

What is Server Virtualization?

Virtualization allows a single physical server to be partitioned into multiple "virtual" servers so that each one has the appearance and capabilities of a dedicated machine. Each virtual server can run its own operating system (Windows or Linux), is assigned its own hostname and IP address, and may be independently administered, configured, and rebooted without affecting the other virtual servers.

Why use a virtual hosting service?

As servers multiply, so do the costs associated with running them: the cost of the computers themselves, the racks to mount them, the power and cooling infrastructure to operate them, and the space to locate and secure them.

The Enterprise Infrastructure Solutions group is now offering a virtual machine hosting service based on VMware's industry-leading virtualization technology. This service is designed to help UofT faculties, departments and divisions conserve scarce resources by consolidating computing infrastructure into the University's central data centre. This allows departmental IT staff to concentrate on administering operating systems and 3rd party applications and services without needing to purchase, support and maintain the underlying hardware. Virtual servers can be provisioned in a fraction of the time it would take to specify, order and setup a standalone physical server.

Virtual Machines are particularly appropriate for hosting development or testing spaces, collaboration and online publication tools, web sites, print and mailing list servers, file sharing, and other applications, while more powerful physical servers are typically dedicated to resource-intensive applications or complex computing environments such as audio/video content streaming.

Pay only for what you need, when you need it.

All too often, you buy far more server than you actually need in order to meet peak loads at certain times of the year or to accommodate future expansion and growth. The rest of the time, the server may only be using a small fraction of its available capacity while still using the same amount of power. When you multiply that wasted capacity and energy consumption across multiple physical servers it adds up to a very inefficient use of resources and capital.

With virtual server hosting, you pay only for the capacity you need and you can add to that capacity incrementally when the need arises. Because multiple virtual machines can be running on a single server, it results in a more efficient use of a shared pool of physical resources. Nevertheless, we are able to guarantee the CPU, RAM and disk capacity that your server requires for those peak loads.

We are also able to rent you a VM server for short periods of time for research projects, testing new versions of software, etc, saving you from having to find a physical server to host your application.

Because VMware abstracts the hardware layer from the OS layer, you can set up identical production and testing instances, reducing potential errors or conflicts resulting from differences in hardware components between servers.

High Availability

Our virtualization environment is designed with high-availability and scalability in mind. Our server cluster will grow to meet demand and provides redundancy and high availability, allowing us to migrate your VM from one physical host to another without shutting it down. This reduces downtime due to hardware failure or scheduled maintenance. Similarly, our SAN (Storage Area Network) infrastructure provides resiliency against hard drive failures and can be scaled up as storage demands increase. Our SAN and virtual server infrastructure is mirrored to our remote disaster recovery site to protect against data loss and to facilitate restoration of service in the event of a catastrophic failure in the primary St. George Campus data centre. Disaster recovery site replication is included in the monthly hosting price.

Pricing *(New Pricing as of May 1, 2011!!)*

In order to make your initial selection process easier, virtual servers are currently being offered in 'Small', 'Medium' and 'Large' sizes. Additional resources are available to meet your specific needs and can be added incrementally to the base monthly price (see table below). There is a one time only setup fee of \$250 per virtual machine.

| Service Description | Specifications | Annual Price |
|---|---------------------------------------|---------------|
| Small VM | 1 vCPU, 1 GB RAM, 1 NIC, 50GB Storage | \$720.00 |
| Medium VM | 1 vCPU, 2GB RAM, 1 NIC, 150GB Storage | \$1,210.00 |
| Large VM | 2 vCPU, 4GB RAM, 2 NIC, 250GB Storage | \$2,300.00 |
| Additional Storage** (minimum 50GB block) | | \$2.40 per GB |
| Additional RAM (per GB) | | \$250.00 |
| Additional vCPU | | \$250.00 |
| Additional NIC | | \$100.00 |

Please note: Cost of operating system licensing & 3rd party applications not included in the price.

** The storage pricing above is based on shared RAID groups using 7200-RPM SATA technology. If disk performance is expected to be a bottleneck for your application, dedicated RAID groups and other high-performance storage options can be engineered to suit at an additional cost. Please contact us for details.

Free Trial Period

When you sign up for a 1-year hosting contract, you have 30 days to decide if you are satisfied with the service. At the end of the 30-day trial period, if you do not wish to continue having your VM hosted you may cancel your contract without penalty.

Further Reading on the Benefits of Virtualization

<http://tinyurl.com/3m5e7wv>

<http://tinyurl.com/3gmgloc>

<http://tinyurl.com/yjxzzevt>

Interested? Contact Us.

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Enterprise Infrastructure Solutions Group

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