VMware Server Module

Introduction

This module has been created to enable Avalanche to create and control virtual machines on target hosts.

Requirements

This module required VMware server (tested with version 1.0.4 build-56528) to be installed and configured on the machine it will be deployed on.

Architecture of the VMware module

TODO: Add class diagram

The VMware module consists of three important parts.

First of all the core: The VMWareVixLibrary class, which is the interface used to wrap the native library of the VMware VIX API into Java code using JNA (Java Native Access API). The wrapper class will be accessed directly only by the VMWareCommunicator class.

The VMWareServerManager exposes the remote interface of the VMware module. It controls the VMware server and the virtual machines using the communicator class.

The third part is the VMWareMessageListener, which is a component of its own which listens for XMPP messages and converts them into call to the VMWareServerManager. The listener is the communication interface to Avalanche but allows the VMware module itself to run independently.

Components of a virtual machine

Each virtual machine is stored in a separated folder. This is done for convenience reasons.

You can find the list of files which make up a virtual machine here:
http://www.vmware.com/support/ws5/doc/ws_learning_files_in_a_vm.html

Creating a new virtual machine

To be able to create a new virtual machine you first have to create a “master” VM. Currently you have to store the master VM into the folder %SFHOME%/vmmasterimages/, but it is planned to implement a mechanism that can get the master images from repository servers.

After successfully igniting a VM, click on the [Virtual Machines] link, which will appear in the “Manage” column, to enter the VM control page. There click on “Create a virtual machine”. On the following page select one of the master images out of the combo box and enter a name for the new machine. Then press “Create VM”.

You will then be redirected to VM control page again. The VMware module of the target host will then start to create a copy of the master image and store it in an appropriate folder in %SFHOME%/vmcopyimages/ . The newly created copy will automatically be renamed to the name you entered.

Please note: Copying the large virtual disks may take some time, so do not worry if you don’t get an answer immediately. The new VM will appear in the list as soon as the creation process has completed.

Starting, Stopping, Suspending a virtual machine

Just mark the virtual machines you want to start/stop/suspend on the VM control page and click on the appropriate button. You should receive an answer immediately.

Renaming a virtual machine

Though there is not yet an option on the Avalanche website to rename a virtual machine the VMware module already supports this operation. Renaming a VM includes:

- Renaming the .vmx file
- Renaming the folder of the virtual machine
- Renaming the displayName of the virtual machine

Deleting a virtual machine

Deleting a virtual machine will remove all of its files – including its containing folder - from the disk of the target machine. If the VM is still running it will be stopped first.