Onboarding Linux Systems

The OMS Agent for Linux is the easiest way to collect Syslog events, Performance metrics, Container data, as well as Nagios and Zabbix alerts. The agent is a light, open and modular agent built on proven open source components. The core of the agent uses an existing open source data aggregator called FluentD. FluentD has hundreds of existing plugins, which will make it easy for you to add new data sources. In fact, for the collection of performance counters, Microsoft wrote a plugin for the OMI provider used for System Center today.

Supported Systems

The following are the Linux distributions supported by OMS.

Distribution	Supported Versions
Amazon Linux	• 2012.09 – 2015.09
CentOS	• 5 (x86/x64) • 6 (x86/x64) • 7 (x86/x64)
Debian GNU/Linux	• 6 (x86/x64) • 7 (x86/x64) • 8 (x86/x64)
Oracle Linux	• 5 (x86/x64) • 6 (x86/x64) • 7 (x86/x64)
Red Hat Enterprise Linux	• 5 (x86/x64) • 6 (x86/x64) • 7 (x86/x64)
Suse Linux Enterprise Server	• 11 (x86/x64) • 12 (x86/x64)
Ubuntu Serer	• 12.04 LTS (x86/x64) • 14.04 LTS (x86/x64) • 15.04 LTS (x86/x64) • 15.10 LTS (x86/x64) • 16.04 LTS (x86/x64)

TABLE 1. LINUX DISTRIBUTIONS SUPPORTED BY OMS

After installing the OMS agent for Linux packages, the following additional system-wide configuration changes are applied. These artifacts are removed when the omsagent package is uninstalled.

1. **New user**. A non-privileged user named **omsagent** is created. This is the identity under which the omsagent daemon runs.

2. **Sudo configuration**. A sudoers "include" file is created at /etc/sudoers.d/omsagent This authorizes omsagent to restart the syslog and omsagent daemons. If sudo "include" directives are not supported in the installed version of sudo, these entries will be written to /etc/sudoers.

3. **Syslog configuration**. The syslog configuration is modified to forward a subset of events to the agent.

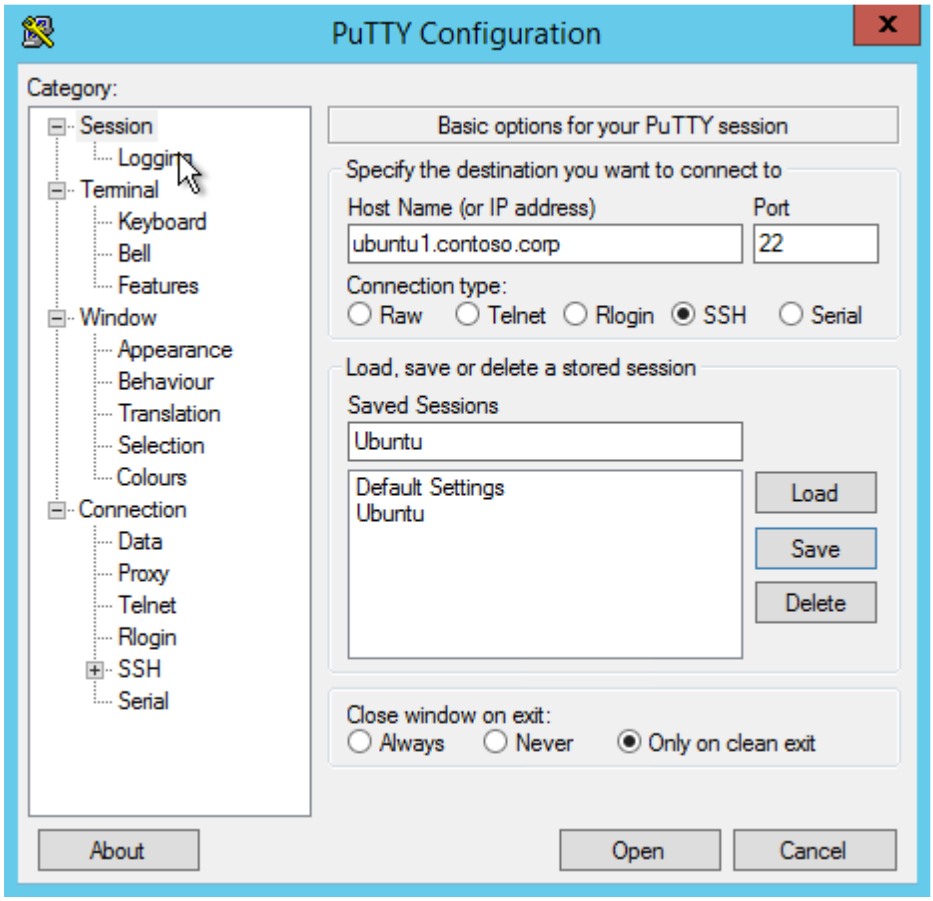
Tools for Linux Management

If you are not a full time Linux administrator, simply knowing which client-side tools you should use from your Windows administrator workstation to connect to Linux systems to complete the necessary tasks can be a big help. Therefore, we will quickly cover a few of our favorite tools to ensure you have sufficient guidance as you configure Linux systems to forward data to OMS.

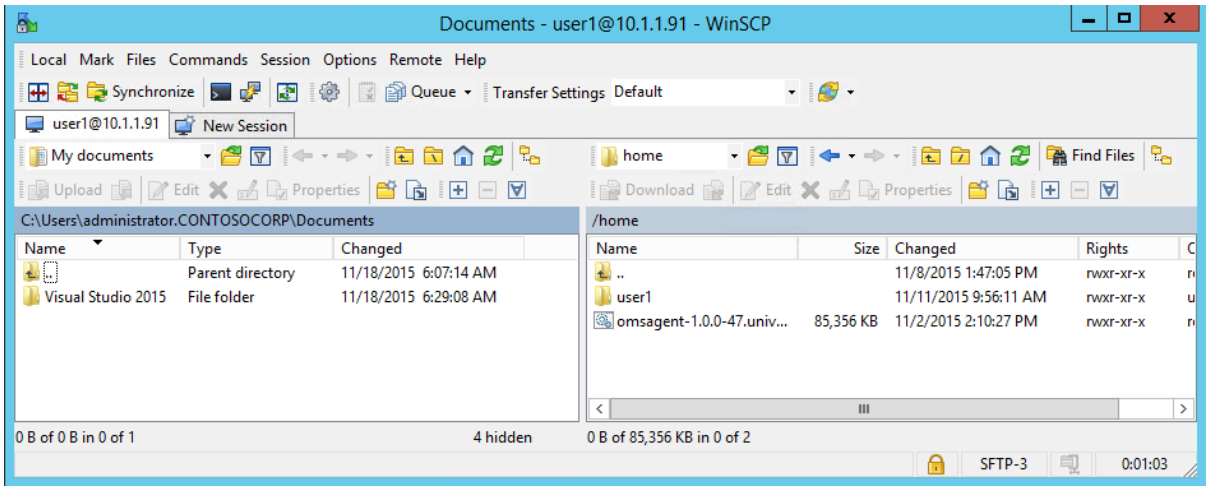
Below are descriptions of a few tools and the tasks for which they will be helpful to you.

Connecting to a server via Secure Shell (SSH) session. SSH is the Linux command line equivalent of Remote Desktop. For SSH connections, the free and open source tool **Putty** is a great fit. Putty enables you to make SSH connections to any system that supports telnet or SSH.

Putty, also allows you to save those sessions for one-click connection later, much like Microsoft's RDP Connection Manager for Windows remote desktop sessions. Session configuration details are pictured in Figure



You can read more and download Putty free at http://www.putty.org/
Copying Files to Linux Systems. For systems without Internet access, downloading the Linux agent directly will not be possible. In these situations, you will need to copy the Linux agent to the target system via the secure copy protocol (SCP) or secure file transfer (sftp) procotol. The perfect open source (and free) tool for this task is WinSCP.
WinSCP provides a GUI experience for copying files from your Windows desktop or server operating system to a target Linux system, as pictured in Figure



WINSCP SESSIONS SCREEN

You can download WinSCP at https://winscp.net/eng/download.php

Editing files. You will need to edit a least one configuration file in the process of configuring the Linux agent. You could actually browse to that file using WinSCP, or you could use the Vi editor, a Linux command line editor. You can find a Vi command reference at http://www.ks.uiuc.edu/Training/Tutorials/Reference/virefcard.pdf.

Requirements

The following are the requirements for the Linux agent for all supported Linux distributions. These prerequisites should be in place prior to installing the agent

Required package	Description	Minimum version
Glibc	GNU C library	2.5-12
Openssl	OpenSSL Libraries	0.9.8b or 1.0
Curl	cURL web client	7.15.5
Python-ctypes		
PAM	Pluggable authentication modules	

TABLE 2. OMS DATA TYPES AND FIELD

Note: Either rsyslog or syslog-ng are required to collect syslog messages. The default syslog daemon on version 5 of Red Hat Enterprise Linux, CentOS, and Oracle Linux version (sysklog) is not supported for syslog event collection. To collect syslog data from this version of these distributions, the rsyslog daemon should be installed and configured to replace sysklog. Step-by-step instructions are available at https://access.redhat.com/solutions/54363.

Installation Files

The OMS agent for Linux includes multiple packages. However, if you want to see these packages, you have to extract the bundle. To extract these, run the shell bundle with the `--extract` parameter.

Package	Version	Description
omsagent	1.0.0	The Operations Management Suite Agent for Linux
omsconfig	1.1.0	Configuration agent for the OMS Agent
omi	1.0.8.3	Open Management Infrastructure (OMI) - a lightweight CIM Server
scx	1.6.2	OMI CIM Providers for operating system performance metrics
apache-cimprov	1.0.0	Apache HTTP Server performance monitoring provider for OMI. Only installed if Apache HTTP Server is detected.
mysql-cimprov	1.0.0	MySQL Server performance monitoring provider for OMI. Only installed if MySQL/MariaDB server is detected.
docker-cimprov	0.1.0	Docker provider for OMI. Only installed if Docker is detected.

COMPONENTS IN THE LINUX AGENT SHELL BUNDLE

Installation Steps

To install the Linux agent, perform the following steps:

1. Transfer the appropriate bundle (x86 or x64) to your Linux computer, using SCP, SFTP or wget.
2. Install the bundle by using the `--install` or `--upgrade` argument.

Note: Use the `--upgrade` argument if any existing packages are installed, as would be the case if the system Center Operations Manager agent for Linux were already installed. To onboard to Operations Management Suite during installation, provide the `-w <WorkspaceID>` and `-s <Shared Key>` parameters.

If you want to download the agent directly using wget, run the following command (actually a single line):

wget https://github.com/MSFTOSSMgmt/OMS-Agent-for-Linux/releases/download/1.4.0-12/omsagent-1.4.0-12.universal.x64.sh

To install the agent, run the following command, replacing the placeholders with your OMS workspace ID and shared key (also a single line).

sudo sh ./omsagent-1.4.0-12.universal.x64.sh --install –w <workspaceid> -s <shared key>

Multi-homing the Linux agent. You can also multi-home the OMS version of the Linux agent to SCOM. Since you cannot onboard Linux agents via SCOM, you must use the OMS version of the OMI agent if you also want your Linux servers to be monitored by SCOM.

Installing Agent and Onboarding Later

You do not have to configure the agent right away. You can actually install the agent without configuring it completely, using the commands below.

sudo sh ./omsagent-1.4.0-12.universal.x64.sh –install

Run the omsadmin.sh command supplying the workspace id and key for your workspace. This command must be run as root (with sudo elevation) or run as the created omsagent user:

cd /opt/microsoft/omsagent/bin
sudo ./omsadmin.sh -w <WorkspaceID> -s <Shared Key>

You can use this together with the 'onboarding use a file' method (described in the section 'Onboarding Using a File'), to perform configuration when the time is right.

Onboarding Using a File
As mentioned above, onboarding with a file enables you to onboard an agent that has been pre-installed, but not configured.

Create the file `/etc/omsagent-onboard.conf`, using the following command syntax. The file must be writable for the user omsagent.

sudo su omsagent vi /etc/omsagent-onboard.conf

Insert the following lines in the file with your Workspace ID and Shared

Key: WORKSPACE_ID=<WorkspaceID> SHARED_KEY=<Shared Key>

Restart the omsagent using the following command syntax.

sudo service omsagent restart

The agent will process the file and startup. The file will be deleted on successful onboarding.

Proxy Settings on Linux Agents
Communication between the agent and OMS services can use an HTTP or HTTPS proxy server. Both anonymous and basic authentication (username/password) proxies are supported.
The proxy server can be specified during installation or directly in a file (at any point).

If specifying the proxy at agent install
When you run the /omsagent.. shell script, you will pass proxy info using `-p http://<proxy user>:<proxy password>@<proxy address>:<proxy port>.`

If specifying in a file
The proxy configuration is set in these files: `/etc/opt/microsoft/omsagent/proxy.conf` and `/etc/opt/microsoft/omsagent/conf/proxy.conf`. These files can be directly created or edited but must be readable by the omsagent user. Both files must be updated should the proxy configuration change.

Detailed instructions for configuring proxy settings for the OMS Linux agent are available in "Configure the agent for use with an HTTP proxy server" at https://github.com/Microsoft/OMS-Agent-for-Linux/blob/master/docs/OMS-Agent-for-Linux.md#configuring-the-agent-for-use-with-an-http-proxy-server.

Multi-homing the Linux Agent with SCOM and OMS
If you discover a Linux computer with SCOM and then upgrade to the OMS agent, nothing further is required. However, if you install the OMS agent and then want to discover it with SCOM, you need to enable the agent to listen on TCP port 1270.

To enable the OMS Agent for Linux to communicate with SCOM, perform the following steps:

- Edit the file **/etc/opt/omi/conf/omiserver.conf**

- Ensure that the line beginning with **httpsport=** defines the port (1270 by default). For example, httpsport=1270

- Restart the OMI server using the following command

sudo /opt/omi/bin/service_control restart

Removing Previous Versions
If you installed an earlier version of the agent, such as that offered during the public preview. The syntax for uninstalling the agent varies by distribution

CentOS Linux, Oracle Linux, RHEL, SLES

sudo rpm -e omsagent scx omi
sudo rm -f /etc/opt/microsoft/omsagent/conf/omsagent.conf

Debian, Ubuntu

dpkg -P omsagent scx omi
sudo rm -f /etc/opt/microsoft/omsagent/conf/omsagent.conf

For any assistance you can write me to gouravrathore23@gmail.com
Or can reach me on below channels.

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