

## How to monitor RedHat Enterprise Linux 5 or 6 using Microsoft System Center Operations Manager (SCOM) 2012 SP1 - Part 3

### Additional notes

In part 3 I will provide some additional information which are not necessary for installing SCOM but give more understanding to the former parts.

#### 1. The resigning certificate issue

I can not really explain nor understand why Microsoft is not able to resign the certificate by itself during the deployment of the Linux agents. I guess this is not a lack of technical skills but may be the protection of it's own Windows universe in mind? Well let us have a look into an invalid and a valid certificate. Do you see the difference?

```
[root@<hostname> ~]# openssl x509 -noout -text -in scx-host-<hostname>.pem.orig
Certificate:
  Data:
    Version: 1 (0x0)
    Serial Number: 1 (0x1)
    Signature Algorithm: sha1WithRSAEncryption
    Issuer: DC=<Country>, DC=<Domain>, CN=<hostname>, CN=<FQDN>
    Validity
      Not Before: Mar 27 12:05:43 2013 GMT
      Not After : Mar 22 12:05:43 2034 GMT
    Subject: DC=<Country>, DC=<Domain>, CN=<hostname>, CN=<FQDN>
    Subject Public Key Info:
      Public Key Algorithm: rsaEncryption
      Public-Key: (2048 bit)
      Modulus:
        00:d9:4f:f8:79:3e:96:de:d2:52:33:b4:42:98:02:
        56:ad:a5:f7:7c:db:ce:3d:c2:a0:f7:60:a8:f3:66:
        b3:3e:ce:b4:43:0f:62:b9:5a:9a:05:e9:3d:25:3a:
        50:ea:be:a0:bf:d2:71:ad:78:2e:aa:c1:44:d1:f3:
        c3:08:f7:25:27:c6:40:df:18:c7:c5:5d:e6:78:c8:
        31:01:b9:fe:59:69:03:3e:4e:3a:72:22:5b:c8:17:
        96:d5:d4:11:9b:1c:89:72:d4:f8:7c:bc:61:e9:ed:
        c4:b9:65:4a:bc:38:96:bf:09:8d:a9:a7:72:8c:20:
        95:96:be:4f:cb:c0:9f:1d:ba:27:fd:b8:2e:67:a0:
        f4:97:69:1e:ee:75:91:e2:b8:27:5e:45:75:a0:c4:
        d3:1a:ca:ac:1f:df:9d:8e:d9:a3:31:2d:8a:ae:38:
        42:06:26:e6:e8:ca:1c:6f:2b:dd:ba:fd:24:3a:4c:
        94:01:71:da:71:b0:4d:cd:b9:ea:40:6a:74:cf:fa:
        cf:75:a4:8a:40:65:fa:b3:80:6a:88:7d:71:84:9d:
        fb:81:fd:20:b6:a9:49:67:84:ff:3d:54:9b:52:b5:
        81:af:7f:fd:c5:46:58:65:86:e5:bd:2b:31:04:1f:
        ed:d2:f6:1f:1f:ec:76:e2:d7:e8:64:cf:3c:b3:cc:
        1d:d9
      Exponent: 65537 (0x10001)
    X509v3 extensions:
      X509v3 Extended Key Usage:
        TLS Web Server Authentication
      Signature Algorithm: sha1WithRSAEncryption
      02:b5:0d:52:84:4d:7f:93:2c:9b:c2:68:1b:37:b3:aa:6a:bb:
      91:fc:be:f4:a3:65:49:ee:fe:75:a5:73:dc:f5:50:08:6f:12:
      01:e6:cc:09:42:86:86:86:a4:36:9d:44:0b:c0:34:ef:b1:47:
      ee:85:58:9a:8d:8e:16:1e:7d:0f:e1:38:a6:93:6d:15:65:78:
      4a:35:cd:49:6d:26:d1:77:83:a6:31:ae:71:28:2c:48:b7:1f:
      44:97:26:20:c5:fd:ab:e5:1f:54:b1:84:fd:2d:6b:bd:92:63:
      1f:02:fc:a5:f3:20:75:10:72:7f:26:dd:c9:8a:02:16:1c:5d:
      e1:af:fa:f5:26:6d:29:42:79:33:19:1b:b1:21:40:db:3d:cc:
      c2:08:da:7f:b0:64:1c:df:68:a3:12:87:34:97:fb:3e:72:da:
      70:80:52:f4:aa:65:9c:93:06:c7:9f:4c:cf:7b:51:66:ae:8a:
      9c:dd:54:31:59:bd:c9:ed:40:76:ca:41:43:77:70:2b:da:fc:
      c4:5a:b5:b8:2b:bf:8a:74:03:ad:ab:3c:e0:9d:0f:ca:79:08:
      c9:3a:3d:57:a9:67:af:36:57:4c:a5:df:cb:1b:80:2e:a7:74:
      e3:81:fb:71:bb:05:99:50:45:f1:f4:8c:db:80:11:ff:d2:e2:
      35:e2:b4:6a
[root@<hostname> ~]#
[root@<hostname> ~]# openssl x509 -noout -text -in scx-host-<hostname>.pem
Certificate:
  Data:
    Version: 1 (0x0)
    Serial Number: 1 (0x1)
    Signature Algorithm: sha1WithRSAEncryption
    Issuer: CN=SCX-Certificate/title=SCX633376D2-????-????-????-D09259ACEF3D, DC=<SCOM-hostname>
    Validity
      Not Before: Mar 27 12:05:43 2013 GMT
      Not After : Mar 27 13:01:20 2024 GMT
    Subject: DC=<Country>, DC=<Domain>, CN=<hostname>, CN=<FQDN>
    Subject Public Key Info:
```

```

Public Key Algorithm: rsaEncryption
Public-Key: (2048 bit)
Modulus:
 00:d9:4f:f8:79:3e:96:de:d2:52:33:b4:42:98:02:
 56:ad:a5:f7:7c:db:ce:3d:c2:a0:f7:60:a8:f3:66:
 b3:3e:ce:b4:43:0f:62:b9:5a:9a:05:c9:3d:25:3a:
 50:ea:ba:a0:bf:d2:71:ad:78:2e:aa:c1:44:d1:f3:
 c3:08:f7:25:27:c6:40:df:18:c7:c5:5d:e6:78:c8:
 31:01:b9:fe:59:69:03:3e:4e:3a:72:22:5b:c8:17:
 96:d5:d4:11:9b:1c:89:72:d4:f8:7c:bc:61:e9:ed:
 c4:b9:65:4a:bc:38:96:bf:09:8d:a9:a7:72:8c:20:
 95:96:be:4f:cb:c0:9f:1d:ba:27:fd:b8:2e:67:a0:
 f4:97:69:1e:ee:75:91:e2:b8:27:5e:45:75:a0:c4:
 d3:1a:ce:ac:1f:df:9d:8e:d9:a3:31:2d:8a:ae:38:
 42:06:26:e6:e8:ca:1c:6f:2b:dd:ba:fd:24:3a:4c:
 94:01:71:da:71:b0:4d:cd:b9:ea:40:6a:74:cf:fa:
 cf:75:a4:8a:40:65:fa:b3:80:6a:88:7d:71:84:9d:
 fb:81:fd:20:b6:a9:49:67:84:ff:3d:54:9b:52:b5:
 81:af:7f:fd:c5:46:58:65:86:e5:bd:2b:31:04:1f:
 ed:d2:f6:1f:1f:ec:76:e2:d7:e8:64:cf:3c:b3:cc:
 1d:d9
Exponent: 65537 (0x10001)
X509v3 extensions:
X509v3 Extended Key Usage:
  TLS Web Server Authentication
Signature Algorithm: sha1WithRSAEncryption
 6e:04:c8:20:4c:74:24:6d:f3:83:4c:c2:6d:12:fb:72:b7:c5:
 ff:e5:af:b8:4a:9b:1f:3d:1b:44:1b:c7:59:bf:c1:10:60:42:
 4c:05:28:da:b9:81:e9:fa:40:cd:fd:43:91:b6:e5:fd:81:ed:
 79:16:5e:ba:e7:82:bc:eb:4a:dc:a6:e8:ab:d9:32:b9:05:fa:
 63:9b:97:5f:45:64:66:22:52:5f:d1:f5:0a:35:98:a1:a1:e2:
 90:63:22:94:74:e1:9e:4a:59:78:1a:ab:14:13:6f:d3:9e:d0:
 4d:a8:f5:0b:9b:a5:db:bd:a9:9b:bd:2b:4c:20:ec:57:fb:ca:
 6c:07:57:b0:3e:55:cf:8f:ca:3e:72:c3:b4:95:2a:21:a0:4b:
 34:59:9f:21:c3:ef:d3:dd:2d:6c:6e:25:97:7a:2f:6b:ca:47:
 54:9d:87:f8:dc:b2:98:f2:95:a7:d9:1a:28:7e:d5:15:ed:17:
 1c:2c:a3:5f:25:4b:7e:38:9e:ab:3b:3e:2a:e2:85:f3:da:1a:
 74:63:c5:70:7d:64:21:f3:b8:1b:9e:9c:31:c1:7c:aa:da:85:
 e9:04:d4:70:bc:0a:df:d6:a6:1f:33:3f:2f:25:03:cc:21:cc:
 ec:80:3b:b2:5d:09:7c:d0:21:b4:e1:d8:0e:bc:ed:1c:56:29:
 ce:21:ac:87
[root@<hostname> ~]#

```

You've got it? No? Please have a look to the issuer line.

## 2. Description of the Linux agent package

Every RPM-package or the internal package database has information about the version, installation date and so on. We can gather this information pretty easy.

```

[root@<hostname> ~]# rpm -q -i scx
Name       : scx                Relocations: (not relocatable)
Version    : 1.4.1             Vendor: http://www.microsoft.com
Release    : 304.el6         Build Date: Tue 24 Dec 2013 02:20:51 AM CET
Install Date: Thu 27 Mar 2014 03:10:10 PM CET   Build Host: scxbl64-rhel6-01.scx.com
Group      : Applications/System   Source RPM: scx-1.4.1-304.el6.src.rpm
Size       : 53708343           License: none
Signature  : (none)
Summary    : Microsoft System Center 2012 Operations Manager for UNIX/Linux agent
Description:
Microsoft CIM server for System Center 2012 Operations Manager.
[root@<hostname> ~]#

```

## 3. Files of the Linux agent package

If you want to know which files are installed during the agent rollout, you can use the rpm command as well.

```

[root@<hostname> ~]# rpm -q -l scx
/etc/init.d/scx-cimd
/etc/opt/microsoft
/etc/opt/microsoft/scx
/etc/opt/microsoft/scx/conf
/etc/opt/microsoft/scx/conf/cimserver_current.conf
/etc/opt/microsoft/scx/conf/cimserver_planned.conf
/etc/opt/microsoft/scx/conf/installinfo.txt
/etc/opt/microsoft/scx/conf/scxlog.conf
/etc/opt/microsoft/scx/conf/scxrunas.conf
/etc/opt/microsoft/scx/ssl
/opt/microsoft
/opt/microsoft/scx

```

```
/opt/microsoft/scx/bin
/opt/microsoft/scx/bin/scxcimprovagt
/opt/microsoft/scx/bin/scxcimprovidr
/opt/microsoft/scx/bin/scxcimserver
/opt/microsoft/scx/bin/scxcimservera
/opt/microsoft/scx/bin/scxlogfilereader
/opt/microsoft/scx/bin/setup.sh
/opt/microsoft/scx/bin/tools
/opt/microsoft/scx/bin/tools/.scxadmin
/opt/microsoft/scx/bin/tools/.scxsslconfig
/opt/microsoft/scx/bin/tools/scxadmin
/opt/microsoft/scx/bin/tools/scxcimcli
/opt/microsoft/scx/bin/tools/scxcimconfig
/opt/microsoft/scx/bin/tools/scxcimmof
/opt/microsoft/scx/bin/tools/scxcimmofl
/opt/microsoft/scx/bin/tools/scxsslconfig
/opt/microsoft/scx/bin/tools/scxwbemexec
/opt/microsoft/scx/bin/tools/setup.sh
/opt/microsoft/scx/lib
/opt/microsoft/scx/lib/libCIMxmlIndicationHandler.so
/opt/microsoft/scx/lib/libCIMxmlIndicationHandler.so.1
/opt/microsoft/scx/lib/libCMPIDProviderManager.so
/opt/microsoft/scx/lib/libCMPIDProviderManager.so.1
/opt/microsoft/scx/lib/libDefaultProviderManager.so
/opt/microsoft/scx/lib/libDefaultProviderManager.so.1
/opt/microsoft/scx/lib/libcmapiCWS_Util.so
/opt/microsoft/scx/lib/libcmapiCWS_Util.so.1
/opt/microsoft/scx/lib/libcmapiCppImpl.so
/opt/microsoft/scx/lib/libcmapiCppImpl.so.1
/opt/microsoft/scx/lib/libcmapiUtilLib.so
/opt/microsoft/scx/lib/libcmapiUtilLib.so.1
/opt/microsoft/scx/lib/libpegauthentication.so
/opt/microsoft/scx/lib/libpegauthentication.so.1
/opt/microsoft/scx/lib/libpegclient.so
/opt/microsoft/scx/lib/libpegclient.so.1
/opt/microsoft/scx/lib/libpegcliutils.so
/opt/microsoft/scx/lib/libpegcliutils.so.1
/opt/microsoft/scx/lib/libpegcommon.so
/opt/microsoft/scx/lib/libpegcommon.so.1
/opt/microsoft/scx/lib/libpegcompiler.so
/opt/microsoft/scx/lib/libpegcompiler.so.1
/opt/microsoft/scx/lib/libpegconfig.so
/opt/microsoft/scx/lib/libpegconfig.so.1
/opt/microsoft/scx/lib/libpegexportclient.so
/opt/microsoft/scx/lib/libpegexportclient.so.1
/opt/microsoft/scx/lib/libpegexportserver.so
/opt/microsoft/scx/lib/libpegexportserver.so.1
/opt/microsoft/scx/lib/libpeggetoopt.so
/opt/microsoft/scx/lib/libpeggetoopt.so.1
/opt/microsoft/scx/lib/libpeghandlerservice.so
/opt/microsoft/scx/lib/libpeghandlerservice.so.1
/opt/microsoft/scx/lib/libpegindicationservice.so
/opt/microsoft/scx/lib/libpegindicationservice.so.1
/opt/microsoft/scx/lib/libpegpmservice.so
/opt/microsoft/scx/lib/libpegpmservice.so.1
/opt/microsoft/scx/lib/libpegprm.so
/opt/microsoft/scx/lib/libpegprm.so.1
/opt/microsoft/scx/lib/libpegprovidermanager.so
/opt/microsoft/scx/lib/libpegprovidermanager.so.1
/opt/microsoft/scx/lib/libpegquerycommon.so
/opt/microsoft/scx/lib/libpegquerycommon.so.1
/opt/microsoft/scx/lib/libpegqueryexpression.so
/opt/microsoft/scx/lib/libpegqueryexpression.so.1
/opt/microsoft/scx/lib/libpegrepository.so
/opt/microsoft/scx/lib/libpegrepository.so.1
/opt/microsoft/scx/lib/libpegserver.so
/opt/microsoft/scx/lib/libpegserver.so.1
/opt/microsoft/scx/lib/libpegservice.so
/opt/microsoft/scx/lib/libpegservice.so.1
/opt/microsoft/scx/lib/libpeguser.so
/opt/microsoft/scx/lib/libpeguser.so.1
/opt/microsoft/scx/lib/libpegwql.so
/opt/microsoft/scx/lib/libpegwql.so.1
/opt/microsoft/scx/lib/libpegwmsserver.so
/opt/microsoft/scx/lib/libpegwmsserver.so.1
/opt/microsoft/scx/lib/providers
/opt/microsoft/scx/lib/providers/ext
/opt/microsoft/scx/lib/providers/libCIMOMStatDataProvider.so
/opt/microsoft/scx/lib/providers/libCIMOMStatDataProvider.so.1
/opt/microsoft/scx/lib/providers/libCertificateProvider.so
```

```
/opt/microsoft/scx/lib/providers/libCertificateProvider.so.1
/opt/microsoft/scx/lib/providers/libConfigSettingProvider.so
/opt/microsoft/scx/lib/providers/libConfigSettingProvider.so.1
/opt/microsoft/scx/lib/providers/libInteropProvider.so
/opt/microsoft/scx/lib/providers/libInteropProvider.so.1
/opt/microsoft/scx/lib/providers/libNamespaceProvider.so
/opt/microsoft/scx/lib/providers/libNamespaceProvider.so.1
/opt/microsoft/scx/lib/providers/libProviderRegistrationProvider.so
/opt/microsoft/scx/lib/providers/libProviderRegistrationProvider.so.1
/opt/microsoft/scx/lib/providers/libSCXCoreProviderModule.so
/opt/microsoft/scx/lib/providers/libUserAuthProvider.so
/opt/microsoft/scx/lib/providers/libUserAuthProvider.so.1
/opt/microsoft/scx/lib/providers/libpegprovider.so
/opt/microsoft/scx/lib/providers/libpegprovider.so.1
/usr/sbin/scxadmin
/var/opt/microsoft
/var/opt/microsoft/scx
/var/opt/microsoft/scx/lib
/var/opt/microsoft/scx/lib/repository
/var/opt/microsoft/scx/lib/repository/repository.conf
/var/opt/microsoft/scx/lib/repository/root
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ActiveConnection.CIM_SAPSADependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ActsAsSpare.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_AdminDomain.CIM_System
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_AlertIndication.CIM_ProcessIndication
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_AlertInstIndication.CIM_AlertIndication
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_BasedOn.CIM_Dependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_BindsTo.CIM_SAPSADependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CIMOMStatisticalData.CIM_StatisticalData
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CIMXMLCommunicationMechanism.CIM_ObjectManagerCommunicationMechanism
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_Capabilities.CIM_ManagedElement
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ClassCreation.CIM_ClassIndication
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ClassDeletion.CIM_ClassIndication
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ClassIndication.CIM_Indication
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ClassModification.CIM_ClassIndication
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CollectedCollections.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CollectedMSEs.CIM_MemberOfCollection
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_Collection.CIM_ManagedElement
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CollectionConfiguration.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CollectionOfMSEs.CIM_Collection
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CollectionSetting.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CommMechanismForAdapter.CIM_Dependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CommMechanismForManager.CIM_ServiceAccessBySAP
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_CommMechanismForObjectManagerAdapter.CIM_Dependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM-CompatibleProduct.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_Component.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ComputerSystem.CIM_System
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ConcreteCollection.CIM_Collection
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ConcreteComponent.CIM_Component
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ConcreteDependency.CIM_Dependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ConcreteIdentity.CIM_LogicalIdentity
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ConcreteJob.CIM_Job
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_Configuration.CIM_ManagedElement
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ConfigurationComponent.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ConfigurationForSystem.CIM_HostedDependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ContainedDomain.CIM_SystemComponent
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ContainedLocation.CIM_Component
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_DefaultSetting.CIM_ElementSetting
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_Dependency.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_DependencyContext.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_DeviceSAPImplementation.CIM_Dependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_DeviceServiceImplementation.CIM_Dependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_DeviceStatisticalInformation.CIM_StatisticalInformation
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_DeviceStatistics.CIM_Statistics
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementCapabilities.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementConfiguration.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementConformsToProfile.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementLocation.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementProfile.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementSetting.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementSettingData.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementSoftwareIdentity.CIM_Dependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ElementStatisticalData.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_EnabledLogicalElement.CIM_LogicalElement
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_EnabledLogicalElementCapabilities.CIM_Capabilities
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ExtentRedundancyComponent.CIM_RedundancyComponent
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_ExtraCapacityGroup.CIM_RedundancyGroup
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_FRU.CIM_ManagedElement
```

```
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_FRUIncludesProduct.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_FRUPhysicalElements.#
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_FormattedIndicationSubscription.CIM_IndicationSubscription
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_HostedAccessPoint.CIM_HostedDependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_HostedCollection.CIM_HostedDependency
/var/opt/microsoft/scx/lib/repository/root#PG_InterOp/classes/CIM_HostedDependency.CIM_Dependency
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/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/ASSOCIATION
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Abstract
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Aggregate
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Aggregation
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Alias
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/ArrayType
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/BitMap
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/BitValues
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/CLASS
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/ClassConstraint
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Composition
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Counter
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/DN
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Delete
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Deprecated
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Description
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/DisplayName
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/EmbeddedInstance
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/EmbeddedObject
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Exception
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Expensive
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Experimental
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Gauge
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/INDICATION
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Iddeleted
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/In
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Invisible
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Key
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Large
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/MappingStrings
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Max
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/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/MaxValue
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/MethodConstraint
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Min
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/MinLen
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/MinValue
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/ModelCorrespondence
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/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/NonlocalType
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/NullValue
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Octetstring
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Out
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Override
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Propagated
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/PropertyConstraint
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/PropertyUsage
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Provider
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Read
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Required
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Revision
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Source
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/SourcefType
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Static
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Syntax
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/SyntaxType
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Terminal
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/TriggerType
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/UMLPackagePath
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Units
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/UnknownValues
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/UnsupportedValues
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/ValueMap
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Values
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Version
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Weak
/var/opt/microsoft/scx/lib/repository/root#PG Internal/qualifiers/Write
/var/opt/microsoft/scx/lib/repository/root#scx
/var/opt/microsoft/scx/lib/repository/root#scx/classes
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_DiskDrive.CIM_MediaAccessDevice
```



```
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_EnabledLogicalElement.CIM_LogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_EthernetPort.CIM_NetworkPort
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_EthernetPortStatistics.CIM_NetworkPortStatistics
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_FileSystem.CIM_EnabledLogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_IPProtocolEndpoint.CIM_ProtocolEndpoint
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_LANEndpoint.CIM_ProtocolEndpoint
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_LogicalDevice.CIM_EnabledLogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_LogicalElement.CIM_ManagedSystemElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_LogicalFile.CIM_LogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_LogicalPort.CIM_LogicalDevice
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_ManagedElement.#
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_ManagedSystemElement.CIM_ManagedElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_MediaAccessDevice.CIM_LogicalDevice
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_Memory.CIM_StorageExtent
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_NetworkPort.CIM_LogicalPort
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_NetworkPortStatistics.CIM_StatisticalData
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_OperatingSystem.CIM_EnabledLogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_Process.CIM_EnabledLogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_Processor.CIM_LogicalDevice
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_ProtocolEndpoint.CIM_ServiceAccessPoint
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_RecordForLog.CIM_ManagedElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_ServiceAccessPoint.CIM_EnabledLogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_StatisticalData.CIM_ManagedElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_StatisticalInformation.CIM_ManagedElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_StorageExtent.CIM_LogicalDevice
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_UnixProcess.CIM_Process
/var/opt/microsoft/scx/lib/repository/root#scx/classes/CIM_UnixProcessStatisticalInformation.CIM_StatisticalInformation
/var/opt/microsoft/scx/lib/repository/root#scx/classes/PG_ElementConformsToProfile.CIM_ElementConformsToProfile
/var/opt/microsoft/scx/lib/repository/root#scx/classes/PG_RegisteredProfile.CIM_RegisteredProfile
/var/opt/microsoft/scx/lib/repository/root#scx/classes/SCX_Agent.CIM_LogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/SCX_Application_Server.CIM_LogicalElement
/var/opt/microsoft/scx/lib/repository/root#scx/classes/SCX_DiskDrive.CIM_DiskDrive
/var/opt/microsoft/scx/lib/repository/root#scx/classes/SCX_DiskDriveStatisticalInformation.CIM_StatisticalInformation
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/var/opt/microsoft/scx/lib/repository/root#scx/classes/SCX_Processor.CIM_Processor
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/var/opt/microsoft/scx/lib/repository/root#scx/classes/SCX_StatisticalInformation.CIM_StatisticalInformation
/var/opt/microsoft/scx/lib/repository/root#scx/classes/SCX_UnixProcess.CIM_UnixProcess
/var/opt/microsoft/scx/lib/repository/root#scx/classes/SCX_UnixProcessStatisticalInformation.CIM_UnixProcessStatisticalInformation
/var/opt/microsoft/scx/lib/repository/root#scx/instances
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers
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/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Abstract
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Aggregate
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/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Counter
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/DN
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Delete
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Deprecated
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Description
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/DisplayDescription
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/DisplayName
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/EmbeddedInstance
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/EmbeddedObject
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Exception
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Expensive
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Experimental
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Gauge
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/INDICATION
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Ifdeleted
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/In
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Invisible
```

```

/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/IsPUnit
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Key
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Large
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/MappingStrings
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Max
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/MaxLen
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/MaxValue
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/MethodConstraint
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Min
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/MinLen
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/MinValue
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/ModelCorrespondence
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Nonlocal
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/NonlocalType
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/NullValue
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Octetstring
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Out
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Override
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/PUnit
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Propagated
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/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/PropertyUsage
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Provider
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/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Required
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Revision
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/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/SourceType
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Static
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Syntax
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/SyntaxType
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Terminal
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/TriggerType
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/UMLPackagePath
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Units
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/UnknownValues
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/UnsupportedValues
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/ValueMap
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Values
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Version
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Weak
/var/opt/microsoft/scx/lib/repository/root#scx/qualifiers/Write
/var/opt/microsoft/scx/lib/repository/root/classes
/var/opt/microsoft/scx/lib/repository/root/instances
/var/opt/microsoft/scx/lib/repository/root/qualifiers
/var/opt/microsoft/scx/lib/state
/var/opt/microsoft/scx/log
/var/opt/microsoft/scx/tmp
/var/opt/microsoft/scx/tmp/localauth
[root@<hostname> ~]#

```

4. Content of /var/log/secure if agent is running:

As I wrote before everything SCOM related is logged in /var/log/secure. It is very easy to find out if the agent has a problem by observing this file.

```

[root@<hostname> ~]# tail -f /var/log/secure
...
Mar 27 15:13:29 sudo: opsmgrsvc : TTY=unknown ; PWD=/ ; USER=root ; COMMAND=/opt/microsoft/scx/bin/scxlogfilereader -p
Mar 27 15:18:44 sudo: opsmgrsvc : TTY=unknown ; PWD=/ ; USER=root ; COMMAND=/opt/microsoft/scx/bin/scxlogfilereader -p
...

```

Every 5 minutes you will get a new line like the one above.

5. Restart of the agent:

Under some circumstances the local installed agent has to be restarted. I will show you how to do this.

```

[root@<hostname> ~]# scxadmin -restart
Shutting down Microsoft SCX CIM Server: [ OK ]
Starting Microsoft SCX CIM Server: [ OK ]

[root@<hostname> ~]#

```

As a second possibility you can use the RedHat service command

```

[root@<hostname> ~]# service scx-cimd restart
Shutting down Microsoft SCX CIM Server: [ OK ]
Starting Microsoft SCX CIM Server: [ OK ]

```

```
[root@<hostname> ~]#
```

6. How is the agent deployment logged:

```
[root@<hostname> ~]# tail -f /var/log/secure
...
Mar 27 15:09:55 sshd[56686]: Accepted password for opsmgrsvc from <SCOM-IP> port 57389 ssh2
Mar 27 15:09:55 sshd[56686]: pam_unix(sshd:session): session opened for user opsmgrsvc by (uid=0)
Mar 27 15:09:55 sshd[56686]: pam_unix(sshd:session): session closed for user opsmgrsvc
Mar 27 15:09:56 sshd[56704]: Accepted password for opsmgrsvc from <SCOM-IP> port 57390 ssh2
Mar 27 15:09:56 sshd[56704]: pam_unix(sshd:session): session opened for user opsmgrsvc by (uid=0)
Mar 27 15:09:56 sshd[56706]: subsystem request for sftp
Mar 27 15:09:56 sshd[56704]: pam_unix(sshd:session): session closed for user opsmgrsvc
Mar 27 15:09:57 sshd[56720]: Accepted password for opsmgrsvc from <SCOM-IP> port 57397 ssh2
Mar 27 15:09:57 sshd[56720]: pam_unix(sshd:session): session opened for user opsmgrsvc by (uid=0)
Mar 27 15:09:57 sshd[56720]: pam_unix(sshd:session): session closed for user opsmgrsvc
Mar 27 15:09:58 sshd[56736]: Accepted password for opsmgrsvc from <SCOM-IP> port 57399 ssh2
Mar 27 15:09:58 sshd[56736]: pam_unix(sshd:session): session opened for user opsmgrsvc by (uid=0)
Mar 27 15:09:58 sudo: opsmgrsvc : TTY=unknown ; PWD=/home/opsmgrsvc ; USER=root ; COMMAND=/bin/sh -c sh /tmp/scx-opsmgrsvc/GetOSVersion.sh; EC=$?; rm -rf /tmp/scx-opsmgrsvc; exit $EC
Mar 27 15:09:58 sshd[56736]: pam_unix(sshd:session): session closed for user opsmgrsvc
Mar 27 15:10:05 sshd[56776]: Accepted password for opsmgrsvc from <SCOM-IP> port 57409 ssh2
Mar 27 15:10:05 sshd[56776]: pam_unix(sshd:session): session opened for user opsmgrsvc by (uid=0)
Mar 27 15:10:05 sshd[56776]: pam_unix(sshd:session): session closed for user opsmgrsvc
Mar 27 15:10:06 sshd[56794]: Accepted password for opsmgrsvc from <SCOM-IP> port 57411 ssh2
Mar 27 15:10:06 sshd[56794]: pam_unix(sshd:session): session opened for user opsmgrsvc by (uid=0)
Mar 27 15:10:06 sshd[56800]: subsystem request for sftp
Mar 27 15:10:07 sshd[56794]: pam_unix(sshd:session): session closed for user opsmgrsvc
Mar 27 15:10:08 sshd[56818]: Accepted password for opsmgrsvc from <SCOM-IP> port 57415 ssh2
Mar 27 15:10:08 sshd[56818]: pam_unix(sshd:session): session opened for user opsmgrsvc by (uid=0)
Mar 27 15:10:08 sshd[56818]: pam_unix(sshd:session): session closed for user opsmgrsvc
Mar 27 15:10:09 sshd[56834]: Accepted password for opsmgrsvc from <SCOM-IP> port 59467 ssh2
Mar 27 15:10:09 sshd[56834]: pam_unix(sshd:session): session opened for user opsmgrsvc by (uid=0)
Mar 27 15:10:09 sudo: opsmgrsvc : TTY=unknown ; PWD=/home/opsmgrsvc ; USER=root ; COMMAND=/bin/sh -c /bin/rpm -U --force /tmp/scx-opsmgrsvc/scx-1.4.1-304.rhel.6.x64.rpm; EC=$?; cd /tmp; rm -rf /tmp/scx-opsmgrsvc; exit $EC
Mar 27 15:10:11 sshd[56834]: pam_unix(sshd:session): session closed for user opsmgrsvc
...
```

In the first step the OS will be detected and after that the agent will be installed.

7. What are the main processes of the agent?

We just have to grep for processes including scx in it's names.

```
[root@<hostname> ~]# ps -ef | grep [s]cx
root    2033      1  0 May28 ?        00:01:02 /opt/microsoft/scx/bin/scxcimserver
550     3075      1  0 May28 ?        00:00:04 /opt/microsoft/scx/bin/scxcimprovagt 0 8 11 opsmgrsvc SCXUserCoreProviderModule
root    5186      1  0 May28 ?        00:01:38 /opt/microsoft/scx/bin/scxcimprovagt 0 18 21 root SCXCoreProviderModule
[root@<hostname> ~]#
```

In this case the UID of opsmgrsvc is 550.

8. The Linux daemon/service auditd:

The SCOM agent wants/needs the auditd to run properly. So we have to start it before.

```
[root@<hostname> ~]# service auditd status
auditd is stopped
[root@<hostname> ~]#
[root@<hostname> ~]# chkconfig --list auditd
auditd 0:off 1:off 2:on 3:off 4:on 5:on 6:off
[root@<hostname> ~]#
[root@<hostname> ~]# chkconfig --level 2345 auditd on
[root@<hostname> ~]#
[root@<hostname> ~]# chkconfig --list auditd
auditd 0:off 1:off 2:on 3:on 4:on 5:on 6:off
[root@<hostname> ~]#
[root@<hostname> ~]# service auditd restart
Stopping auditd:                               [FAILED]
Starting auditd:                                [ OK ]
[root@<hostname> ~]#
```

In our environment the RHEL server are running in runlevel 3. For this purpose we have to modify the baseline using chkconfig as you can see above.

9. After deleting the agent:

```
[root@<hostname> ~]# ls -l -R /etc/opt
/etc/opt:
total 4
```

```
drwxr-xr-x 3 root root 4096 Mar 26 09:02 microsoft
/etc/opt/microsoft:
total 4
drwxr-xr-x 3 root root 4096 Jun  6 08:47 scx
/etc/opt/microsoft/scx:
total 4
drwxr-xr-x 2 root root 4096 Mar 26 09:17 ssl
/etc/opt/microsoft/scx/ssl:
total 12
-r--r--r-- 1 root root 1224 Mar 26 09:17 scx-host-<hostname>.pem
-r--r--r-- 1 root root 1188 Mar 26 09:02 scx-host-<hostname>.pem.orig
-r----- 1 root root 1679 Mar 26 09:02 scx-key.pem
lrwxrwxrwx 1 root root  48 Mar 26 09:02 scx.pem -> /etc/opt/microsoft/scx/ssl/scx-host-<hostname>.pem
[root@<hostname> ~]#
```

If you delete the agent the certificates and its directory structure remains unchanged on the Linux server.

10. Upgrade to SCOM 2012 R2

As time goes by we updated the SCOM 2012 SP1 to the R2 release. There are some changes regarding the RHEL agents. Because this is a ongoing project I've created a [specific page](#).

You can download this page as [pdf file](#) [82 kB].


On the [previous page](#) I showed the SCOM agent deployment for RedHat Enterprise Linux.

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 Phone: not available

 [frank.\[dot\]ickstadt\[at\].removethis.gmail\[dot\].com](mailto:frank.[dot]ickstadt[at].removethis.gmail[dot].com)

 Fax: currently out of order

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Your browser: Netscape : 5.0 (Windows)

