Microsoft System Center 2012 Configuration Manager RTM Advanced Security Deployment Document

Mar.13 2012



1. Deploy Environment Introduction:

This operations process including four servers.

1. DC:

Role: ADDS + ADCS

OS: Windows Server 2008 R2 Enterprise Edition with SP1

IE: IE 9.0

IP: 192.168.0.100/24

DNS: 192.168.0.100

2. DB:

Role: Domain Member and SC2012 ConfigMgr RTM Database

OS: Windows Server 2008 R2 Enterprise Edition with SP1

IE: IE 9.0

IP: 192.168.0.101/24

DNS: 192.168.0.100

3. ConfigMgr2012:

Role: SC2012 ConfigMgr RTM

OS: Windows Server 2008 R2 Enterprise Edition with SP1

IE: IE 9.0

IP: 192.168.0.102/24

DNS: 192.168.0.100

4. Console:

Role: Domain Member and SC2012 ConfigMgr RTM Remote Console

OS: Windows 7 Enterprise Edition with SP1 x64

IE: IE 9.0

IP: 192.168.0.103/24

DNS: 192.168.0.100

2. System Requirements:

About System Center 2012 Configuration Manager RTM system requirements,

you can access this link to reference:

http://technet.microsoft.com/en-us/library/gg682077.aspx

3. Deploy Active Directory:

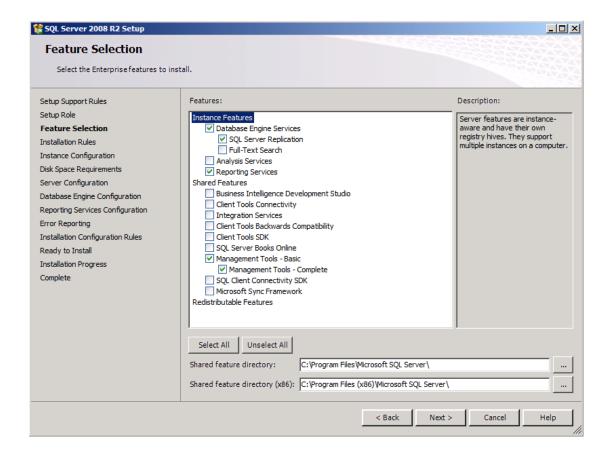
1) Logon to DC server, installing ADDS and ADCS. Domain name is

Contoso.msft . Active Directory forest functional level is Windows Server 2008 R2.

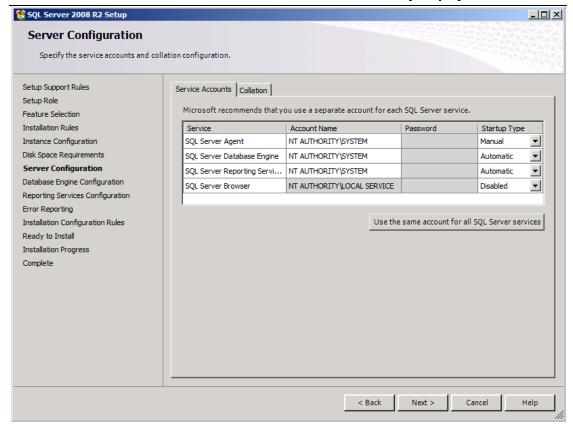
This process is no longer described in this part.

4. Deploy SC2012 ConfigMgr RTM Database:

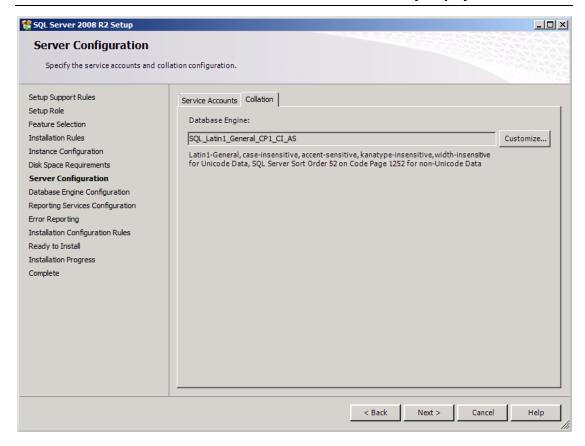
1) Logon to **DB** server, installing SQL Server 2008 R2 enterprise edition with SP1. Because SC2012 ConfigMgr RTM site system need to replication data through **SQL Server Replication**, so in **Feature Selection** step when you install SQL Server phase, you need to select **SQL Server Replication**, **Reporting Services** and **Management Tools – Basic**:



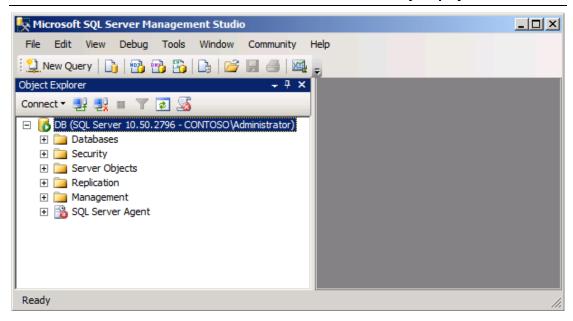
2) In **Server Configuration** step , You must configure all SQL Server services(engine , agent , etc.) to run under the **LOCAL SYSTEM** account . If you use another account (e.g. **NETWORK SERVICE** or a domain user account) , database replication will fail with certificate issues :



3) In Collation step , You must use a case-insensitive collation(e.g. SQL_Latin1_General_CP1_CI_AS) and it must be consistent throughout your hierarchy:



- 4) Other steps you can based on your requirements to setting, and finished to install . After setup , don't forget installing SQL Server 2008 R2 SP1 and Cumulative update package 4 for SQL Server 2008 R2 Service Pack 1.
 - 5) Updated Version is **10.50.2796**:



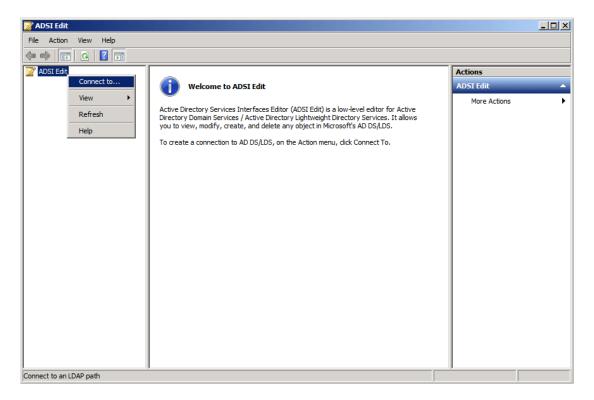
Cumulative update package 4 for SQL Server 2008 R2 Service Pack 1 download

link: http://support.microsoft.com/kb/2633146/en-us

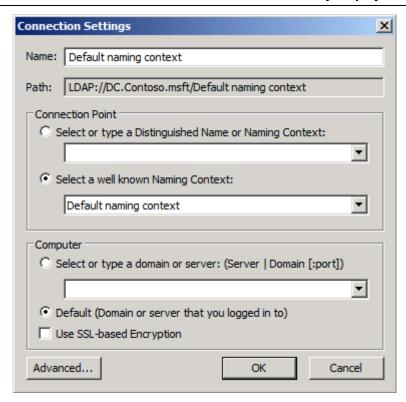
5. Configure Active Directory Permissions:

1) Logon to DC server, Open ADSI Edit mmc snap-in console, right-click

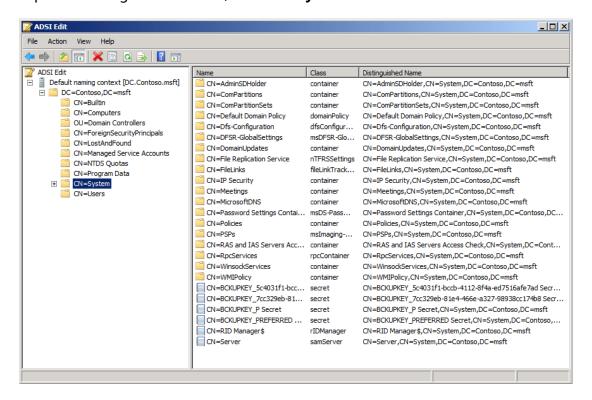
ADSI Edit and click Connect to ...:



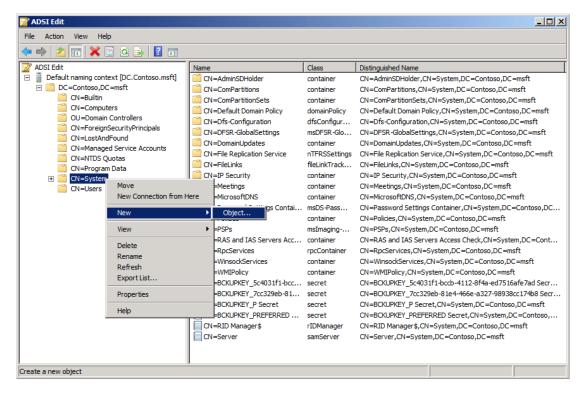
2) Display Connection Settings:



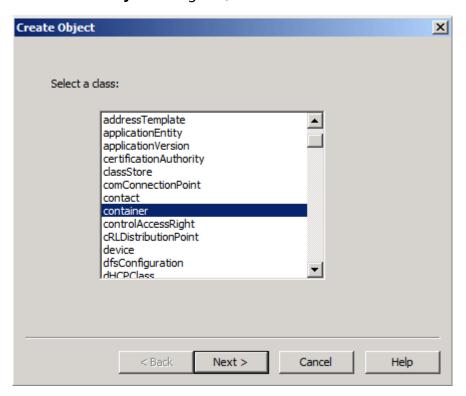
3) Click **OK**, Expand **Domain** <computer fully qualified domain name>, expand <distinguished name>, click **CN=System**:



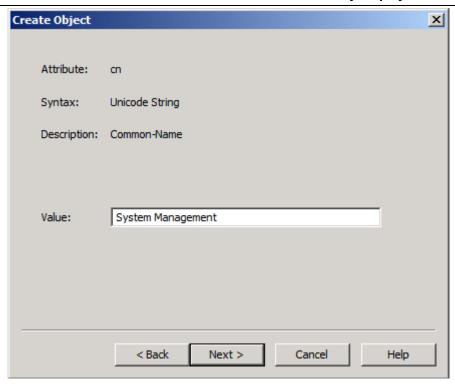
4) Right-click CN=System, click New, and then click Object...:



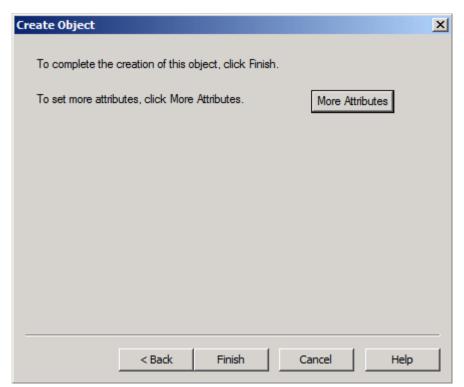
5) In the Create Object dialog box, select container:



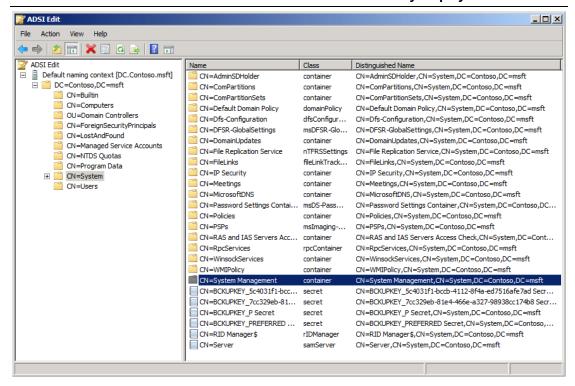
6) Then click **Next**, iIn the **Value** box, type **System Management**:



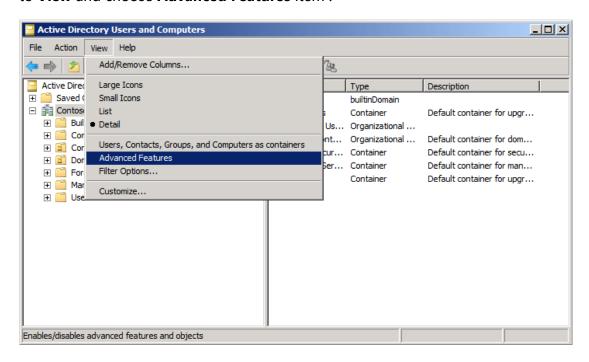
7) Click **Next**, display finish phase:



8) Click **Finish**, you can see created new container:

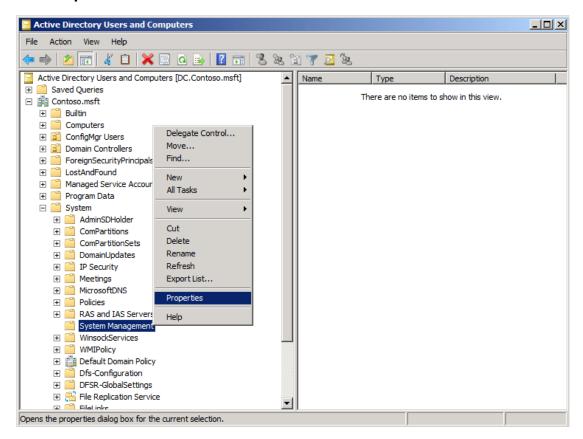


- 9) Close **ADSI Edit** mmc snap-in console.
- 10) Open **Active Directory Users and Computers** mmc snap-in console . Point to **View** and choose **Advanced Features** item :

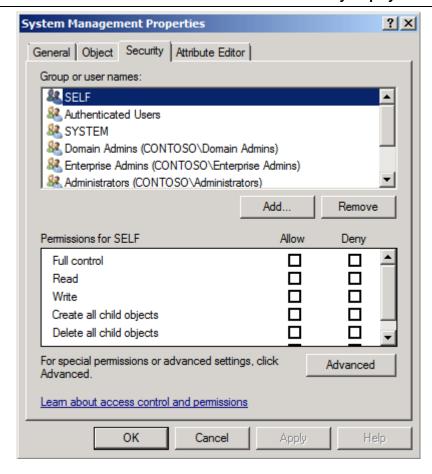


11) Expand the **System** container, right-click **System Management**, and then

click **Properties**:

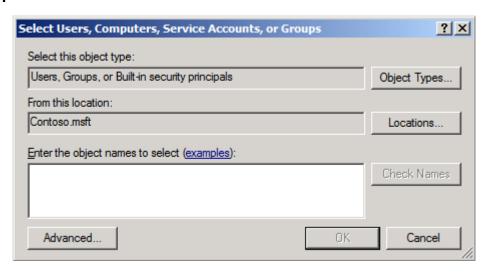


12) System Properties is display, click Security page:

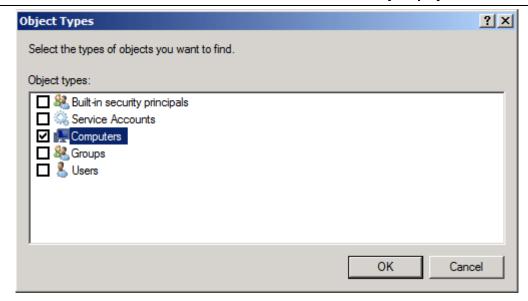


13) Click Add..., Display Select Users, Computers, Service Accounts, or

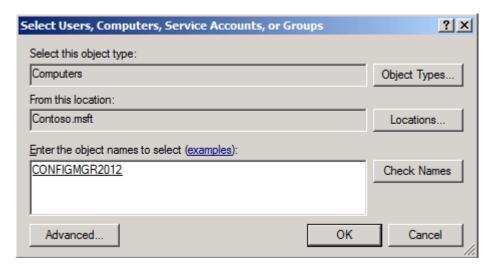
Groups box:



14) Click Object Types...item , just choose Computers in Object Types box :

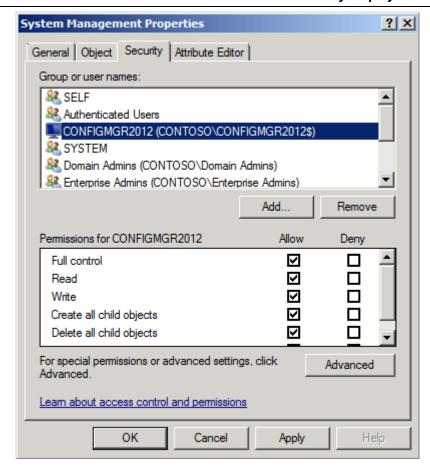


15) Click **OK** and fill SC2012 ConfigMgr site server **NetBIOS** name:

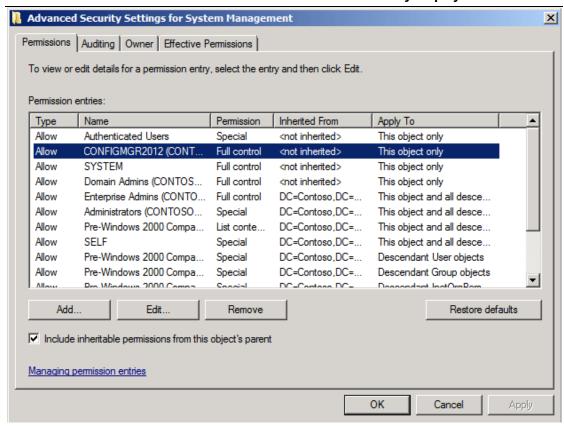


16) Click Check Names to confirm, and click OK, return to System Properties

box, and point just added computer name and choose all **Allow** items:

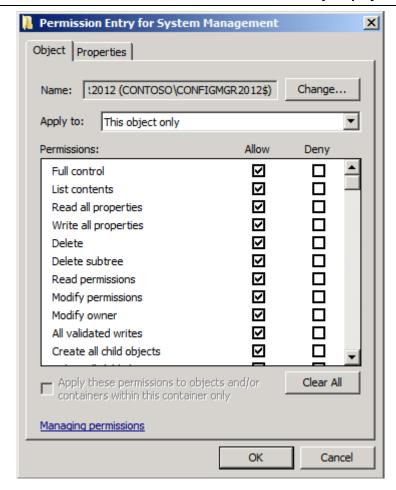


17) Click Advanced will display Advanced Security Settings for System box :



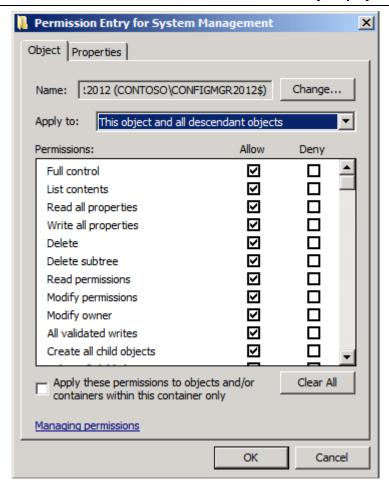
18) Double-click SC2012 ConfigMgr site server name, will display Permission

Entry for System:

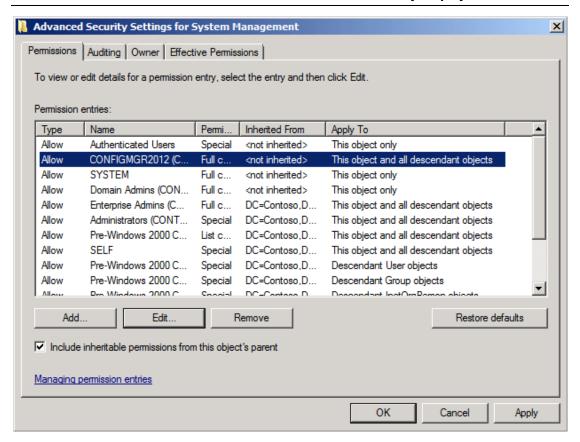


19) You need to choose This object and all descendant objects In Apply to ,

and confirm all Allow items was choose:



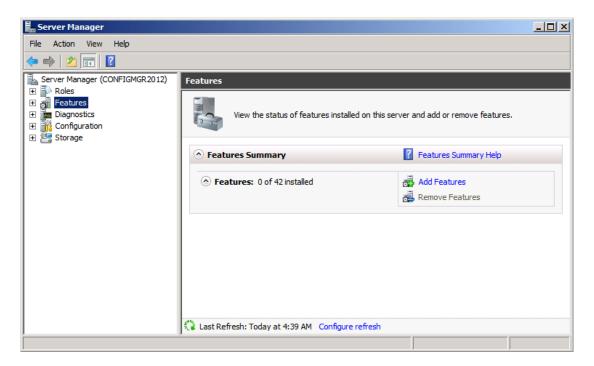
20) Click **OK** and back to **Advanced Security Settings for System** box:



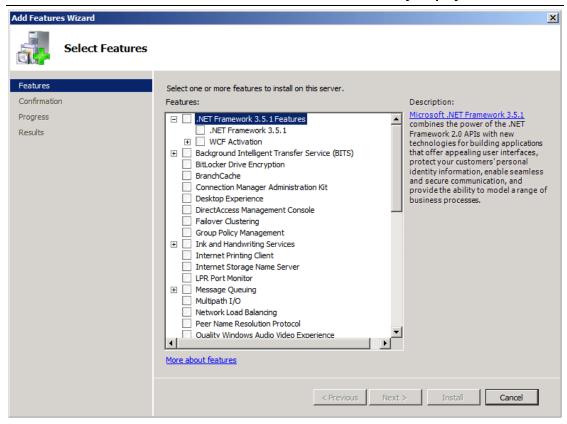
21) Two consecutive hits **OK** will finish setting AD permission , close ADUC mmc snap-in console.

6. Installing SC2012 ConfigMgr RTM requirement Windows components :

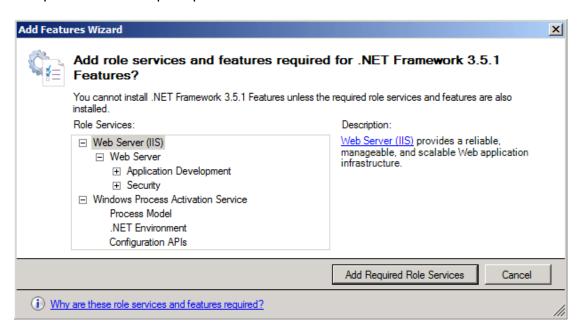
1) Logon to ConfigMgr2012 Server , Open Server Manager , Click Features :



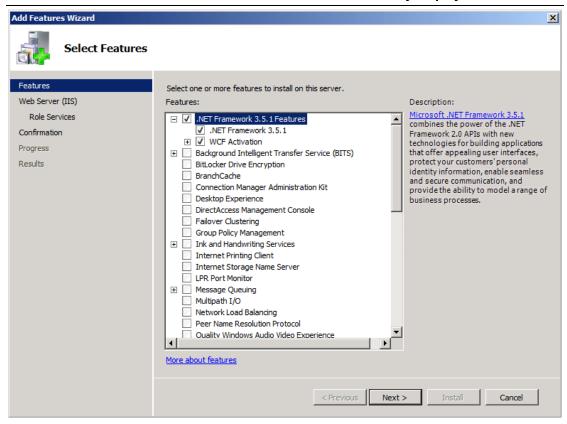
2) Click Add Features, display Select Features page:



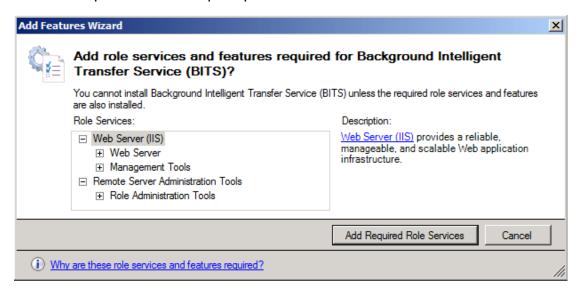
3) Choose **.Net Framework 3.5.1** and **WCF Activation** , will display related components needed prompt box :



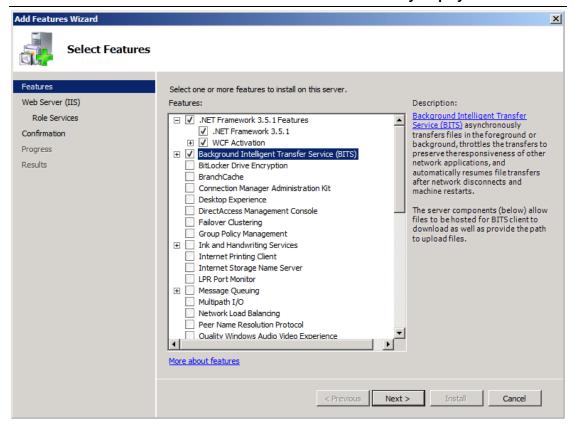
4) Click Add Required Role Services and return to Select Features:



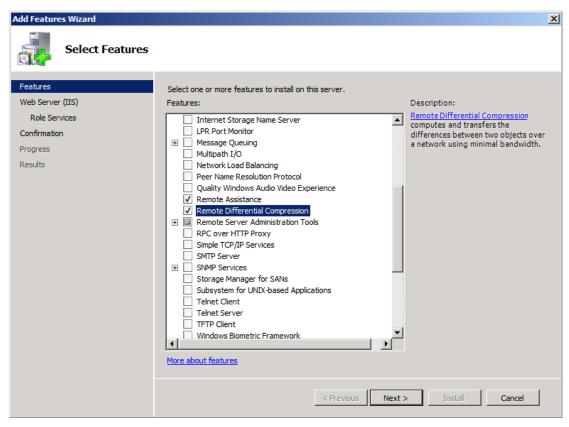
5) Choose **Background Intelligent Transfer Service(BITS)**, will display related components needed prompt box :



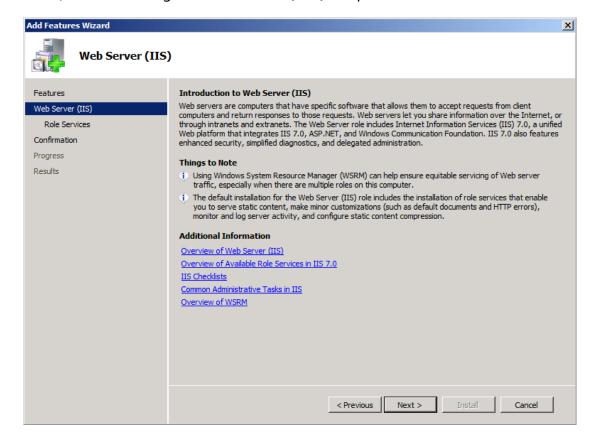
6) Click Add Required Role Services and will return to Select Features page:



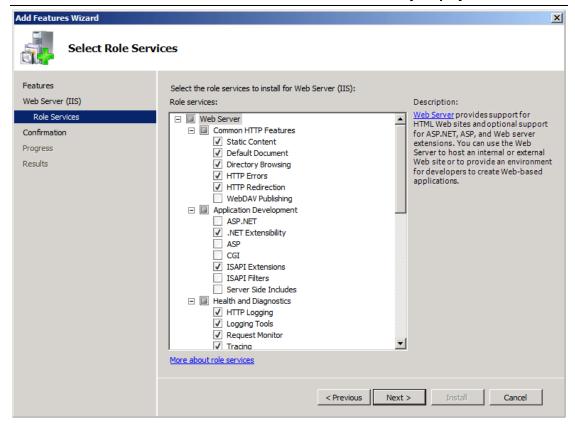
7) Choose Remote Assistance and Remote Differential Compression:



8) Click **Next**, go to **Web Server (IIS)** step:

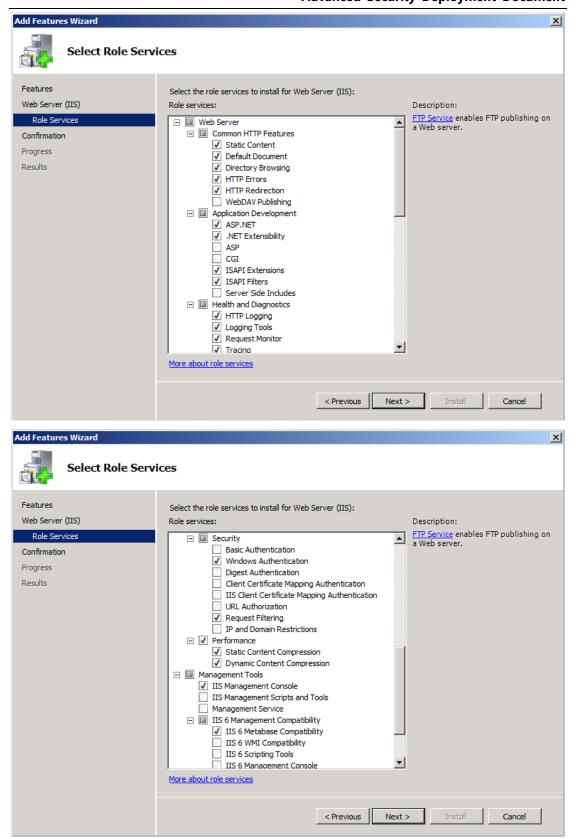


9) Click **Next** will display **Select Role Services** step:

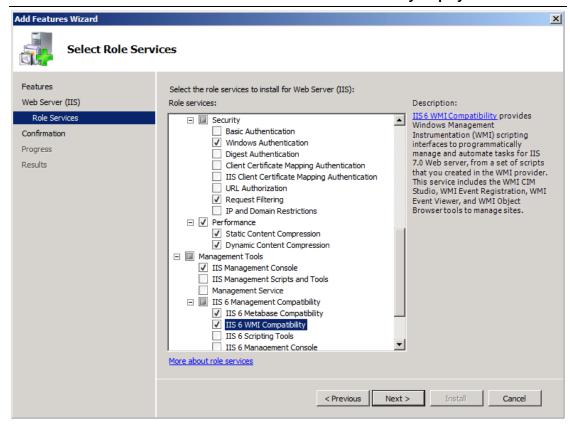


10) Choose ASP.NET Windows Authentication Dynamic Content

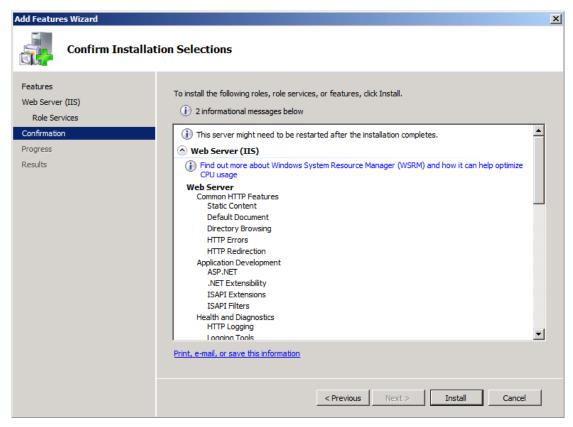
Compression and IIS 6 Metabase Compatibility items for WSUS 3.0 SP2:



11) Choose IIS6 WMI Compatibility items for SC2012 ConfigMgr RTM:

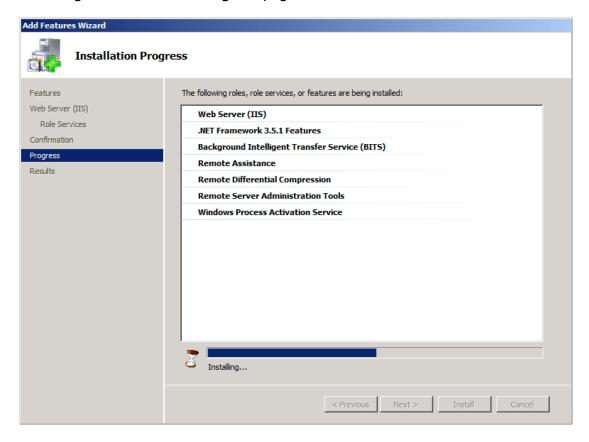


12) Click **Next**, display **Confirm Installation Selections** step:

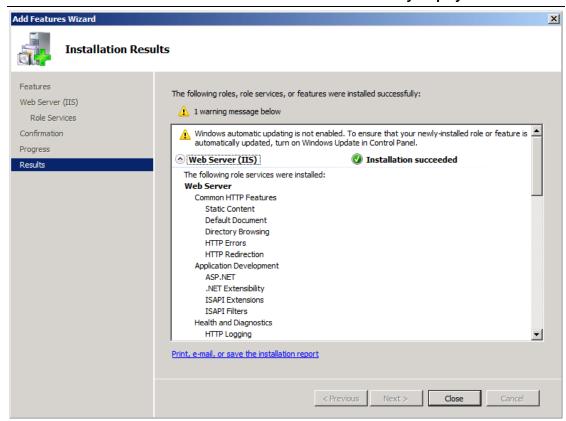


13) Make sure that all components have been selected to complete, click

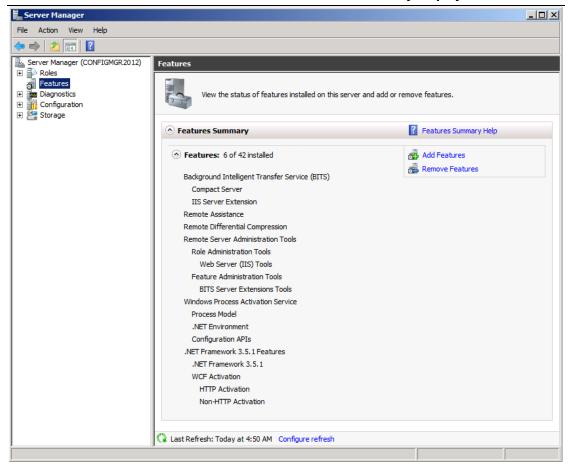
Install, go to Installation Progress page:



14) Please wait some minutes , display **Installation results** page :



15) Click Close will go to Server Manager homepage:



- 16) Last don't forget install .Net framework 4.0 tool.
- 17) By default, IIS blocks several file extensions and folder locations from access by HTTP or HTTPS communication. If your package source files contain extensions that are blocked in IIS, you must configure the **requestFiltering** section in the **applicationHost.config** file on distribution point computers. The following file extensions are used by Configuration Manager for packages and applications. Allow the following file extensions on distribution points:
- ➤ .PCK
- PKG

- ➤ .STA
- ➤ .TAR
 - 1. Open the applicationHost.config file located in the %Windir%\System32\Inetsrv\Config\ directory, Search for the <requestFiltering> section, determine the file name extensions and folder names that you will have in the packages on this distribution point. For each extension and folder name that you require, perform the following steps:
 - If it is listed as a fileExtension element, set the value for allowed to true.

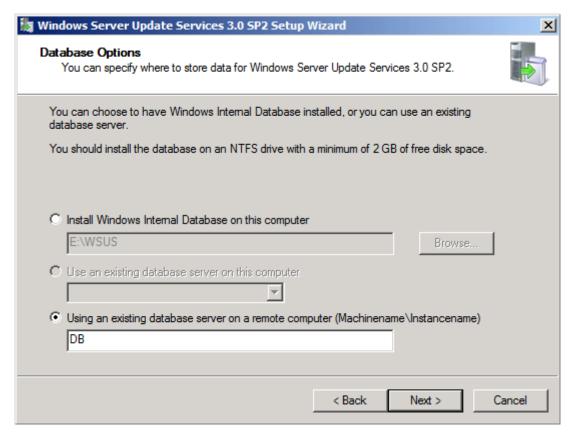
For example, if your content contains a file with an .mdb extension, change the line <add fileExtension=".mdb" allowed="false" /> to <add fileExtension=".mdb" allowed="true" />.

Allow only the file name extensions required for your content.

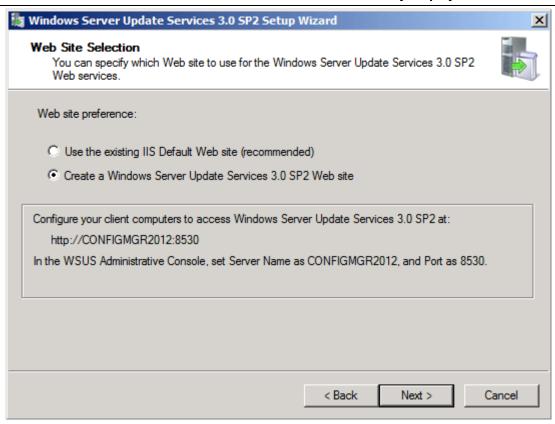
If it is listed as a <hiddenSegments> element, delete the entry that matches the file name extension or folder name from the file.
 For example, if your content contains a folder with the label of bin, remove the line <add segment="bin" /> from the file.

7. Installing WSUS 3.0 SP2:

1) Logon to **ConfigMgr2012** server ,installing WSUS 3.0 SP2, Because already installed Database on **DB**, So you can using this database for WSUS 3.0 SP2. In **Database Options** step, you can choose **Using an existing database server on a remote computer** and fill in database server name:



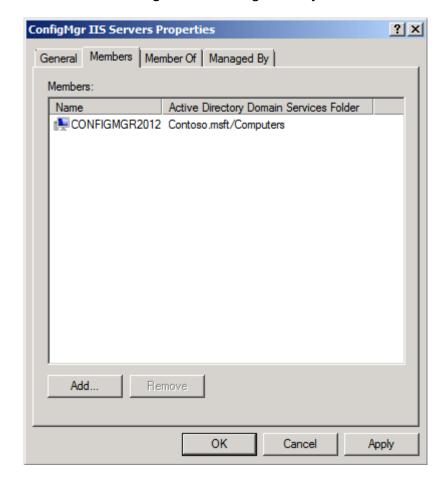
2) In Web Site Selection step you can base on your requirement to choose ,
In this deployment , I will choose Create a Windows Server Update Services 3.0
SP2 Web site :



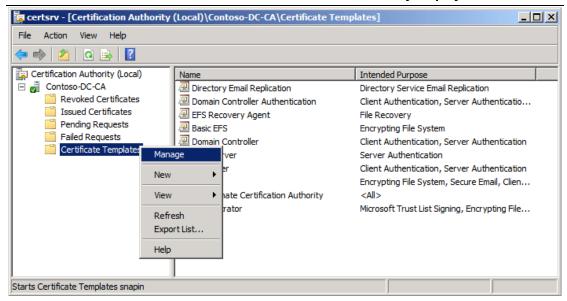
3) Click **Next** and complete the installation.

8. Configure SC2012 ConfigMgr RTM Certificates:

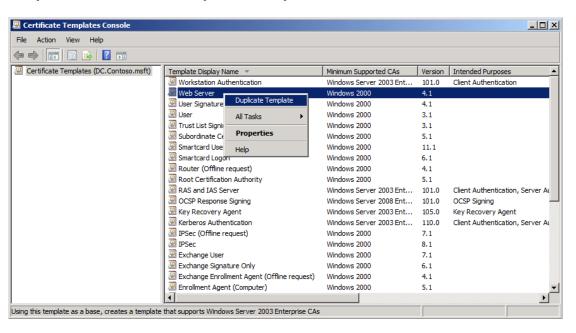
- This procedure I will create two certificates. One is Web Server Certificate,
 one is client certificate.
- 2) Logon to **DC** server , create a security group that contains the member servers to install SC2012 Configuration Manager site systems that will run IIS.



3) Open **Certification Authority** mmc snap-in console, right-click **Certificate Templates** choose **Manage**:



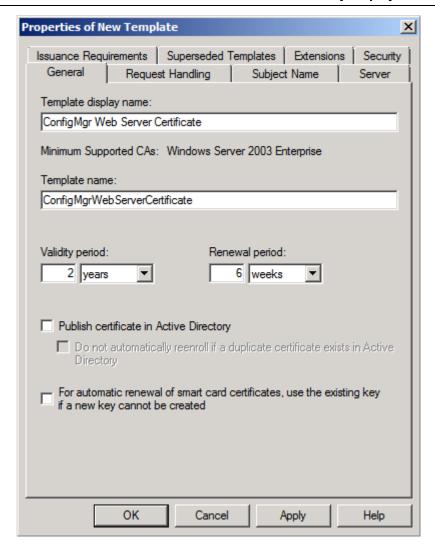
4) Certificate Templates Console will opened , right-click Web Server template , and then click Duplicate Template :



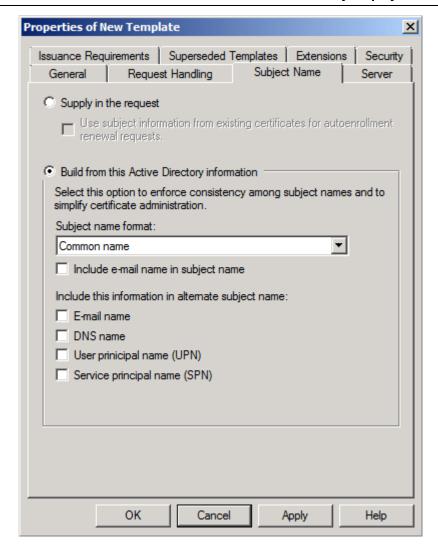
5) Display **Duplicate Template** dialog box :



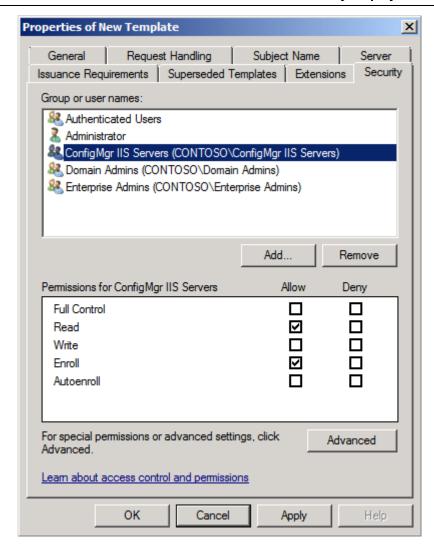
6) Ensure that **Windows Server 2003 Enterprise** is selected, and then click **OK**. In the **Properties of New Template** dialog box, on the **General** tab, enter a template name to generate the Web certificates that will be used on Configuration Manager site systems, such as **ConfigMgr Web Server Certificate**:



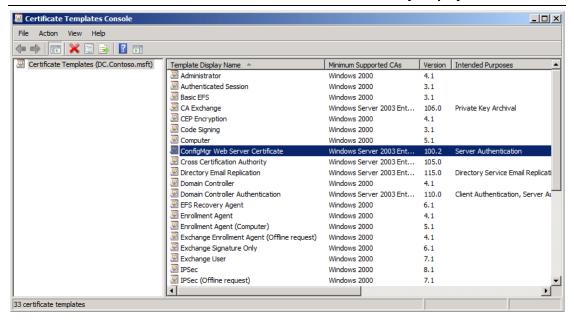
7) Click the Subject Name tab , Click Build from this Active Directory Information is selected , and then select one of the following for the Subject name format , Common name or Fully distinguished name , if you select Common name , you need to unselect User Principal name(UPN) :



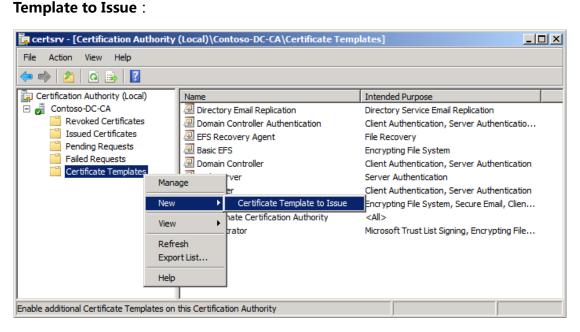
8) In the **Security** tab , remove the **Enroll** permission from the security groups **Domain Admins** and **Enterprise Admins**, click **Add** ,enter **ConfigMgr IIS Servers** in the text box , select the **Enroll** permission for this group , and do not clear the **Read** permission:



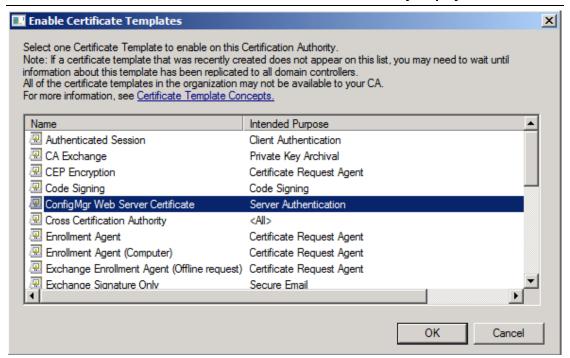
9) Click **OK** , return to **Certificate Templates Console** , you can see your just created template :



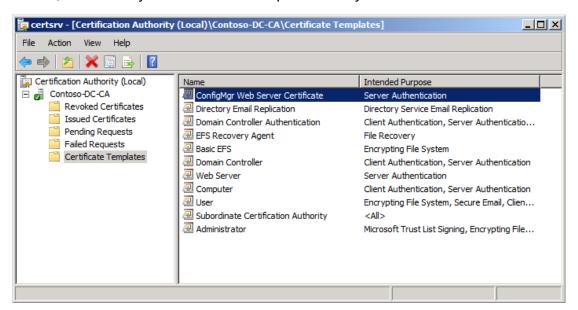
10) Close the **Certificate Templates Console**. In the **Certification Authority** console , right-click **Certificate Templates** , click **New** , and then click **Certificate**



11) In the **Enable Certificate Templates** dialog box , select the new template you have just created, **ConfigMgr Web Server Certificate** :

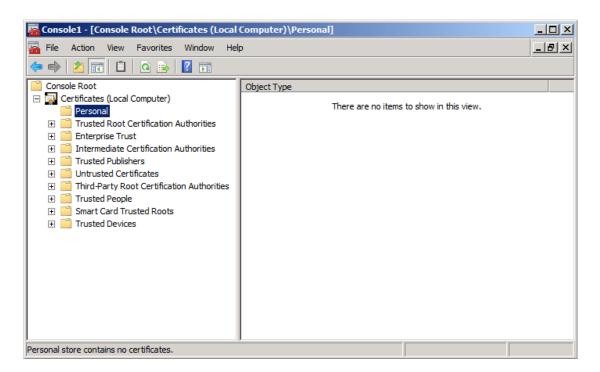


12) Click **OK**, you can see this template already added:

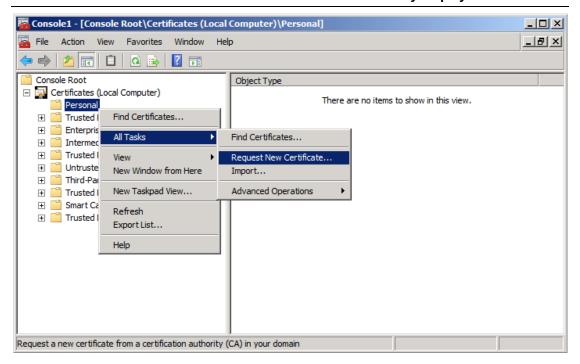


13) If you do not need to create and issue any more certificate, close Certification Authority. Restart the member server that runs IIS (ConfigMgr2012 server), to ensure it can access the certificate template with the configured permission.

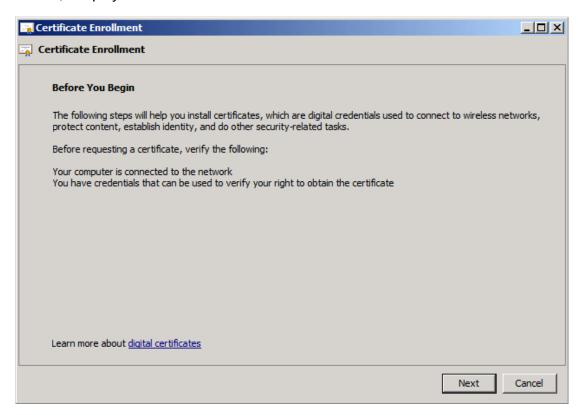
14) Logon to **ConfigMgr2012** server , in the **Certificate** snap-in dialog box, select **Computer account** , In the console , expand **Certificates(Local Computer)**, and then click **Personal** :



15) Right-click **Personal**, click **All Tasks** , and then click **Request New**Certificate...:

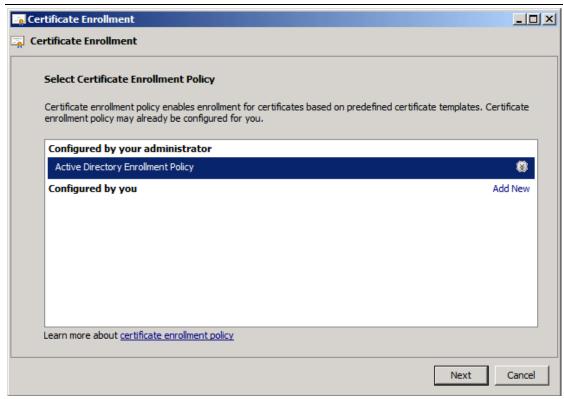


16) Display Certificate Enrollment wizard:



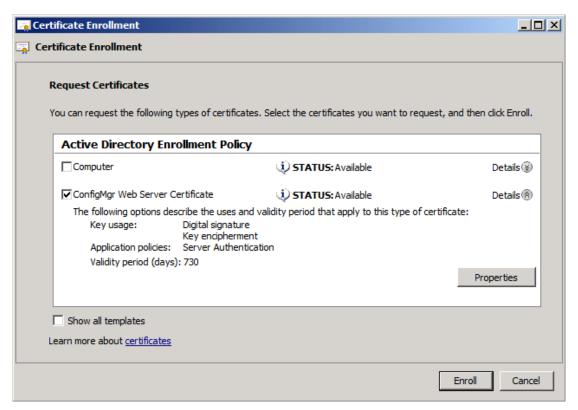
17) On the **Before You Begin** page , click **Next** , you can see **Select Certificate**

Enrollment Policy page:

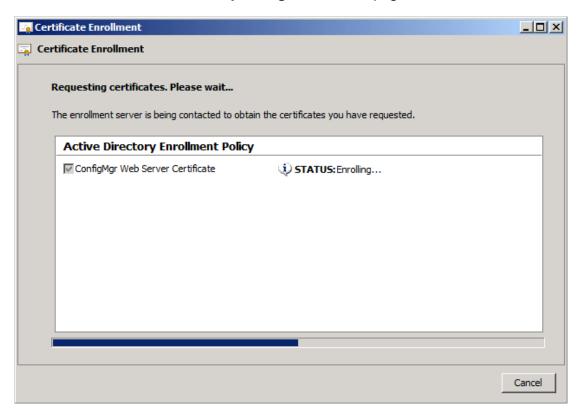


18) Click Next, On the Request Certificates page, select ConfigMgr Web

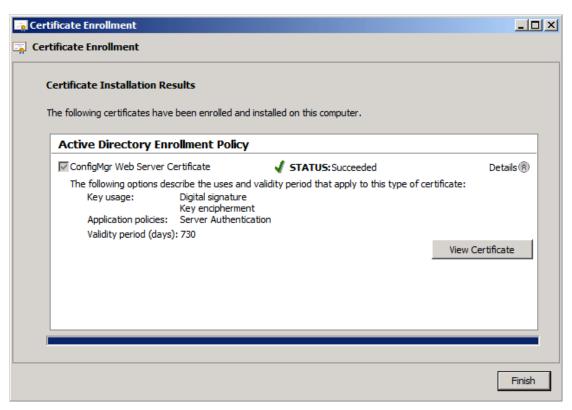
Server Certificate from the list of displayed certificates:



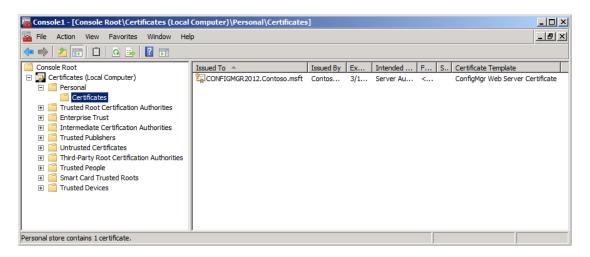
19) Click **Enroll**, on the **Requesting certificates** page:



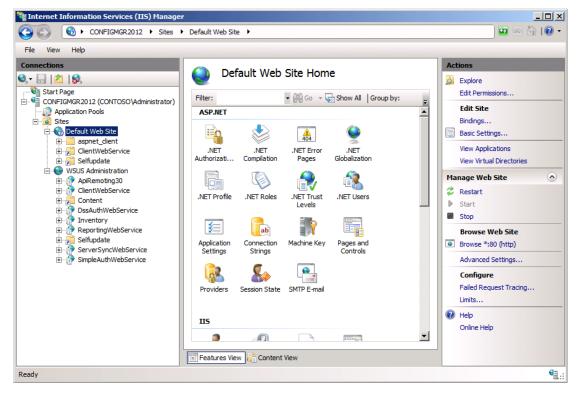
20) Wait until the certificate is installed:



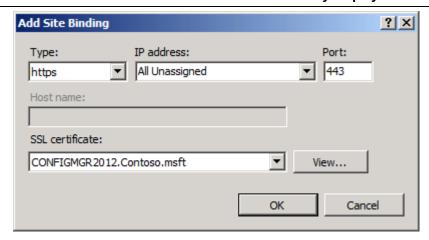
21) Click Finish, you can see a new certificate:



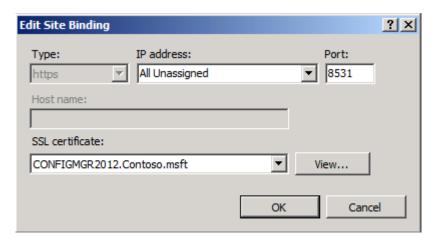
22) Close **Certificates(Local Computer)**. Open **Internet Information Services(IIS) Manager**, Right-click **Default Web Site** and then select **Bindings**:



23) In the **Add Site Binding** box , click the **https** entry , and then select the certificate that you requested by using the ConfigMgr Web Server Certificates template certificate:

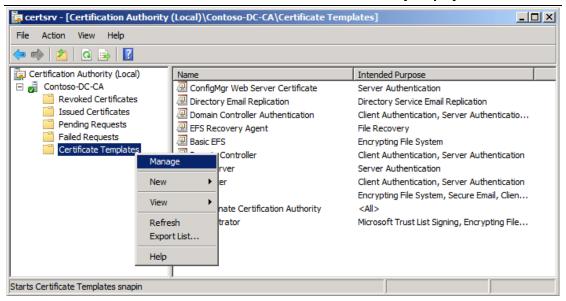


24) Click **OK**. You need to use the same step to binding this certificate to WSUS virtual directory :

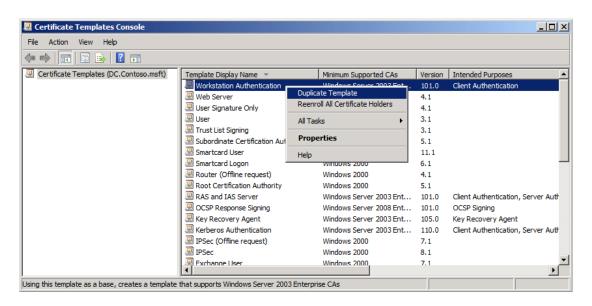


- 25) Click **OK** and close to IIS Manager.
- 26) Web certificate request finished . We will go to setting certificate for Client.

 Logon to **DC** server. Open **Certification Authority** console, right-click **Certificate Template** , and then click **Manage** to load the **Certificate Templates** management console :



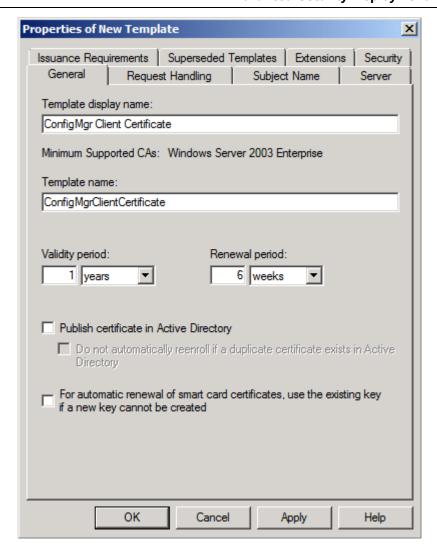
27) In the **Certificate Templates Console**, right-click the entry that displays **Workstation Authentication** in the column **Template Display Name**, and then click **Duplicate Template**:



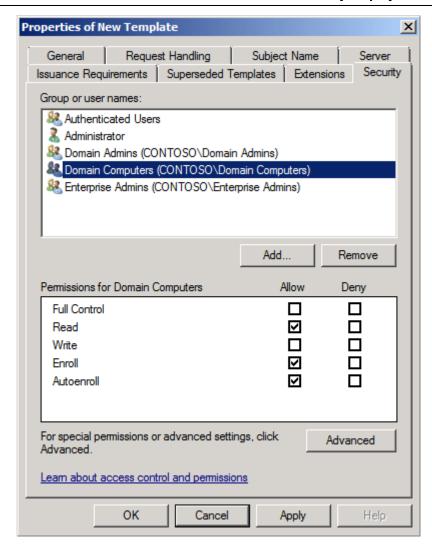
28) In the **Duplicate Template dialog** box, ensure that **Windows Server 2003 Enterprise** is selected:



29) Click **OK**, in the **Properties of New Template** dialog box, On **General** tab, enter a template name to generate the client certificates that will be used on Configuration Manager client computers, such as **ConfigMgr Client Certificate**:

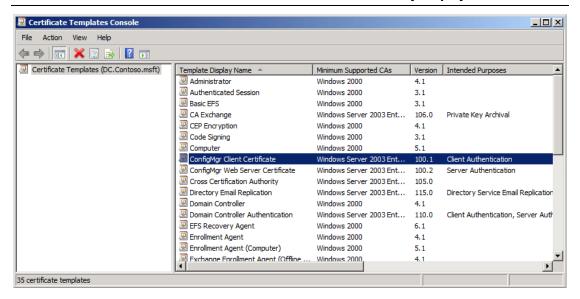


30) Click the **Security** tab , select the **Domain Computers** group, and select the additional permissions of **Read** and **Autoenroll** . Do not clear **Enroll** :



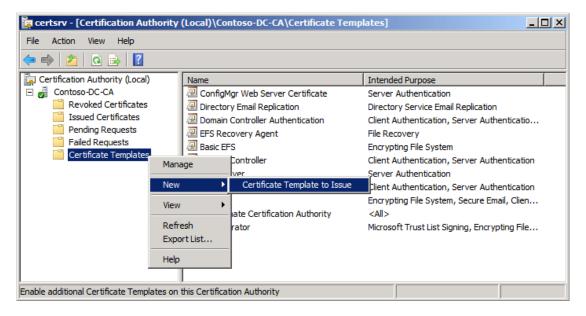
31) Click **Apply** and **OK**, you can see this new template in **Certificate**

Templates Console:

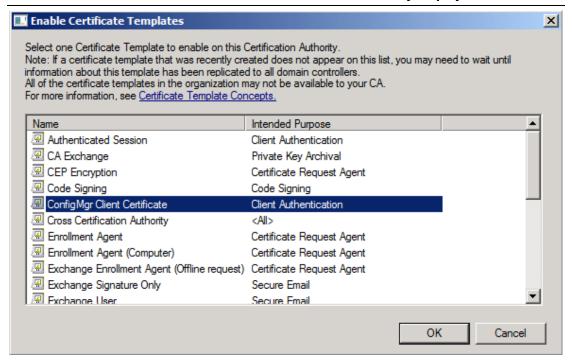


32) Close **Certificate Templates Console** , in the **Certification Authority**Console , right-click **Certificate Templates**, click **New** , and then click **Certificate**

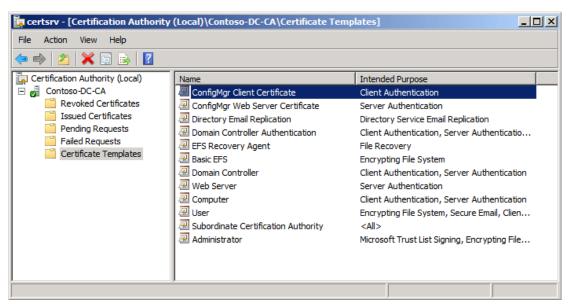
Template to Issue:



33) In the **Enable Certificate Templates** dialog box , select the new template you have just created , **ConfigMgr Client Certificate** :



34) Click **OK** , you can see this template has already added :



35) On the **DC** server ,Open **Group Policy Management** , Navigate to your domain , right-click the domain , and then select **Cteate a GPO in this domain ,** and **Link it here**. In the **New GPO** dialog box , enter a name for the new Group Policy , such as **Autoenroll Certificates** , and click **OK**. In the results pane , on the

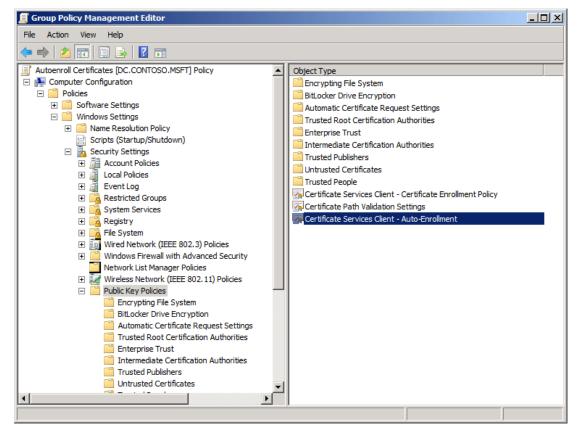
Linked Group Policy Objects tab , right- click the new Group Policy , and then click

Edit . In the Group Policy Management Editor, expand Polices under Computer

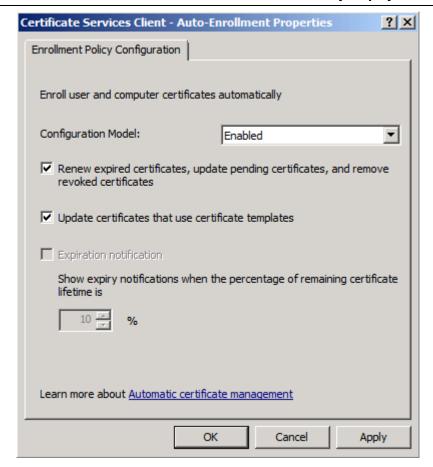
Configuration , and then navigate to Windows Settings---Security

Settings---Public Key Polices , double-click Certificate Services Client – Auto –

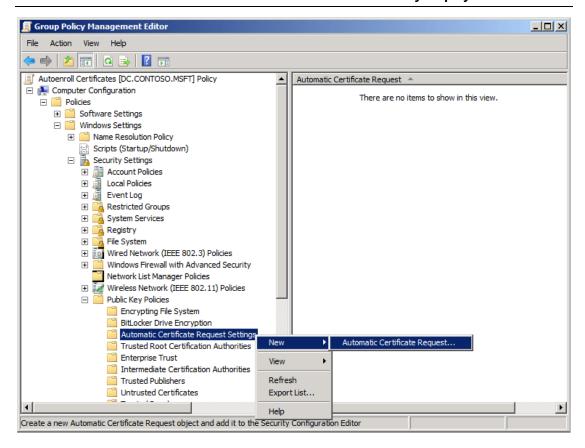
Enrollment :



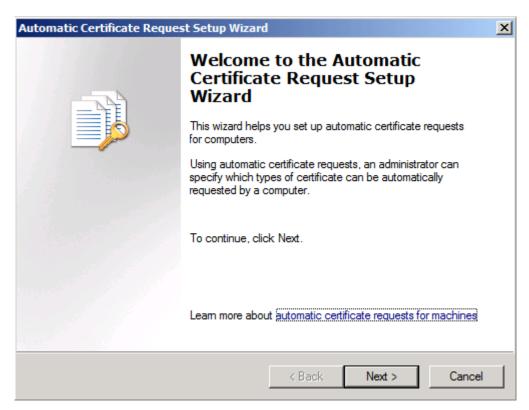
36) Display Certificate Services Client – Auto-Enrollment Properties , from the Configuration Model drop-down list , select Enabled , and select Renew expired certificates , update pending certificates ,and remove revoked certificates and Update certificates that use certificate templates:



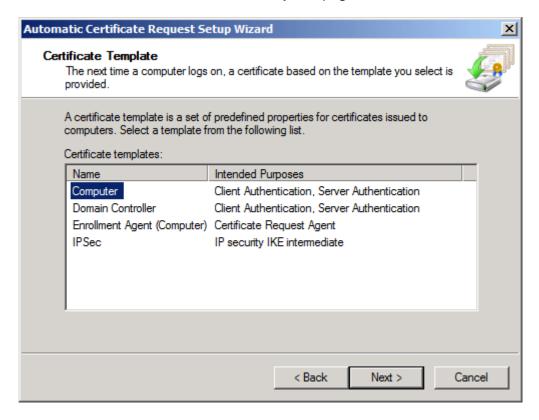
37) Click **OK**. Right-Click **Automatic Certificate Request Settings**, click **New** and then click **Automatic Certificate Request...**:



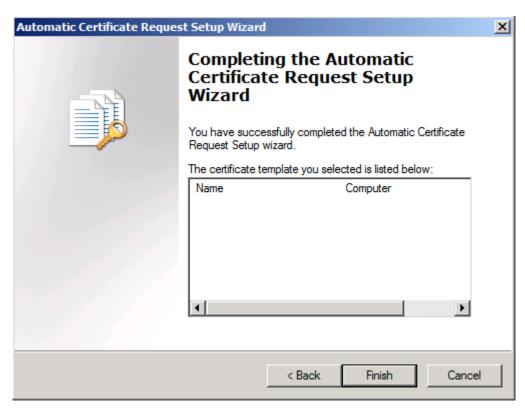
38) Display Automatic Certificate Request Setup Wizard:



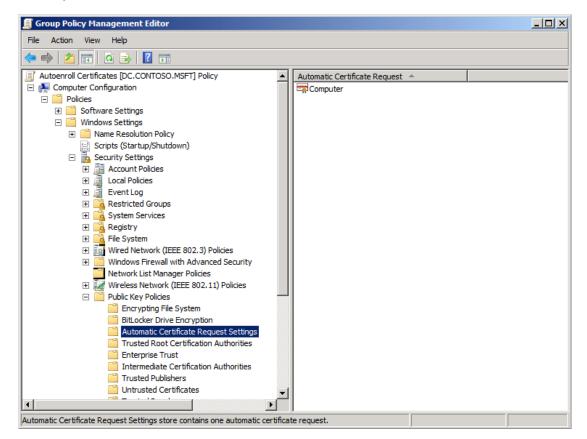
39) Click Next, in the Certificate Template page:



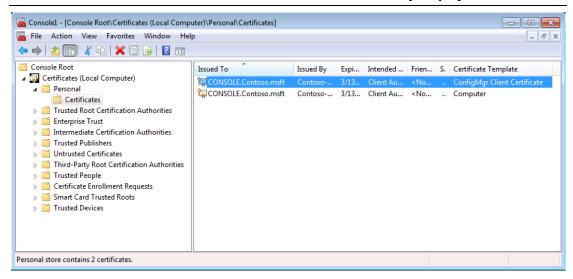
40) Select Computer and click Next until Complete:



41) Click Finish:



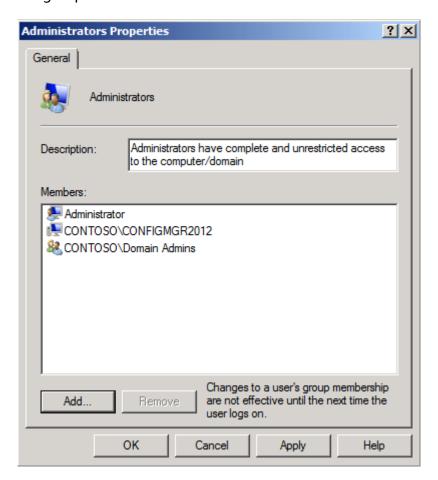
42) Close **Group Policy Management**. To automatically enroll the workstation authentication certificate and verify its installation on the client computer. Restart the **Client** computer, and wait a few minutes before logging on. Logon with an account that has administrative privileges. Open Certificate snap-in mmc, select **Computer account**. In the console, expand **Certificates(Local Computer)**, expand **Personal**, and then click **Certificates**, in the results pane, confirm that a certificate is displayed that has Client Authentication displayed in the **Intended Purpose** column, and that **Configmgr Client Certificate** is displayed in the **Certificate Template** column:



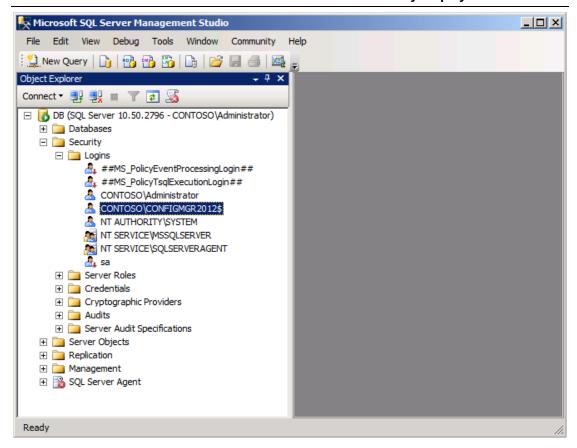
43) Close **Certificates(Local Computer)**. You can repeat these steps to verify that the server that will be configured as the management point also has a client certificate.

9. Install SC2012 ConfigMgr RTM Primary Site Server:

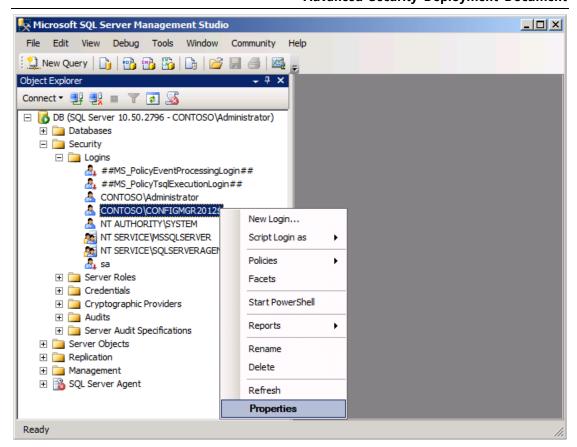
 First , logon to **DB** server , add **ConfigMgr2012** computer account to local administrators group :



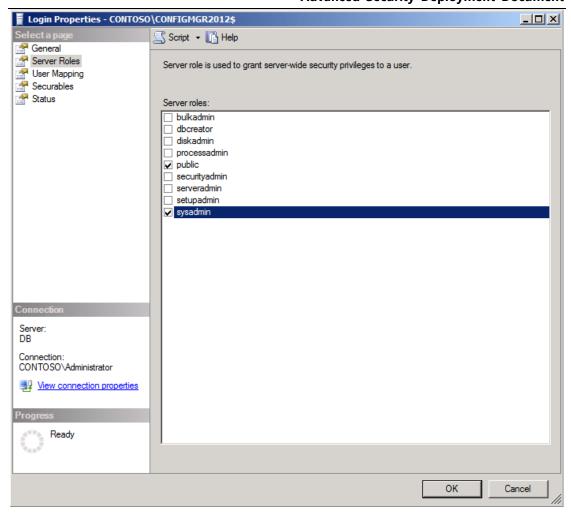
2) open Microsoft SQL Server Management Studio , click Logins node , you can see CONFIGMGR2012\$ account :



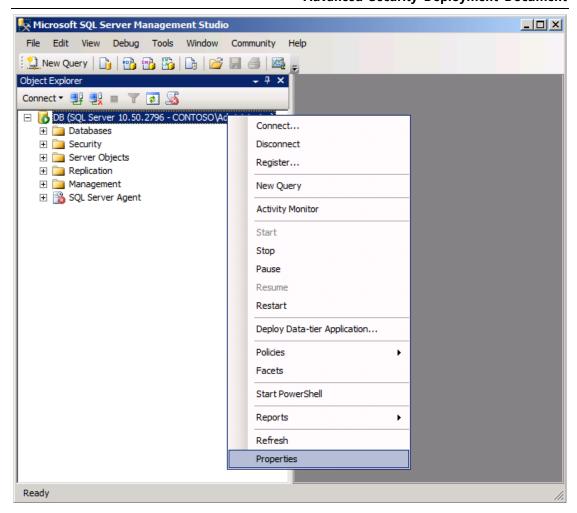
3) Right-click this account and click **Properties**:



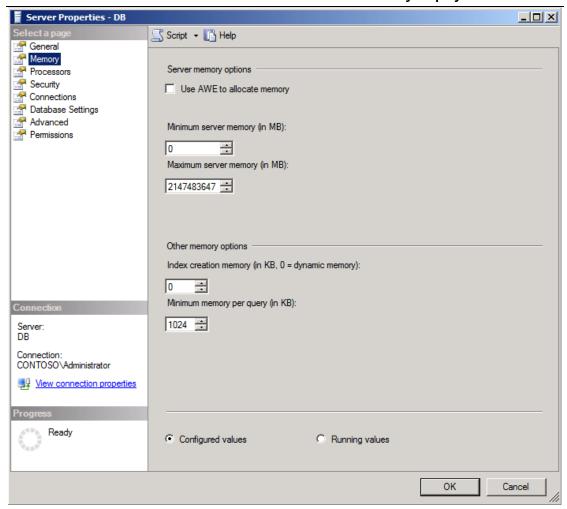
4) The Login Properties will display , click **Server Roles** item and select appropriate privilege can create database in the future , like **sysadmin**:



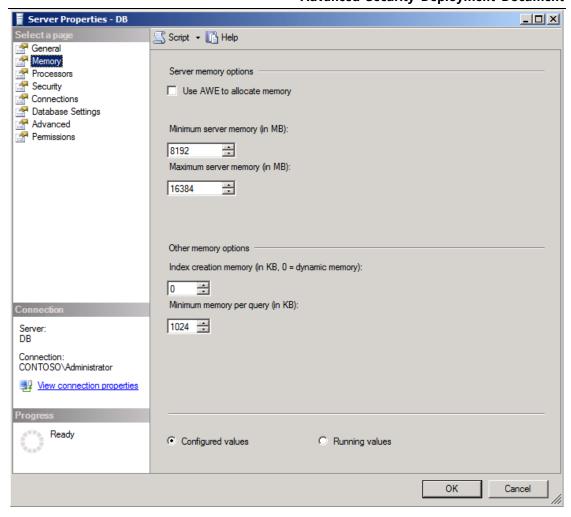
5) Click **OK** to finish . Right-click root node and click **Properties** :



6) Click **Memory** page:

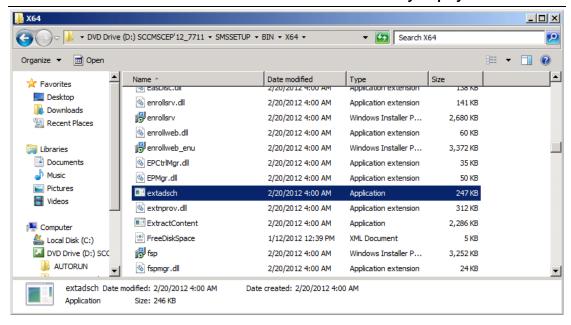


7) Fix **Minimum server memory** and **Maximum server memory** items to appropriate capacity:

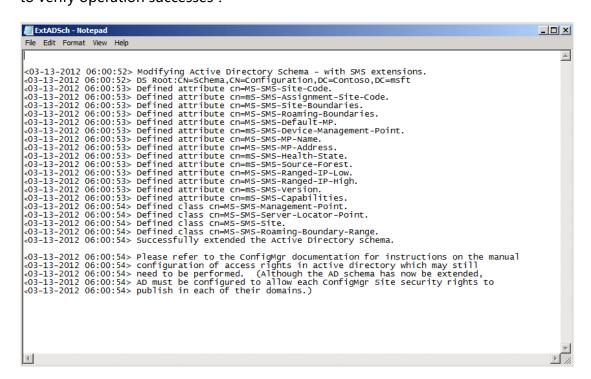


- 8) Click **OK** and close this console.
- 9) Logon to **DC** server, I will need to extend AD schema before install SC2012

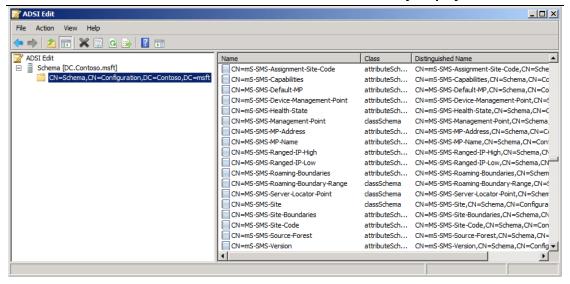
ConfigMgr RTM. Insert SC2012 ConfigMgr RTM image , find extadsch.exe tool :



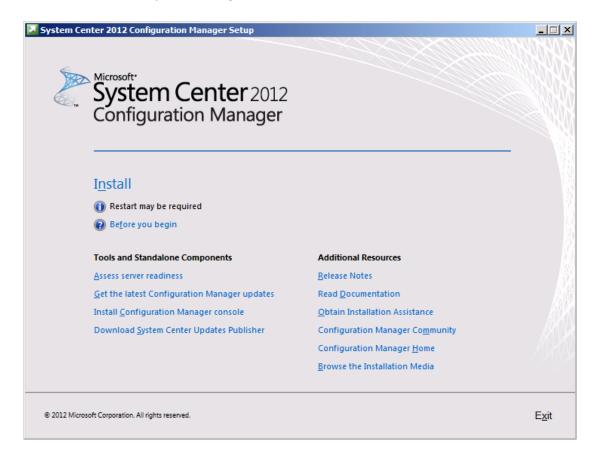
10) Double-click to run this tool, and you can check the **ExtADSch.txt log** file to verify operation successes:



11) Open **ADSIEdit.msc** , you can see all SC2012 ConfigMgr RTM create attributes and classes :



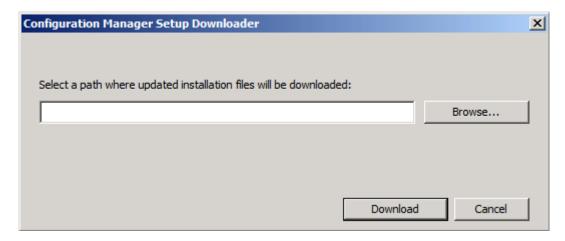
12) Logon to **ConfigMgr2012** server , insert SC2012 ConfigMgr RTM image , auto-run and display install page :



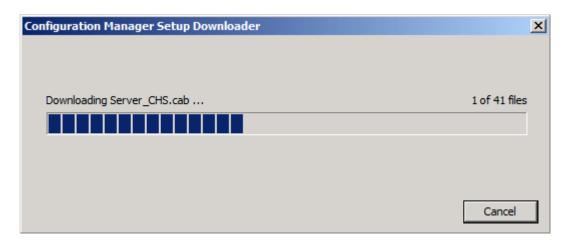
13) First , I will click **Get the latest Configuration Manager updates** to download SC2012 ConfigMgr RTM needed updates , **Configuration Manager**Justin Gao 高扬
yanga@microsoft.com

http://blogs.technet.com/b/justin_gao

Product Updater box will display:

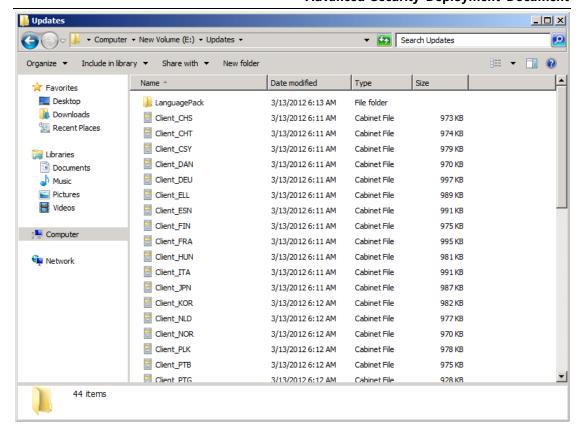


14) Click **Browse...** to define path , click **Download** will downloading all needed updates :

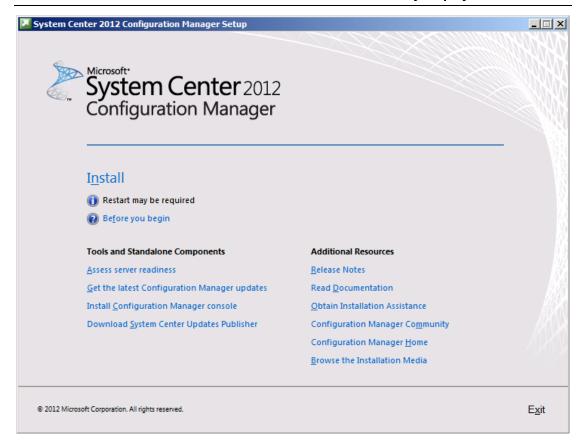


15) Please wait some minutes , you can see all downloaded updates in define path :

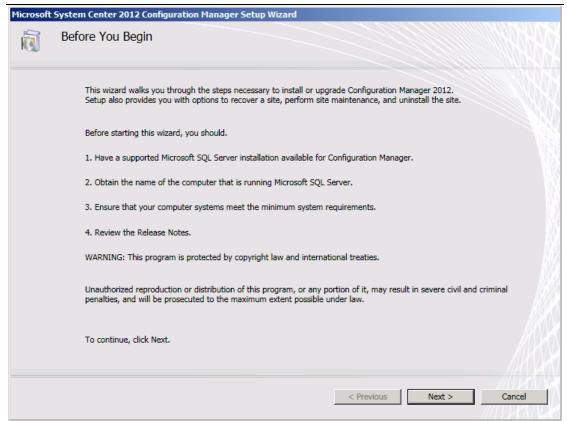
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Configuration Manager RTM
Advanced Security Deployment Document



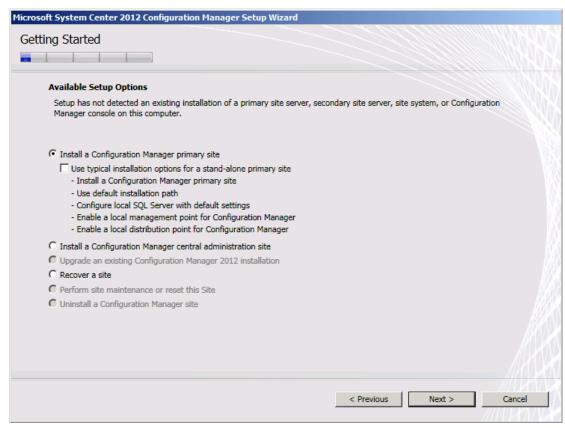
16) Now, I will officially begin installing SC2012 ConfigMgr RTM:



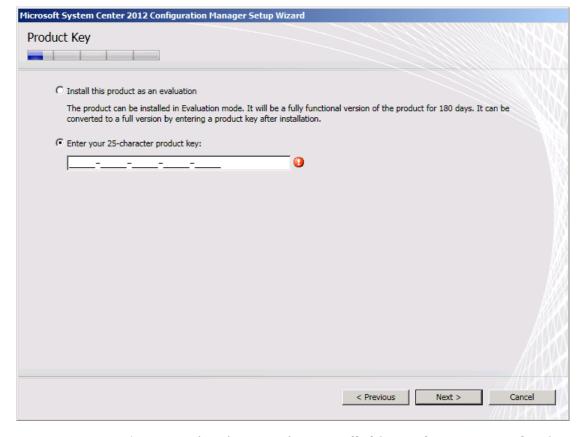
17) Click Install will display welcome page:



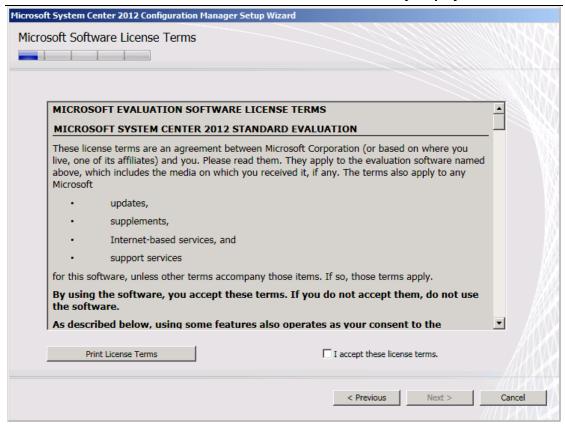
18) Click Next, into Getting started page:



19) You can choose Install a Configuration Manager Primary Site server or Install a Configuration Manager Central Administration Site based-on your needed. Now I will install SC2012 ConfigMgr RTM Primary Site server, so I will select Install a Configuration Manager Primary Site server, and unselect Use typical installation options for a single server installation, click Next, display Product Key page:

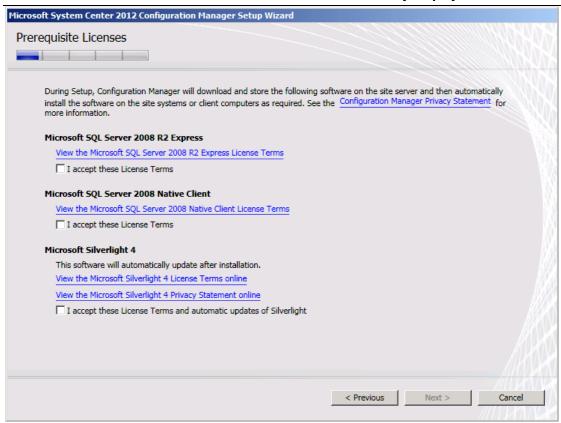


20) You can input product key or select **Install this product as an evaluation** to evaluate this product , click **Next** , display **Microsoft Software License Terms** page :

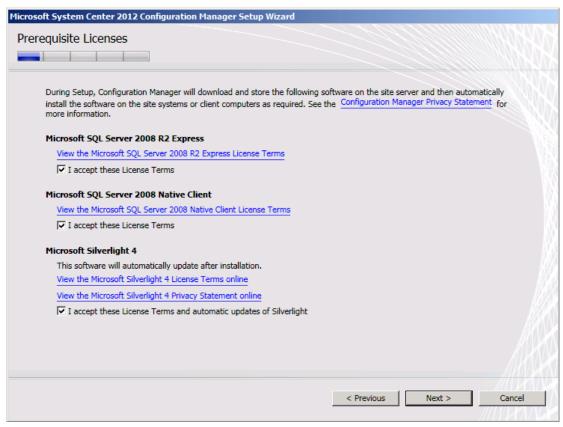


21) Select I accept these license terms , and click Next , into Prerequisite

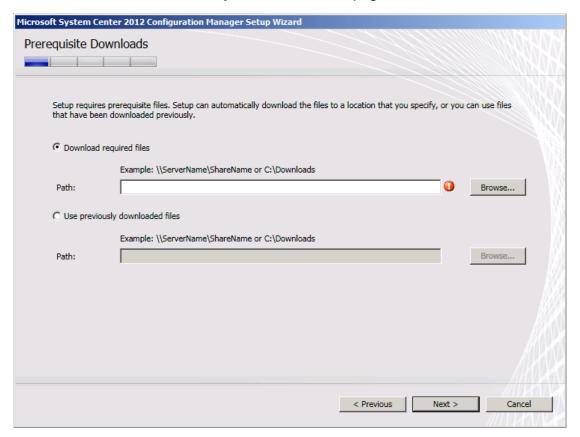
Licenses page:



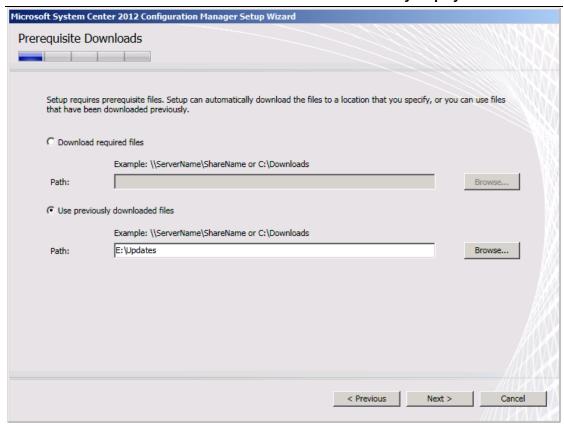
22) Select all items:



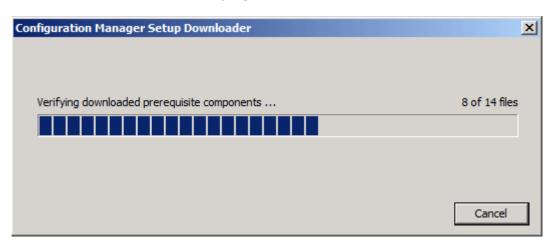
23) Click Next, into Prerequisite Downloads page:



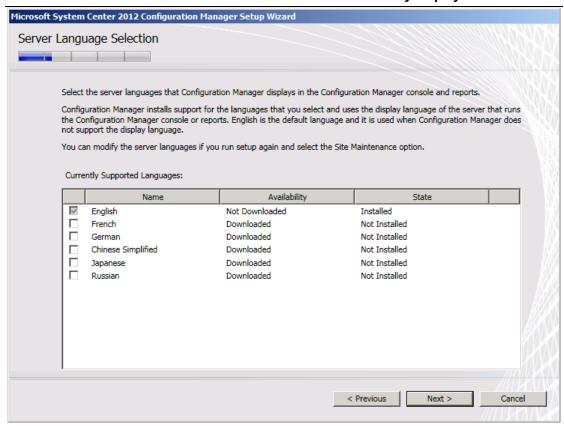
24) Because we already downloaded all updates , so we can select **Use** previously downloaded files and click **Browse...**to specify path :



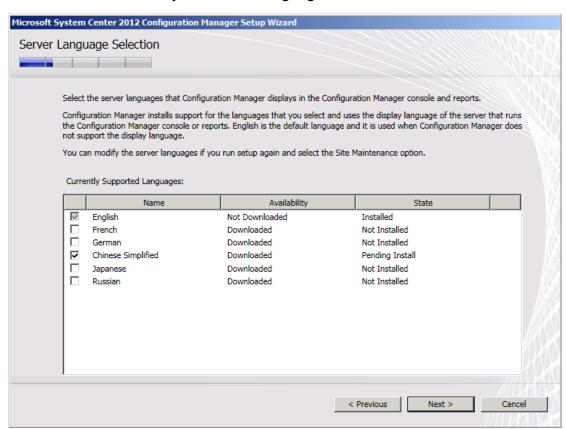
25) Click **Next**, start to verifying updates:



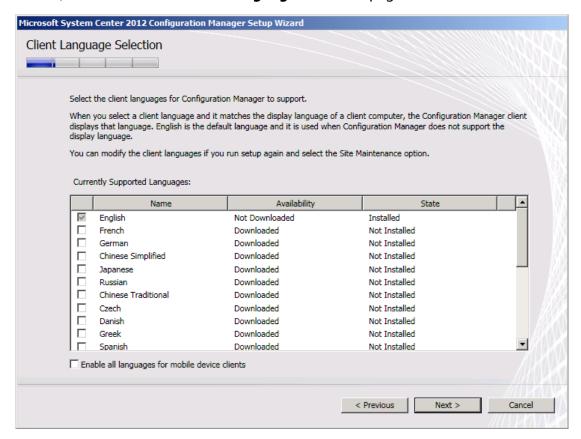
26) Wait some minutes , into Server Language Selection page :



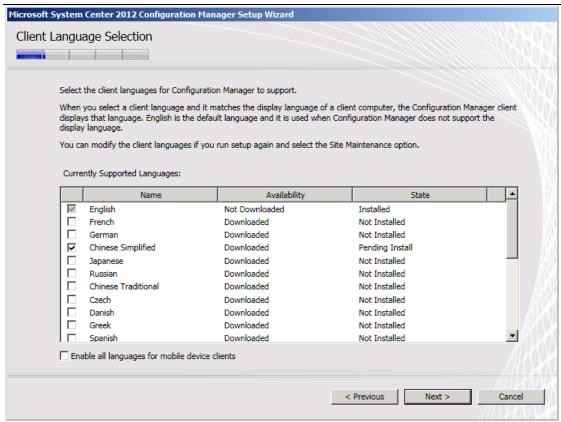
27) You can choose your needed language:



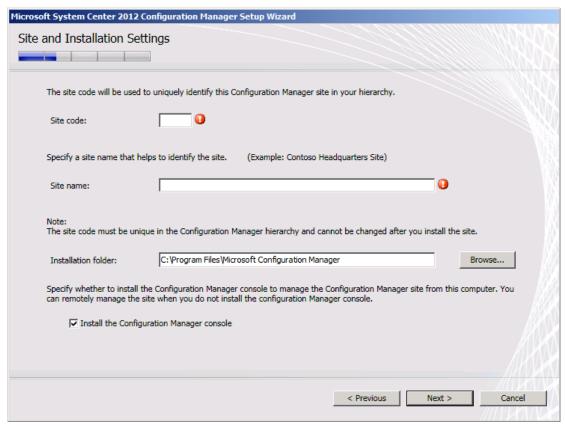
28) Click Next, into Client Language Selection page:



29) You can choose language that your managed client :

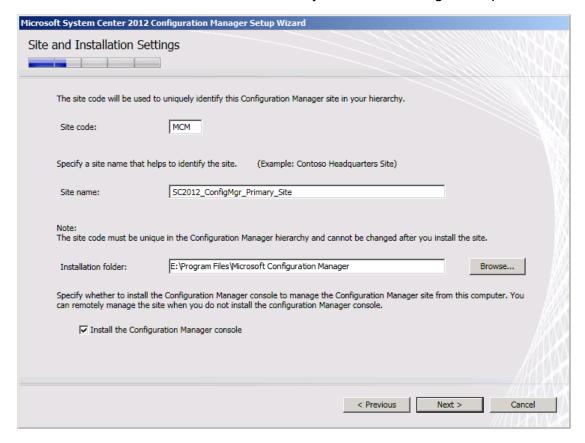


30) Click Next, into Site and Installation Settings page:

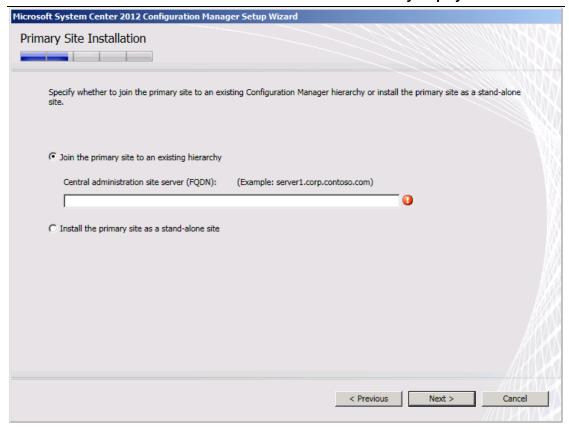


31) In **Site code** box, you need to assign site code, and setting site name in the

Site name box , in **Installation folder** box , you need to setting install path :

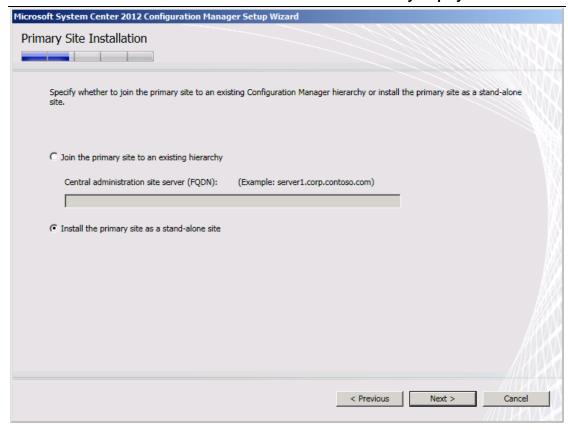


32) Click Next, into Primary Site Installation page:

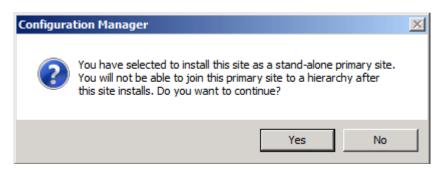


33) Because this deployment just have standalone Primary site, so I will select

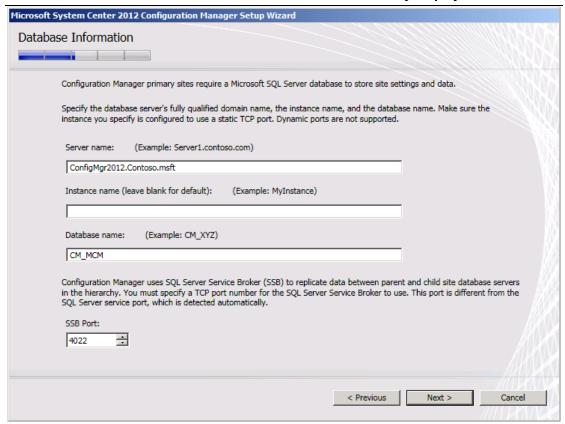
Install the primary site as a stand-alone site :



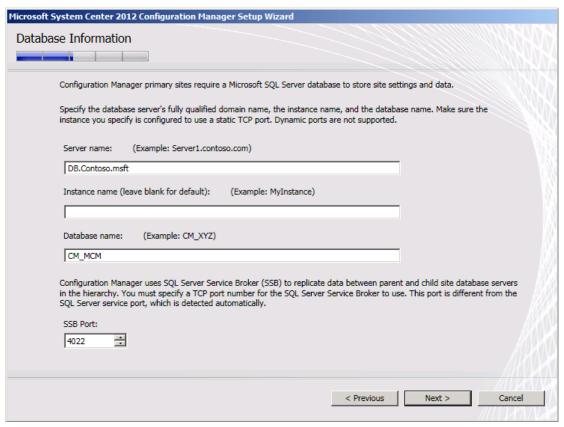
34) Click **Next**, will display this information box:



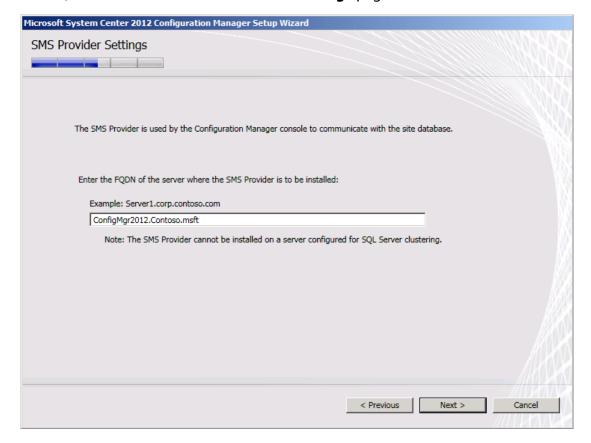
35) Click Yes, into Database Information page:



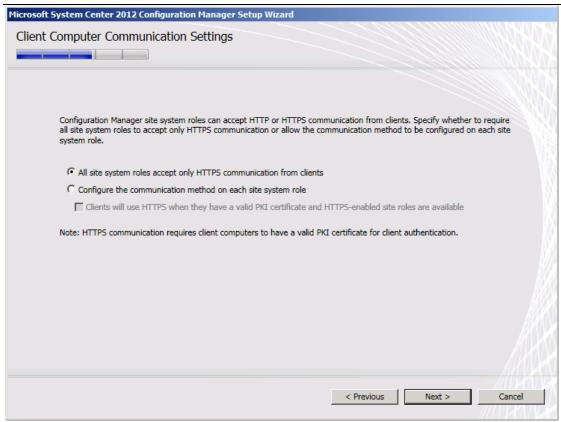
36) You can setting based on your requirement:



37) click Next, into SMS Provider Settings page:



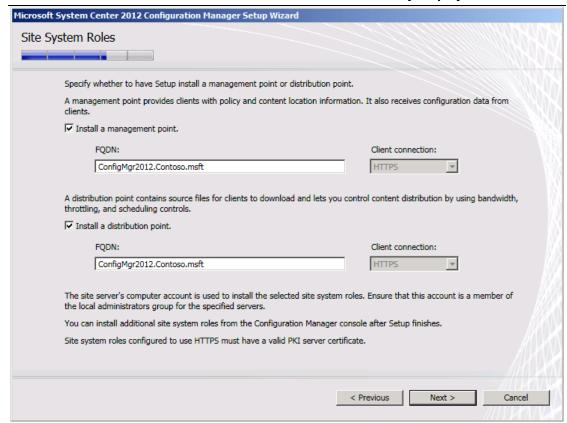
38) Click Next, into Client Computer Communication Settings page:



39) Because I already configured all certificates for SC2012 ConfigMgr RTM, so please confirm select **All site system roles accept only HTTPS communication**from clients, and click **Next**, display this information box:

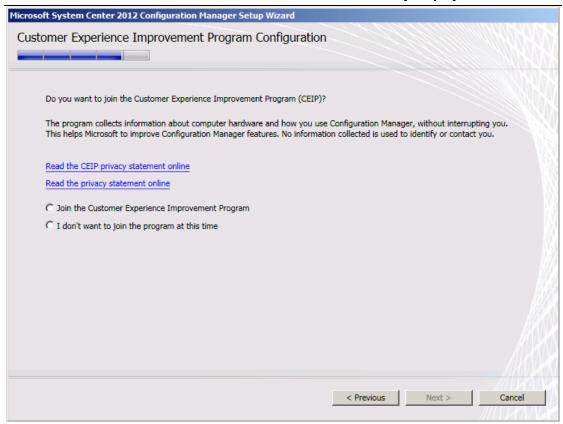


40) Click **Yes** into **Site System Roles** page :

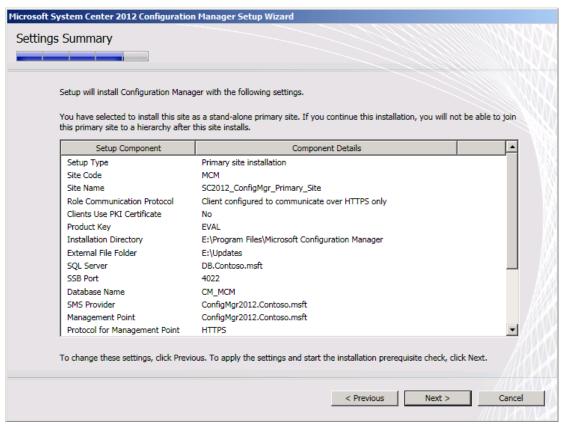


41) Click Next , into Customer Experience Improvement Program

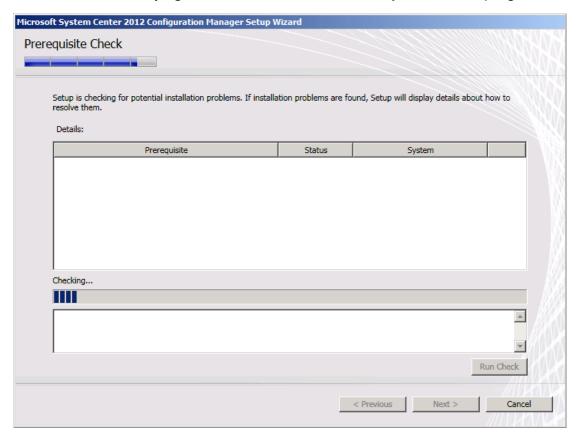
Configuration page:



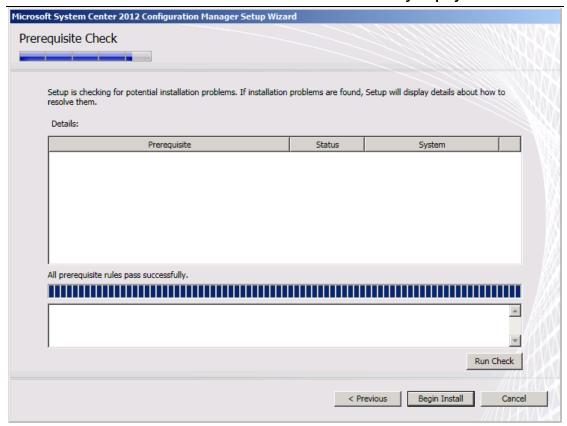
42) Select your needed item and click Next, into Settings Summary page:



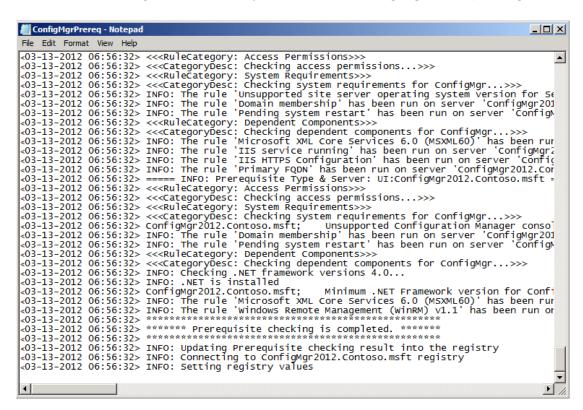
43) You can verify again and click **Next** , into **Prerequisite Check** progress :



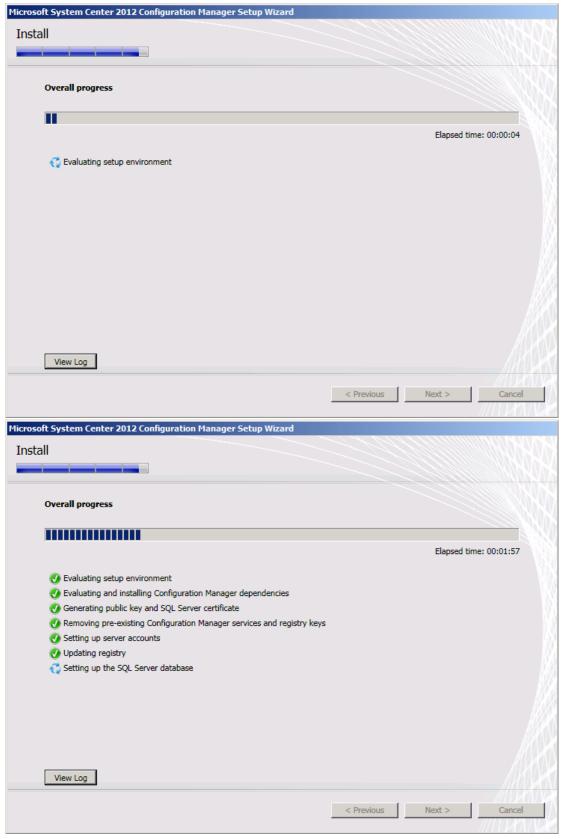
44) Please wait some minutes check completed:

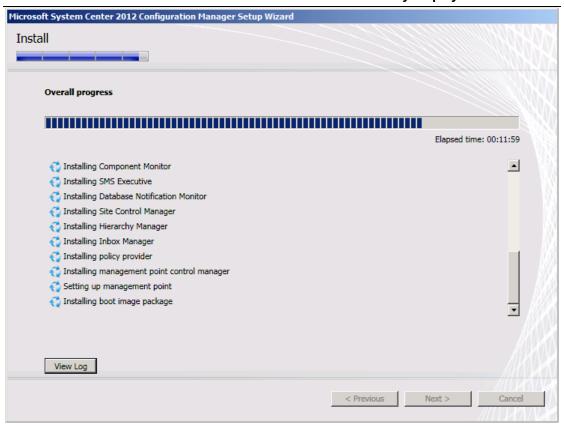


45) No warning and No error , you can check **ConfigMgrPrereq.txt** log file :

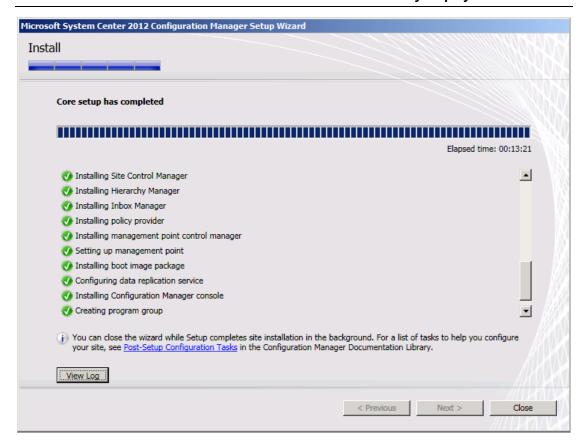


46) Click **Begin Install** to starting installing progress:

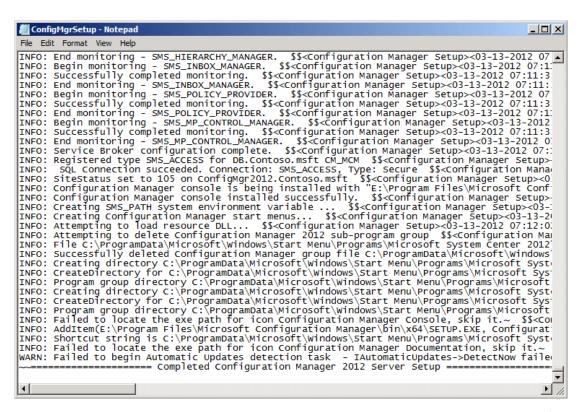




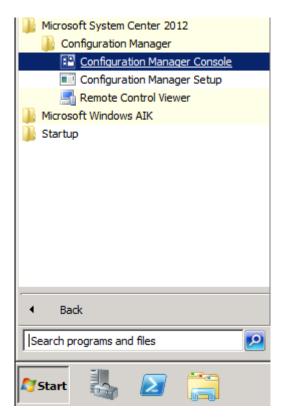
47) Wait 10-20 minutes, setup completed:



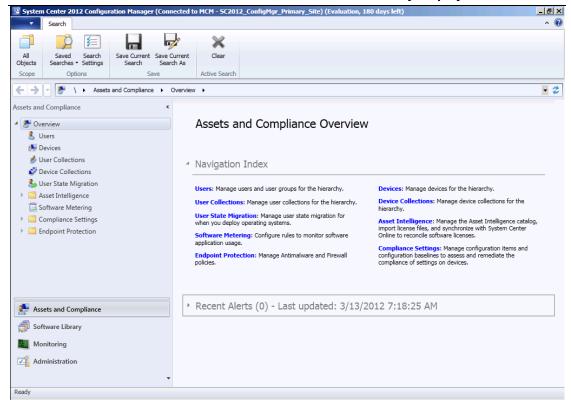
48) Click View Log can open ConfigMgrSetup.log file:



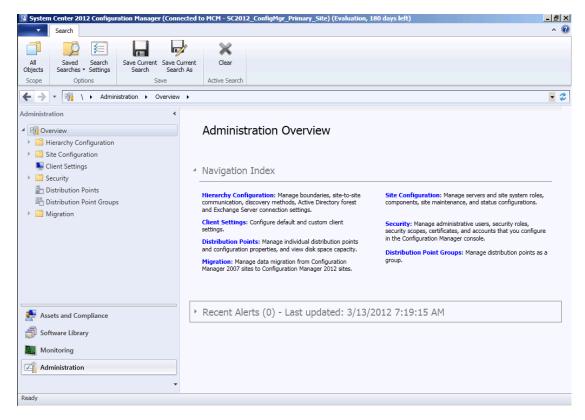
49) Click **Close** and click **Start** , click **Configuration Manager Console** shortcut :



50) System Center Configuration Manager management console opened , will display Assets and Compliance tab :

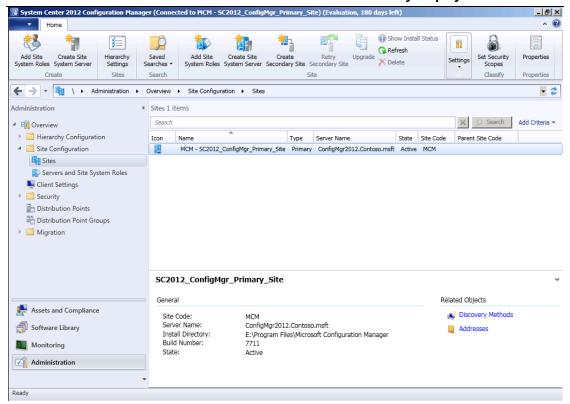


51) Click Administration tab:

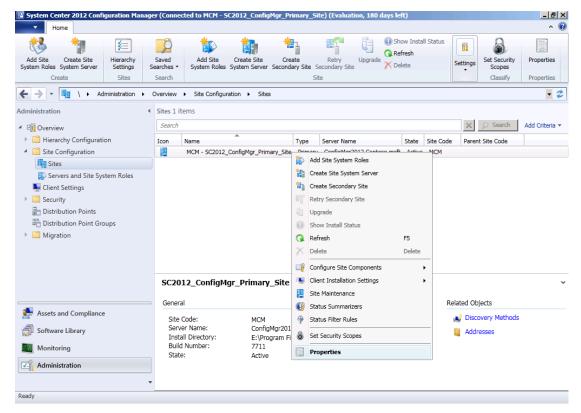


52) Click Site Configuration --- Sites:

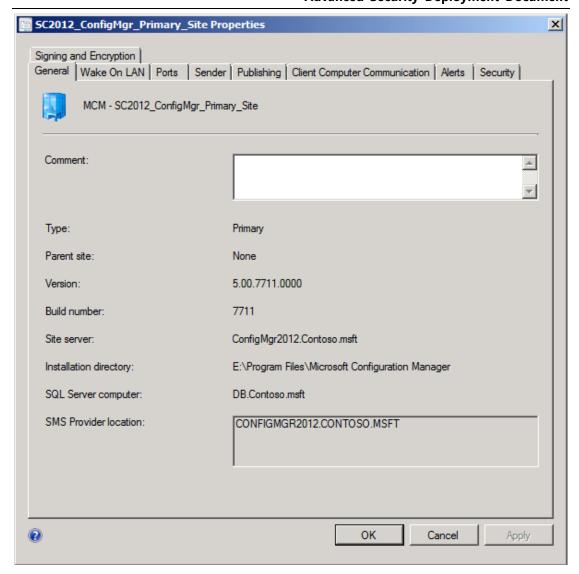
System Center 2012 Configuration Manager RTM Advanced Security Deployment Document



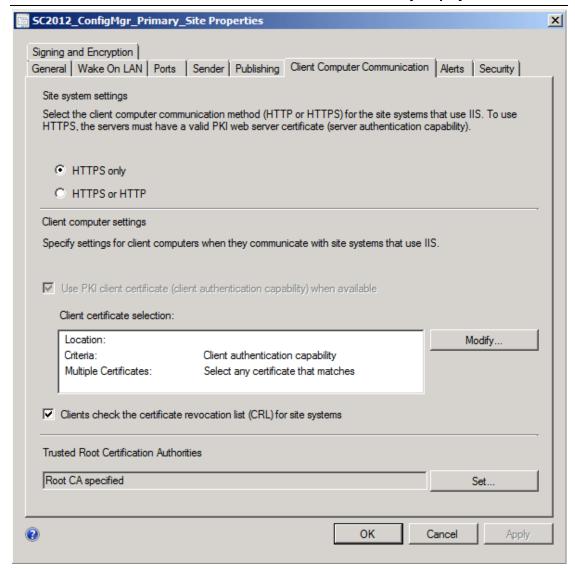
53) Right-click site name select **Properties**:



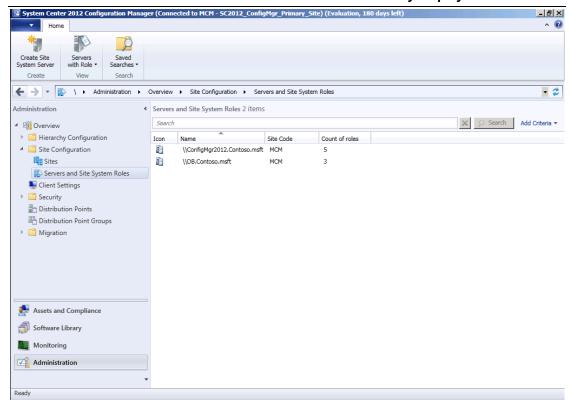
54) Display SC2012_ConfigMgr_Primary_Site Properties:



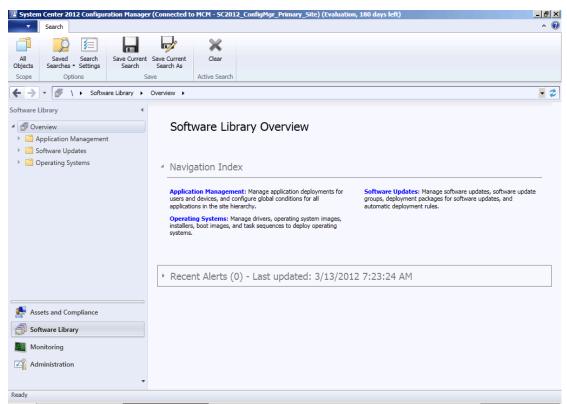
55) Now we can see about SC2012 ConfigMgr RTM version and other information. Click **Client Computer Communication** page, we can see about security settings:



56) Click **OK** to close . Click **Servers and Site System Roles** node , you can see all site server and holding roles:

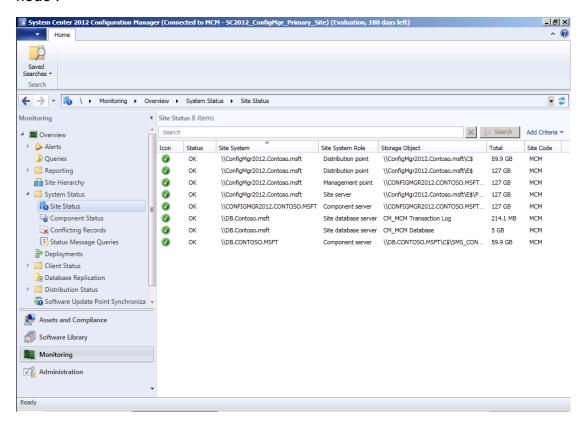


57) **Software Library** page:

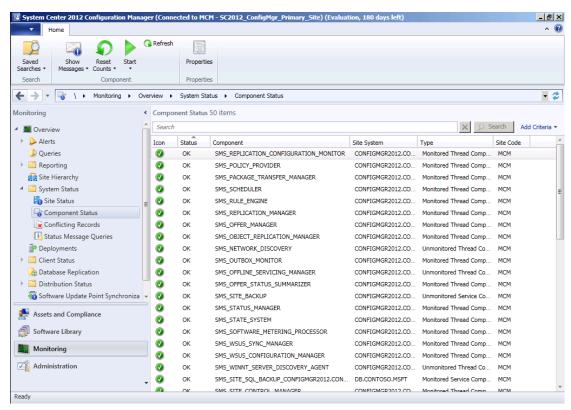


58) In Monitoring page, you can monitor all site roles status in the Site Status

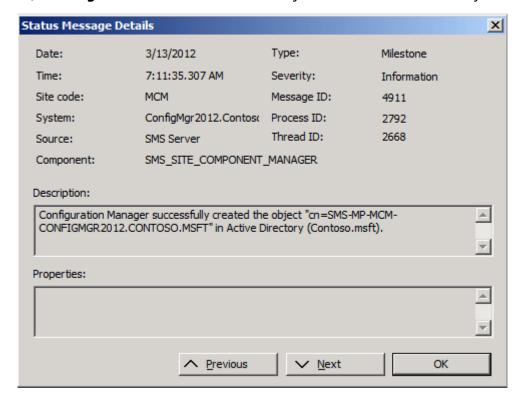
node:



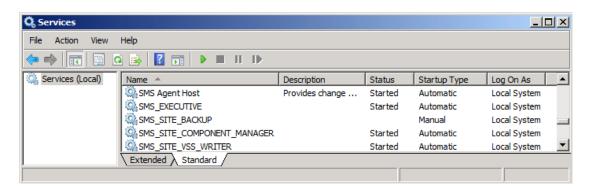
59) In **Component Status** node you can monitoring all site services status:



60) Message ID 4911 will indicate MP object will created successfully in AD:

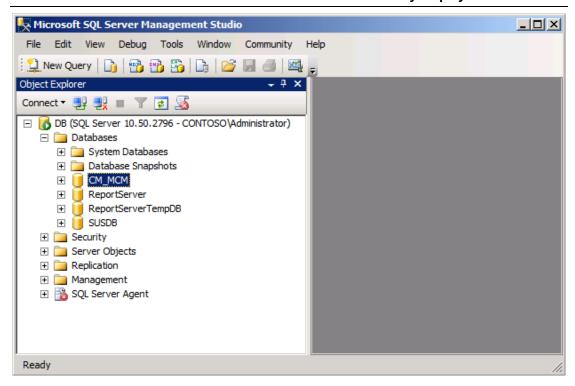


61) Open Services.msc, you can see all SC2012 ConfigMgr RTM all services:

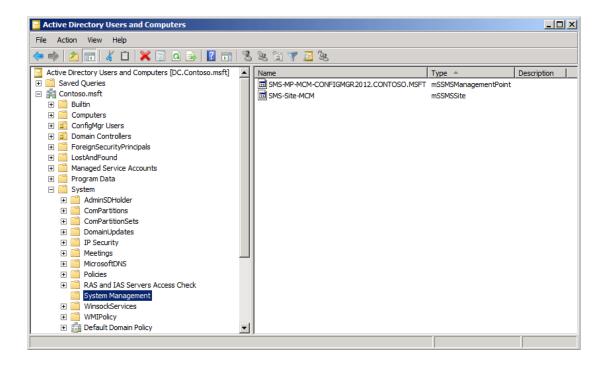


62) Open **SQL Server Management Studio** , you can see SC2012 ConfigMgr

RTM database CM_MCM:



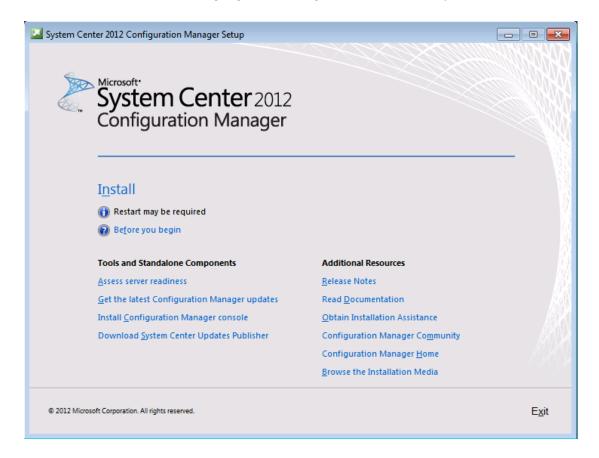
63) Logon to **DC** server , open ADUC snap-in console , in **System** container you can see **System Management** container :



64) Now SC2012 ConfigMgr RTM Site server deployment finished.

10. Installing SC2012 ConfigMgr RTM Remote Console:

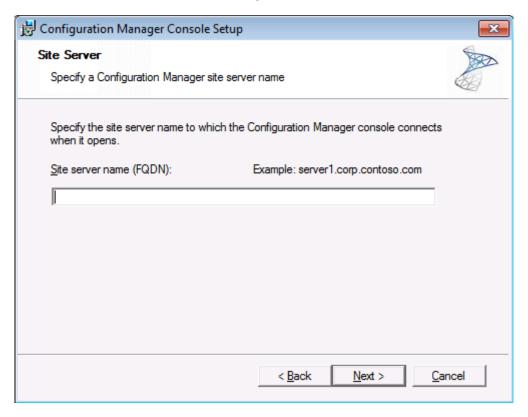
- Use Administrator logon to Console computer, install .Net Framework 4.0 tool.
 - 2) Insert SC2012 ConfigMgr RTM image, will auto display:



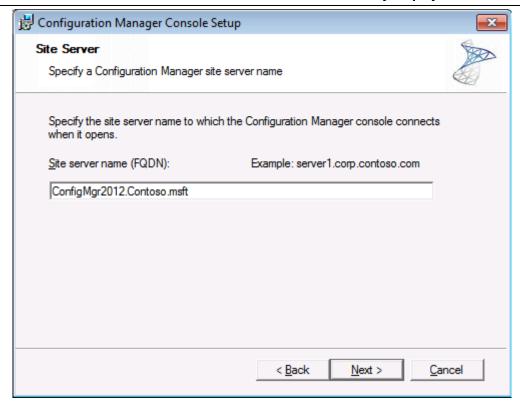
3) Click Install Configuration Manager console, display this wizard:



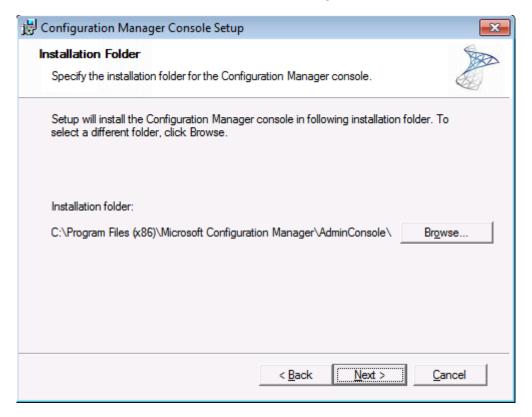
4) Click Next, into Site Server page:



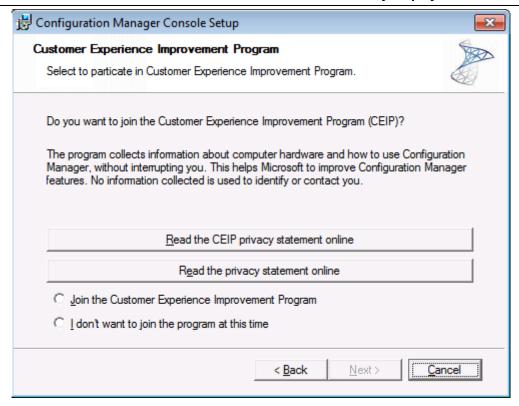
5) Enter SC2012 ConfigMgr RTM site server FQDN name in **Server name**:



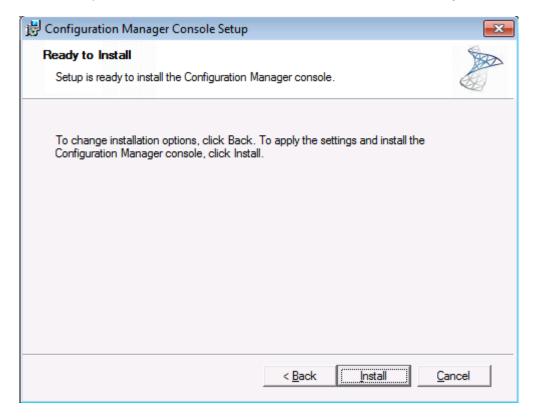
6) Click Next, into Installation Location page:



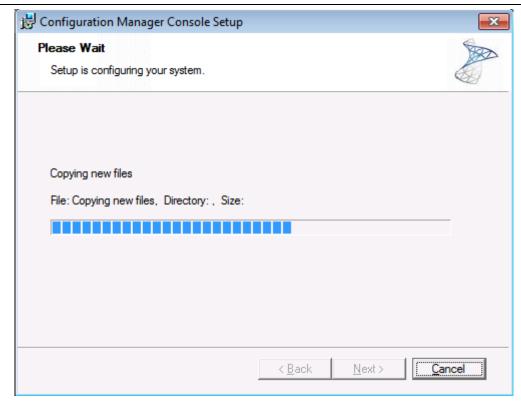
7) Click Next, into Customer Experience Improvement Program page:



8) Select your needed and click **Next**, into **Ready to Install** page:



9) Click **Install** starting install progress:

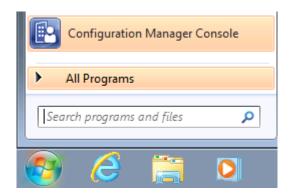


10) Please wait some minutes, display finished page:

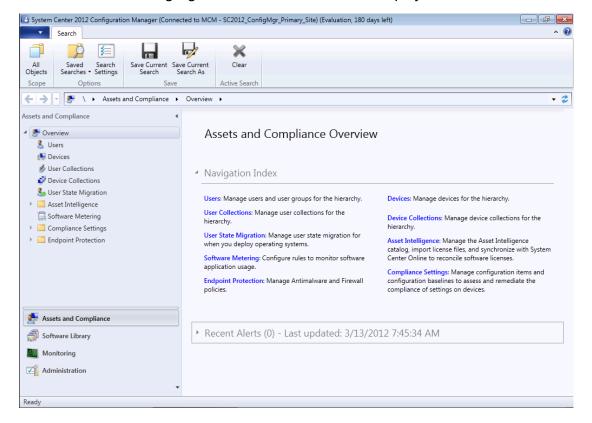


11) Click Finish will open SC2012 ConfigMgr RTM Administration Console, the

same you can point Windows Button and click **Configuration Manager Console** to open :



12) SC2012 ConfigMgr RTM remote console will display:



13) Now System Center 2012 Configuration Manager RTM Advanced Security deployment fully finished.