

GUIDE #5: Use Case for Low Cost Automated Testing Using Ezstackr Cloud

Introduction:

Using virtual machines in a virtual testing lab is becoming more popular as a QA testing practice. This approach allows QA teams to save money by running a number of virtual machines on fewer servers and also allows testers to test different application builds on a permanent system configuration. The efficiency of testing in virtual labs increases when you automate the testing process with an automated cloud based infrastructure driven via a web user interface such as Ezstackr.

Testing in the past and testing environment today:

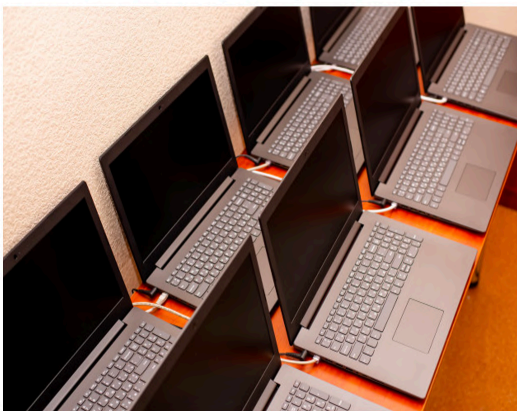
In the diagram below, the use case for virtualized test environment e.g. for load testing has many advantages.



Use Case for Low Cost Automated Testing Using VMs



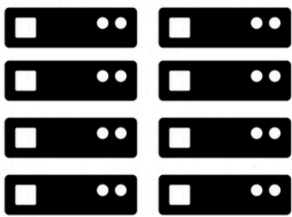
- Testing In The Past
 - Tester sets up every endpoint
 - Tester has to install and operate scripts on each endpoint’s keyboard



- Testing Today
 - Tester can clone as many VMs as needed
 - Tester operates all VMs from single display and keyboard



Virtual Machines and Virtual Networks



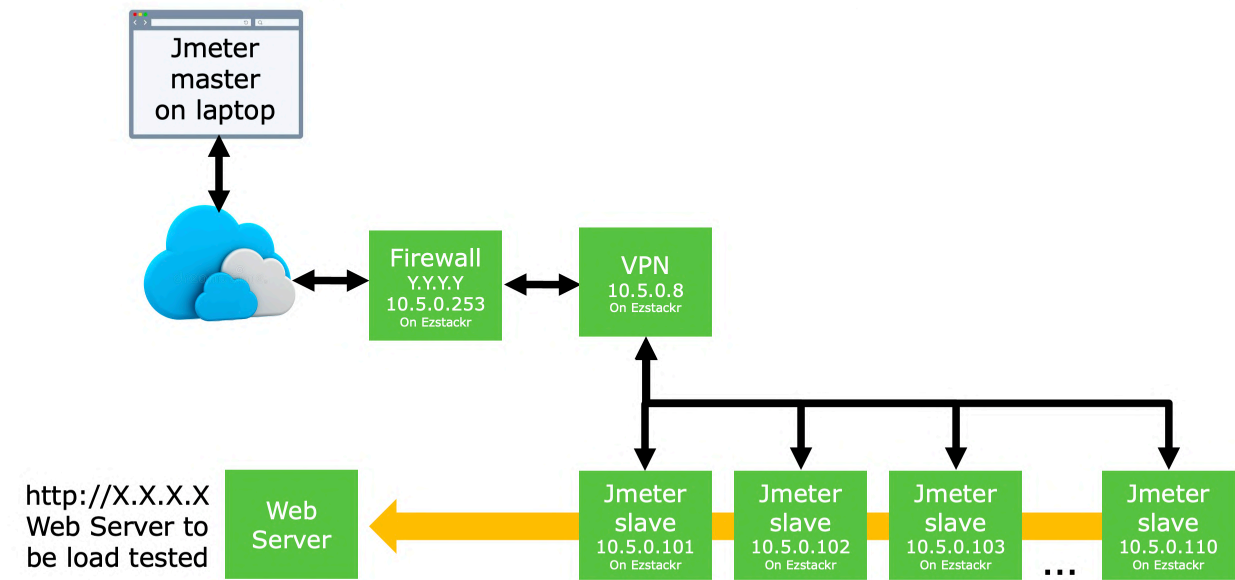
Load Testing Environment:

The use case for virtualized for load testing e.g. using Jmeter is described below. Two configuration alternatives were created. In all cases, it is easy to copy clone many Jmeter slaves and run these in individual VMs.

Alternative #1: Master on laptop and 10 slaves on Ezstackr



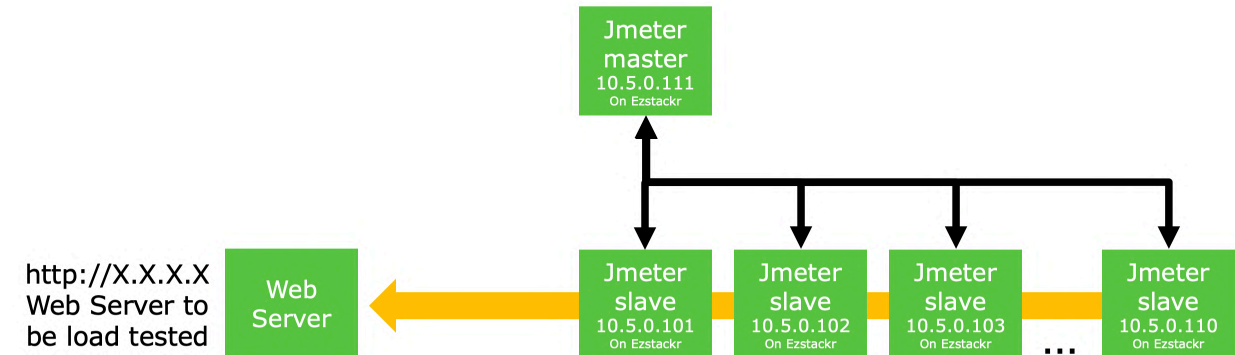
Low Cost Automated Testing Setup: Master on Laptop



Alternative #2: Master & 10 slaves on Ezstackr



Low Cost Automated Testing Setup: Master on Ezstackr



When a laptop hosting the Jmeter master is on another network, additional steps are needed for the Jmeter master to connect to the Jmeter slaves:

Macbook VPN Client Setup

VPN Account Information

Server Address : Y.Y.Y.Y
Account Name : testapp
Password : *****
Shared Secret : *****

1

Create VPN Client

2

Enter VPN Information

Select the interface and enter a name for the new service.
Interface: VPN
VPN Type: L2TP over IPSec
Service Name: testapp

Cancel Create

User Authentication:
☒ Password: *****
☐ RSA SecurID
☐ Certificate
☐ Kerberos
☐ CryptoCard
Machine Authentication:
☒ Shared Secret: *****
☐ Certificate
Group Name: (Optional)

Cancel OK

© LGA Telecom Pte Ltd 2020. All rights reserved

www.lgatecom.net76

CREATING VMs FOR TEST ENVIRONMENT
As User: Create DD-WRT firewall, SoftEther VPN and Jmeter slaves:

A screenshot of the EZSTACKR web interface. The dashboard shows a grid of five virtual machines. The first row contains 'dd-wrt' (with a question mark icon), 'vpn2' (with an Ubuntu icon), and 'ubuntu-101' (with an Ubuntu icon). The second row contains 'ubuntu-103' (with an Ubuntu icon) and 'ubuntu-104' (with an Ubuntu icon). Each VM card has a title bar with the name and a close button, and a main area with an icon and three small action icons at the bottom.

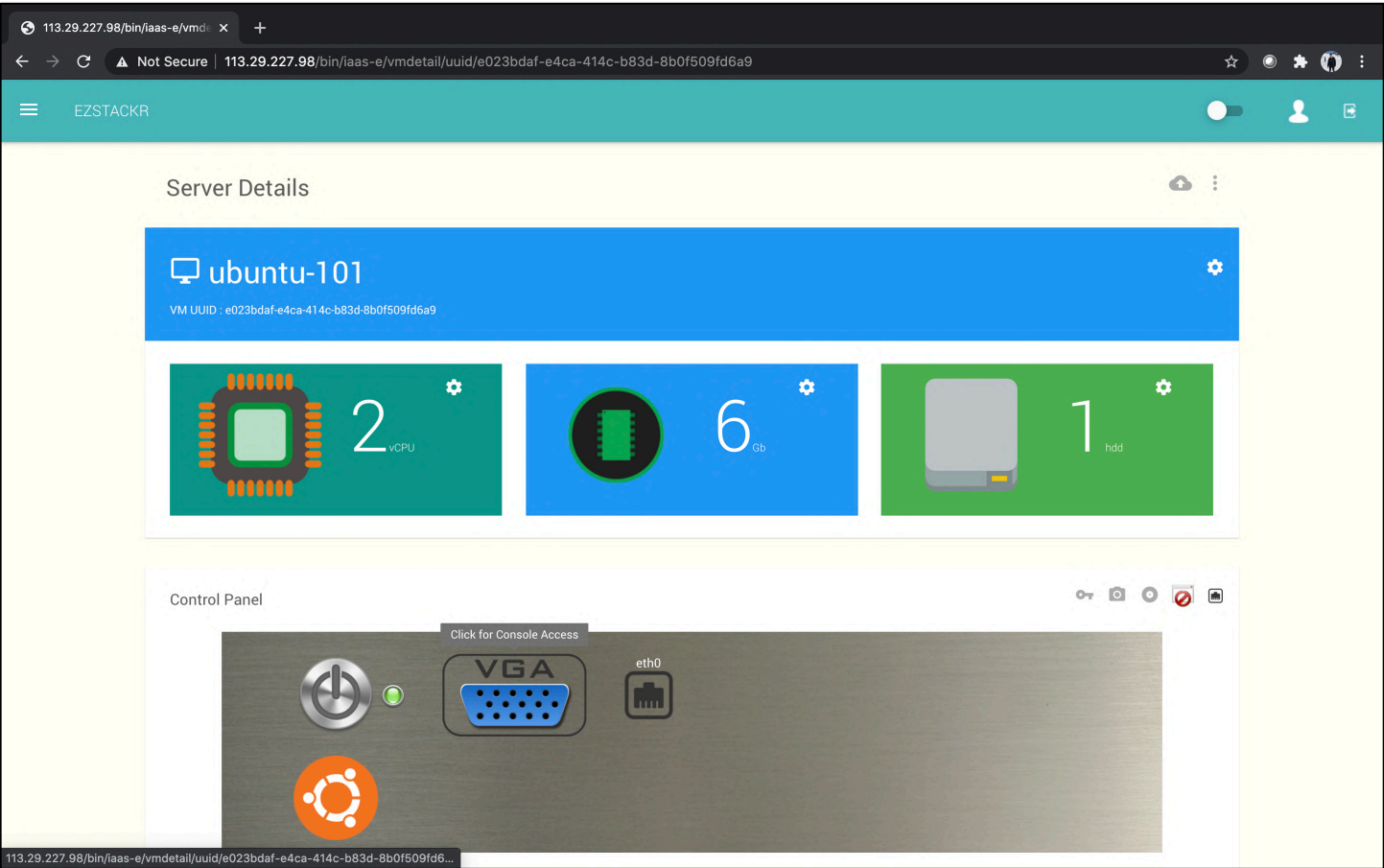
As User: Configure the firewall

A screenshot of the EZSTACKR web interface showing the configuration details for the 'dd-wrt' VM. The 'Server Details' section shows the VM UUID and three resource cards: '1 vCPU', '0.125 Gb' of memory, and '1 hdd'. Below this is a 'Control Panel' section with a graphical representation of the VM's hardware, including a power button, a VGA port, and two network ports labeled 'eth0' and 'eth1'.

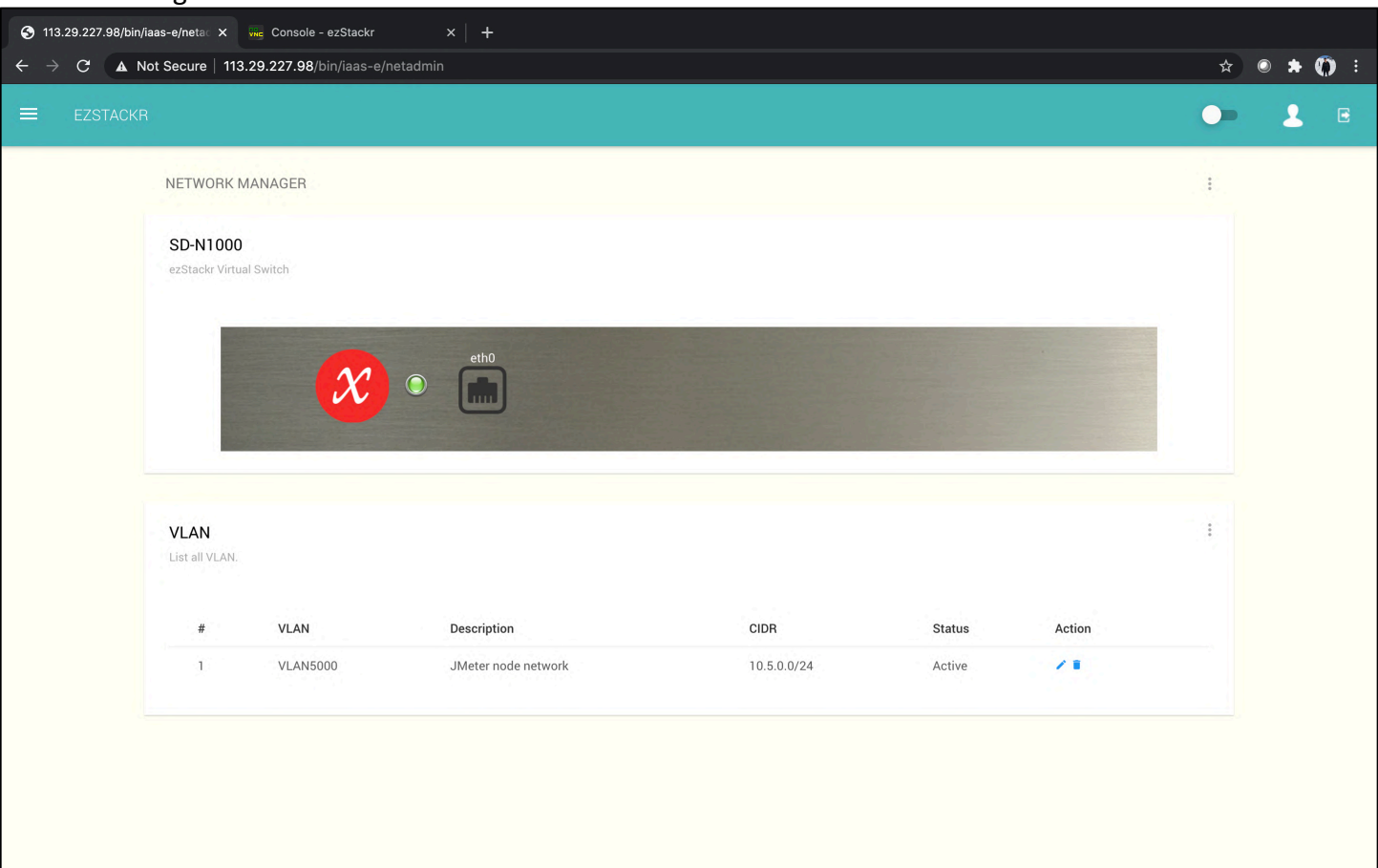
As User: Configure the VPN

A screenshot of the EZSTACKR web interface showing the configuration details for the 'vpn2' VM. The 'Server Details' section shows the VM UUID and three resource cards: '1 vCPU', '1 Gb' of memory, and '1 hdd'. Below this is a 'Control Panel' section with a graphical representation of the VM's hardware, including a power button, a VGA port, and a single network port labeled 'eth0'. An Ubuntu logo is visible in the bottom left corner of the control panel area.

As User: Configure slaves as the example below:



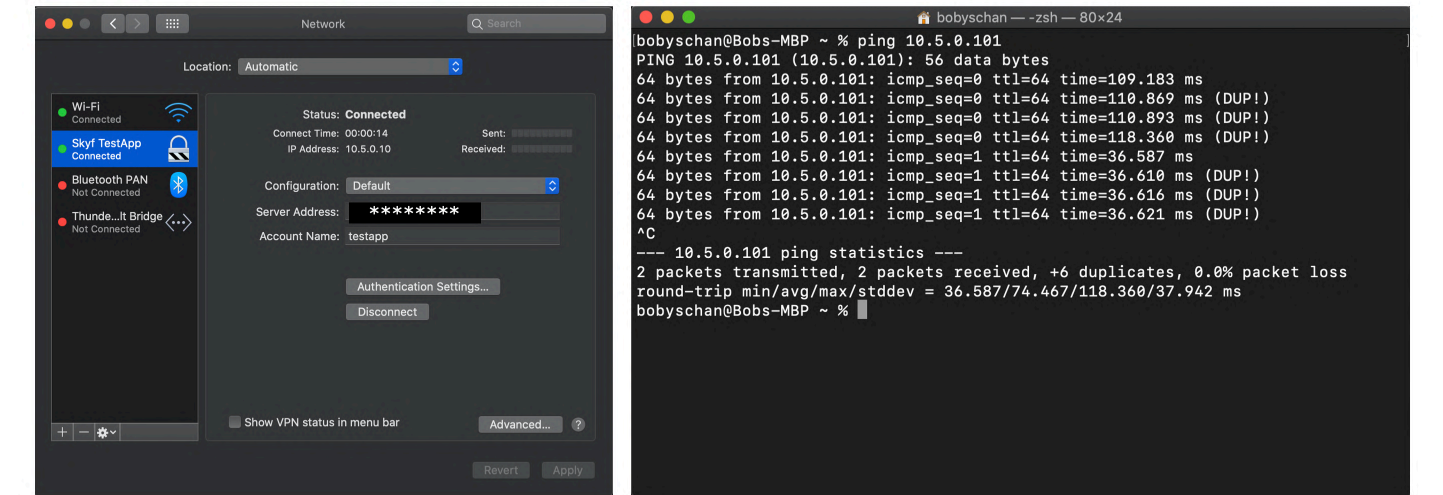
As User: Configure the Jmeter network



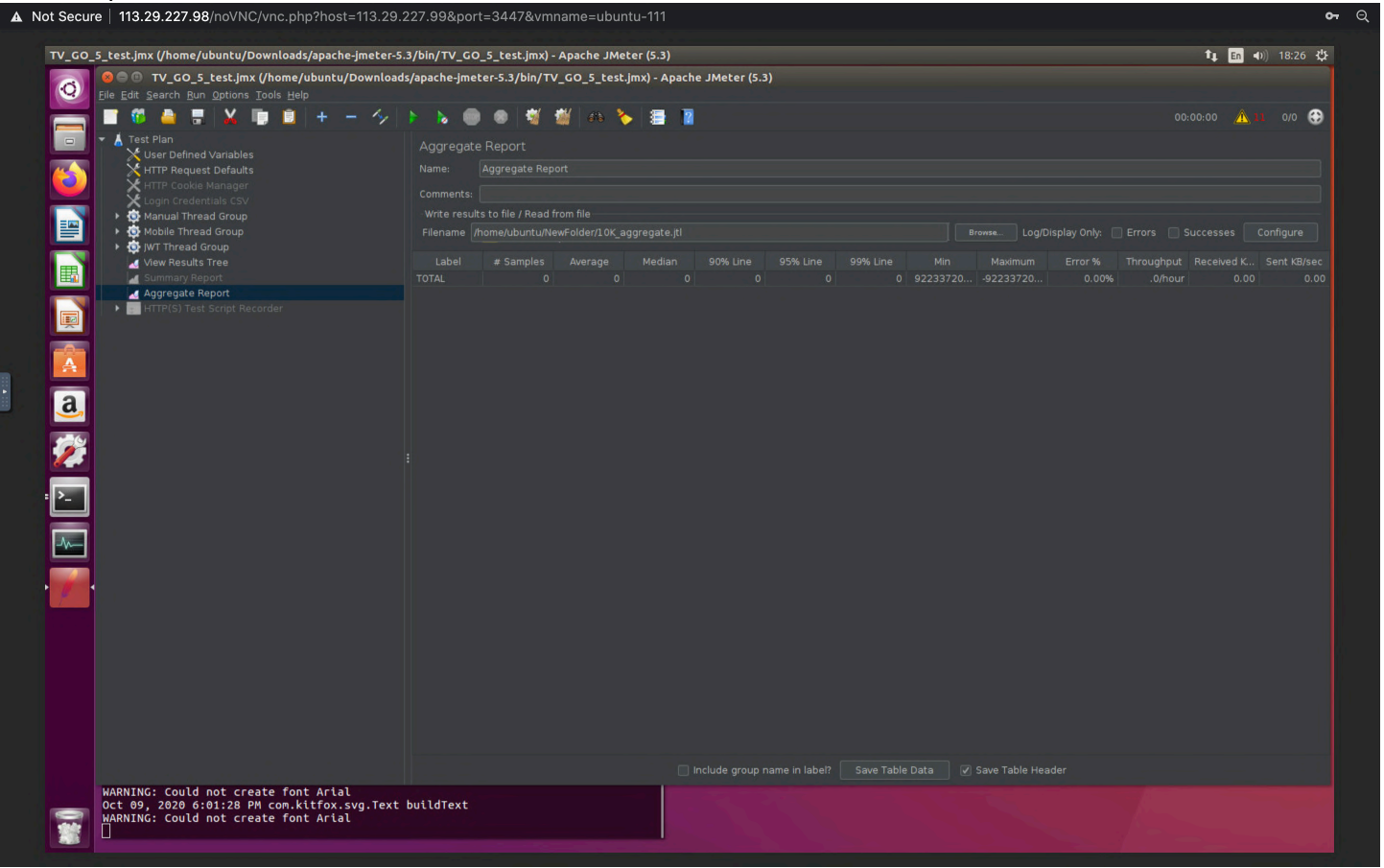
Connecting to VPN and ping the internal network from client laptop e.g.:



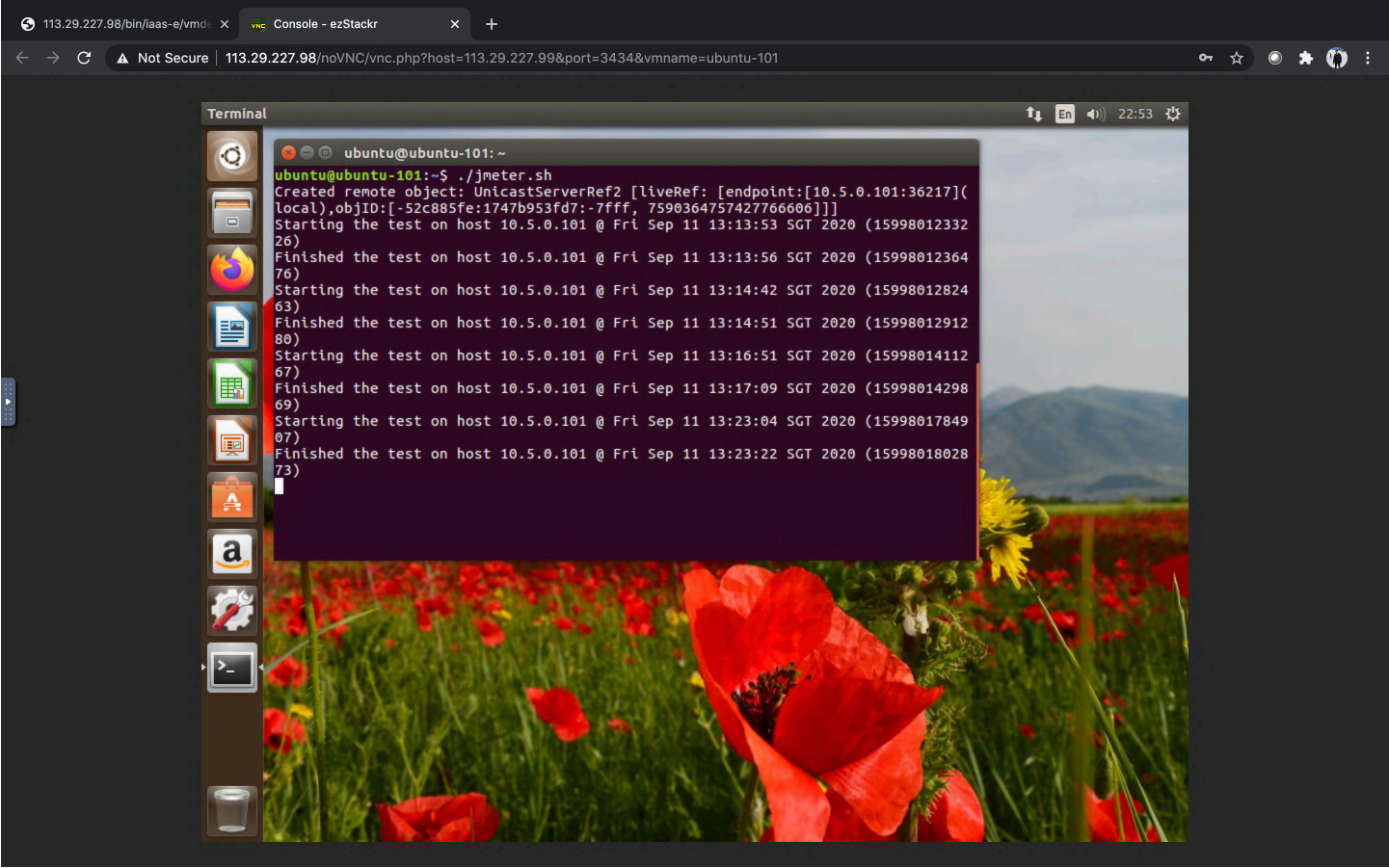
Macbook VPN Client Connect and Test ping



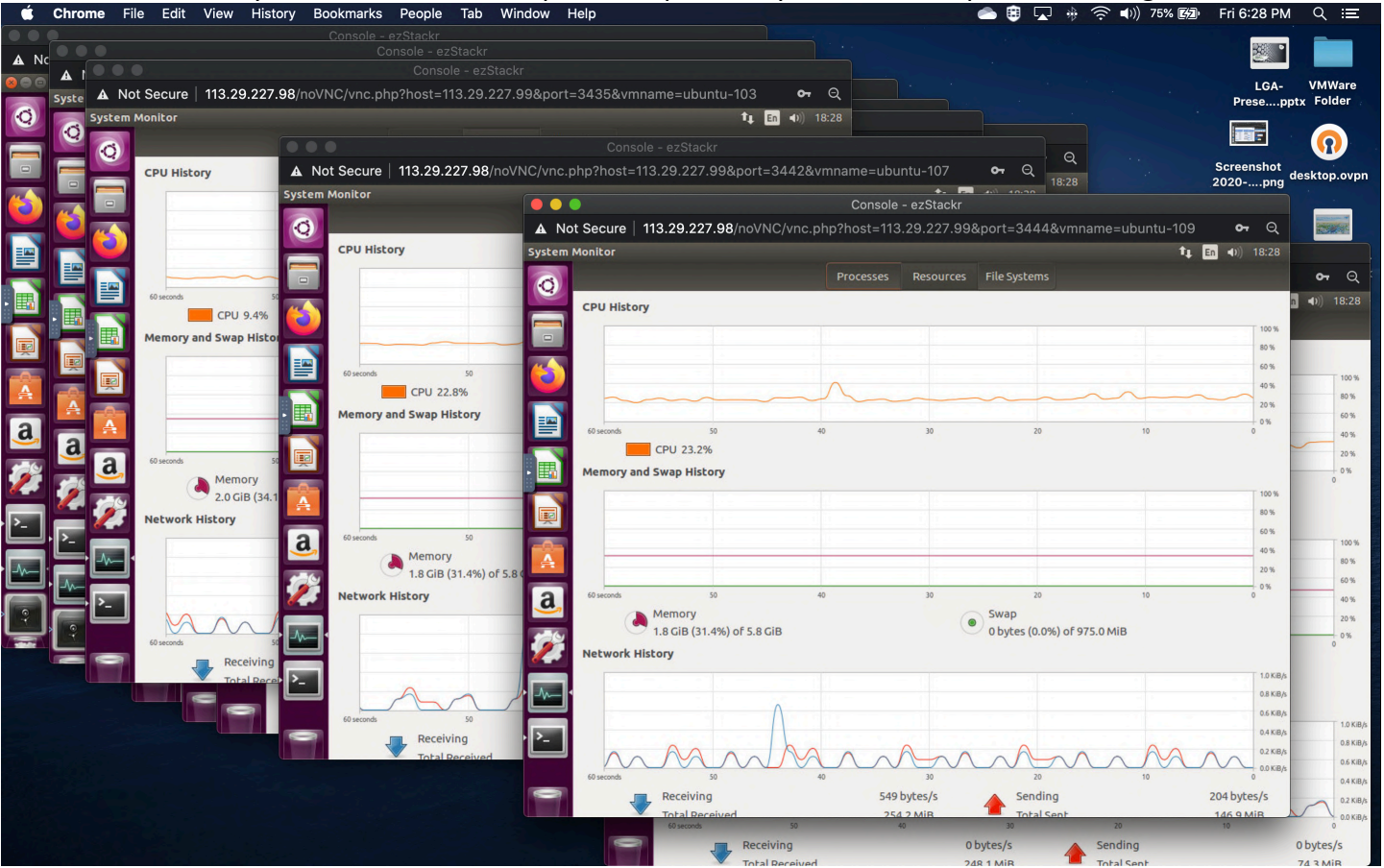
An example of a Jmeter master on Ubuntu on Ezstackr:



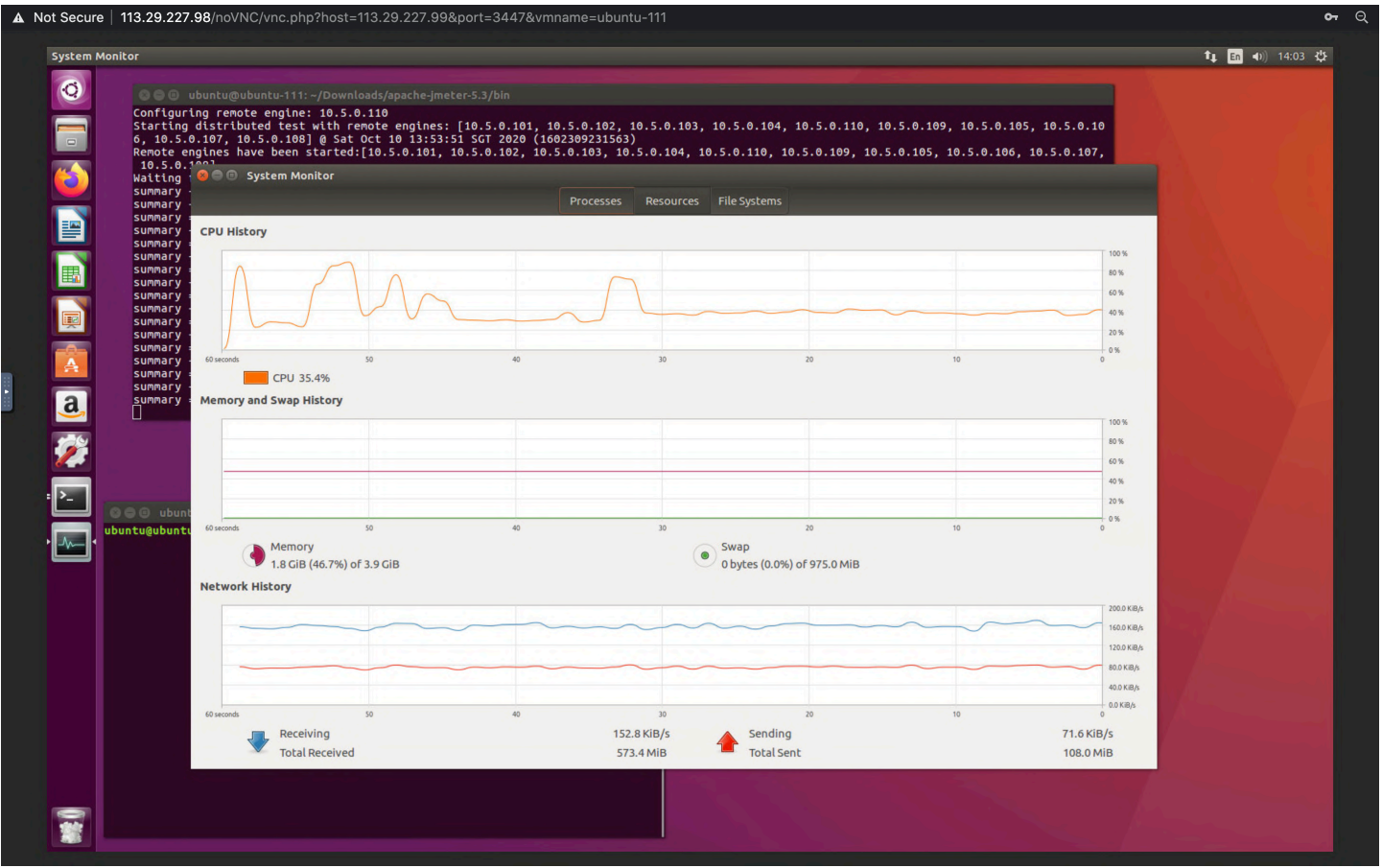
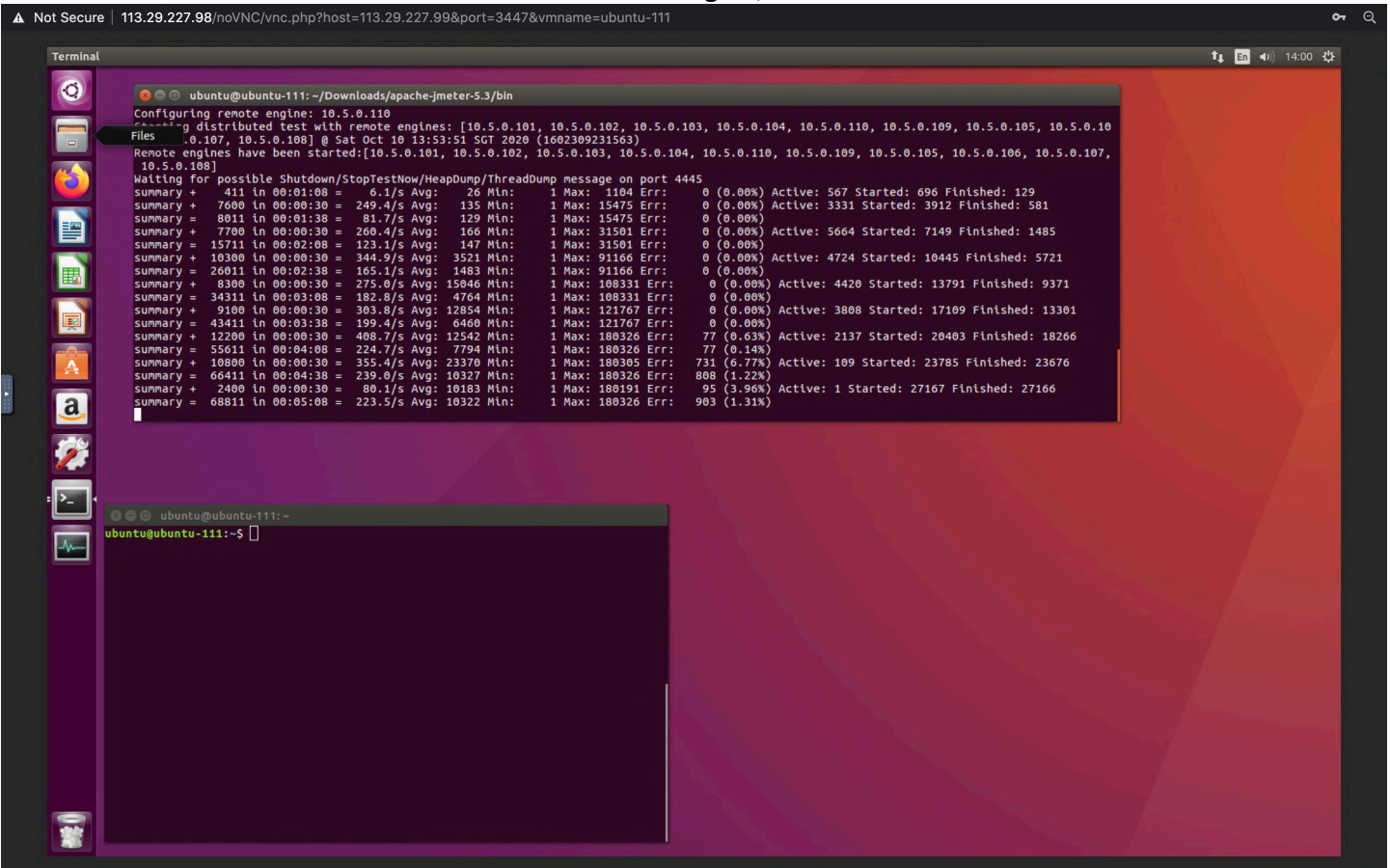
The Jmeter slave executes instructions from its Jmeter master



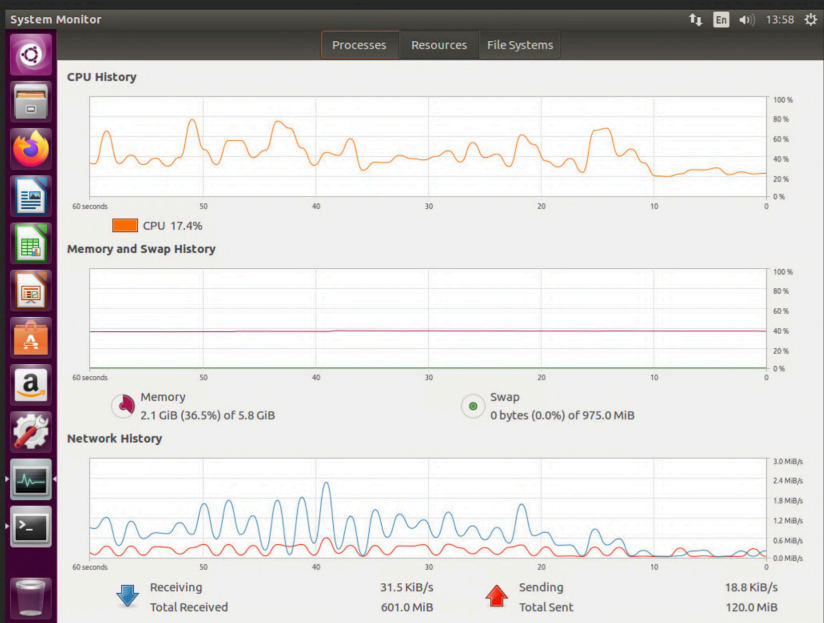
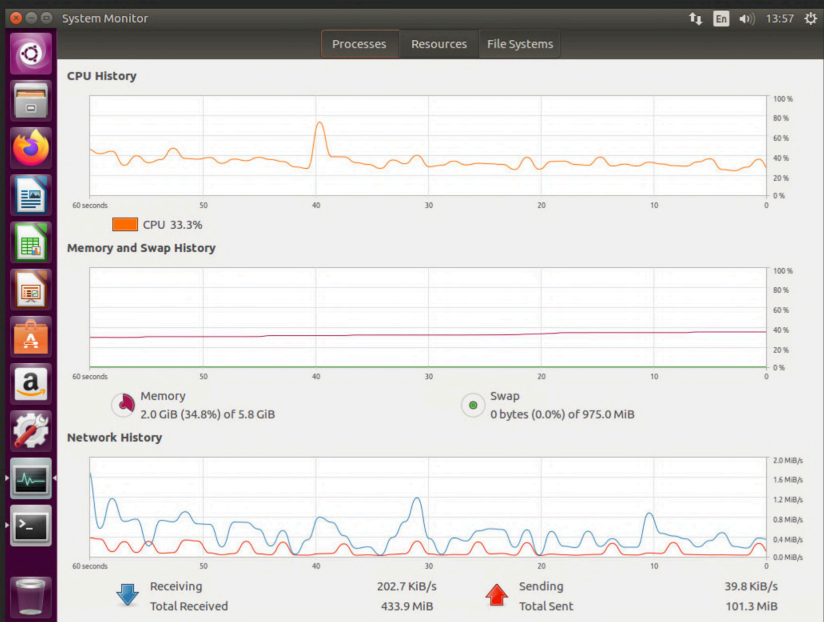
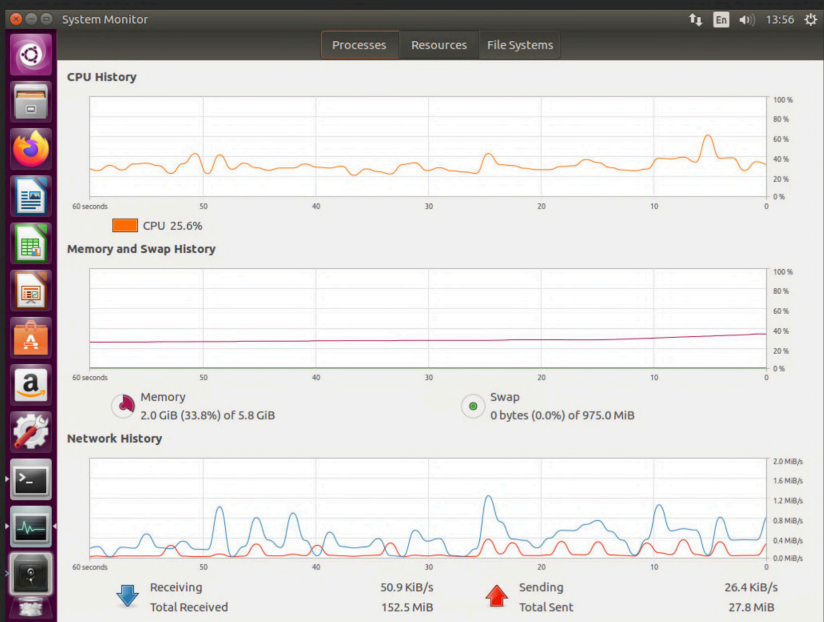
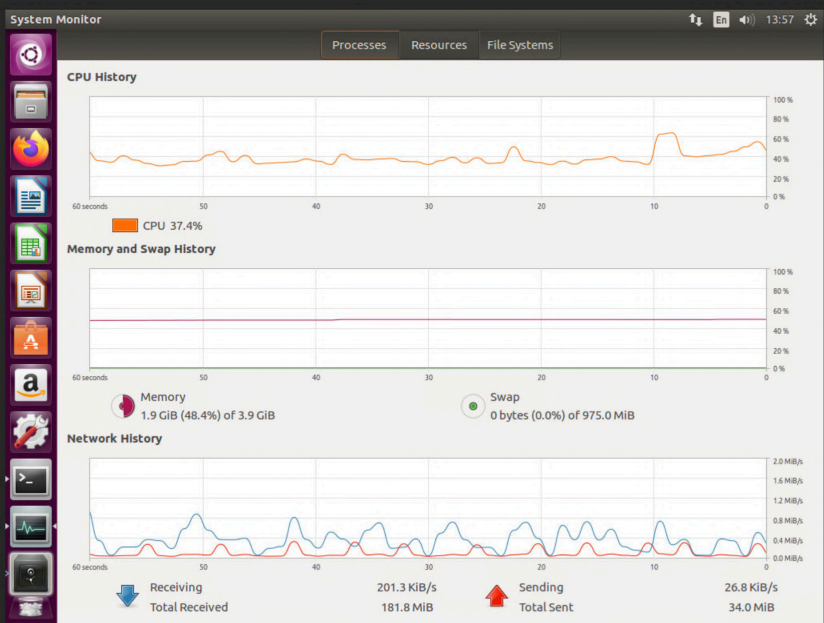
Solution allows many Jmeter clients to be operated upon easily without the operator leaving his desk.

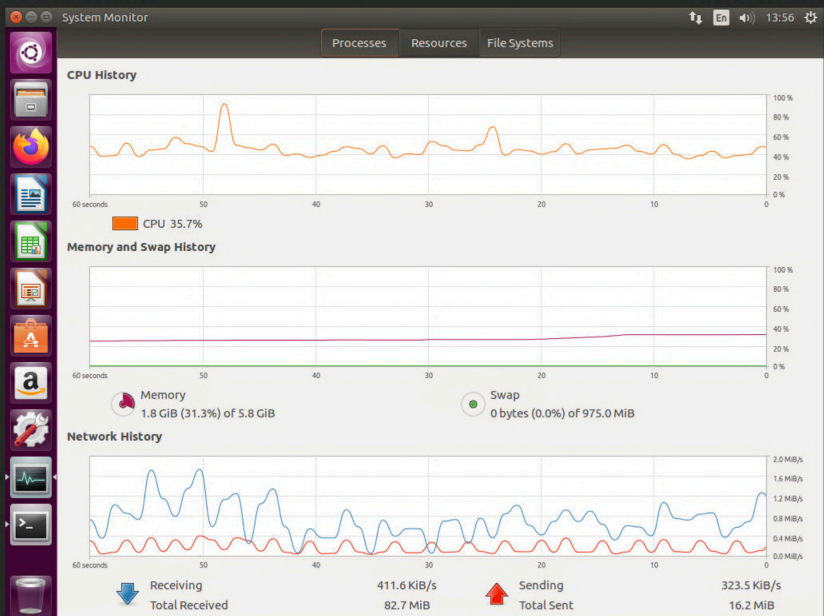
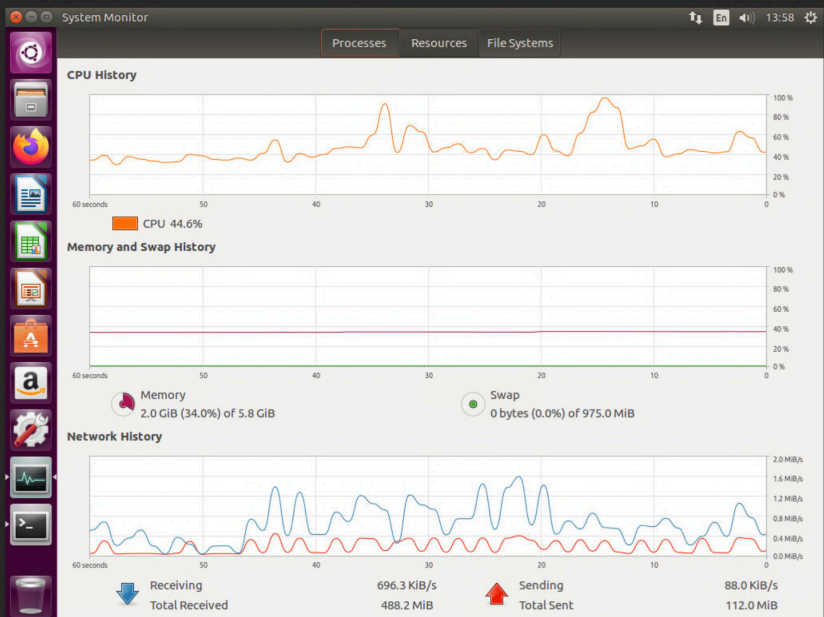
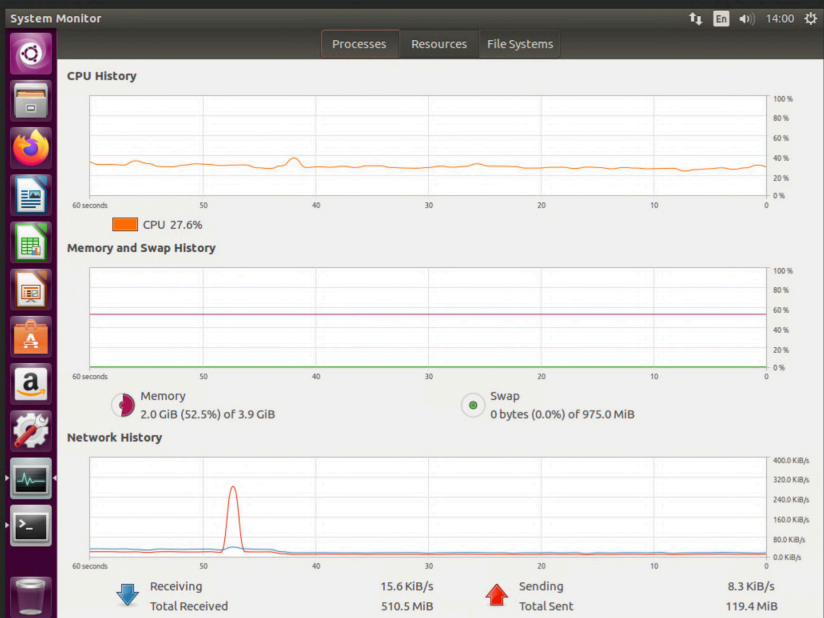
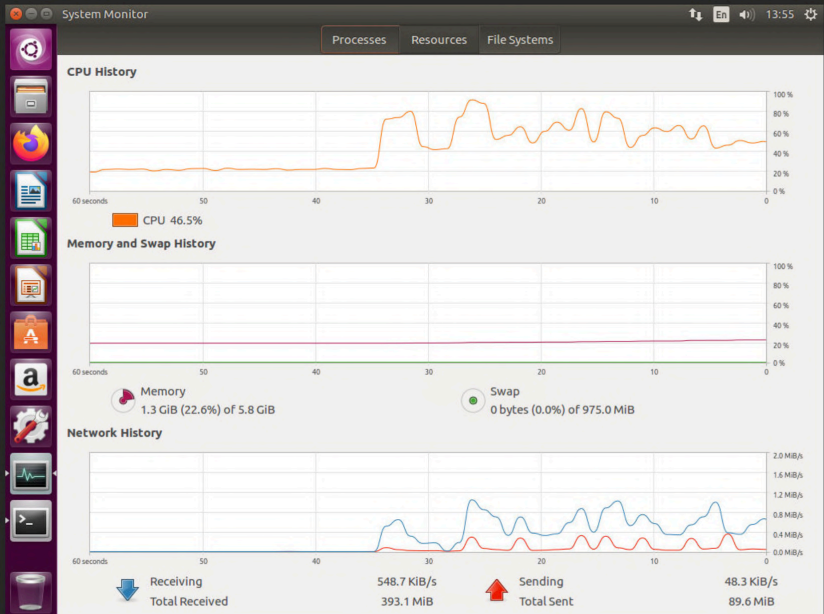


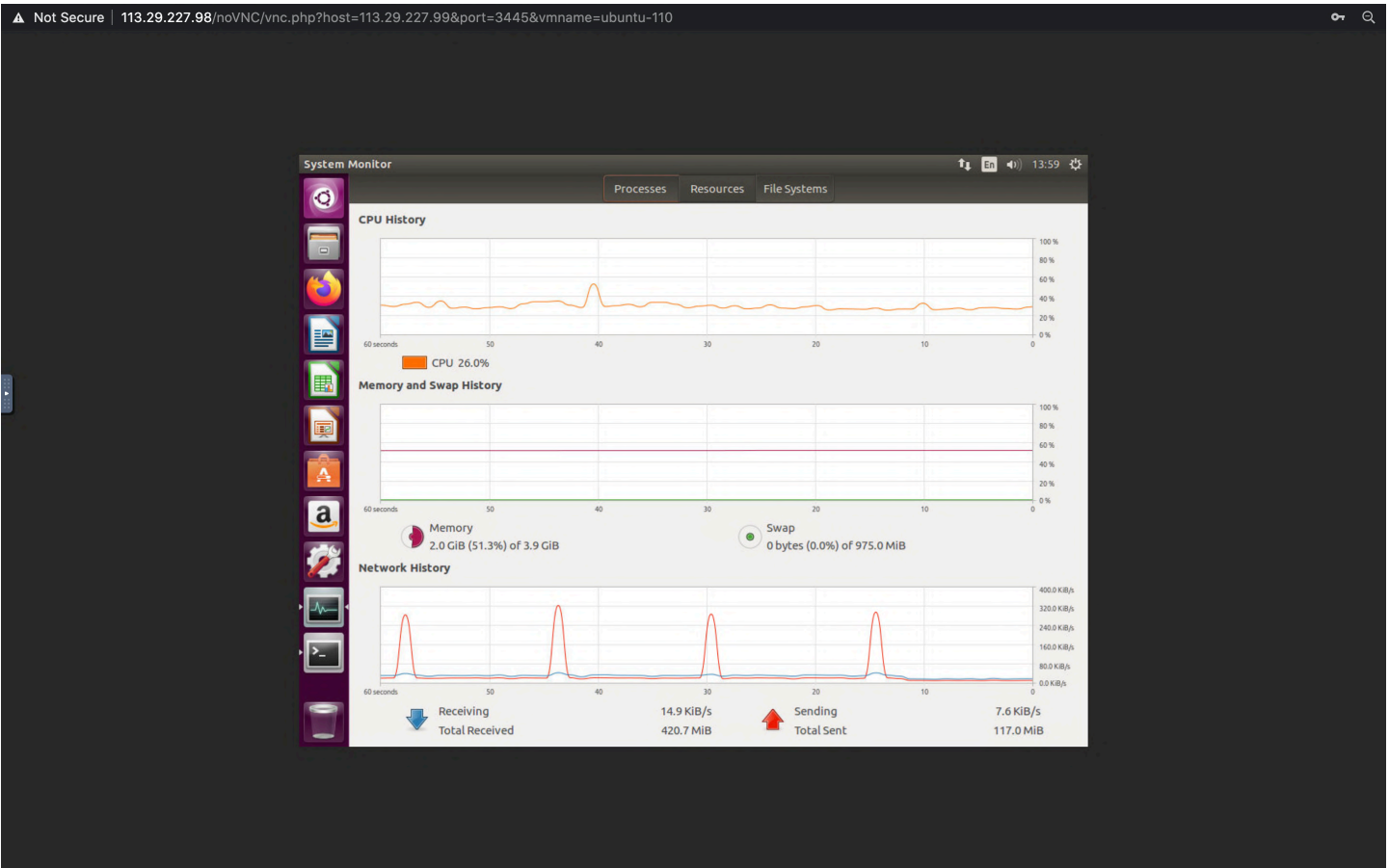
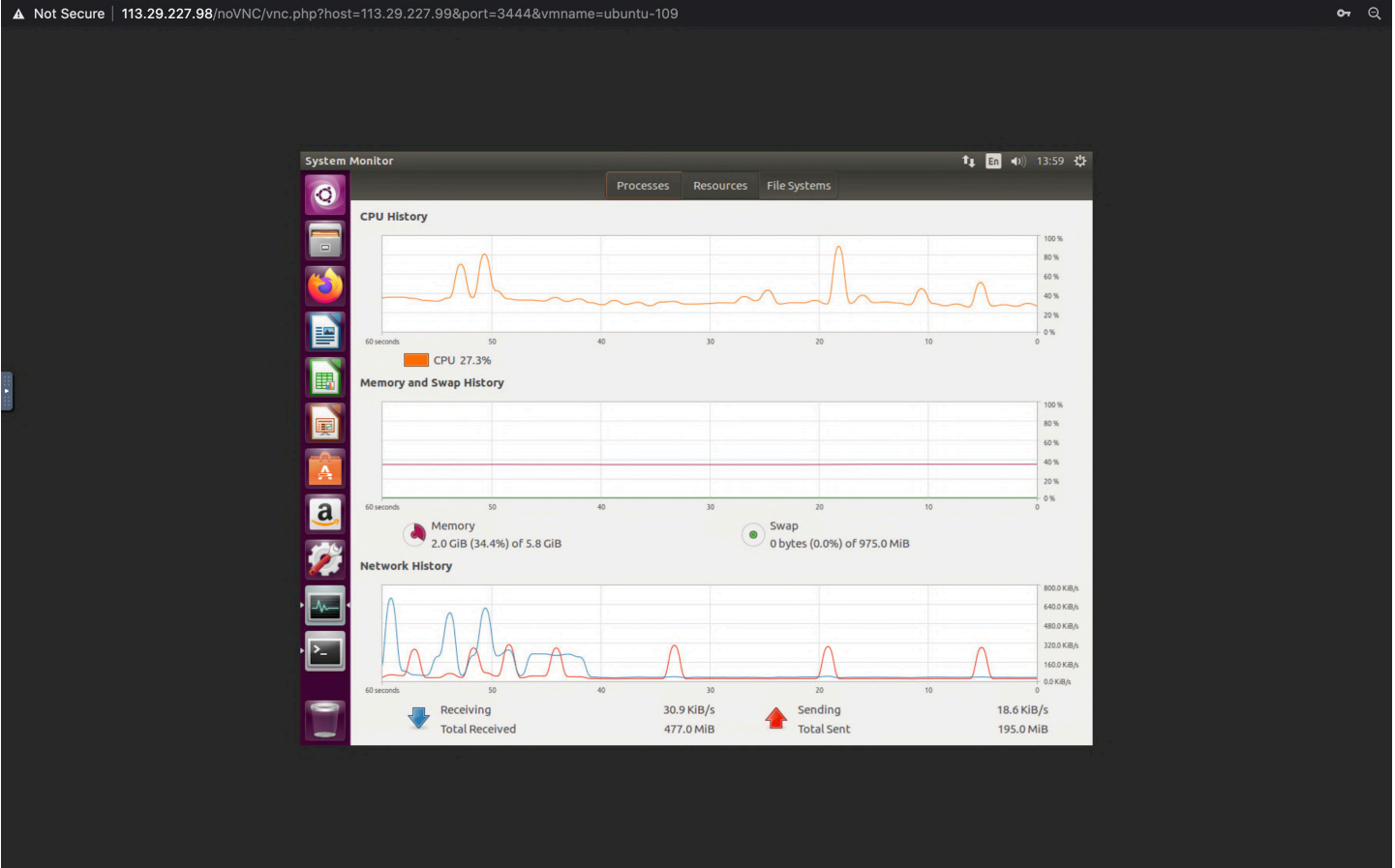
Results from Jmeter Master – a successful test simulating 50,000 users



Results from 10 Jmeter slaves:







END OF TEST
This concludes a successful basic test of Ezstackr

Contact Us

LGA Telecom Pte Ltd
33 Ubi Avenue 3
#08-53 Vertex (Tower A)
Singapore 408868

Tel (65) 6892 2308
Email: sales@lgatelecom.net
Website: www.lgatelecom.net

© 2020 LGA Telecom Pte Ltd. All rights reserved.