Virtualization Quick Start Guide

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Getting Started

To request a virtual server, complete the following procedures.

Step 1: Complete the New Customer Signup Request

Complete the New Customer Signup Request. You will receive an email notifying you that your signup request has been received. In addition, the following tasks will be completed for your group:

- An Active Directory (AD) group will be created in the M-Pathways domain to facilitate access to your virtual server(s) and to the infrastructure.
- MAIS will create a Citrix account with inclusion in the new AD group for you and other admins you submit.
- Depending on whether you choose to create a virtual network or extend your current network, U-M's Information Technology Communications Service (ITCom) will contact you to work with setting up your network and assisting you with any network-related issues.

Note: When you have completed the new customer sign up process, including Steps 2 – 5, you can then submit a request for a new virtual server (Step 6).

Step 2: Join the UMOD Group

To ensure that you are aware of all system maintenance issues and announcements, join the UMOD group VaaSNotify. For instructions on joining this group, go to the VaaS Notify website.

Step 3: Install Citrix Client

Click the link below based on your operating system (OS) and follow the instructions provided to install the Citrix Client. Once the access process is complete, you will have the appropriate permissions to log into Citrix and can choose the Virtual Center Client from the Start Menu.

- For Windows OS: http://www.mais.umich.edu/access/win_citrix.html
- For Mac OS: http://www.mais.umich.edu/access/mac_citrix.html

Step 4: Log into the Virtual Center Server

1. In the **VMware Infrastructure Client** login screen, enter **vcenter.dsc.umich.edu** in the **IP address / Name** field.

2. Enter your Citrix credentials in the **User name** and **Password** fields.

3. Click **Login**.
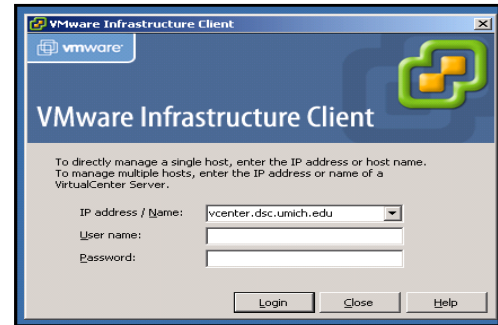
Step 5: Complete the Setup Process

Select **Virtual Machines and Templates** from the **Inventory** drop-down menu to view your Virtual Machines.
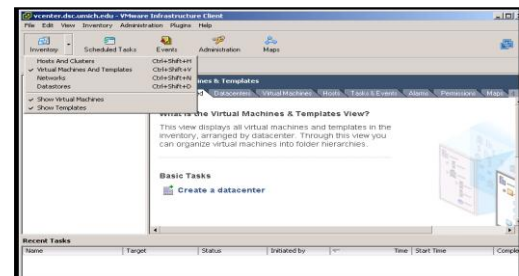
Step 6: Request a Virtual Server

Once you have received confirmation that your network is ready, submit a request for a new virtual server using the online New Virtual Server Request Form.

Step 7: Install Operating System

Once you have your virtual server, mount an ISO image file of the operating system (OS) you requested for the virtual server and install that OS.

For more information on booting to an ISO or editing BIOS settings, go to the Virtualization FAQs web page and scroll down to the FAQ titled: *How do I set BIOS options, boot order, or boot from an ISO image?*

Step 8: Install VM Tools on Your Virtual Server

Note: While the installation of VM Tools is optional, the advantage is that Workstation supports much faster graphics performance With VMware Tools installed on your guest OS and with the VMware Tools SVGA driver installed.

The tools in this package provide:

- synchronizing of time in the guest OS with time on the host
- automatic grabbing and releasing of the mouse cursor
- copying and pasting between guest and host
- improved mouse performance in some guest OSs

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Step 8: Install VM Tools *(continued)*

The installers for VMware Tools for Windows, Linux, FreeBSD, and NetWare guest operating systems are built into VMware as ISO image files. When you choose VM > Install VMware Tools from the VMware Workstation menu, VMware Workstation temporarily connects the VM's first virtual CD-ROM drive to the ISO image file that contains the VMware Tools installer for your guest operating system. You are then ready to begin the installation process.

To Install or upgrade your VM Tools, complete the following steps:

1. Right click on the VM and choose the option to install / upgrade.

2. In the **VMware Tools Properties** dialog box (windows Control panel), select the option **Time synchronization between the virtual machine and the ESX Server operating system**. Please see the VMware website for accessing / configuring these settings for other Oss.

3. Click **Upgrade** and then click **OK**.

    Note: The Host.NTP runs on all of the ESX hosts. To ensure that your VM will keep time, sync it with the host that it runs on. Disable Windows Time or for non-Windows hosts, disable any other time services running in the guest OS. To access these settings, open VMware Tools from the control panel.
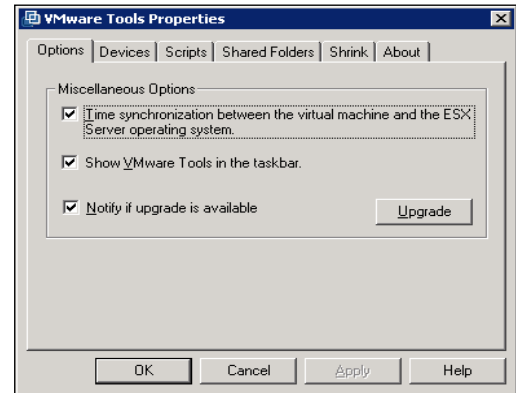
Step 9: Set Up File-Level Back Up and Recovery Using the Tivoli Storage Manager (TSM)

Note: MAIS provides this optional service for file level backup and recovery. This service uses IBM's Tivoli Backup System.

To get started using this feature, complete the following steps:

1. Download and install the TSM client from ftp://service.boulder.ibm.com/storage/tivoli-storage-management/maintenance/client/v5r5. Documentation can be found at http://publib.boulder.ibm.com/infocenter/tivihelp/v1r1/index.jsp.

2. Complete the TSM Request Form.

3. Complete this step based on your operating system type:

    Note: <HOSTNAME> and <PASSWORD> = the name of the Virtual Server as Displayed in Virtual Center.

    For WINDOWS

    *   Click the following link for install guide.
        http://publib.boulder.ibm.com/infocenter/tivihelp/v1r1/topic/com.ibm.itsmfdt.doc/ans60000.pdf

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Step 9: For Windows *(continued)*

- Click the following link <u>dsm.opt</u> and then click the dsm.opt file under **Windows**. Select Save and then save this file to C:\Program Files\Tivoli\TSM\baclient. Insert the VM name of your host where it says <hostname> (The same name you supplied to MAIS in your request).

- The dsm.opt file controls all customizable aspects for TSM. All client side settings for TSM can be altered and stored in this file. For Windows, the file should be kept in the baclient folder within the TSM directory in Program Files.

- From a DOS Command Prompt run the following command (you will need the password supplied by MAIS): dsmcutil install /name:"TSM Central Scheduler Service" /node:<HOSTNAME> /password:<PASSWORD > /autostart:yes.

- You can log into the fat client to confirm that you are able to connect to the Backup server. You can do a test backup from the client as well.

- View C:\Program Files\Tivoli\TSM\baclient\dsmsched.log to verify if the daily backup is successful.

For LINUX

- Click the following link for install guide.
  http://publib.boulder.ibm.com/infocenter/tivihelp/v1r1/topic/com.ibm.itsmfdt.doc/ans50000.pdf
  Follow the instruction on" *Installing the Linux x86/x86_64 Client"* in chapter 1.

- Click the following file links and then click the dsm.opt and dsm.sys text file links under **Linux** and save these files to the correct directory:

    o <u>dsm.opt</u>

    o <u>dsm.sys</u>

- The TSM path for dsm.opt and dsm.sys is /opt/tivoli/tsm/client/ba/bin/.

- The schedule process is /opt/tivoli/tsm/client/ba/bin/dsmcad.

- Create a directory "/usr/local/logs/" for the TSM logs.

- If you have include exclude lists, create a file name /usr/local/tsm_client/tsm.incl_excl.system.

- Initiate the TSM client by typing in TSM command "dsmc".

- When asked for the ID, press ENTER.

- When asked for the password, enter the PASSWORD

- When you see the TSM prompt, you are in:

  IBM Tivoli Storage Manager
  Command Line Backup/Archive Client Interface
  Client Version 5, Release 4, Level 2.0
  Client date/time: 10/03/2008 14:33:46
  ©Copyright by IBM Corporation and other(s) 1990, 2008. All Rights Reserved.

Step 9: For Linux *(continued)*

    Node Name: HOSTNAME
    Session established with server TSM-ELAENIA: AIX-RS/6000
    Server Version 5, Release 4, Level 3.0
    Server date/time: 10/03/2008 14:33:46 Last access: 10/03/2008 13:45:35

- Test the backup type: backup "/usr/local/logs/*".

- Exit out of TSM type: quit

- The command line for testing the backup is "dsmc backup /usr/local/logs/*".

- If everything looks okay, begin the daily schedule process by entering /opt/Tivoli/tsm/client/ba/bin/dsmcad.

- View /usr/local/logs/ dsmwebcl.log to verify the process dsmcad.

- Wait one minute and then view /usr/local/logs/tsm.sched.log to verify the schedule.

- The MAIS TSM server will back up the file for Client node based on the schedule requested.

- View /usr/local/log/ tsm.sched.log to verify daily backup to see if it is successful.

Additional Resources

- To access the vendor website, go to vmware.com**.**

- For VMware Time Sync and Windows Time Service, go to http://kb.vmware.com/selfservice/documentLink.do?externalID=1318.

- For Timekeeping in VMware Virtual Machines, go to http://www.vmware.com/pdf/vmware_timekeeping.pdf.