A secondary menu lists various services: Instances, Apps, Blueprints, Automation, Virtual Images, Library, Migrations, and Deployments.

The dashboard features several key metrics:

- INSTANCE COUNT:** A line graph showing an increasing trend, ending at a value of 4.
- INSTANCE STATUS:** A bar chart showing 3 instances in a 'Running' state and 1 instance in a 'Stopped' state.
- MAX CPU:** A gauge showing 0% usage.
- STORAGE:** A gauge showing 0% usage.
- MEMORY:** A gauge showing 12% usage.

The 'INSTANCES' section includes a search bar, filters for 'SELECT: GROUP' and 'SELECT: TYPE', and a toolbar with various icons. Below this, there is a 'Select All' checkbox and an 'ACTIONS + ADD' button.

The main instance list shows one instance:

Instance Name	SSH	Version	Virtual Machines	Group	Clouds	Status	Health	MAX CPU	MEMORY	STORAGE
TESTInstance1	10.1.19.5:22	16.04	1	AWS-Canada	AWS-Canada	STATUS	HEALTH	0	0	0

A red callout box with the text 'Click to go to Instance View' points to the 'TESTInstance1' entry in the list.

Creating a Linux Instance:

The screenshot displays the Canarie Cloud interface for a specific instance. At the top, the navigation bar includes 'Operations', 'Provisioning', 'Infrastructure', 'Backups', 'Logs', 'Monitoring', 'Services', and 'Administration'. Below this, a secondary bar shows 'Instances', 'Apps', 'Blueprints', 'Automation', 'Virtual Images', 'Library', 'Migrations', and 'Deployments'. The main content area is titled 'Instances > TESTInstance1'. It features a header with 'TESTInstance1' and a star icon, along with 'EDIT', 'ACTIONS', and 'DELETE' buttons. Below the header, the plan is identified as 'Amazon T2 Medium - 2 Core, 4GB Memory'. A row of metrics includes: STATUS (play icon), HEALTH (checkmark icon), LAST BACKUP (minus icon), AVAILABILITY (100.000%), RESPONSE TIME (OMS), MAX CPU (0%), MEMORY (7%), and STORAGE (4%). An 'INFO' section provides details: Group: AWS-Canada, Created By: TESTY THETESTER, Cores: 2, Price: CAD50.1711 / Month, Cloud: AWS-Canada, Layout: Ubuntu, Memory: 4.0GiB, Source Image: Morpheus Ubuntu 16.04.3 v2, Date Created: 06/05/2019 02:45 PM, Version: 16.04, Total Storage: 40.0GiB, and Provision Time: 2 minutes 23 seconds. A 'VMS' table lists the instance with columns for STATUS, NAME, TYPE, CLOUD, LOCATION, COMPUTE, MEMORY, STORAGE, and ACTIONS. Below the table, a 'SUMMARY' section shows a table of operations: NAME, DESCRIPTION, CREATED BY, START DATE, ETA/DURATION, STATUS, and ERROR. The operations listed are 'Provision', 'Prepare Resources', and 'Finalize', all with a status of 'Complete'. A red callout bubble points to the 'CONSOLE' button in the 'ACTIONS' column, with the text 'Login to instance'.

canarie DAIR Cloud | Le nuage ATIE

Support | TESTY THETESTER

Operations Provisioning Infrastructure Backups Logs Monitoring Services Administration

Instances Apps Blueprints Automation Virtual Images Library Migrations Deployments

Instances > TESTInstance1

TESTInstance1 ★ EDIT ACTIONS DELETE

Plan: Amazon T2 Medium - 2 Core, 4GB Memory

STATUS HEALTH LAST BACKUP AVAILABILITY RESPONSE TIME MAX CPU MEMORY STORAGE

100.000% OMS 0% 7% 4%

INFO

Group: AWS-Canada Cloud: AWS-Canada Date Created: 06/05/2019 02:45 PM
Created By: TESTY THETESTER Layout: Ubuntu Version: 16.04
Cores: 2 Memory: 4.0GiB Total Storage: 40.0GiB
Price: CAD50.1711 / Month Source Image: Morpheus Ubuntu 16.04.3 v2 Provision Time: 2 minutes 23 seconds

VMS

STATUS	NAME	TYPE	CLOUD	LOCATION	COMPUTE	MEMORY	STORAGE	ACTIONS
<input type="checkbox"/>	TESTInstance1	Ubuntu 16.04	AWS-Canada	35.183.53.3:22	0	7	4	

SUMMARY DEPLOY STORAGE NETWORK LOGS BACKUPS SETTINGS ENVIRONMENT SCALE HISTORY CONSOLE

NAME	DESCRIPTION	CREATED BY	START DATE	ETA/DURATION	STATUS	ERROR
TESTInstance1	Provision	TESTY THETESTER	06/05/2019 02:45 PM	00:02:22	Complete	
	Prepare Resources		06/05/2019 02:45 PM	00:00:33	Complete	
	Finalize		06/05/2019 02:46 PM	00:01:49	Complete	

Login to instance

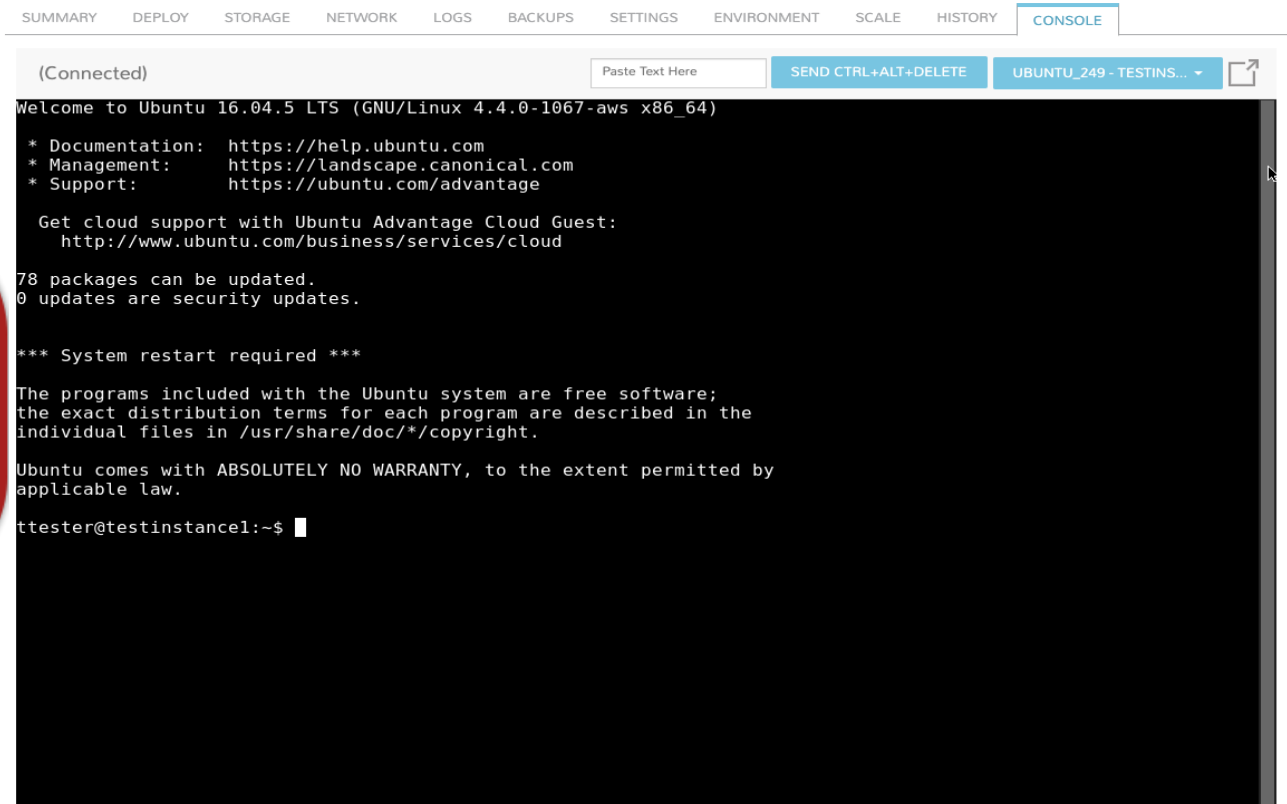
The Basics:

Logging into an Instance



Login to Your Linux Instance – Option 1

- > Use the built-in console (web browser)
- > You are auto logged in with the account you setup



```
SUMMARY  DEPLOY  STORAGE  NETWORK  LOGS  BACKUPS  SETTINGS  ENVIRONMENT  SCALE  HISTORY  CONSOLE
(Connected)  Paste Text Here  SEND CTRL+ALT+DELETE  UBUNTU_249 - TESTINS...
Welcome to Ubuntu 16.04.5 LTS (GNU/Linux 4.4.0-1067-aws x86_64)
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

Get cloud support with Ubuntu Advantage Cloud Guest:
http://www.ubuntu.com/business/services/cloud

78 packages can be updated.
0 updates are security updates.

*** System restart required ***

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

ttester@testinstance1:~$
```

If you are prompted for a login in the console tab, you have not properly provisioned your account settings. See Pages 16-17.

Login to Your Linux Instance – Option 2

> Use your SSH client application

> Mac & Windows (with Linux subsystem)

```
ssh -i /pathtoyourkey/yourkey username@XXX.XXX.XXX.XXX
```

> Your IP is listed under “Location”

TESTInstance1 ★ EDIT ACTIONS ▾ DELETE

Plan: Amazon T2 Medium - 2 Core, 4GB Memory

STATUS HEALTH LAST BACKUP AVAILABILITY RESPONSE TIME MAX CPU MEMORY STORAGE

INFO

Group: [AWS-Canada](#) Cloud: AWS-Canada Date Created: 06/05/2019 02:45 PM
Created By: TESTY THETESTER Layout: Ubuntu Version: 16.04
Cores: 2 Memory: 4.0GiB Total Storage: 40.0GiB
Price: CAD49.0993 / Month Source Image: [Morpheus Ubuntu 16.04.3 v2](#) Provision Time: 2 minutes 23 seconds

VMS

<input type="checkbox"/>	STATUS	NAME	TYPE	CLOUD	LOCATION	COMPUTE	MEMORY	STORAGE	ACTIONS
<input type="checkbox"/>	▶	TESTInstance1	Ubuntu 16.04	AWS-Canada	35.183.53.3:22	0	14	6	⋮

SUMMARY DEPLOY STORAGE NETWORK LOGS BACKUPS SETTINGS ENVIRONMENT SCALE HISTORY **CONSOLE**

(Connected) SEND CTRL+ALT+DELETE UBUNTU_249 - TESTINS...

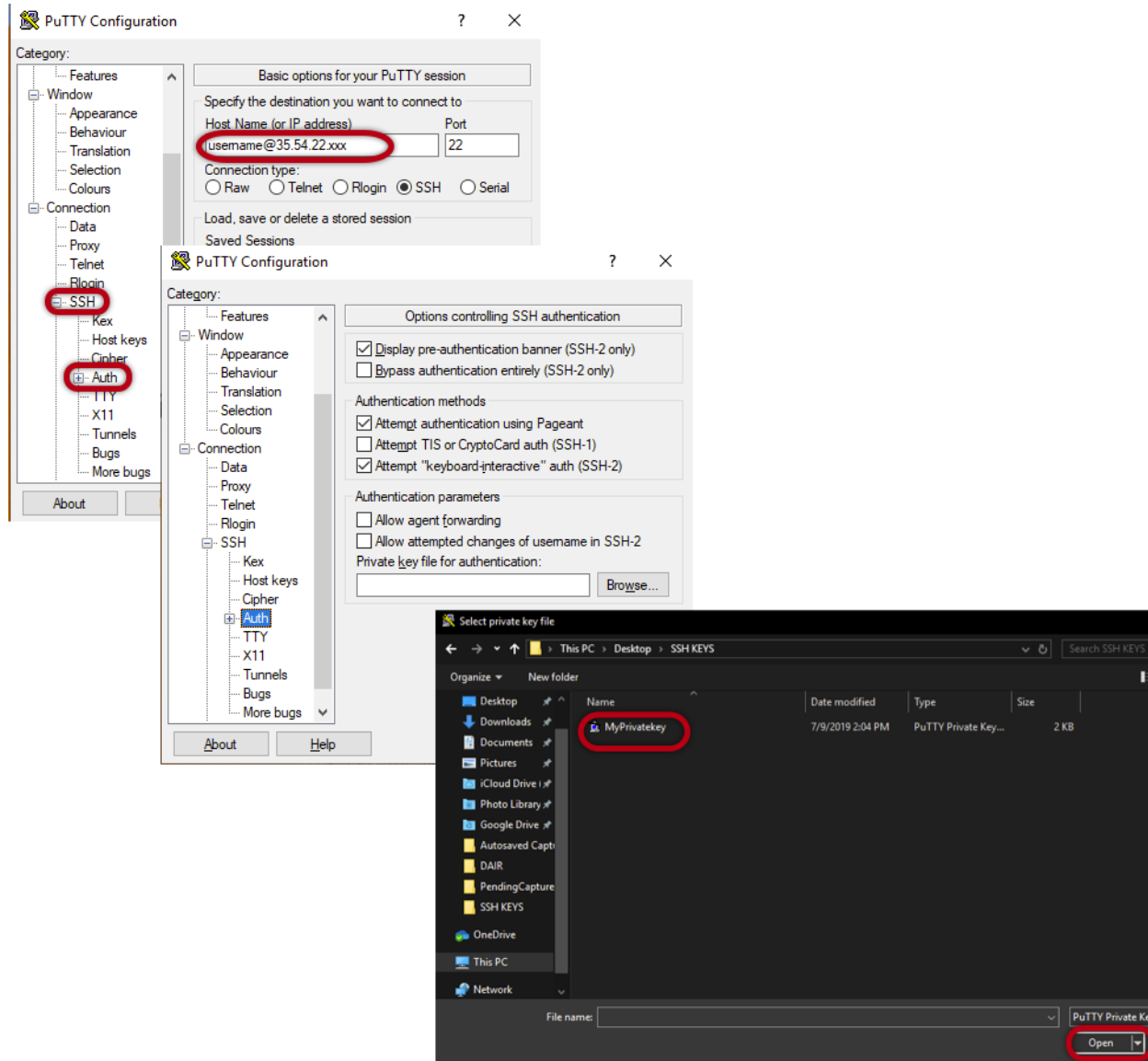
```
Welcome to Ubuntu 16.04.5 LTS (GNU/Linux 4.4.0-1067-aws x86_64)
* Documentation: https://help.ubuntu.com
```


Login to Your Linux Instance – Option 3

On your Windows machine:

- > Locate and run putty.exe (previously installed, see [Slide-7](#))
- > Use the IP (see previous slide) and Username you defined in your Morpheus default user settings (see [Slide-16](#)) to create a new “putty” session as shown in the following slides.

Login to Your Linux Instance – Option 3



Login to Your Linux Instance – Option 3

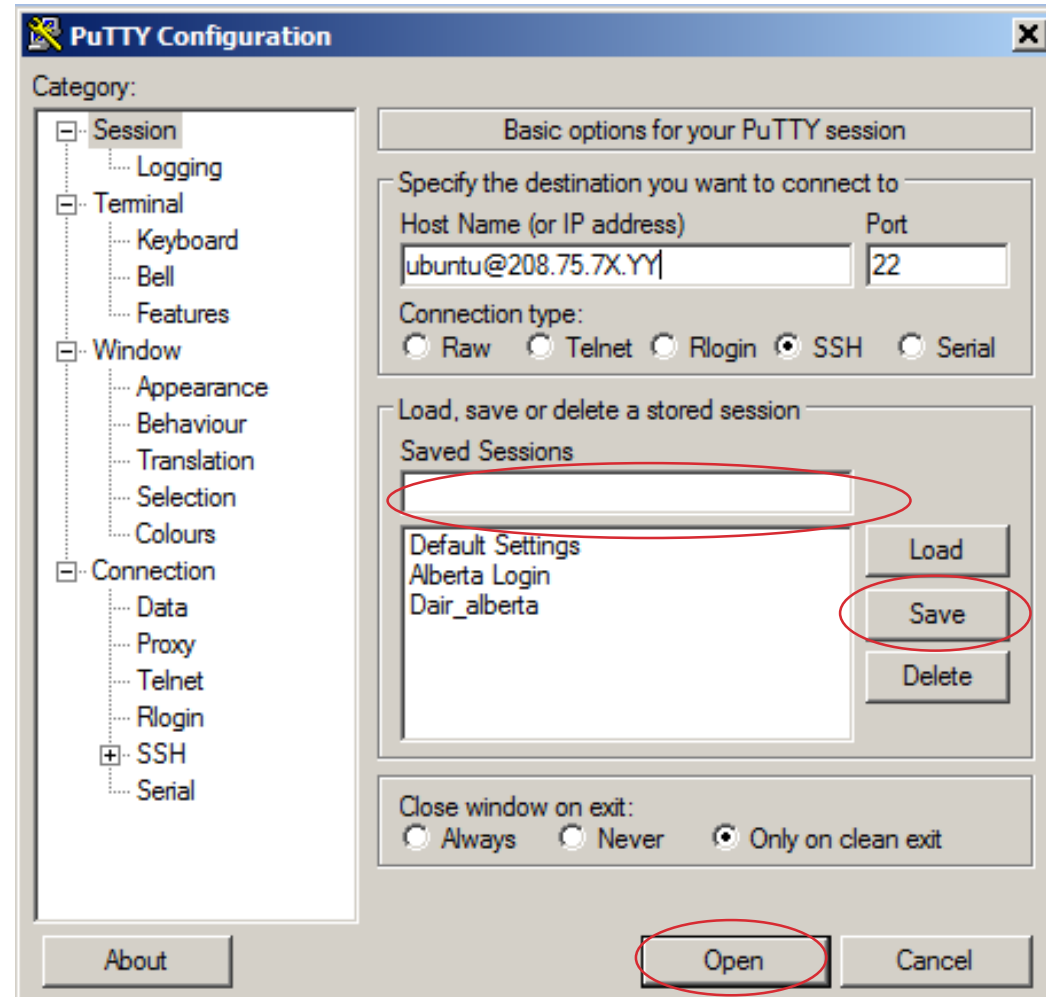
The image displays two screenshots of the PuTTY Configuration dialog box, illustrating the steps to save and load a session configuration.

Left Screenshot: The 'Session' category is selected in the left-hand tree, indicated by a red circle and the number 1. The 'Options controlling SSH authentication' tab is active, showing various authentication options.

Right Screenshot: The 'Basic options for your PuTTY session' tab is active. The 'Host Name (or IP address)' is set to 'username@35.54.22.xxx' and the 'Port' is '22'. The 'Connection type' is set to 'SSH'. The 'Saved Sessions' list is empty, indicated by a red circle and the number 2. The 'Save' button is highlighted, indicated by a red circle and the number 3. The 'Open' button is highlighted at the bottom, indicated by a red circle and the number 4.

Login to Your Linux Instance – Option 3

- > Click “Session”
- > Enter a “Saved Session” name
- > Click “Save”
- > Finally “Open” to start an SSH session to your server



The Basics:

Secure VNC to XWindows for Linux GPU Based Instances



Login: VNC to XWindows (MAC or Linux)

- > Setup an SSH tunnel to your instance

<https://github.com/apenwarr/sshtuttle>

- > OSX process

- > Change uname to your username

```
ssh -i ~/yourkey -p 22 uname@208.75.7x.xxx -L 5901:127.0.0.1:5901 sleep 2h
```

- > This terminal will be unusable until you terminate the tunnel

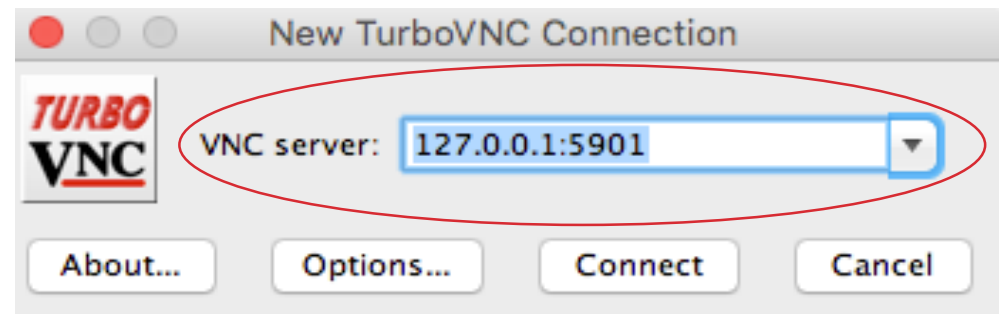
Login: VNC to XWindows (MAC or Linux)

- > Use the username and password you set up in the Morpheus account setup
- > Install TurboVNC
- > Run TurboVNC viewer
- > Connect as illustrated

```
ssh-I /{downloadsDirectory}/{Keypair}.pem  
Ubuntu@208.75.7x.yy
```

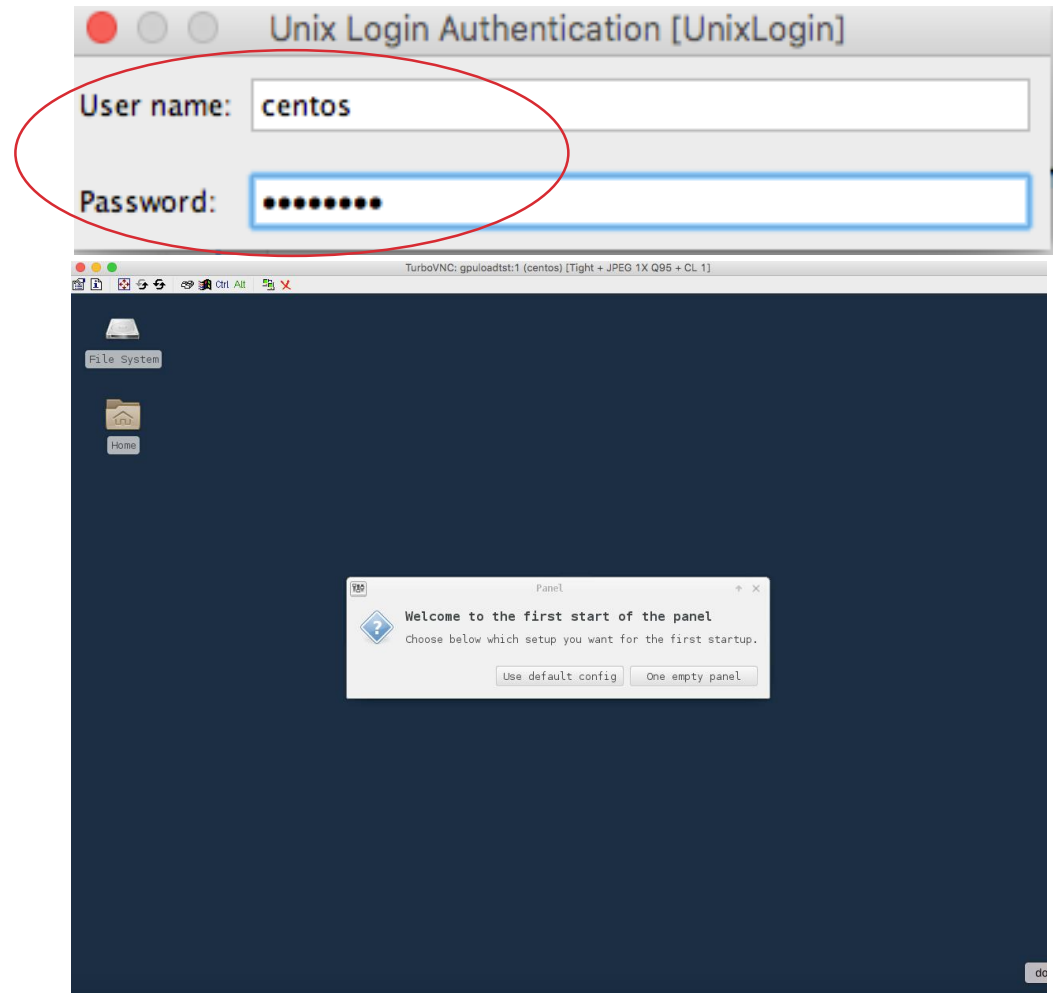
```
sudo passwd ubuntu  
New Password:  
Re-enter New Password:
```

<https://sourceforge.net/projects/turbovnc/files/>



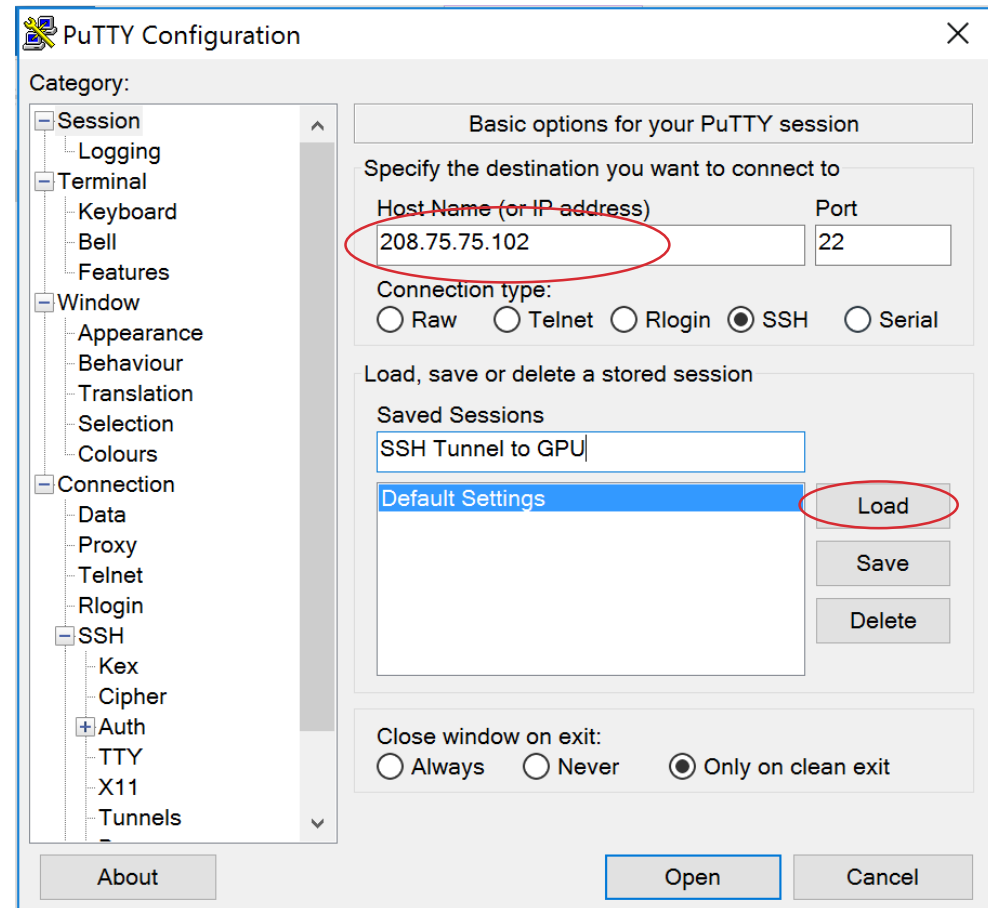
Login: VNC to XWindows (MAC or Linux)

- > Login to XWindows
- > Enter username and the password you just setup for Ubuntu or CentOS
- > You are logged into XWindows
- > Select use default config
- > You now have access to XWindows and can run GPU GUI applications



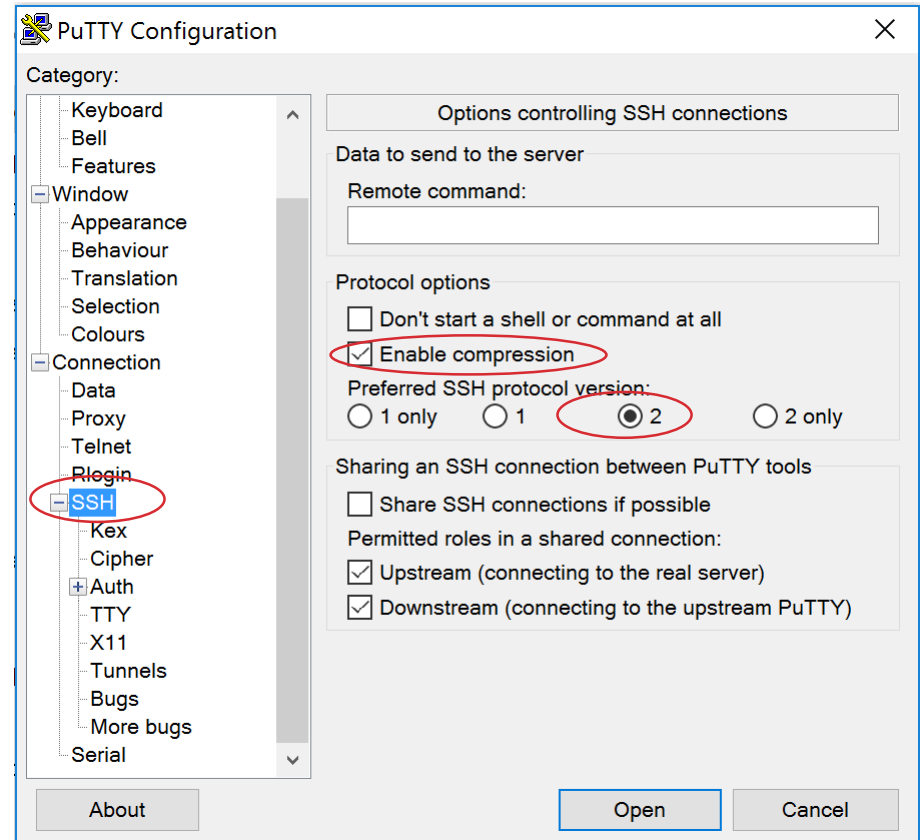
Login: VNC to XWindows (Windows)

- > Locate and run `putty.exe`
 - > See [Slide-7](#) if putty is not installed
- > Load your previous saved Putty session
- > Edit Hostname to match your IP



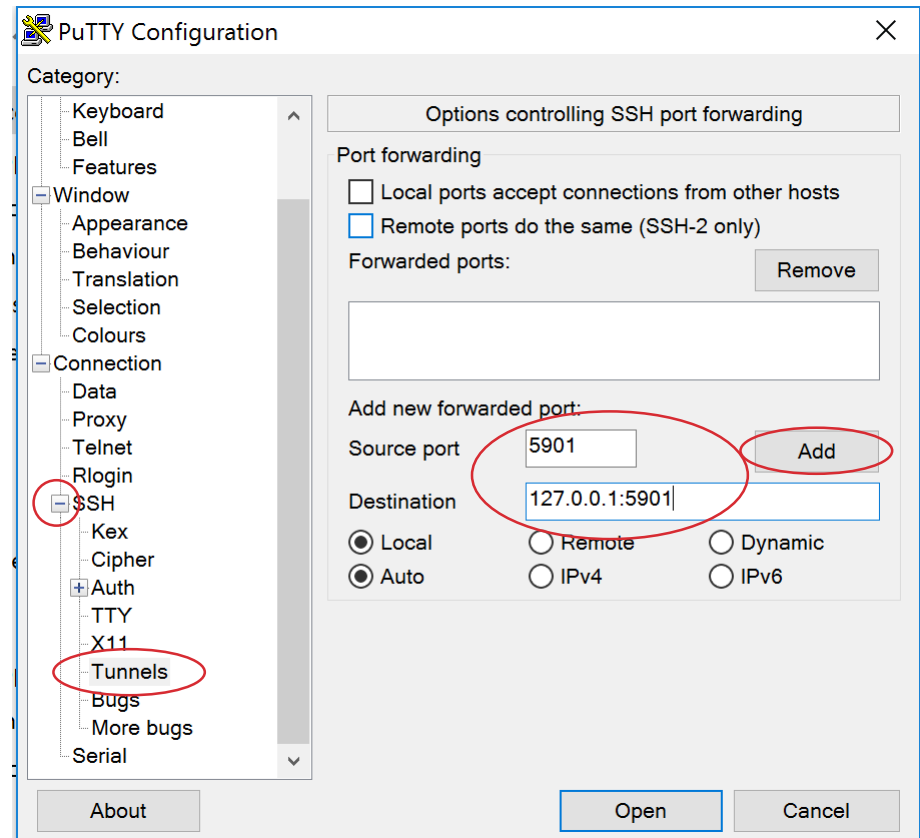
Login: VNC to XWindows (Windows)

- > Click “SSH”
- > Enable compression
- > Set SSH Protocol Version to “2”



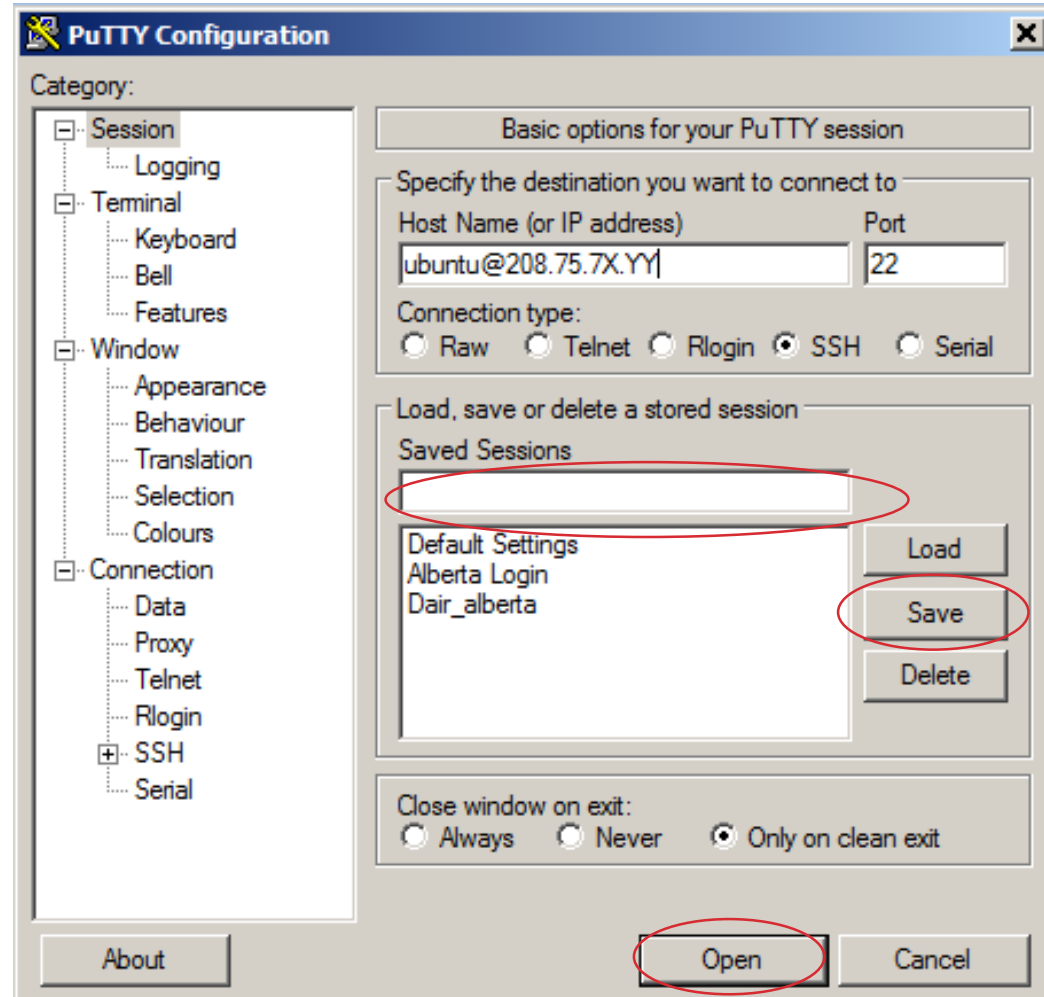
Login: VNC to XWindows (Windows)

- > Open “SSH”
- > Click “Tunnels”
- > Set up new forwarding port as seen here
- > Click “Add”



Login: VNC to XWindows (Windows)

- > Click “Session”
- > Enter a “Saved Session” name
- > Click “Save”
- > Finally, “Open” to start SSH session with an established tunnel for Secure VNC access



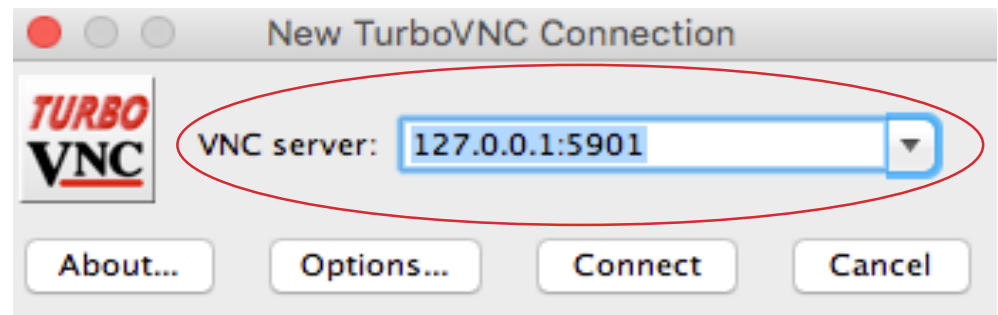
Login: VNC to XWindows (Windows)

- > From the putty terminal
- > Add password to ubuntu user
 - > For CentOS, use “CentOS” instead of “Ubuntu”
- > Install TurboVNC
- > Run TurboVNC viewer
- > Connect as illustrated

```
sudo passwd ubuntu  
New Password:  
Re-enter New Password:
```

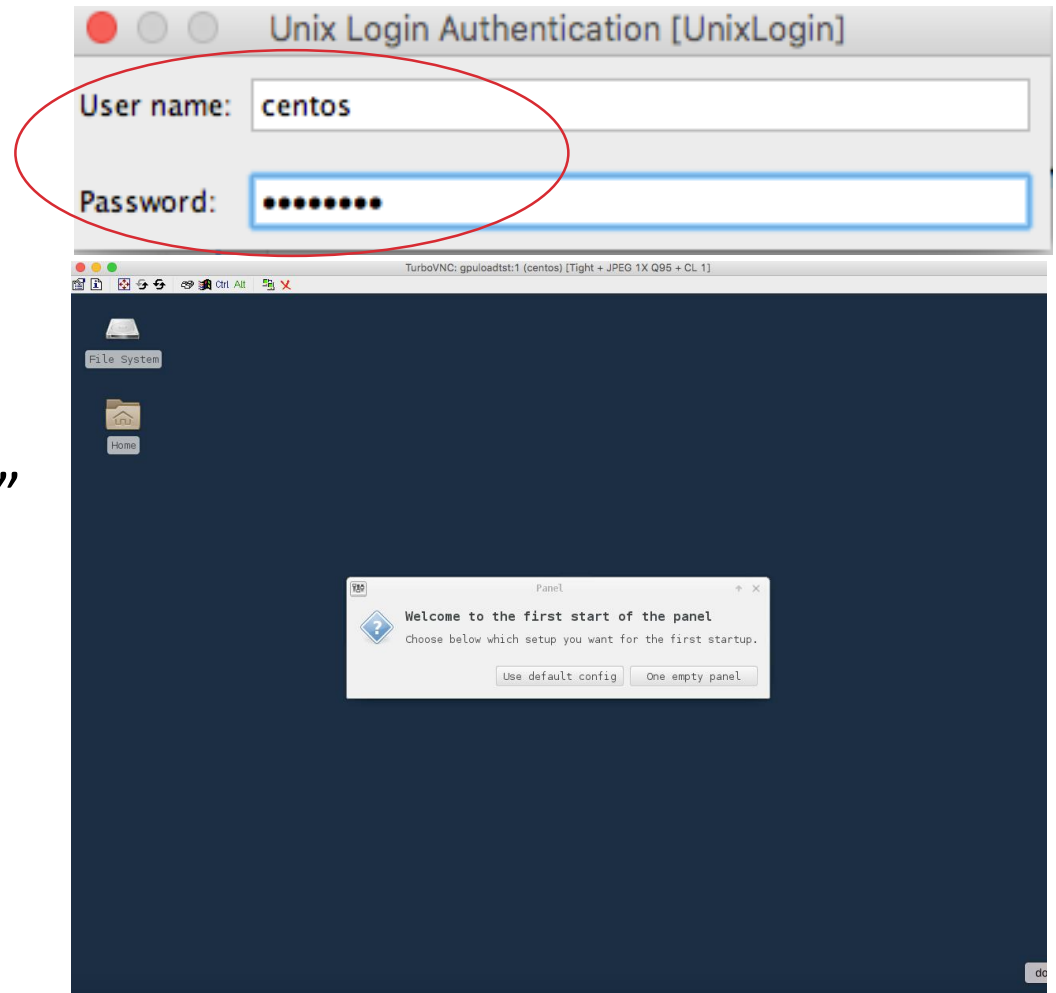
Turbo VNC download location:

<https://sourceforge.net/projects/turbovnc/files/>



Login: VNC to XWindows (Windows)

- > Login to XWindows
- > Enter username and the password you just setup for Ubuntu or CentOS
- > You are logged into XWindows.
- > Select “Use default config”
- > You now have access to XWindows and can run GPU GUI applications.



The Basics:

Creating User Accounts



Create a User Account on Your Linux VM

Connect to your Linux instance using SSH:

<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AccessingInstancesLinux.html>

Use the `adduser` command to add a new user account to an EC2 instance (replace `new_user` with the new account name). The following example creates an associated group, home directory, and an entry in the `/etc/passwd` file of the instance:

```
$ sudo adduser new_user
```

Note: If you add the `new_user` to an Ubuntu instance, include the `--disabled-password` option to avoid adding a password to the new account:

```
$ sudo adduser --disabled-password new_user
```

Change the security context to the `new_user` account so that folders and files you create will have the correct permissions:

```
$ sudo su - new_user
```

Note: When you run the `sudo su - new_user` command, the name at the top of the command shell prompt changes to reflect the new user account context of your shell session.

Create a `.ssh` directory in the `new_user` home directory:

```
$ mkdir .ssh
```

Use the `chmod` command to change the `.ssh` directory's permissions to 700. Changing the permissions restricts access so that only the `new_user` can read, write, or open the `.ssh` directory.

```
$ chmod 700 .ssh
```

Use the `touch` command to create the `authorized_keys` file in the `.ssh` directory:

```
$ touch .ssh/authorized_keys
```

Use the `chmod` command to change the `.ssh/authorized_keys` file permissions to 600. Changing the file permissions restricts read or write access to the `new_user`.

```
$ chmod 600 .ssh/authorized_keys
```

open their public key in a text editor and edit with `vi` or other Linux text edit and insert the private key then save the file.

```
$ vi .ssh/authorized_keys
```


Advanced Topics:

Morpheus Command Line



Using Morpheus CLI Commands

- > Anything you perform through the Dashboard may be performed through CLI commands or the Morpheus API
- > Documentation can be found here:
 - CLI:
 - <https://docs.morpheusdata.com/en/3.6.2/cli/gettingStarted.html>
 - API:
 - <https://docs.morpheusdata.com/en/3.6.2/api/intro.html>



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