

Research Virtual Machine

ReadMe

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Author: Toby O'Hara, eResearch
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This ReadMe is for researchers who have computing needs and want to learn what a virtual machine is at UWS and how to request and access a virtual machine.

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1 About virtual machines

This FAQ is not intended to provide full detail about what a virtual machine (VM) is, and how it works, sufficient to say, in this context a VM is a configurable server capable of performing any task a physical server performs. To read more about VMs, check the web, here:

http://en.wikipedia.org/wiki/Virtual_machine

For the purpose of this document it is important to understand that the virtual machine is provided processing speed and memory from a physical server. For example. If a physical server has 8 processors, it could be divided into 2 virtual servers each having 4 processors, or 3 machines with 2, 2, and 4 processors. Memory works the same way. The more processors and memory that a physical server or a virtual server has (or is allocated) the faster it can run software or programs without lagging or freezing up.

Storage is allocated to the virtual machine, to the level specified by the researcher, and can be allocated irrespective of the type of virtual machine. The amount of storage you need is entirely dependent on how much data and files you will be storing on the virtual machine.

1.1 Roles and responsibilities

You are responsible for expressing what you need your virtual machine to do. You're also responsible for your content and software which is added to the server.

UWS ITS will maintain the VM and ensure that all maintenance actions are performed to keep it running smoothly and securely. ITS will also notify you when maintenance is needed or if the machine will be unavailable. ITS is responsible for software which UWS provides to the researcher.

It is expected that when your research is concluded, the virtual machine will be returned to the University for reuse. Once your data is archived (with UWS or with an alternative archive space or service), and your research deliverables are finalised, you should make a copy of your files for yourself if needed, and let the service desk know that your virtual machine is ready to be recycled back into the general pool of resources.

Compliance with University policies, as in paragraph 4, below, is required.

1.2 Levels of use

ITS will allocate processing power and memory to the virtual server when it is created, based on what you need. The table below breaks this down by intensity levels to help you categorise what you might need.

Intensity level	Processors	Memory	Example
Low	Up to 4 cores	Up to 4 Gb	Software that can run on a typical Windows desktop
Medium	4 to 8 cores	4 to 32 Gb	Engineering researchers running small jobs on Abacus software
High	8 to 24 cores	32 to 256 Gb	Analysis of genomics data
High Performance	More than 24 cores	More than 256 Gb	Typically this is set up as a physical server, or access to supercomputing resources might be needed.

1.3 Operating System

Virtually any Operating System (OS) can be requested, however the standard ones are Windows 2008, RedHat Linux, CentOS, or Solaris. The OS is dependent on your needs and should be specified in the request.

1.4 Networking

By default the VM will be configured to be networked to the UWS network only. You will be able to log in to the VM from anywhere on UWS campus or through a virtual private network (VPN). Also by default, the VM is not accessible from the web.

The machine can be configured as needed, however, according to your stated needs as described in your request.

2 Access

To access this VM, one must have a UWS account, and then be added to the virtual machine as a user. In the initial request, all team members should have been identified. If team member changes are needed, the person with sufficient rights may make changes, or a request may be made to the service desk.

Only those who have a UWS account can log on to the server and make changes such as installing or removing programs. By default those with a UWS account can do everything that they need to do from on campus.

If the server is configured to be a web server, and programs are installed that work with the web, then user access is determined by the program that is running on the server. For example if an instance of WordPress is running, and is accessible from the web, then the WordPress admin can create a user within WordPress who is outside UWS.

3 Requesting a virtual machine

To request a virtual machine, please send an email to eresearch@uws.edu.au with the following details:

- What you plan to use it for, in layman's terms
- What software you plan to run with it
- How intensive a machine you would like
- How much storage you will need
- What other UWS researchers will need to access the virtual machine

For assistance with your virtual machine, please contact the Service Desk on Extension 5111
Phone (02) 9852 5111
Email itservicedesk@uws.edu.au

You may also wish to view relevant articles on the IT Services website:
http://www.uws.edu.au/information_technology_services/its/servicedesk

4 References

UWS Research Code of Practice

<http://policies.uws.edu.au/view.current.php?id=00166#p1>

Australian code for the Responsible Conduct of Research

<http://www.nhmrc.gov.au/guidelines/publications/r39>

UWS Policies

UWS IT Acceptable Use of Resources Policy

<http://policies.uws.edu.au/view.current.php?id=00124>

UWS Information Security Policy

<http://policies.uws.edu.au/view.current.php?id=00142>

UWS Web Policy

<http://policies.uws.edu.au/view.current.php?id=00116>

Records Management Policy

<http://policies.uws.edu.au/view.current.php?id=00128>

UWS Privacy Policy

<http://policies.uws.edu.au/view.current.php?id=00108>

Disclosure and Use of Student Personal Information Guidelines

<http://policies.uws.edu.au/view.current.php?id=00046>