Linux + SCOM + OMS = ❤

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30 SAC (30 Seconds Audience Check)

- Who is using SCOM & Unix/Linux monitoring?
- Who is using OMS & Unix/Linux agent?
- Who is using OMS in production?
- Who does not know either SCOM or OMS?
  - This is a level 300 session
  - Slide / Demo ratio 2.83 : 1
- Who is already bored ☺?

Blogger
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Co-Author

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Microsoft® MVP
Most Valuable Professional

Twitter
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Blogger
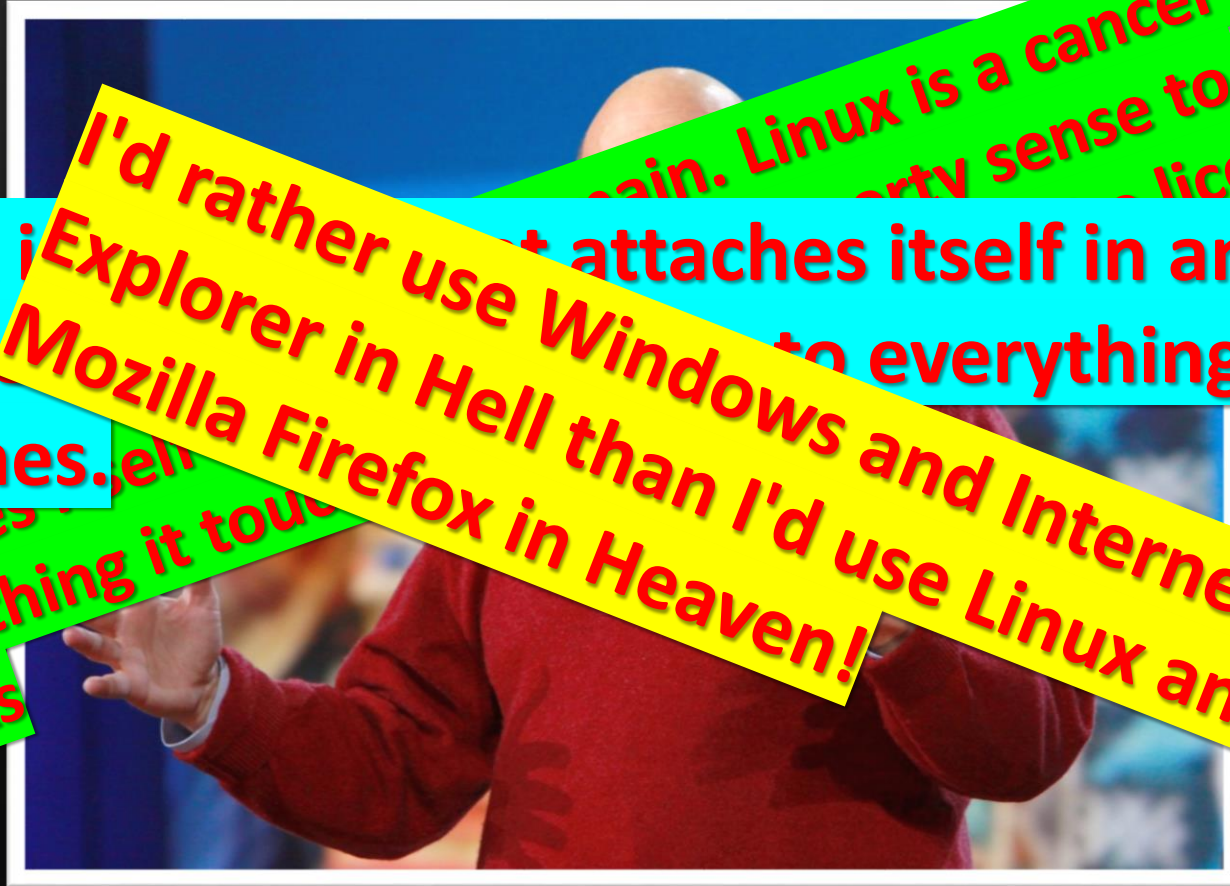https://blog.jhnr.ch

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Agenda

- SCOM X-Plat Overview
- SCOM 2016 What's New
- OMS X-Plat Overview
- Demo, Demo, Demo

Once upon a Time…

Linux is a cancer that attaches itself in an intellectual property sense to everything it touches. Linux is a cancer that attaches itself... everything it touches... works...

Linux is a cancer that attaches itself in an intellectual property sense to everything it touches. Linux license

I'd rather use Windows and Internet Explorer in Hell than I'd use Linux and Mozilla Firefox in Heaven!

A Miracle Happened…

Linux in System Center: increasing momentum

2008 → 2009 → 2010 → 2011 → 2012 → 2013 → 2014 → 2015

Linux/UNIX In OpsMgr

JEE in OpsMgr

Linux/UNIX in ConfigMgr

Linux Endpoint Protection in ConfigMgr

Linux in VMM

Linux in DPM

Apache and MySQL in OpsMgr

Initial development
Shipping
Preview

Preview
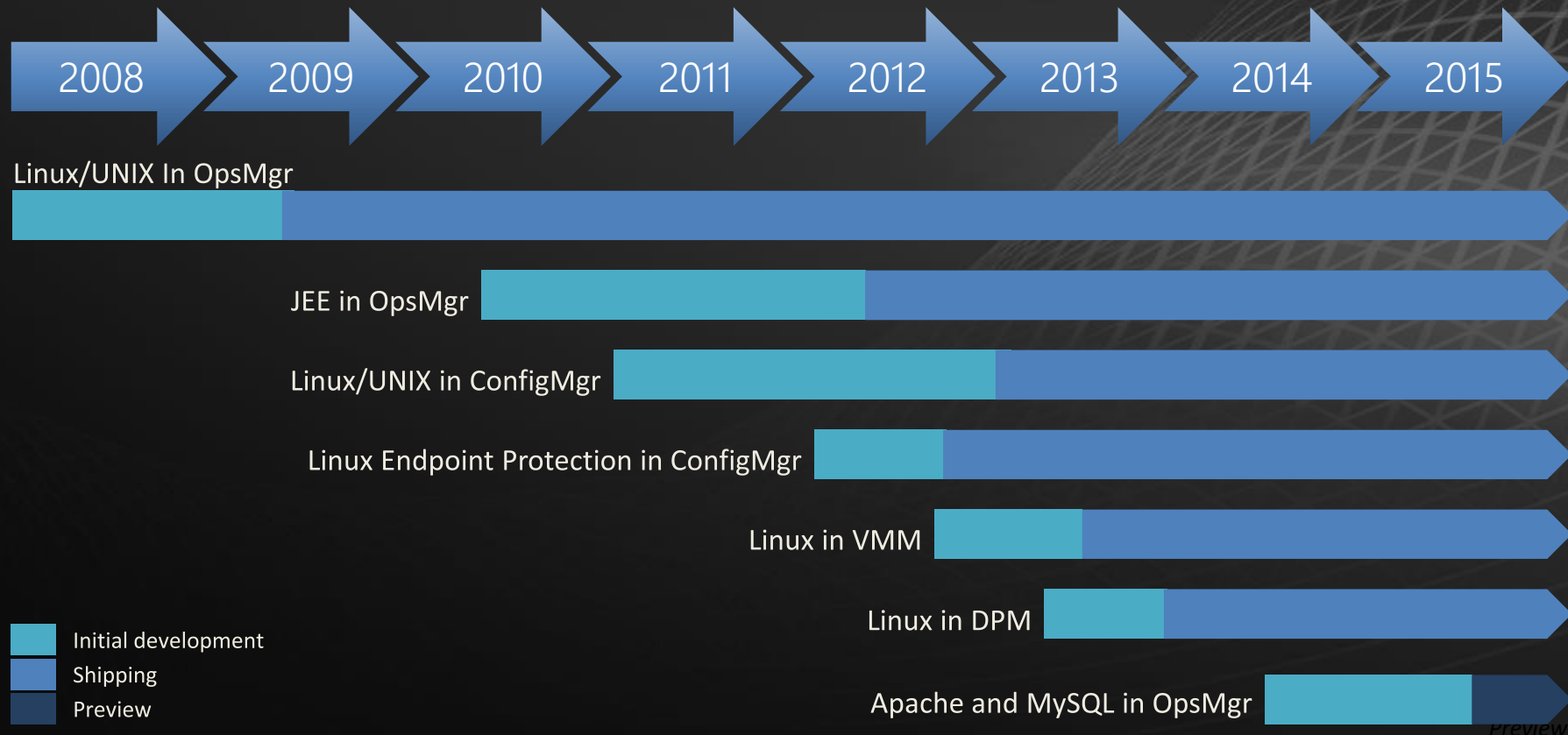
Architectural Overview
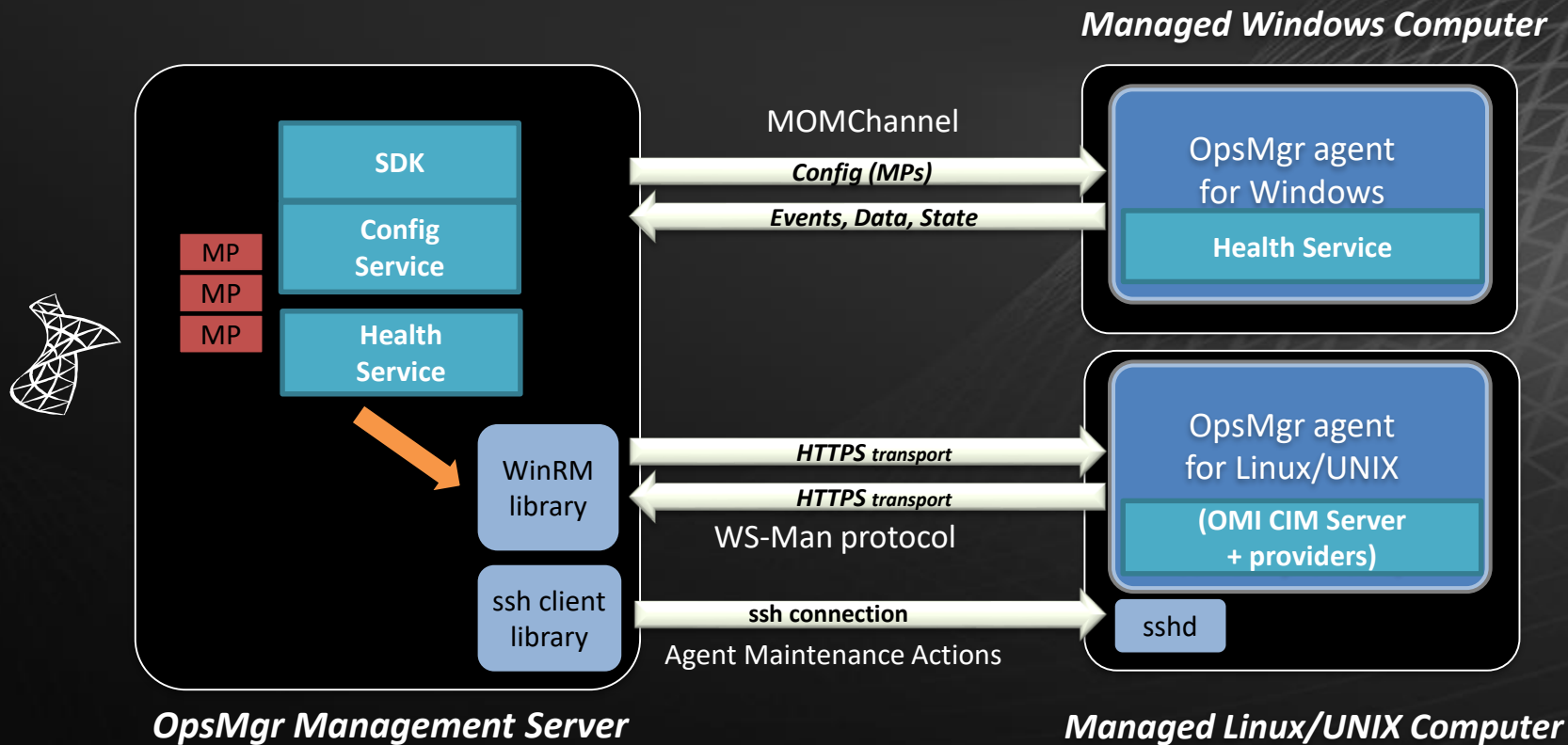
Built-In Monitoring

Custom LogFile Monitoring
- **Monitor any logfile**
- **Specify regular expression to match against**
- **Target computer or group**

Process Monitoring
- **Monitor by name any service, daemon or process**
- **Distinguish duplicate names with regex filter on process arguments**
- **Specify minimum and maximum counts**
- **Target computer or group**

Command line rules and monitors
- **Run any shell command line to determine health or performance**
- **Target computer or group**

JEE AppServer

Basic
- Application server instances
- Basic discovery of apps, ports etc.

Deep (Bean Spy)
- Applications deployed in the application server.
- Garbage collections per second.
- Time spent in garbage collection.
- JVM memory usage and capacity.
- Number of class loaded in the JVM.
- Number of active threads.
- **More using MBeans (JMX)**

ORACLE WEBLOGIC   IBM WebSphere.   JBoss

Health and performance monitoring in Microsoft's Linux/UNIX management packs

CPU	Memory	Disk	Network	Processes	Logfiles

redhat. LINUX   SUSE   debian   ubuntu   CentOS   ORACLE LINUX   AIX   hp UX   ORACLE SOLARIS

Apache Monitoring Architecture

Demo
Apache Monitoring

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MySQL Monitoring Architecture

MySQL Server

OpsMgr Linux Agent

Authentication
File defines credentials

MySQL Client

OMI Server (CIM Server)

MySQL_Server*

SCX_OperatingSystem

SCX_FileSystem

SCX_UnixProcess

Providers
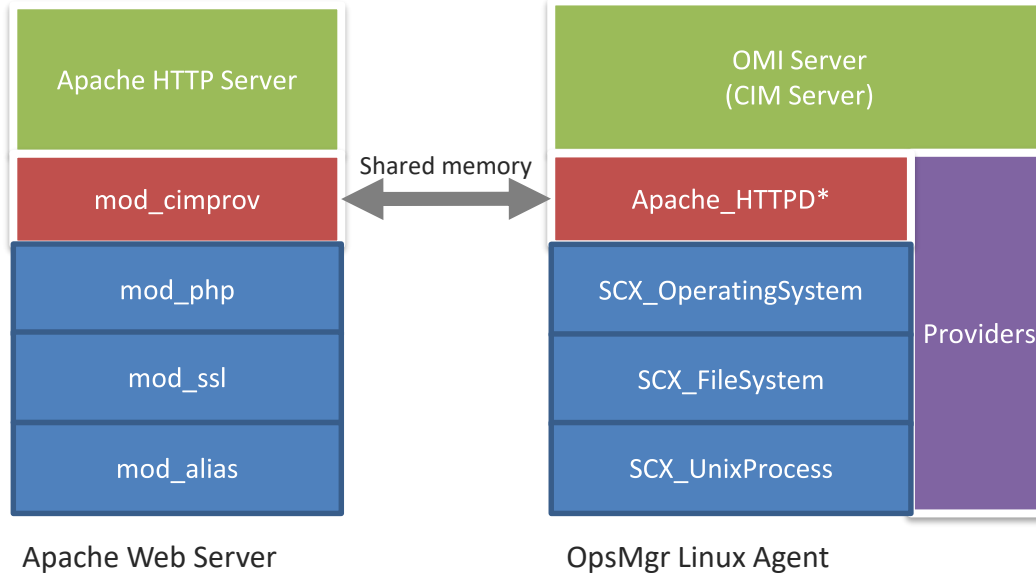
WS-Man
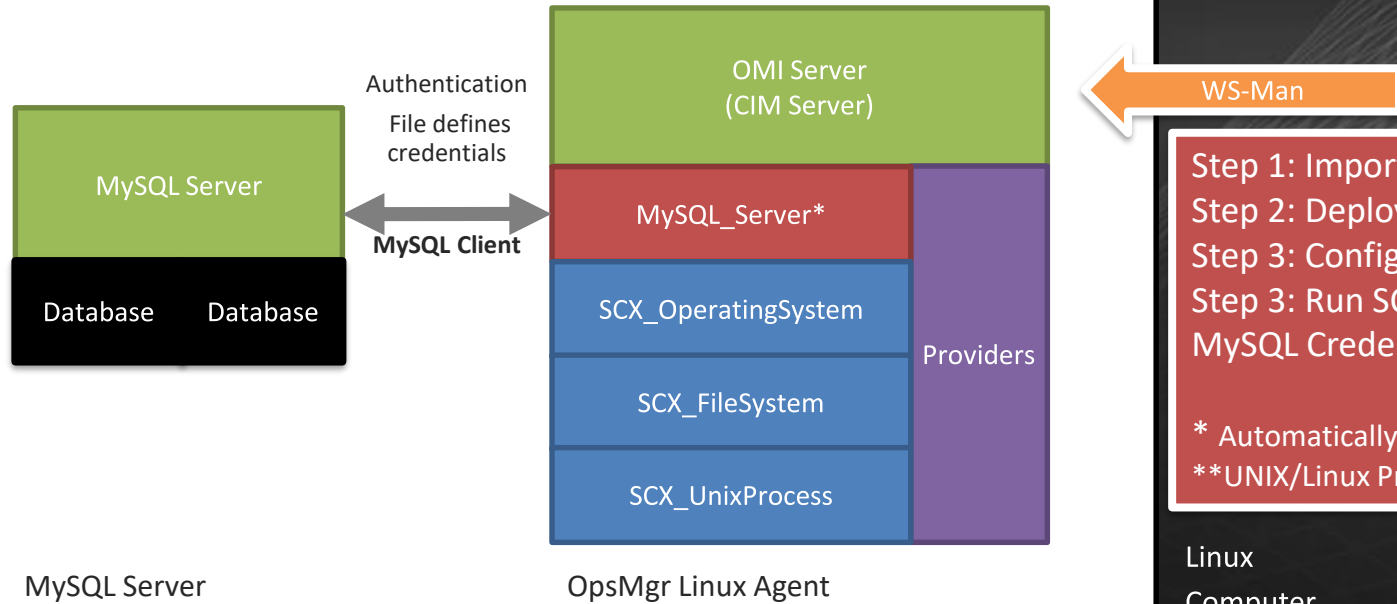
Step 1: Import MP
Step 2: Deploy SCOM agent*
Step 3: Configure MySQL user
Step 3: Run SCOM task "Set Default MySQL Credentials"**

* Automatically deploys OMI module
**UNIX/Linux Privileged Account Run As Profile

Linux
Computer

OMS
Agent for Linux

Big Picture

Sources:
https://azure.microsoft.com/en-us/documentation/articles/log-analytics-overview/
https://azure.microsoft.com/en-us/documentation/articles/log-analytics-security/
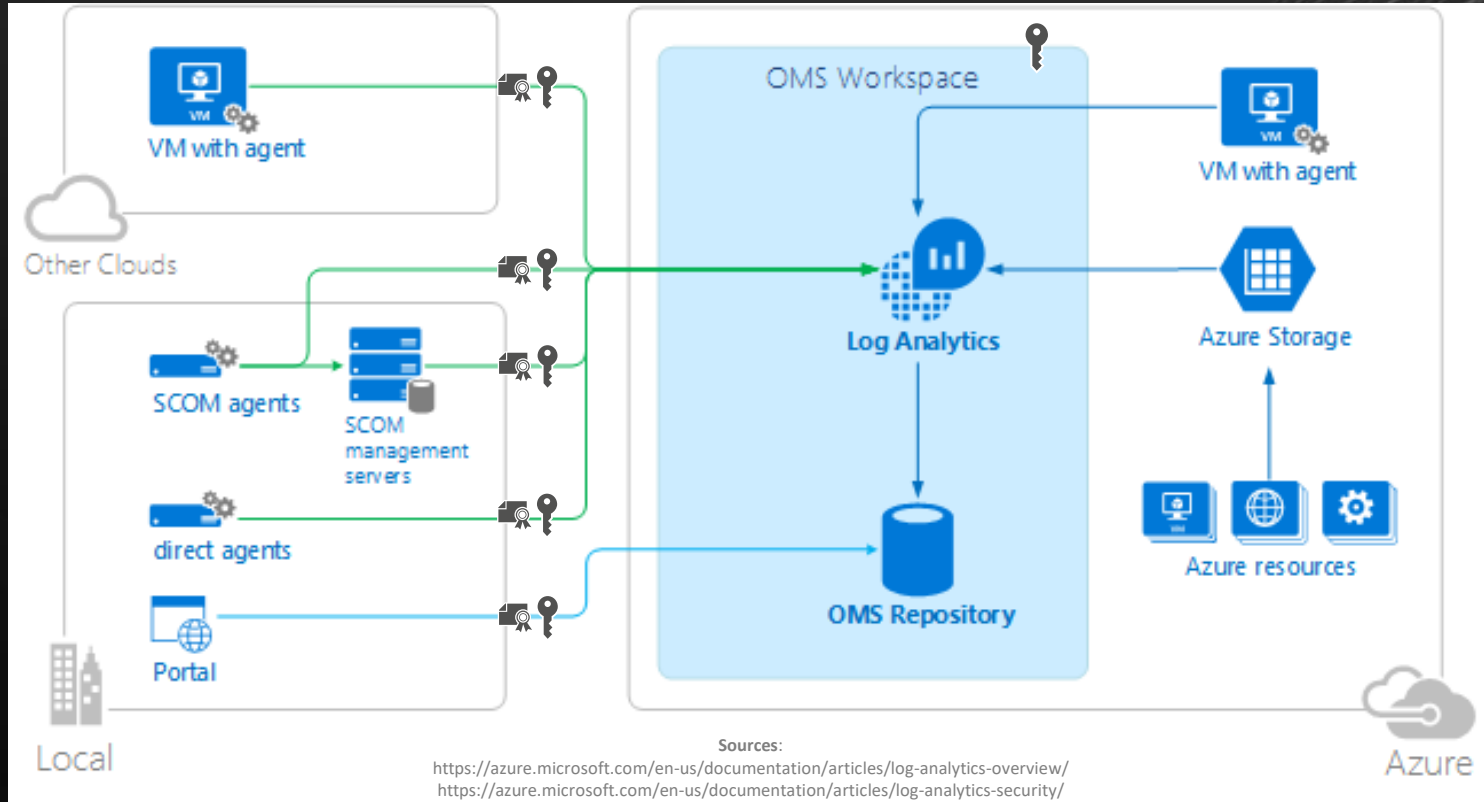
Architectural Overview
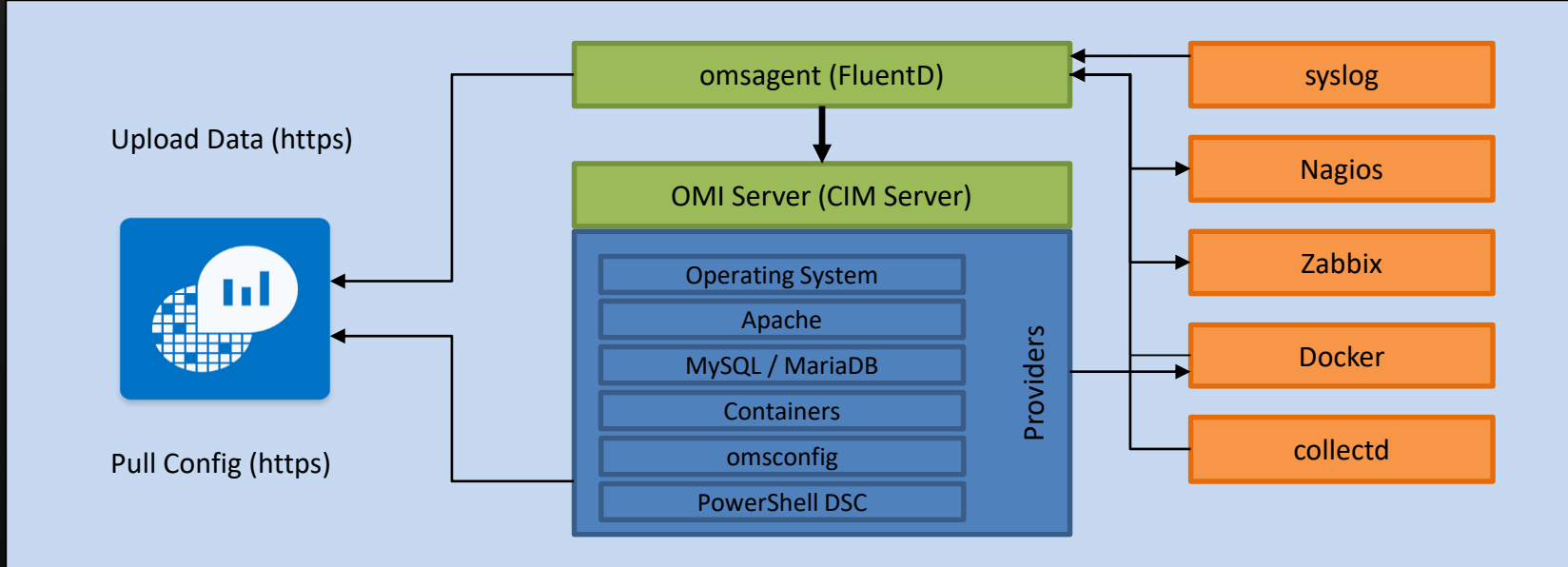
OMS CollectD

– **collectd** is a Unix daemon that collects, transfers and stores performance data of computers and network equipment.

– «read plug-ins» collect data

– «write plug-ins» send data over the network to a remote instance of the daemon
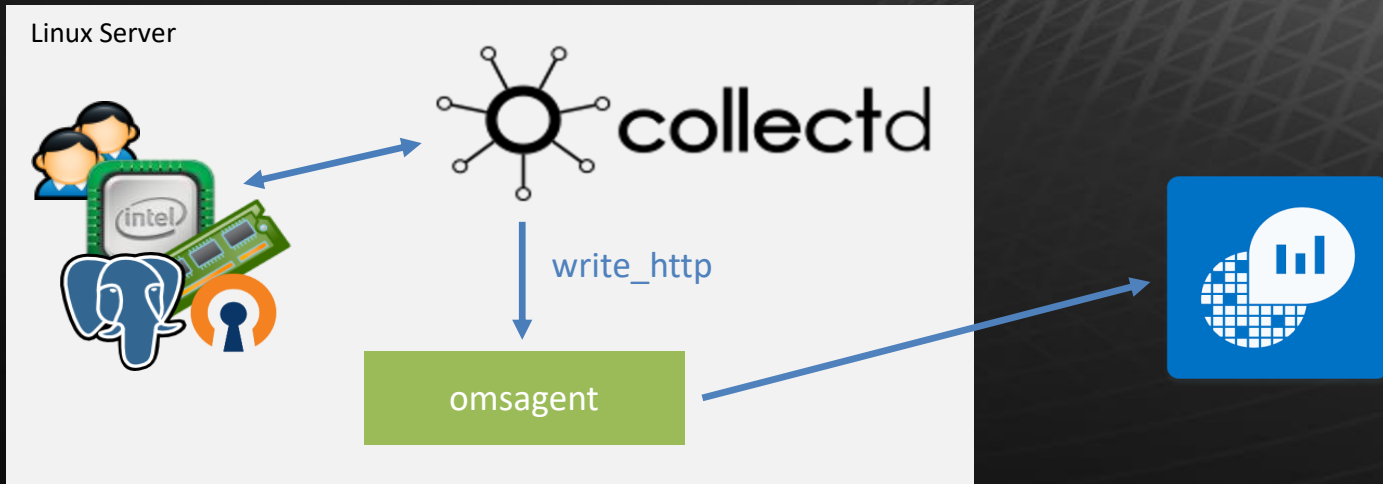
List of available plugins: https://collectd.org/wiki/index.php/Table_of_Plugins

Custom Dashboard

Data based on last 6 hours   Data Plan: Free   JHNR

Overview ▶ Linux Computers Sending Data

⚙ Edit   ⧉ Clone

Stefan's Linux Lab

Visit blog.jhnr.ch ⊕

Lab Overview

The following VMs are part of this lab setup:

1. labgateway (Ubuntu Linux)
2. labvm01 (Ubuntu Linux)
3. labvm02 (Windows Server)
4. labvm03 (Ubuntu Linux)

Linux VMs are running **OMS agent v1.1.0-217** and default collectd config with following additional plugins:

1. ping (only enabled on labgateway)
2. users
3. uptime

collectd
The system statistics collection daemon

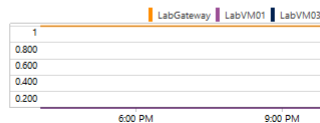### DISTRIBUTION BY COMPUTER

1
Windows Computers sending data

3
Linux Computers sending data

COMPUTER	COUNT	
LabGateway	340K	▬▬▬▬▬
LabVM01	307.6K	▬▬▬▬
LabVM02.lab.jhnr.ch	594	|
LabVM03	307.9K	▬▬▬▬

See all...

LOGGED IN USERS

Logged in users over time

LabGateway LabVM01 LabVM03

1
0.800
0.600
0.400
0.200

6:00 PM   9:00 PM

TYPE	COUNT	
LabGateway	1	▬▬▬▬
LabVM03	0	
LabVM01	0	

See all...

LATENCY

Max Latency by Host

labvm01.lab.jhnr.c... labvm02.lab.jhnr.c... labvm03.lab.jhnr.c...

2

1

6:00 PM   9:00 PM
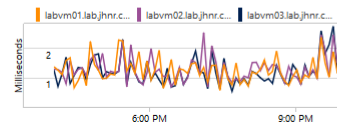
HOST	AVERAGE LATENCY	
labvm02.lab.jhnr.ch.value	0.5	∿∿
labvm03.lab.jhnr.ch.value	0.4	∿∿
labvm01.lab.jhnr.ch.value	0.4	∿∿

See all...

UPTIME

Uptime over time

LabGateway LabVM01 LabVM03

3

2

1

6:00 PM   9:00 PM
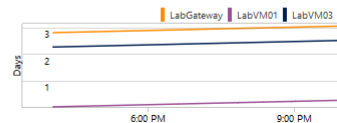
HOST	SECONDS UPTIME	
LabGateway	265.1K	▬▬▬
LabVM03	218.5K	▬▬▬
LabVM01	24.6K	▪

See all...

OMS Syslog

- Either **rsyslog** or **syslog-ng** are required to collect syslog messages.
  - *sysklog is not supported*
- Use OMS portal for centralized facility and severity management
- Default all managed agents get OMS configuration. Selective disable:
  - OMS_MetaConfigHelper.py –disable
- > 500 messages/seconds (daemon => agent) needs change to TCP protocol
- Routing syslog messages directly to OMS agent possible (passing by syslog daemon)
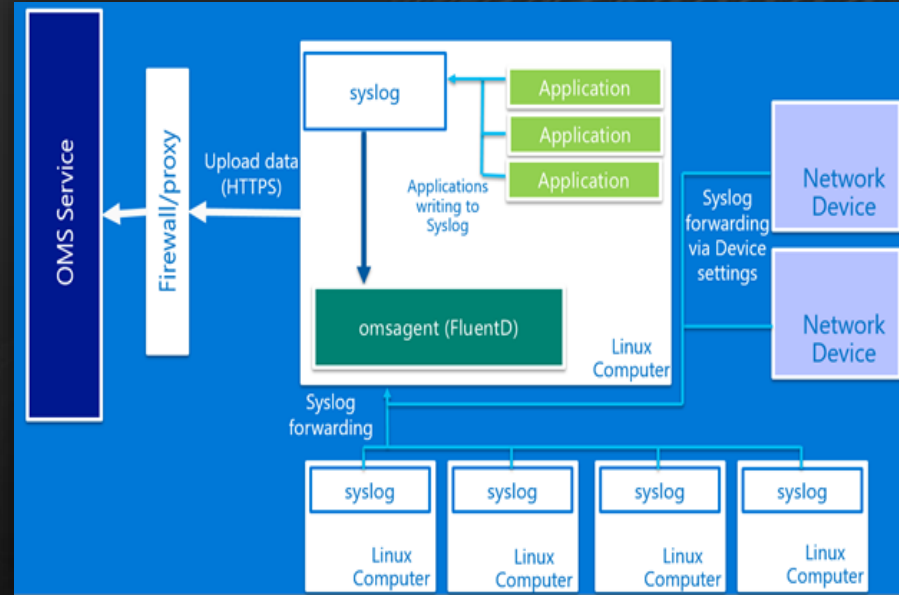
Demo:
Syslog

Additional Resources

- OMS Agent for Linux Documentation
https://github.com/Microsoft/OMS-Agent-for-Linux/blob/master/docs/OMS-Agent-for-Linux.md#install-the-oms-agent-for-linux

- Troubleshooting Guide:
https://github.com/Microsoft/OMS-Agent-for-Linux/blob/master/docs/Troubleshooting.md

- Bring your custom collectd metrics into the OMS Log Analytics platform
https://blogs.technet.microsoft.com/msoms/2016/07/14/bring-your-custom-collectd-metrics-into-the-oms-log-analytics-platform/

- Syslog collection in Operations Management Suite
https://blogs.technet.microsoft.com/msoms/2016/05/12/syslog-collection-in-operations-management-suite/

- Enable Log Analytics in MS OMS on Azure virtual machines
https://blogs.technet.microsoft.com/msoms/2016/02/09/1474/

- Bring your Custom JSON data to Log Analytics (OMS) with Twitter Data Example
https://blogs.technet.microsoft.com/msoms/2016/07/21/bring-your-custom-json-data-to-log-analytics-oms-with-twitter-data-example/

- Inside the Microsoft Operations Management Suite [e-book]
https://gallery.technet.microsoft.com/Inside-the-Operations-2928e342

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Upcoming OMS Sessions

- Wednesday, August 24 • 15:15 - 16:15
- Automation in a modern world
- Thursday, August 25 • 14:00 - 15:00
- Lessons learned from Microsoft Premier Support - Implementing OMS
- Thursday, August 25 • 16:15 - 16:45
- Ask-the-Experts: Focus 'OMS'
- Thursday, August 25 • 16:45 - 17:45
- Using your OM skills to hack OMS
- Friday, August 26 • 10:45 - 11:45
- Rocket science OMS and German Cloud? Must compliance be complex?
- Friday, August 26 • 14:00 - 15:00
- How to Manage your Azure RemoteApp environment with OMS

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Thank you!

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  – Please rate this session
  – Use the "Happy-Or-Not" devices at the exit
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