



The first step is to open [Vlab Dashboard](https://vlab.ac.ke) (<https://vlab.ac.ke>) and click [Sign up](#) if it is your first time or simply log in if you have an account already

Pithos Cyclades Sign in >



LOGIN

[Sign up](#)

Classic login

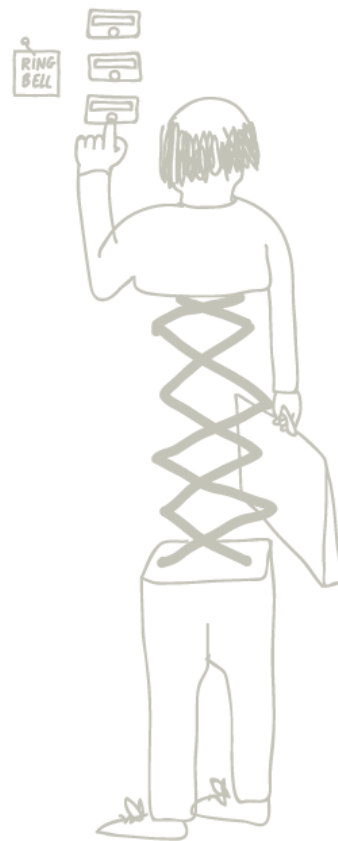
[Forgot your password?](#)

Copyright (c) 2017 KENET All rights reserved.

Powered by Synnefo v0.18.1

[Terms of service](#)

Fill in your details, enter the required security captcha and click on [SUBMIT](#). An email will be sent to your account. Confirm your account by clicking on the included link. Your account will then be [activated](#) by KENET VLAB team.



SIGN UP

[Sign In](#)[SUBMIT](#)



Once your account is activated you can now login. Provide your [Email](#), type **** in [Password](#) and Press Enter

Pithos Cyclades

Sign in >



LOGIN

[Sign up](#)

Classic login

SUBMIT

[Forgot your password?](#)

Copyright (c) 2017 KENET All rights reserved.

[Terms of service](#)

Powered by Synnefo v0.18.1

Click [Projects](#). ** If you are already a member of a project, jump to page 9 of this tutorial


Pithos Cyclades

rosure@kenet.or.ke


Logged in successfully.

Overview Profile API access Usage **Projects** Contact

Pithos is the File Storage service. Click to start uploading and managing your files on the cloud.



Cyclades is the Compute and Network Service. Click to start creating Virtual Machines and connect them to arbitrary Networks.



Access the dashboard from the top right corner of your screen. Here you can manage your profile, see the usage of your resources and manage projects to share virtual resources with colleagues.

username@synnefo.org

Click [Join](#)

PROJECTS

Vlab gives you the opportunity to run your own projects on virtual infrastructure or to become a member of other Vlab users' projects. Simple and fast!



Create a new Project. Name it, describe its purpose, choose virtual resources to be granted to members, and submit. Your application will be reviewed, and if accepted, you and your colleagues are ready to deploy!

[create a project >](#)



Request to be a member of an existing Project and instantly gain access to the resources it has to offer you. Search for public Projects, or submit a join request to a private Project, if you think its administrators will accept you. In short: try to join now.

[join a project >](#)

MY PROJECTS

Search:

Select a project and click on [Join](#). e.g [kenet.or.ke](#). * If you are a researcher, please join the [research-services.kenet.or.ke](#) project

Pithos Cyclades

rosure@kenet.or.ke ▾

[Overview](#) [Profile](#) [API access](#) [Usage](#) [Projects](#) [Contact](#)

ALL PROJECTS

Search:

Name ▾	Status	Application	Expiration	Members	Action
	Accepted member	12/07/2017	31/10/2017		Leave
	Not a member	14/07/2017	30/09/2017	2 pending	Join
	Not a member	24/07/2017	31/10/2017	1 pending	Join
	Accepted member	30/05/2017	31/01/2020	- 1 pending	Leave
	Active	26/05/2017	28/06/2017		Leave
	Accepted member	26/05/2017	31/10/2018		Leave
research-services.kenet.o...	Active	24/01/2018	31/12/2020	6	Leave
kenet.or.ke	Active	12/07/2017	30/09/2017	4	Join

Showing 1 to 8 of 8 entries

Pagination

< Previous Next >

Click **Yes** to submit your Join request

[Overview](#) [Profile](#) [API access](#) [Usage](#) [Projects](#) [Contact](#)

ALL PROJECTS

Search:

Name ▾	Status	Application	Expiration	Members	Action
domainreseller.kenet.or.k...	Accepted member	12/07/2017	31/10/2017	7	Leave
fileshare.kenet.or.ke	Not a member	14/07/2017	30/09/2017	1 - 2 pending	Join
freeipa.kenet.or.ke	Not a member	24/07/2017	31/10/2017	1 - 1 pending	Join
kenet.or.ke	Accepted member	30/05/2017	31/01/2020	19 - 1 pending	Leave
kyuc.ac.ke	Active	26/05/2017	28/06/2017	5	Leave
martin.kenet.or.ke	Accepted member	26/05/2017	31/10/2018	2	Leave
research-services.kenet.o...	Active	24/01/2018	31/12/2020	6	Leave
whmcs.kenet.or.ke	Active	12/07/2017	30/09/2017	4	Join

Showing 1 to 8 of 8 entries

Pagination

< Previous

Are you sure you want to join this project?

[Yes](#) [No](#)

Copyright (c) 2017 KENET All rights reserved.
Powered by Synnefo v0.18.1

[Terms of service](#)

Project summary details are shown and [member quota](#). ** In the meantime the [project admin](#) will [approve](#) your request

Overview Profile API access Usage **Projects** Contact

whmcs.kenet.or.ke PROJECT ACTIVE

MODIFY - CANCEL JOIN REQUEST

PROJECT DETAILS

Name	whmcs.kenet.or.ke
Homepage url	Not set yet
Description	WHMCS Piloting
Creation date	12/07/2017
End Date	30/09/2017
Owner	Me


RESOURCES

	Max per member	Total	Usage
File Storage Space	5.00 GB	50.0 GB	0% (0 bytes)
Hard Disk Storage	40.0 GB	250.0 GB	0% (0 bytes)
CPUs	8	50	0% (0)
RAM	8.00 GB	100.0 GB	0% (0 bytes)
VMs	4	20	0% (0)
Private Networks	10	100	0% (0)
Public (Floating) IPs	0	0	--
pending project applications	Unlimited	Unlimited	0% (0)

MEMBERS

Click on [Cyclades](#) once you are approved as a project member and you have received an email alert confirming the same

Pithos Cyclades rosure@kenet.or.ke


Virtual Computing Lab

Overview Profile API access Usage **Projects** Contact

research-services.kenet.or.ke PROJECT ACTIVE
MODIFY - LEAVE

PROJECT DETAILS

Name	research-services.kenet.or.ke
Homepage url	https://www.kenet.or.ke/research-services
Description	Research Services - For use by researchers running R, Python, Quantum, Octave etc
Creation date	24/01/2018
End Date	31/12/2020
Owner	Me

RESOURCES

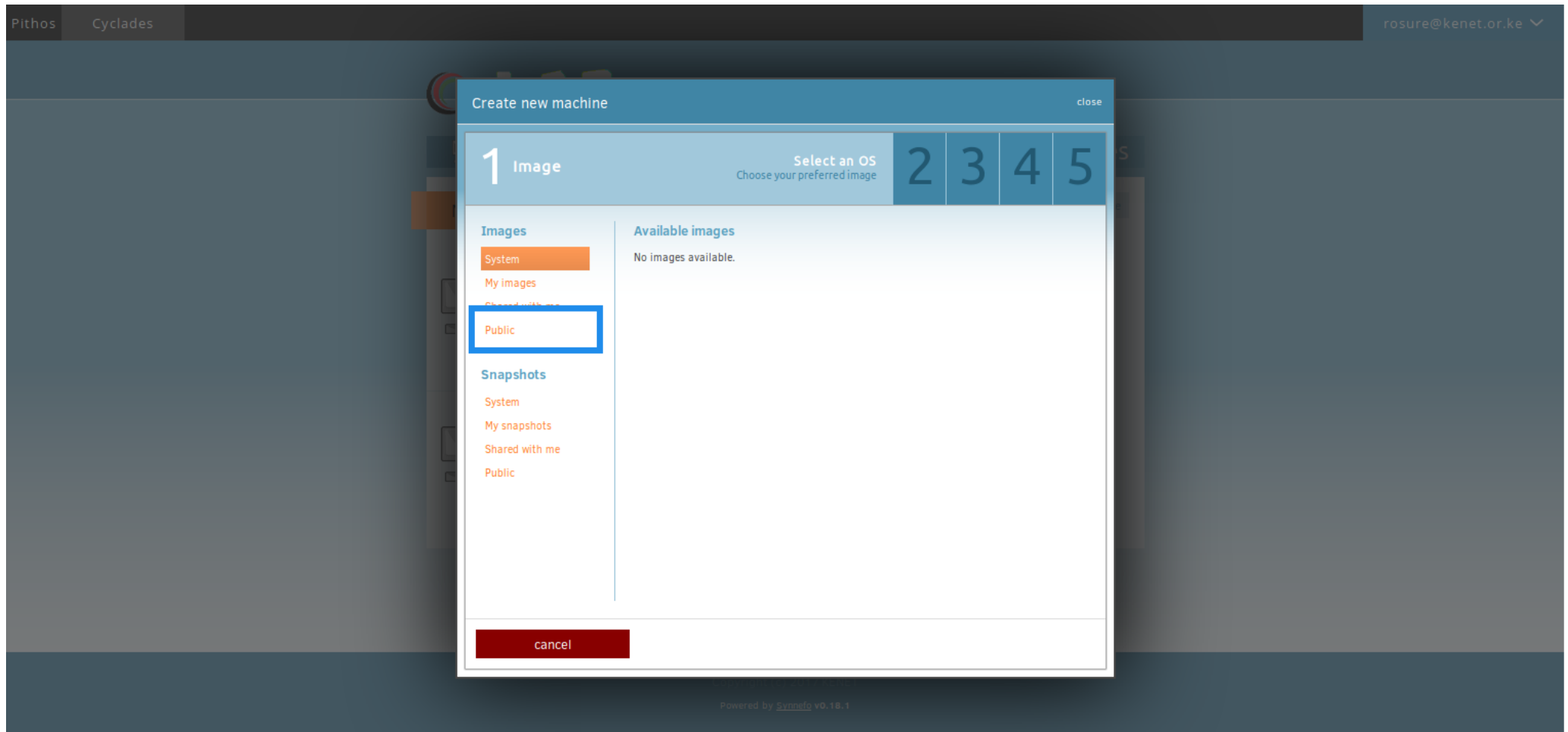
	Max per member	Total	Usage
File Storage Space	5.00 GB	1000.0 GB	0% (38.7 kB)
Hard Disk Storage	500.0 GB	15.0 TB	1% (180.0 GB)
CPUs	4	80	7% (6)
RAM	16.0 GB	200.0 GB	7% (14.0 GB)

Click [New Machine +](#) to create your virtual server

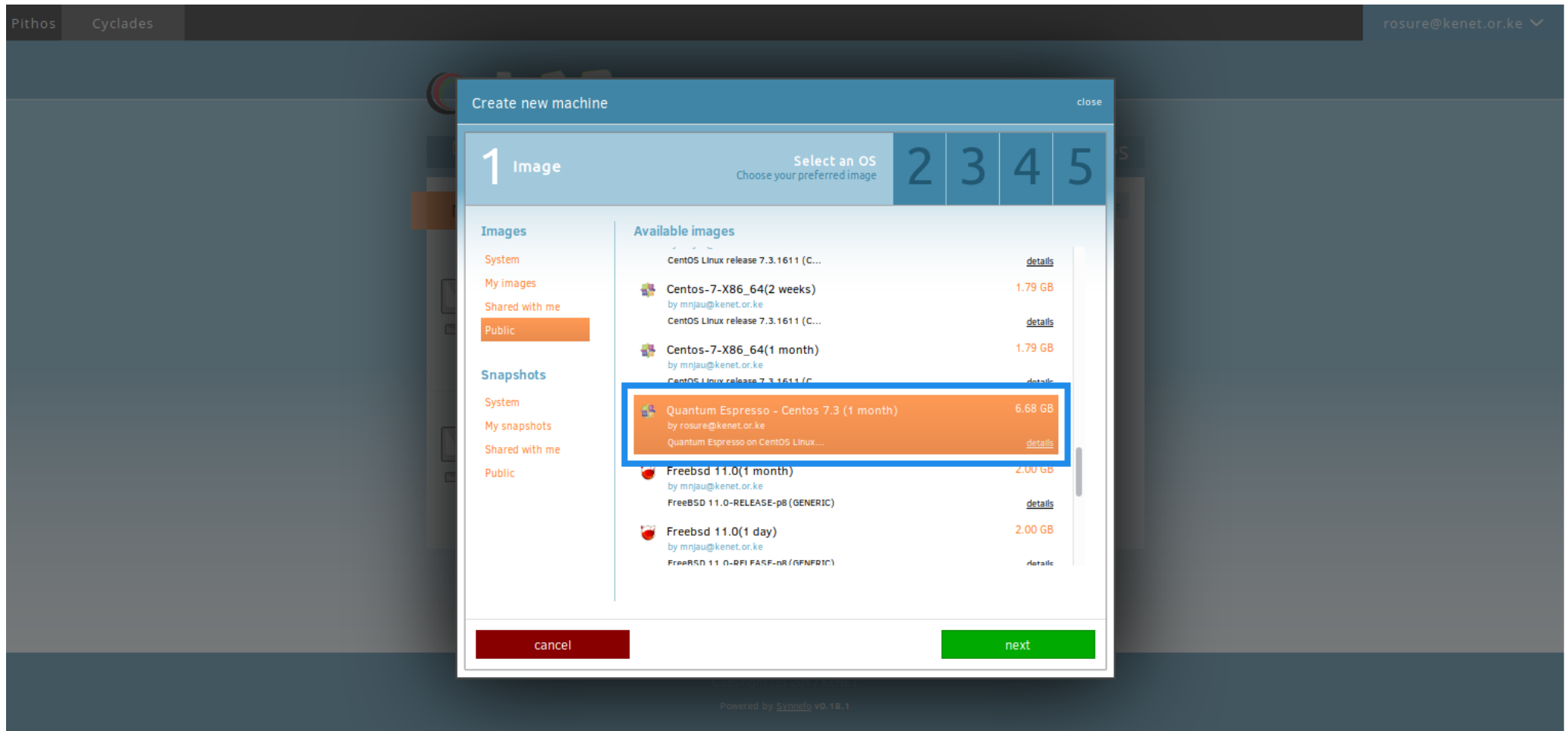
The screenshot displays the KENET VLAB web interface. At the top, there's a navigation bar with 'Pithos' and 'Cyclades' tabs, and a user profile 'rosure@kenet.or.ke'. The main header features the 'vLAB' logo. Below this is a toolbar with icons for a monitor, database, Docker, IP, and a key. The 'machines' tab is active, showing a list of virtual machines. A blue box highlights the 'New Machine +' button. Two machines are listed: 'test-kenet-ca' and 'jupyterhub test', both in a 'Running' state with green progress bars. Each machine entry includes a monitor icon, a username '[kenet.or.ke]', a host address 'snf-...vlab.ac.ke', and buttons for 'info', 'disks', and 'IPs'. The footer contains copyright information for KENET 2017 and mentions it is powered by Synnfo v0.18.1.

Machine Name	Status	Host
test-kenet-ca	Running	snf-...vlab.ac.ke
jupyterhub test	Running	snf-...vlab.ac.ke

Click **Public**



Select an image of your choice. In this example **Quantum Espresso**...



Click [next](#)

Pithos Cyclades rosure@kenet.or.ke

Create new machine

1 2 Flavor 3 4 5

Select CPUs, RAM and Disk Size

Available images

CentOS Linux release 7.3.1611 (C...	details
Centos-7-X86_64(2 weeks) by mnjau@kenet.or.ke	1.79 GB details
CentOS Linux release 7.3.1611 (C...	details
Centos-7-X86_64(1 month) by mnjau@kenet.or.ke	1.79 GB details
CentOS Linux release 7.3.1611 (C...	details
Quantum Espresso - Centos 7.3 (1 month) by rosure@kenet.or.ke	6.68 GB details
Quantum Espresso on CentOS Linux...	
FreeBSD 11.0(1 month) by mnjau@kenet.or.ke	2.00 GB details
FreeBSD 11.0-RELEASE-p8 (GENERIC)	details
FreeBSD 11.0(1 day) by mnjau@kenet.or.ke	2.00 GB details
FreeBSD 11.0-RPI FASFP-nR (RNFNFDIC)	details

previous next

Powered by [Synnfo](#) v0.18.1

Ensure your project is selected [research-services.kene...](https://research-services.kenet.or.ke)

Create new machine close

1 2 **Flavor** 3 4 5
Select CPUs, RAM and Disk Size
Available options are filtered based on the selected image

research-services.kene...

Predefined

Small
Medium
Large

CPUs (4 left) Choose number of CPU cores

1 x 2 x 4 x

Memory size (16.00 GB left) Choose memory size

512 MB 1 GB 2 GB 4 GB 6 GB 8 GB

Disk size (500.00 GB left) Choose disk size

2 GB 4 GB 5 GB 10 GB 20 GB 40 GB 100 GB

Storage Select storage type

ext_archipelago

previous next

Powered by Synnfo v0.18.1

Select no. of CPUs

Pithos Cyclades rosure@kenet.or.ke

Create new machine

1 2 Flavor 3 4 5

Select CPUs, RAM and Disk Size
Available options are filtered based on the selected image

research-services.kene...

Predefined

Small
Medium
Large

CPUs (4 left) Choose number of CPU cores

1 x 2 x 4 x

Memory size (16.00 GB left) Choose memory size

512 MB 1 GB 2 GB 4 GB 6 GB 8 GB

Disk size (500.00 GB left) Choose disk size

2 GB 4 GB 5 GB 10 GB 20 GB 40 GB 100 GB

Storage Select storage type

ext_archipelago

previous next

Powered by Synnfo v0.18.1

Set memory size

The screenshot shows the 'Create new machine' dialog box in the KENET Virtual Computing Lab. The dialog is titled 'Create new machine' and has a 'close' button. It is divided into five steps: 1, 2 (Flavor), 3, 4, and 5. Step 2, 'Flavor', is the active step, and it contains the text 'Select CPUs, RAM and Disk Size' and 'Available options are filtered based on the selected image'. The dialog shows a search bar with 'research-services.kene...' and a dropdown arrow. Below the search bar, there are three predefined flavors: Small, Medium, and Large. The 'Small' flavor is selected. The 'CPUs' section shows '4 left' and three options: 1 x, 2 x, and 4 x. The 'Memory size' section shows '16.00 GB left' and six options: 512 MB, 1 GB, 2 GB, 4 GB, 6 GB, and 8 GB. The '1 GB' option is highlighted with a blue box. The 'Disk size' section shows '500.00 GB left' and seven options: 2 GB, 4 GB, 5 GB, 10 GB, 20 GB, 40 GB, and 100 GB. The 'Storage' section shows 'ext_archipelago' as the selected storage type. At the bottom of the dialog, there are 'previous' and 'next' buttons. The background of the dialog is dark blue, and the overall interface is dark gray.

Powered by [Synnfo](#) v0.18.1

Set disk space [size](#)

The screenshot shows the 'Create new machine' dialog box in the KENET Virtual Computing Lab. The dialog is titled 'Create new machine' and has a 'close' button in the top right corner. It is divided into five steps, with the second step, 'Flavor', currently selected. The 'Flavor' step is titled 'Select CPUs, RAM and Disk Size' and includes a note: 'Available options are filtered based on the selected image'. The selected image is 'research-services.kene...'. The dialog is divided into two main sections: 'Predefined' and 'Custom'. The 'Predefined' section has three options: 'Small', 'Medium', and 'Large'. The 'Custom' section has four sub-sections: 'CPUs (4 left)', 'Memory size (16.00 GB left)', 'Disk size (500.00 GB left)', and 'Storage'. The 'CPUs' section has three options: '1 x', '2 x', and '4 x'. The 'Memory size' section has six options: '512 MB', '1 GB', '2 GB', '4 GB', '6 GB', and '8 GB'. The 'Disk size' section has seven options: '2 GB', '4 GB', '5 GB', '10 GB', '20 GB', '40 GB', and '100 GB'. The 'Storage' section has one option: 'ext_archipelago'. At the bottom of the dialog are two buttons: 'previous' and 'next'. The background of the dialog is a dark blue gradient. The top of the dialog has a dark blue header with the text 'Pithos' and 'Cyclades' on the left, and 'rosure@kenet.or.ke' on the right.

1 2 Flavor 3 4 5

Select CPUs, RAM and Disk Size
Available options are filtered based on the selected image

research-services.kene...

Predefined

Small
Medium
Large

CPUs (4 left) Choose number of CPU cores

1 x 2 x 4 x

Memory size (16.00 GB left) Choose memory size

512 MB 1 GB 2 GB 4 GB 6 GB 8 GB

Disk size (500.00 GB left) Choose disk size

2 GB 4 GB 5 GB 10 GB 20 GB 40 GB 100 GB

Storage Select storage type

ext_archipelago

previous next

Powered by Synnfo v0.18.1

Click [next](#)

Pithos Cyclades rosure@kenet.or.ke

Create new machine

close

1 2 Flavor

Select CPUs, RAM and Disk Size
Available options are filtered based on the selected image

3 4 5

research-services.kene...

Predefined

Small
Medium
Large

CPUs (4 left)

Choose number of CPU cores

1 x 2 x 4 x

Memory size (16.00 GB left)

Choose memory size

512 MB 1 GB 2 GB 4 GB 6 GB 8 GB

Disk size (500.00 GB left)

Choose disk size

2 GB 4 GB 5 GB 10 GB 20 GB 40 GB 100 GB

Storage

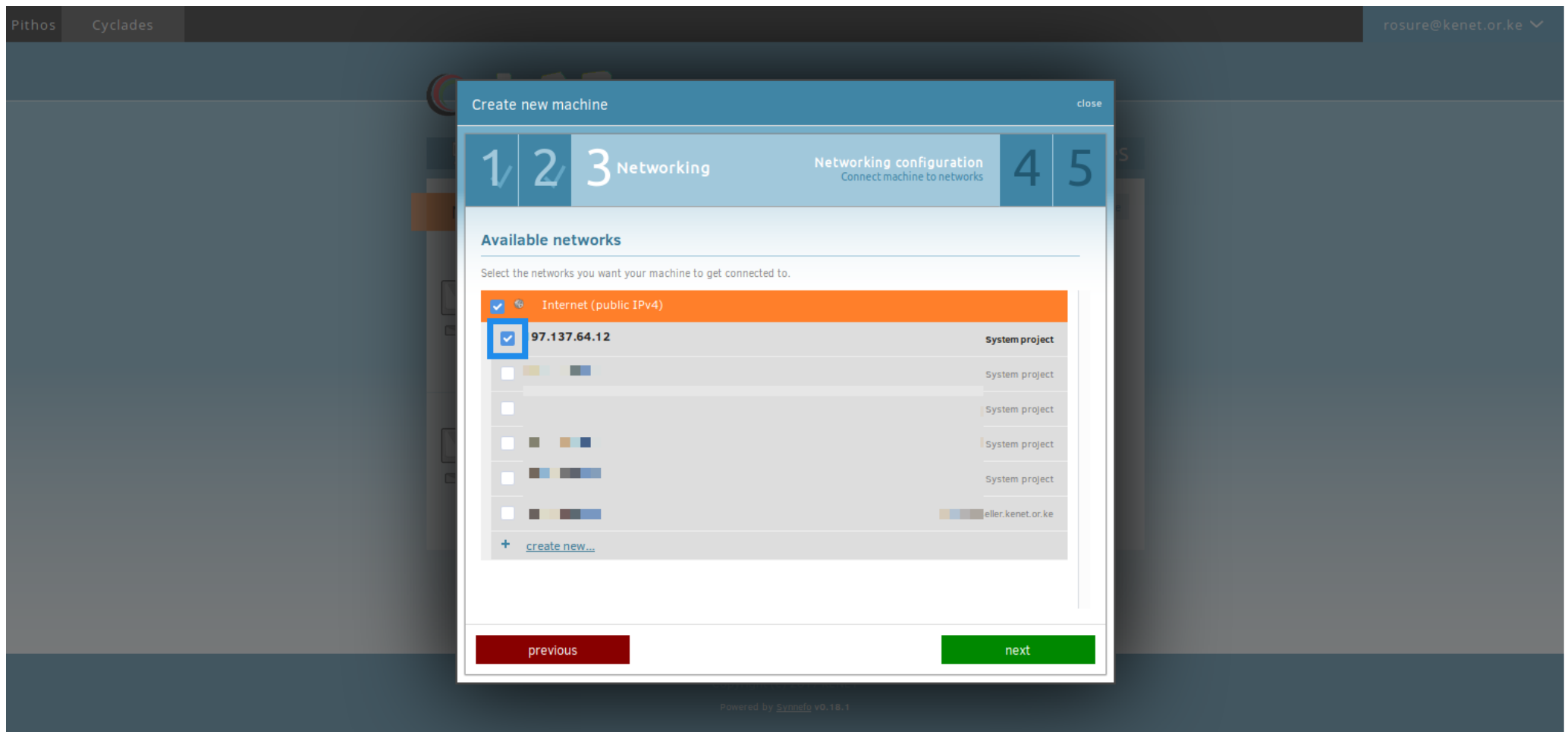
Select storage type

ext_archipelago

previous next

Powered by Synnfo v0.18.1

Allocate an IP address. Make sure an IP is selected or else click [create new](#) and check the [box](#) next to the IP address



Click [next](#)

The screenshot shows the KENET Virtual Computing Lab interface. At the top, there are tabs for 'Pithos' and 'Cyclades'. The user's email 'rosure@kenet.or.ke' is displayed in the top right corner. A modal dialog titled 'Create new machine' is open, showing a progress bar with five steps. Step 3, 'Networking', is the current step, with the sub-header 'Networking configuration' and the instruction 'Connect machine to networks'. Below the progress bar, the 'Available networks' section lists several networks. The first network, 'Internet (public IPv4)', is selected with a blue checkmark. Below it, there are several other networks, each with a checkbox and a 'System project' label. The 'next' button at the bottom right of the dialog is highlighted with a blue border.

Close

1 2 3 Networking Networking configuration Connect machine to networks 4 5

Available networks

Select the networks you want your machine to get connected to.

☒ Internet (public IPv4)

☒ 197. .12 System project

☐ System project

☐ System project

☐ System project

☐ System project

☐ System project

☐ eller.kenet.or.ke

+ [create new...](#)

previous next

Powered by [Synapse](#) v0.18.1



Type **** in [Machine name](#)

Pithos Cyclades rosure@kenet.or.ke

Create new machine

close

1

2

3


4 Personalize

5

Virtual machine custom options

Virtual machine custom options

Machine name



Public SSH keys

Your account contains the following SSH public keys. Select one or more to activate in your new machine. You will then be able to ssh with the corresponding private key without a password.

springbok

☐

Suggested tags

You may change machine tags later from the machines view.

Role

Database server

File server

Mail server

Web server

Proxy

previous

next

Powered by Synnfo v0.18.1

Click [next](#)

Pithos Cyclades rosure@kenet.or.ke

Create new machine

close

1 2 3 4 Personalize 5

Virtual machine custom options
Virtual machine custom options

Machine name

my-quantum-espresso-instance

Public SSH keys

Your account contains the following SSH public keys. Select one or more to activate in your new machine. You will then be able to ssh with the corresponding private key without a password."

springbok

Suggested tags

You may change machine tags later from the machines view.

Role

Database server File server
Mail server Web server Proxy

previous next

Powered by Synnfo v0.18.1

Review [summary](#)

Pithos Cyclades rosure@kenet.or.ke

Create new machine

1 2 3 4 5 Confirm

Confirm your settings
Confirm that the options you have selected are correct

Machine name
my-quantum-espresso-instance

Image	Flavor	SSH Keys
Quantum Espresso - Centos 7... Quantum Espresso on CentOS Linux release 7.3.1611 (Core)	CPUs 2x	springbok
OS Centos	Memory 1024 MB	IP Addresses
Size 6.68 GB	Disk 10.00 GB	197.132.12 System project
GUI No GUI	Storage type ext_archipelago	Networks
Kernel 3.10.0-514.10.2.el7.x86_64	Machine Tags	No private networks selected
	No tags selected	

Project

previous create machine

Powered by Synnfo v0.18.1

Ready? Click [create machine](#) to start the build process


Pithos Cyclades rosure@kenet.or.ke

Create new machine close

1 2 3 4 5 Confirm

Confirm your settings
Confirm that the options you have selected are correct

Machine name

 my-quantum-espresso-instance

Image

Quantum Espresso - Centos 7...

Quantum Espresso on CentOS Linux release 7.3.1611 (Core)

OS Centos

Size 6.68 GB

GUI No GUI

Kernel 3.10.0-514.10.2.el7.x86_64

Flavor

CPU 2x

Memory 1024 MB

Disk 10.00 GB

Storage type ext_archipelago

Machine Tags

No tags selected

SSH Keys

springbok

IP Addresses

197.12 System project

Networks

No private networks selected

Project

previous

create machine

Powered by Synnfo v0.18.1

Apr 18, 2018

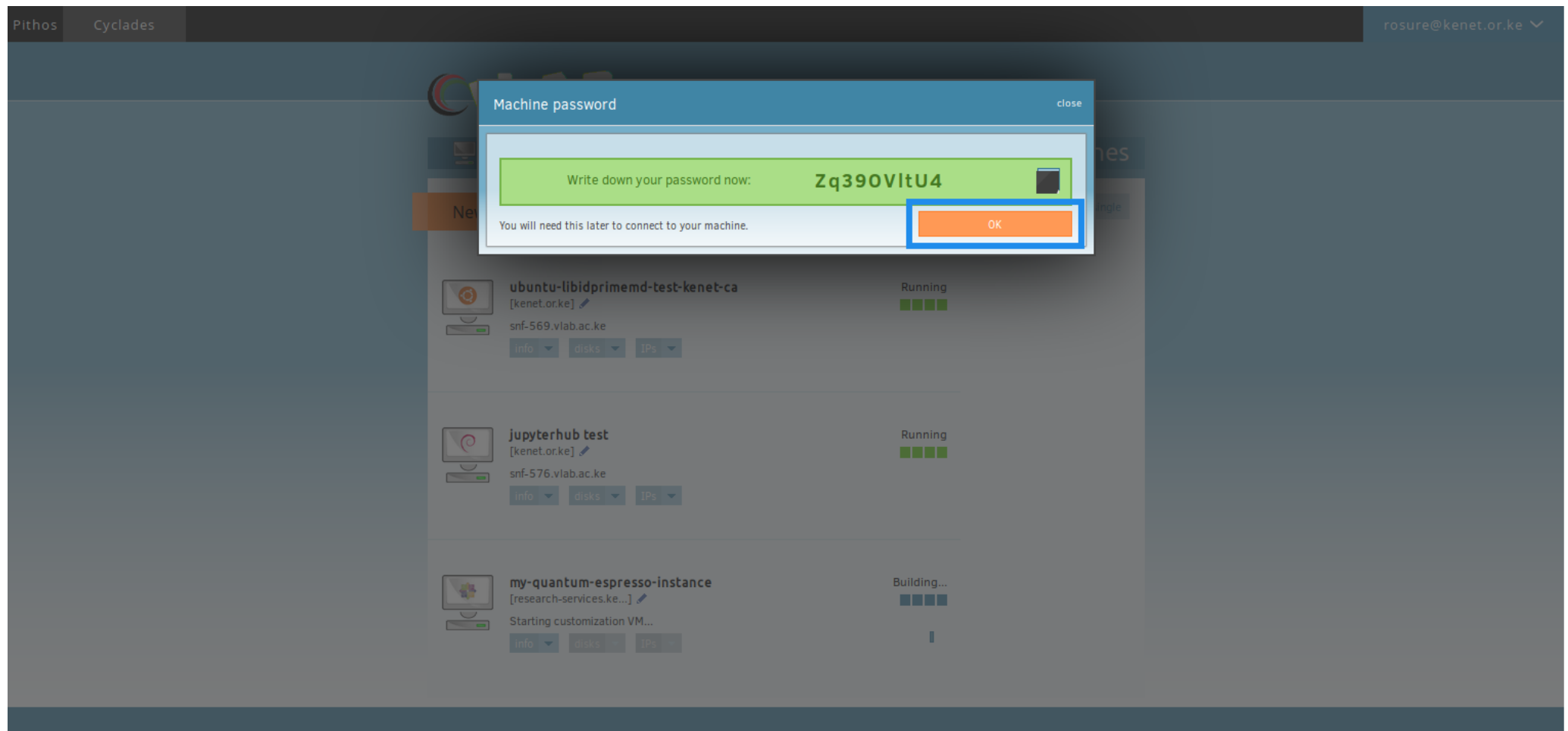
24 of 30

As the machine builds, your **password** for the machine/server will be presented to you. Copy and save in a safe place for use later

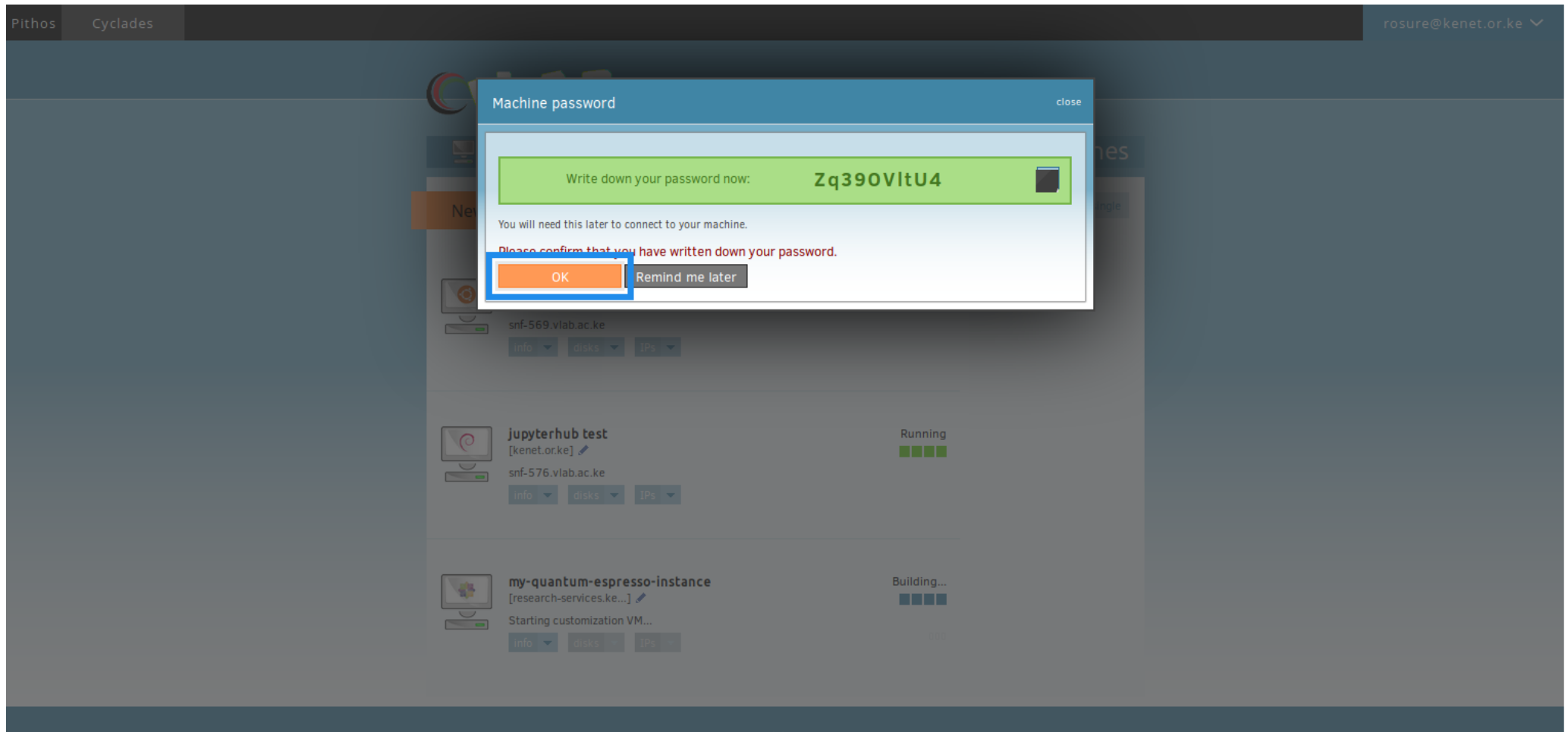
The screenshot shows the KENET Virtual Computing Lab interface. A modal dialog box titled "Machine password" is displayed in the center. The dialog has a blue header with a "close" button. Inside, a green box contains the text "Write down your password now:" followed by a text input field containing the password "Zq390VltU4". Below this, a message states "You will need this later to connect to your machine." and an orange "OK" button is present. The background interface shows a list of virtual machines:

- ubuntu-libidprimemd-test-kenet-ca** [kenet.or.ke] Running (snf-569.vlab.ac.ke)
- jupyterhub test** [kenet.or.ke] Running (snf-576.vlab.ac.ke)
- my-quantum-espresso-instance** [research-services.ke...] Building... (Initializing...)

Click **OK**



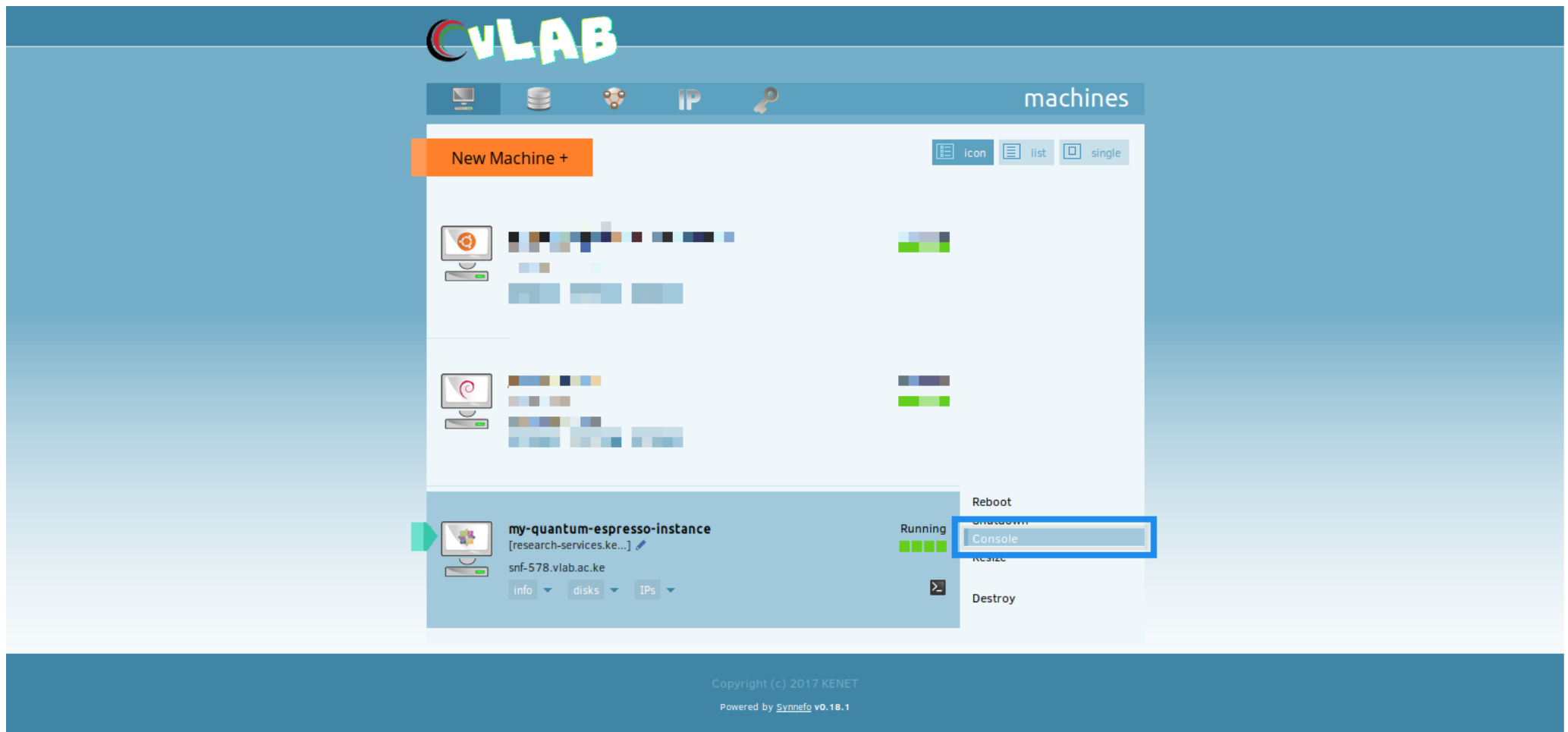
Click **OK** again to close the dialog box.



Your machine now **builds**. Wait a few minutes to complete

The screenshot displays the VLAB (Virtual Lab) interface. At the top, the 'vLAB' logo is visible. Below it, a navigation bar contains icons for a computer, database, network, IP, and key, followed by the word 'machines'. A 'New Machine +' button is located on the left. The main area shows a list of machines. The machine 'my-quantum-espresso-instance' is highlighted with a blue border. It is in the 'Building...' state, indicated by a progress bar and the text 'Building...'. The machine's details include a monitor icon, the name 'my-quantum-espresso-instance', a link to '[research-services.ke...]', and the status 'Starting customization VM...'. Below this, there are buttons for 'info', 'disks', and 'IPs'. The footer of the interface shows 'Copyright (c) 2017 KENET' and 'Powered by Synnefo v0.18.1'.

At this point you can access your machine/server by clicking [Console](#) or via SSH/Putty as follows: User: root (or user) Password: copied/saved earlier Host: snf-[XXX](#).vlab.ac.ke



That's it. You're done.

The screenshot shows the VLAB web interface. At the top, there's a blue header with the VLAB logo and navigation icons for a monitor, database, network, IP, and key. The word 'machines' is displayed on the right. Below the header, there's a 'New Machine +' button and view toggles for 'icon', 'list', and 'single'. The main content area shows a list of virtual machines. One machine, 'my-quantum-espresso-instance', is highlighted with a blue border. It has a status of 'Running' shown with four green bars. Below the name, there are links for 'info', 'disks', and 'IPs'. The footer of the interface states 'Copyright (c) 2017 KENET' and 'Powered by Synnefo v0.18.1'.