# How to monitor RedHat Enterprise Linux 5 or 6 using Microsoft System Center Operations Manager (SCOM) 2012 SP1 - Part 1

### Modifications of the Linux OS and SCOM

It's really a mess to get a running configuration for SCOM and RHEL. There are serveral descriptions for more or less specific installations. The scope of this document is to provide a generic solution for a running configuration of RHEL 5 or 6 and SCOM 2012 SP1. Relax and enjoy!

- 1. If you are unfamilar with the Linux Operating System please fetch a Linux guy first. He or she will be very helpful during the troubleshooting process!
- 2. To fulfill the prerequisites on Linux I've provide a small and simple bash shell script which doing all the stuff. The script name is "**prepare4scom**" and I guess there are some improvements possible but now it does what it should. Here it is:

```
#! /bin/bash
# This script prepares a RHEL System to get ready for a Micrososft System Center Operations Manager (SCOM)
# agent installation.
# doing some prerequisites
if (( $EUID != 0 )); then
   echo "You must be root to run this script!"
    exit 1
fi
DATE=$ (date +%Y%m%d %H%M)
# Add user and set password
echo "Adding user opsmgrsvc with uid 550"
useradd -c "SCOM service account" -u 550 -m opsmgrsvc
echo "Setting password for user opsmgrsvc"
echo "please-enter-password-here" | passwd opsmgrsvc --stdin
# Configure /etc/sudoers file
echo "adding entries to /etc/sudoers"
```

```
[ -f /etc/sudoers ] ; then
if
 cp -p /etc/sudoers /etc/sudoers.$DATE
 cp -p /etc/sudoers /etc/sudoers work
 sed -i '/^root.*ALL=(ALL) /a\opsmgrsvc ALL=(root) NOPASSWD: ALL' /etc/sudoers work
 sed -i '/^Defaults.*requiretty/a\Defaults:opsmgrsvc !requiretty' /etc/sudoers work
 echo "performing a visudo check"
 visudo -c -f /etc/sudoers work 2>&1 >/dev/null
 RC=$?
 if [ ${RC} -ne 0 ] ; then
   echo "There is a problem in accessing/editing /etc/sudoers work!"
   exit 2
 fi
 mv -f /etc/sudoers work /etc/sudoers
else
 echo "No /etc/sudoers file found!"
fi
echo "all done. Exiting"
echo
    11 11
echo "Please add the appropriate user (opsmgrsvc) to /etc/ssh/sshd config file"
echo "if the directive AllowUsers is used and restart the ssh daemon!!"
exit
```

3. Save the script to the system which should be monitored and change the ownership and execute permisions:



4. Now execute this script as user "**root**":

#### /prepare4scom

After (successful) execution of this script delete it immediately, because the password is coded into the script itself!

- 5. Now we've done the whole Linux part for configuration the Linux OS!
- 6. I assume that there is a ready to run SCOM 2012 installation. First we have to create a cross-platform resource pool for monitoring UNIX and Linux systems:



7. Give the resource pool a meaningfull name:

Create a Resource Pool V	Vizard
General Properties Pool Membership Summary Completion	Enter a friendly name and description         Name         Cross-Platform Monitoring Resource Pool         Description (optional)         Recource Pool kir Linux und Unix Server(
1	< Previous Next > Create Cancel

We choose "Resource pool for Linux and UNIX server".

8. Assign the management server to the resource pool:

Resource pool members Choose the resources that you high availability.	want in this pool. Two or more men	bers are required for
Pool members:	(e	Add
Name	Туре	Add pools
	Resource pool members         Choose the resources that you high availability.         Pool members:         Name	Resource pool members Choose the resources that you want in this pool. Two or more mem- high availability. Pool members: Name Type

Just click "Add".

9. Choose the management server:

elect management servers or gateway	y servers for this resource pool.	
ilter by part of name (optional):		
bvm		
		Count
		Search
Available items:		
Name	Туре	
Constant?	Management Server	
The second difference	Management Server	
	the second se	
		Add
selected items.		Add Remove
Selected items:	Туре	Add Remove
Selected items:	Type Management Server	Add
Selected items: Name	Type Management Server Management Server	Add
Selected items: Name Company Common Company Common	Type Management Server Management Server	Add
elected items: Name	Type Management Server Management Server	Add
ielected items: Name	Type Management Server Management Server	Add
Selected items: Name	Type Management Server Management Server	Add Remove

In our environment there are two managmenet server, you may have just one or more. Don't forget to click OK!

10. Click Next:



11. Create the resource pool:

eneral Properties	Persure nod member	
ummary ompletion	Choose the resources that you high availability.	u want in this pool. Two or more members are required for
	Pool members:	
	Name	Туре
		Management Server Management Server

Just click on Create to build the resource pool!

- 12. Now we've done the resource pool creation part!
- 13. Because we have more than one management server as members of a cross-platform resource pool, we have to copy the server certificates to each member of the resource pool. Doing this we must start the command.com as an aministrator (click right on icon):



14. Go to the appropriate directory:



cd "%Program Files%\System Center 2012\Operations Manager\Server"

15. Export certificate on each management server:

(61)		Adr	ninistrator: Comma	nd Prompt	_ <b>_</b> ×
C:\Program Files\Syste -export .cert_		Center	2012\Operations	xcertconfig.exe	

scxcertconfig.exe -export <local-hostname>.cert

16. Import only the foreign certificates on each management server:

The certificates has to be placed on each management server in to the directory "%Program Files%\System Center 2012\Operations Manager\Server"

GS	Administrator: Command Prompt	X
and then import them to the local cert store.	vam Files\System Center 2012\Operations Manager\Server>s	cxcertconfig.exe
cd "%ProgramFiles%\System Center 2012 scxcertconfig.exe -import <local-host< th=""><th>perations Manager\Server" me&gt;.cert</th><th></th></local-host<>	perations Manager\Server" me>.cert	

17. Now we've done the spread certificates part!

18. Next we have to download the current Monitoring Pack for UNIX and Linux from the following website: <u>http://www.microsoft.com/en-us/download/details.aspx?id=29696</u>

You will be asked to choose the download and we want to have the "System Center 2012 MPs for UNIX and Linux.msi" package. Feel free to download more files, but these are not necessarry for our installation.

# Choose the download you want

🗄 File Name	Size	
System Center 2012 MPs for UNIX and Linux.msi	470.3 MB	Download Summary: 1. System Center 2012 MPs for UNIX sold Uncerter
ADXMPGuide.doc	692 KB	and Linucinia
HPUXMPGuide.doc	553 KB	
RHELMPGuide.doc	773 KB	
SLESMPGuide.doc	750 КВ	Total Size: 470.3 MB
		Next

19. Next step is to execute the msi file. As a result we get a whole bunch of fresh management packs:

		System Center	2012 MPS for UNIX	and Linux (7.
Home Share View				
-) - T 📕 • Computer • Local Di	x (C) Source System Center Management Packs	<ul> <li>System Center 20</li> </ul>	The MPs for UNIX and Lin	ILOI (7,4,4338.0)
* Favorites	Name	Date modified	Type	Size
Desktop	2012	25.03.2014 13:59	File folder	
🎥 Downloads	2012 SP1	25.03.2014 13:59	File folder	
3/2 Recent places	EULA	06.01.2014 09:03	Rich Text Docume	41 KB
	Microsoft.AIX.5.3.mpb	06.01.2014 09:03	MP8 File	16.709 KB
🙀 Libraries	Microsoft.AlX.6.1.mpb	06.01.2014 09:03	MP8 File	16.714 KB
Documents	Microsoft.AIX.7.mpb	06.01.2014.09.04	MPB File	15.923 KB
a Music	Microsoft.AUCLibrary.mp	06.01.2014 09:04	MP File	31 KB
Pictures	Microsoft.HPUX.11iv2.mpb	06.01.2014 09:03	MPB File	39.327 KB
H Videos	Microsoft.HPUX.11iv3.mpb	06.01.2014 09:03	MPB File	39.374 KB
	Microsoft.HPUX.Library.mp	06.01.2014 09:03	MP File	31 KB
Somputer	Microsoft.Linux.Library.mp	06.01.2014 09.03	MP File	31 KB
Local Disk (C:)	Microsoft.Linux.RedHat.Library.mp	06.01.2014 09:04	MP File	15 (0)
🗼 PerlLogs	Microsoft.Linux.RHEL.4.mpb	05.01.2014 09:03	MP8 File	35.539 KB
Program Files	Microsoft.Linux.RHEL.5.mpb	06.01.2014 09:03	MPB File	34.865 KB
🏄 Program Files (x86)	Microsoft.Linux.RHEL.6.mpb	06.01.2014 09:03	MPB File	13.062 KB
J Source	Microsoft.Linux.SLES.9.mpb	06.01.2014 09:03	MP8 File	16.751 KB
🔒 Users	Microsoft.Linux.SLES.10.mpb	06.01.2014 09:03	MPE File	33.698 KB
🏄 Windows	Microsoft.Linux.SLES.11.mpb	06.01.2014 09:03	MPB File	22.981 KB
DVD Drive (D:) SC2012SP1SCOM	Microsoft.Linux.SUSE.Library.mp	06.01.2014 09:04	MP File	15 KB
	Microsoft.Solaris.9.mpb	06.01.2014 09:03	MPB File	8.521 KB
Network	Microsoft.Solaris.10.mpb	06.01.2014 09:04	MPB File	16.173 KB
	Microsoft.Solaris.11.mpb	06.01.2014 09:03	MPII File	17.208 KB
	Microsoft.Solaris.Library.mp	06.01.2014-09:03	MP File	22 KB
	Microsoft.Unix.ConsoleLibrary.mp	06.01.2014 09:03	MP File	23 KB
	Microsoft.Unix.LogFile.Library.mpb	06.01.2014 09:04	MPB File	B5 KB
	Microsoft Unix.Process Library.mpb	06.01.2014 09:03	MPB File	95 KB
	Microsoft.Unix.ShellCommand.Library.m_	06.01.2014 09:03	MPB File	68 KB
	Open Pegasus Attributions	21.05.2012 09:12	Text Document	7 KB

20. Now we are ready to import the wanted management packs using the SCOM console:

File Edit View Go Tasks Tools Help Search 🕶 📮 🗍 Scope 👂 Find	Tasks
Administration  Administration  Connected Management Groups  Agent Management  Agent Managed  Management Servers  Pending Management  UNIX/Linux Computers	*
Management Pack Network M: Discovery Wizard Discovery Wizard Discovery Wizard Create Management Pack Network C Network C Network C Metwork C Network C Network C Metwork C Metwork C Metwork C Network C Network C Metwork C Metwork C Network C Network C Metwork C Metwor	=

21. Add from disk:



22. Resolve dependencies (click Yes):



## 23. Select MPs to import:

		Import Manageme	nt Packs		
		Select Management Pac	is to import		
🕑 💿 🔹 🕇 🎩	« Syste	• System Center 2012 MPs for UNIX a	• • ¢ S	earch System Cente	r 2012 M 🔎
Organize 👻 New fo	older			11	- 🔟 🛛
🔆 Favorites	^	Name	Date modified	Type	Size
E Desktop		Microsoft.AIX.Library.mp	06.01.2014.09:04	MP File	
Downloads		Microsoft.HPUX.11iv2.mpb	06.01.2014 09:03	MP8 File	- 39
I Recent places		Microsoft.HPUX.11iv3.mpb	05.01.2014 09:03	MPB File	39
		Microsoft.HPUX.Library.mp	06.01.2014 09:03	MP File	
Calibraries	=	Microsoft.Linux.Library.mp	06.01.2014 09:03	MP File	
Documents	101	Microsoft.Linux.RedHat.Library.mp	06.01.2014.09:04	MP File	
J Music		Microsoft.Linux.RHEL.4.mpb	06.01.2014 09:03	MPB File	35
Pictures		Microsoft.Linux.RHEL.5.mpb	05.01.2014 09:03	MPB File	34
🗄 Videos		Microsoft.Linux.RHEL.6.mpb	06.01.2014 09:03	MPB File	33
2	-	Microsoft.Linux.SLES.9.mpb	05.01.2014 09:03	MP8 File	16
E Computer		Microsoft.Linux.SLES.10.mpb	06.01.2014 09:03	MPB File	33
Local Disk (C:)	1	Microsoft.Linux.SLES.11.mpb	06.01.2014 09:03	MPB File	22
DVD Drive (D:) S	sc ~ <		ш		>
1	File nam	"Microsoft.Linux.RHEL.5.mpb" "Microso	ft.Linux.RHEL.6. 🗸	All Management Pa	cks (*.mp; * 👻
				Open	Cancel

24. Installation of selected MPs:

Because this is not a really fresh installation we see the blue icons and the gey (inactive) Install button. If you have truely a fresh installation of the MPs, the icons are green and you are able to choose the Install button!

	Import Manageme	nt Packs				×
Select Management Pa	cks				000	
Select Management Packs						😧 Help
Imp	ort list :		+ Add - 🛛	Propert	ies 🗙 P	Remove
	Name	Version	Release Date	Status	EULA	
0	Universal Linux Operating System	7.4.4338.0				
0	Universal Linux Monitoring	7.4.4338.0				
0	Universal Linux (Debian) Discovery	7.4.4338.0				
0	Universal Linux (RPM) Discovery	7.4.4338.0				
0	UNIX/Linux Core Library	7.4.4338.0				
0	Red Hat Operating System Library	7.4.4338.0		0		_
0	Red Hat Enterprise Linux Server 5	7.4.4338.0				
0	Red Hat Enterprise Linux Server 6	7.4.4338.0				
Sta	tus details :					
Ā	nanagement pack contained in Red Ha	t Enterprise Lin	ux Server 5 Operat	ting System	bundle (ver	sion
7.4	4338.0) has already been imported	0.000.000	0.000.000.000			
1.1						
				Ins	təl	Cancel

- 25. Now we've done the whole management pack installation part!
- 26. Creation of two UNIX/Linux Run As accounts

Now we have to create two SCOM Run As accounts. We follow the documentation: Microsoft System Center Operations Manager - "Red Hat Enterprise Linux Server Management Pack Guide for System Center 2012 - Operations Manager" (RHELMPGuide.doc). Both accounts are mapped to the single local Linux account which we have created in step 4. by executing the bash shell script.

1. First we create a non-elevated Run As account:



• Give the account a meaningfull display name



We choose "Linux Monitoring Account".

• Insert the account credentials

æ.	UNIX/Linux Run As Account Properties Wizard
Account Crede	entials
General Properties Account Credentials Distribution Security Completion	Provide the account credentials that will be used for health and performance monitoring persitions on UNIX/Linux computers. User name:  Second Password:  Confirm password:  Do you want to use elevation for privileged access?  Do not use elevation with this account
	< Previous Next > Save Cancel

The credentials are the same as in step 4.! Please select "Do not use elevation with this account".

• Choose distribution security option



Select "More secure" and click on add to choose a resource pool.

• Add the resource pool

Computer Sear	ch ?
To add computers, search for available computers and then add them Option:	to the selected computers list.
Search by resource pool name	
Filter by (optional):	
	Search
Available items	
AD Assignment Resource Pool All Management Servers Resource Pool Cross-Platform Monitoring Resource Pool Network Device Monitoring Pool Notifications Resource Pool	
Selected objects	Add
Name	
	OK Cancel

Now we add the resource pool "Cross-Platform Monitoring Resource Pool" which we have created in step 11). Don't forget to click OK!

• Save the settings for the first Run As account



To set up the first account just click "Save".

2. As the second step we create the elevated Run As account:



• Give the account a meaningfull <u>priveliged</u> display name



We choose "Linux Privileged Monitoring Account".

• Insert the account credentials

( <b>R</b> )	UNIX/Linux Run As Account Properties Wizard	×
Account Cr	edentials	in the
General Properties Account Credentials Distribution Security Completion	Provide the account credentials Specify the account credentials that will be used for health and performance month operations on UNIX/Linux computers. User name User name Password: Confirm password: Do you want to use elevation for privileged access? Bevate this account using sudo for privileged access	₩ Help
	< Previous Next > Save	Cancel

The credentials are the same as in step 4.! Please select "Elevate this account using sudo for privileged access".

• Choose distribution security option



Select "More secure" and click on add to choose a resource pool.

• Add the resource pool

Computer Sea	rch ?
To add computers, search for available computers and then add the	m to the selected computers list.
Search by resource pool name	(i)
Filter by (optional):	
	Search
Available items	
AD Assignment Resource Pool Al Management Servers Resource Pool Cross-Platform Monitoring Resource Pool Network Device Monitoring Pool Notifications Resource Pool	
Selected objects	Add Remove
Name	
	OK Cancel

Now we add the resource pool "Cross-Platform Monitoring Resource Pool" which we have created in step 11). Don't forget to click OK!

• Save the settings for the second Run As account



To set up the second account just click "Save".

You can download this page as pdf file [648 kB].

On the <u>next page</u> I will show the SCOM-agent deployment for RedHat Enterprise Linux.







Your browser: Netscape ; 5.0 (Windows)

