

# Microsoft System Center Configuration Manager (SCCM)

is a Windows product that enables administrators to manage security and deployment of applications, devices that are part of an Enterprise. System Center is the family or suite of management tools from Microsoft.



- **Step1:** To install the application, create packages in the SCCM console which consists of the command line and executed files.
- **Step2:** Configuration manager admin creates virtual application packaging and replicates it to selected Distribution Points. (Distribution points are nothing but file servers, they store the packages for a particular region)--- APAC, EMEA, US
- **Step3:** If the user wants to download any application, then the user can directly download the application from the distribution points rather than connecting to the SCCM primary server.
- **Step4:** Now, install the SCCM agent which helps a machine communicate with the SCCM servers.
- **Step5:** In this step, the SCCM agent keeps on checking for the new policies and deployments. Using the updates SCCM admin creates deployment where an application is targeted on a bunch of machines.
- **Step6:** Once the policy reached the end machine, the SCCM agent evaluates the policy and reaches out to its particular regional distribution points for downloading the packages.
- **Step7:** Once the executed files are downloaded in a temp folder, users can install those packages in the local system. Now the file status is sent back to the SCCM server to update in the database.

*These are the basic steps to explain how SCCM works, and a lot more additional steps need to be considered in the background. But the core components used in the software distribution (Application packages, Distribution points, SCCM agents, servers) are the same for any infrastructure).*

## **SCCM Version History**

### **SCCM 2019 Version**

- *SCCM 1902 - Released March 2019*

### **Core components used in software distribution:**

**The lab environment uses Windows Server 2012 R2.**

**The lab environment uses SQL Server 2012 SP2 for the site database:**

- *Configuration Manager requires a 64-bit version of SQL Server to host the site database.*
- **SQL\_Latin1\_General\_CP1\_CI\_AS** as the **SQL Collation class**.
- **Windows authentication**, rather than SQL Server authentication, is required.
- *A dedicated **SQL Server instance** is required.*
- *Do not limit the **system addressable memory** for SQL Server.*
- *Configure the **SQL Server service** account to run using a low rights domain user account.*

### **The domain controller uses Windows Server 2008 R2**

### **Hyper-V is used with a few virtual machines**

**Administrator permissions** will be required for all of these components.

- *Configuration Manager requires an administrator with local permissions within the Windows Server environment*
- *Active Directory requires an administrator with permissions to modify the schema*
- *Virtual machines require local permissions on the machines themselves*

### **□ Steps for setting up a configuration manager are as follows:**

*1. Prepare Active Directory Content for Lab container*

2. *Create the System Management*

3. *Set security permissions for the System Management Container*

4. *Extend the Active Directory Schema using extadsch.exe*

### Prepare Active Directory content for the lab

#### Security group: Evaluation

- Group scope: **Universal**
- Group type: **Security**

Domain user: ConfigUser

### Create the System Management container

*Configuration Manager will not automatically create the required System Management container in Active Directory Domain Services when the schema is extended. Therefore, you will create this for your lab. This step will require you to install ADSI edit.*

*Ensure that you are logged on as an account that has **Create All Child Objects** permission on the System Container in Active Directory Domain Services.*

### To create the System Management container:

1. Run **ADSI Edit**, and connect to the domain in which the site server resides.
2. Expand Domain<**computer fully qualified domain name**>, expand <**distinguished name**>, **right-click CN=System**, click New, and then click Object.
3. In the **Create Object** dialog box, select **Container**, and then click **Next**
4. In the Value box, type System Management, and then click Next.
5. Click **Finish** to complete the procedure.

### Set security permissions for the System Management container

1. In the console pane, expand the site server's domain, expand **DC=<server distinguished name>**, and then expand **CN=System**. Right-click CN=System Management, and then click Properties.
2. In the **CN=System Management Properties dialog box**, click the Security tab, and then click Add to add the site server computer account. Grant the account Full Control permissions.
3. Click Advanced, select the site server's computer account, and then click Edit.
4. In the Apply onto list, select **This object and all descendant objects**.
5. Click **OK** to close the **ADSI Edit** console and complete the procedure.

### Extend the Active Directory schema using extadsch.exe

*Extending the Active Directory schema is a forest-wide configuration that is done one time per forest. Extending the schema permanently modifies the set of classes and attributes in your base Active Directory configuration. This action is irreversible. Extending the schema allows Configuration Manager to access components that will allow it to function most effectively within your lab environment.*

Steps are as follows:

1. Create a backup of the schema master domain controller's system state. For more information about backing up master domain controller, see Windows Server Backup
2. Navigate to **\SMSSETUP\BIN\X64** in the installation media.
3. Run **extadsch.exe**.
4. Verify that the schema extension was successful by reviewing the **extadsch.log** located in the root folder of the system drive.

### To enable a Configuration Manager site to publish site information to your Active Directory Forest:

1. In the Configuration Manager console, click **Administration**.
2. You will configure a new forest that hasn't yet been discovered.

3. In the **Administration** workspace, click **Active Directory Forests**.
4. On the **Publishing** tab of the site properties, select your connected forest, then click **Ok** to save the configuration.