Virtual Machine

Installation Instructions
For the DownStream License Manager

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1.   Introduction

DownStream Technologies supports Virtual Machine licensing using the FLEXlm tools from Flexera Software.   DownStream licenses network licensing servers using unique host ID's and special license daemons for virtual machines. Current support for virtual machine suppliers include: **VMware** and **Microsoft**. The Virtual Machine host support includes the following platforms: **VMware ESX, VMware ESXi** and **Microsoft HyperV**.   This document describes how to install DownStream network License Managers on virtual machines.   The supported HostID types for virtual machines are Virtual Machine UUID (Universally Unique Identifier) and USB dongle Over IP (internet protocol). DownStream License Managers supports virtual machines running Windows® OS and Red Hat® LINUX® OS.

2.   HostID Support for Virtual Machine UUID

DownStream Technologies supports unique host ID's for Virtual Machine licensing using the so-called **UUID** (Universally Unique Identifier) for an individual Virtual Machine.   The **UUID** host ID is the primary supported type of host ID for Virtual Licensing at DownStream**.**   If you already have sent your VM license file from DownStream, unzip the **DownStreamLM_VM.exe** file and run to install.   Go to section 5 below for Trouble Shooting the license manager setup.

For the UUID host ID type, if you have not already done so, you need to get the UUID host ID, using the **LMHOSTID** utility supplied by DownStream for the Virtual Machine where the DownStream License Manager will run.   After running LMHOSTID, send the UUID to DownStream and request a license file for Virtual Licensing support.   DownStream will provide you with the required license file and the specific DownStream License Manager Installation executable for Virtual Machines **(DownStreamLM_VM.exe)**. (See Section 5.3 below).

For virtual machines from suppliers VMWare and Microsoft, the utility program **lmhostid.exe** for Windows OS (or **lmhostid** for LINUX) can be used to determine the UUID for your virtual machine.   See **Section 3** which describes obtaining the UUID host ID for your virtual machine.   If the UUID is not supported for your virtual machine supplier, you must use the USB Dongle Over IP virtual licensing.   See Section 4.

3.   Getting the UUID Host ID: DownStream License Manager - VM

Download the LMHOSTID.EXE executable using the link below to obtain the UUID for your Virtual Machine.   DownStream currently supports the virtual machine suppliers, VMWare and Microsoft.   For DownStream License Manager installation, DownStream supports installation on virtual machines running Windows OS and Red Hat® LINUX® OS.

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LMHOSTID EXE Download (Windows OS)
http://www.downstreamtech.com/customer-ftp/lmhostid.zip

LMUTIL Download (Red Hat LINUX OS)
http://www.downstreamtech.com/customer-ftp/lmutil_lsb.zip

Unzip the downloaded file.   Run LMHOSTID.EXE in a Command Prompt window with the following arguments.

For VMWare Virtual Machine supplier and Windows OS, type the following.

    lmhostid –ptype VMW –uuid

For VMWare Virtual Machine supplier and LINUX OS, type the following.

    lmutil lmhostid –ptype VMW –uuid

For Microsoft (HyperV) Virtual Machine supplier, type the following.

    lmhostid –ptype HPV –uuid

Send the UUID output to DownStream and request for virtual machine license file processing.

4. **HostID Support for Virtual Machines Using USB Dongle Over IP**

DownStream Technologies also supports unique host ID's for Virtual Machine licensing using: **USB Dongle over IP (Internet Protocol)**.   **USB dongle is t**he secondary supported type of host ID at DownStream for Virtual Machine licensing. For the USB Dongle Over IP host ID type, you will either (1) need to purchase network USB hardware, such as AnywhereUSB® or (2) be able to access a USB device on the VM Host machine passing through the Virtual Machine where the DownStream License Manager is running.   Request a USB dongle from DownStream and request Virtual Licensing support.   DownStream will provide you with the required dongle and the specific DownStream License Manager Installation executable for Virtual Machines (**DownStreamLM_VM.exe)**. (See Section 5.3 below)   The Sentinel System Driver from SafeNet, Inc. is installed with the DownStream License Manager on the Virtual Machine.

NOTE: If you use a USB dongle for licensing, you must use a VM client program, such as vSphere Client, when you manage the DownStream License Manager with a USB dongle.   You should not use Remote Desktop Connection. If you use a remote console program, such as Remote Desktop Connection to manage the DownStream License Manager, then the USB key will not be recognized and the DownStream License Manager will not start.

4.1. **USB Dongle - DownStream License Manager Installation**

Two steps are required to install the DownStream License Manager for Virtual Licensing using the USB dongle host ID: (1) purchase and set up of the USB device over IP (Internet Protocol) and (2) installation of the DownStream License Manager on the target virtual machine.

Purchase the USB network device, such as AnywhereUSB(™).   Install the hardware on your LAN (local area network).   On the virtual machine on which the DownStream License Manager will run, install the USB network device drivers that are delivered with the USB network hardware.   Plug the DownStream USB dongle into the purchased USB network device.

You must obtain a special DownStream License Manager installation executable from DownStream support (See Section 5.3 below). The executable (**DownStreamLM_VM.exe)** is required for installing a DownStream License Manager on a virtual machine.   To install the license manager, you need to obtain the appropriate license from DownStream Technologies. Copy the license file and the installation executable (**DownStreamLM_VM.exe)** to the target virtual machine. Run the installation executable.   When asked for the license

file, browse to the license file that you have obtained from DownStream Technologies.

On the virtual machine, install the DownStream License Manager. Browse to the license file that was emailed to you from DownStream Technologies for the virtual machine.   The Sentinel System Driver version 7.5.8 will be installed to access the DownStream USB dongle on the USB network device.

On client machines for DownStream product installations, you can use either the server license file or the environment variable "port@host" to reference the DownStream License Manager.

NOTE: If the Sentinel USB dongle host ID is not detected. Go to the folder:

> C:\DownStreamTech\LicenseManager\hardlock

Run the installation program to update the Sentinel System driver.

> Sentinel System Driver Installer 7.5.8.exe

5.   Trouble Shooting License Manager - VM: Manual Setup

NOTE: Use the following instructions if you are unsuccessful in the DownStream License Manager.

The recommended setup for the DownStream License Manager on a virtual server is done in 3 steps.

First install the Microsoft Visual C++ 2012 redistributable, setup the key (if applicable), and finally install the license manager.

DO NOT use Microsoft Remote Desktop Connection when setting up your license service and testing.

5.1.   Install the latest Microsoft Visual C++ 2012 Redistributable.

http://www.microsoft.com/en-us/download/details.aspx?id=30679

Download **vcredist_x86.exe**.   Install it then reboot.

5.2.   Key setup.   (Only if you are using USB Dongle Over IP)

First, using a USB drive or some other USB device, make sure your Virtual machine can see your USB port.   Once you are sure the Virtual machine can see the port, install the key driver onto the virtual machine.

Key Driver
http://www.downstreamtech.com/customer-ftp/ssd758.exe

After installing the key driver, you can use testkey758.exe to make sure the virtual machine can read the key. Plug in the key and run testkey758.

testkey758
http://www.downstreamtech.com/customer-ftp/testkey758.exe

5.3. Install the Virtual Licensing software.

The VMLM setup will install flexlm software, create a license service and start the license service on the virtual server. Contact support@downstreamtech.com if a manual setup of VMLM is required.

Virtual license manager software (Windows OS)
http://www.downstreamtech.com/customer-ftp/VMLM.zip

It is recommended that you use all the default settings. The VMLM setup will install the latest Microsoft Visual C++ 2012 Redistributable if it is not already installed on your virtual server.

You may want to run LMTOOLS.EXE and check server status before moving onto client setup. If the license service is not running, client setup will fail.

NOTE: On **Red Hat LINUX**, use the DownStream License Manager binaries in the following download.

http://www.downstreamtech.com/customer-ftp/lsb_rel6_vm.zip

5.4. Install the client setup

Install the licensed product (Cam350 and/or Blueprint). Do not install license file. When you get to the licensing screen during installation select
"Set ACT_INC_LICENSE_FILE Environment Variable."
This is the first option. Do not select Install license file or browse to find license.

On the next screen you will be setting the ACT_INC_LICENSE_FILE variable.
You will want to use the format:
7102@<ServerName>

So if you server is named Tophat then use
7102@Tophat