

Notre Dame Center for Research Computing Virtual Machine Services Policy

Last Revised: 09/2015

This document defines the CRC's policy regarding the provision of virtual machine (VM) servers for faculty use in University research activities. The CRC will review this policy annually and make revisions as advised by the CRC Faculty Advisory Committee members. VM requests must be made by ND faculty members on the CRC VM request form. Ownership of each VM is mapped to a single PI for support of specific research objectives.

VM Hardware

- Baseline VM is **2 cores, 2GB RAM, and 25GB virtual hard disk (or "vdisk")**, with the justification of particular requirements, up to 4 cores, 8GB RAM, and 100GB vdisk may be requested at no cost; one VM per T&R faculty member.
- VM data is stored in network attached storage (per CRC Storage Policy)
- Faculty whose VMs require additional capability need to pay for the additional hardware.
 - Estimates for a physical host server (warranted 5 years) are \$2,500 to \$4,500.

VM Availability, Resiliency, and Redundancy

- VM host servers reside in the CRC data center
 - System uptime is subject to data center, ND network, and hardware uptime
- VMs are stored on network attached storage and backed up nightly to offsite tape
 - If the owner chooses to administer the VM he/she accepts the responsibility to verify that the backup client continues to run following any software upgrades made on the VM
- In the event of hardware failure, VMs migrate to host servers of equal capability

VM Configuration and Operation

- CRC provides initial setup and configuration of the VM **at no cost** if a request is estimated to take **no more than 2 hours** for a CRC staff member.
- Typical initial configurations include OS (Linux and Windows) with web development, web services, databases, and software development toolsets.
- After the initial VM configuration by CRC
 - **Faculty member assumes ALL responsibilities for operations and monitoring**
 - Faculty member is responsible for all system security and data handling as governed by ND's Responsible IT Use Policy and Information Security Policy (<http://policy.nd.edu>)
- It is **highly recommended** that faculty budget funds for CRC system administration and software engineering. Please identify specific requirements on the VM request form.
 - Example: System monitoring/patching/maintenance - (12 months×2hr×\$66) = \$1,584/yr
 - Example: Four weeks of web portal design - (4×40×\$66) = \$10,560