

# Ex 2 - Shopping 5.6 - Installing Shopping

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## Installing Shopping

In this lab, you will install all Shopping Central components on the **1ETRNPAP** server along with the Shopping Receiver on the **1ETRNCM** server. In addition, the Shopping agent will be installed on all PCs using ConfigMgr.

### Prepare the environment

In this exercise, you will prepare the lab environment with the necessary configuration and components required by Shopping.

Always refer to the latest product documentation (<http://help.1e.com>) for details of pre-requisites and system requirements for the version of Shopping you are installing.

### Understanding Shopping Users and Groups

Several components of Shopping are run with the identity of either a defined user account or a special system account (such as Network Service). Beyond the accounts used by the system, there are also roles within Shopping that define the level of access that users of the system have. These roles are assigned to AD security groups and users are added into these groups to assign them the associated role. In this task, you will review the accounts and groups that need to be created or designated for Shopping.

#### Installer Accounts

The installation of the various Shopping components requires specific permissions. Whichever user performs the installation of the various components requires the permissions specified below.

To install the **Shopping Central** server components, the installer account requires the following:

In this lab, the **1ETRNPAppInstaller** account will be used to install the Shopping Central components and has already been configured with all the necessary permissions to do so, as specified in this section.

- Local admin rights on the server that Shopping Central is being installed on
- SQL Server sysadmin rights on the Shopping Database server

Best practice is to create the **Shopping2** database prior to running the installer, so the database and log files can be created at the correct size on suitable drives. If the database has already been created, the user performing the Shopping Database installation needs db\_owner rights on the Shopping2 database.

- Local admin rights on the ConfigMgr server that Shopping will connect to
- SQL Server sysadmin rights on the ConfigMgr Primary site database server that Shopping Central will connect to (the CAS in multi-site hierarchy) in order to create a SQL Login for the Shopping Central service account (this is then added as a user to the ConfigMgr database)
- Must be a member of the local SMS Admins group on the ConfigMgr server as the installer adds ConfigMgr security rights (through WMI) for the Shopping Central Service account

- Must be configured as a Full Administrator in ConfigMgr
- Must have a minimum of "Write Member" security right on the *Full Shopping DB Admin Access* and *SMS / ConfigMgr Database Access* AD groups defined during installation either through the UI or the installer properties SHOPPINGCONSOLEADMINUSERS and SHOPPINGCONSOLESMSUSERS.

To install the **Shopping Receiver**, the installer account requires the following:

In this lab, the **1ETRN\SCCAdmin** account will be used to install the Shopping receiver component on 1ETRN and that account has the necessary rights to do so. No additional configuration is required.

- Local admin rights on the ConfigMgr Primary site server where the Receiver is being installed
- Must be a member of the local SMS Admins group on the ConfigMgr server and a member of the Full Administrators role in ConfigMgr as the installer adds ConfigMgr security rights (through WMI) for the Shopping Receiver Service account

In production environments, the ConfigMgr administrator will usually be asked to install the Shopping Receiver component. This simplifies things (in the majority of cases) as no additional accounts need to be created and no additional rights need to be granted to install the Shopping Receiver.  
**Shopping Central Service account**

The Shopping Central Service security principal is a Domain User specified during Shopping Central installation (through either the installer UI or using the SVCUSER and SVCPASSWORD installer properties).

In this lab environment, you will use **1ETRN\svc\_ShoppingCentral** as the Shopping Central Service account.

This account requires the following permissions and configuration. Items marked \* are configured by the Shopping Central installer.

#### On the Shopping Central server

- Log on as a service user right\*

#### On the Shopping database

- Access to the Shopping database is managed through Database Roles (db\_ShoppingConsoleAdmin and db\_ShoppingConsoleUser). The installer adds the Shopping Central service user to *Full Shopping DB Admin Access* group, which in turn is associated with the db\_ShoppingConsoleAdmin role in the Shopping database

#### On the ConfigMgr Primary site server (or CAS)

- db\_datareader role on the ConfigMgr database\*

The Shopping Central Service account will be added to the SMS/ ConfigMgr Access group defined during installation, either through the installer UI or through the installer property SHOPPINGCONSOLESMSUSERS. This group is in turn added to the db\_datareader role in the ConfigMgr database. All this is taken care of by the installer, which is why the Installer Account requires "Write Member" permissions on the AD group and sysadmin role on the ConfigMgr database server.

#### In Active Directory

- Requires an email account to be defined in the Email attribute of the user. This email account is used to send system emails to administrators
- If Shopping AD Integration is to be used to manage self-service of AD group membership, the Shopping Central Service account must have write access to the AD groups which are to be managed by Shopping

In this lab, the groups to be managed through Shopping are contained in a specific OU, to which the *Shopping Central Service* has Full Control permissions on all descendant group objects.

If a Group Policy that enforces the *Access this computer from the network* local user rights setting is applied to the ConfigMgr Primary Site server that Shopping Central integrates with, this policy must be updated to include the Shopping Central service (i.e. enabling the Shopping Central service to access the ConfigMgr server remotely). If no such policies are applied to the ConfigMgr server, there is no requirement to create one (default settings for a Server grant this user right to Everyone and Users).

#### Shopping Receiver Service account

The Shopping Receiver Service runs on each ConfigMgr Primary Site and primarily manages the creation of Collections and Deployments on the local site.

By default, the Shopping Receiver Service will use the local computer's **NETWORK SERVICE** security principal. It is best practice to create a Domain User account and use this for all Shopping Receivers. If there is an absolute requirement to use different accounts for different Primary sites (this scenario includes using the default **NETWORK SERVICE** account on each Receiver), it will be necessary to create a Shopping Receivers group, which will be used to grant the necessary security rights to securable objects that the receiver needs to access.

Note that this user (or group if multiple accounts are used) must be specified first during the Shopping Central installation, either through the installer UI or using the RECEIVERACCOUNT installer property as the Central Service uses this as a means of authorizing the receiver that is connecting to it. For each Receiver installation, the account user name and password must also be provided to install the service, through either the UI or the SVCUSER and SVCPASSWORD installer properties.

In this lab environment, you will use the **1ETRN\svc\_ShoppingReceiver** account as the Shopping Receiver service account.

The Shopping Receiver account requires the following permissions. Items marked \* are configured by the Shopping Receiver installer.

#### On each ConfigMgr Primary Site

- Log on as a service user right\*
- Membership of the local SMS Admins group\* (required for access to the SMS Provider)
- The following ConfigMgr Security Rights are required

Class	Permission
Applications	Read
Collections	Full
Configuration Policy	Full
Distribution Point	Read
Distribution Point Group	Read
Global Condition	Full
Site	Read
Status Messages	Read
Task Sequence Package	Read
Users	Read

The ConfigMgr security rights will be applied using an imported security role that is preconfigured with the appropriate rights.

- **db\_datareader** role on the ConfigMgr database
- **EXECUTE** permission on the ConfigMgr database scalar functions *fn\_GetAppState* and *fnGetSiteNumber*

The EXECUTE permission on the two functions above will be granted by the installer.

The Shopping Receiver service account no longer has to have administrator privileges on client computers. Configuration Manager policy refreshes for new requests and re-shopping are now done using the Client Notification feature of Configuration Manager.

#### Management Accounts and Groups

Before installing Shopping, you must define a Shopping Admin account or group in AD that will be used the first time you open the console (additional users can be added through the console). You also need to define AD groups that will be assigned to the Report Viewer and License Manager roles in the Shopping console.

#### Shopping Admin account/group

The Shopping Admin account or group specified during the Shopping Central Service installation (either in the UI or by the ADMINACCOUNT installer property) is initially the only security principal that has visibility of all nodes in the Shopping Admin Console and the Administration tab in the Shopping Web Portal.

During the Shopping Central installation, the Shopping Admin account (or group), is also added to the *Full Shopping DB Admin Access* and *SMS /ConfigMgr Access* groups (detailed later in this section) to provide the necessary access to the Shopping and ConfigMgr databases to perform all admin tasks.

This account (or group) must have a valid email account defined in AD.

Use a group, with an associated email Distribution List (DL) rather than a single account, as this enables Shopping administrators to be easily managed through AD group membership.

In this lab environment, the Shopping Admin group is **1ETRN\Shopping\_Admins**, with an email DL of [shopping\\_admins@1etrn.local](mailto:shopping_admins@1etrn.local).

#### Shopping Report Viewer account / group

The Shopping Report Viewer account or group defined during the installation of the Shopping Central Service (using either the UI or the REPORTSACCOUNT installer property) is granted permissions necessary to view the Shopping reports by the Shopping Central Service installer. Only this user (or members of the group) will see the Reporting tab on the Shopping Web Portal.

Use a group rather than a single account, as this enables access to Shopping's reporting features to be easily managed through AD group membership.

In this lab environment, the Shopping Report Viewer group is **1ETRN\Shopping\_ReportViewers**.

#### Shopping License Manager account / group

The Shopping License Manager account or group defined during the installation of the Shopping Central Service (using either the UI or the LICENSEMGRACCOUNT installer property) receives e-mail notifications when application license thresholds are reached. This user or group must therefore have a valid email address defined in Active Directory.

Use a group with an associated email DL rather than a single account to enable targeting of license notifications to be easily managed through AD group membership.

In this lab environment, **1ETRN\Shopping\_LicenseManagers** is the Shopping License Managers group, associated with the [Shopping\\_LicenseManagers@1etrn.local](#) email DL.

**Database Access groups**

When a user of the Shopping Console requires access to either the Shopping database (to manage Shopping objects) or the Principal ConfigMgr Site database (to look-up Sites, Packages and Programs), they are granted access through SQL Database Roles defined (and created during the Shopping Central installation) in the respective databases. The three AD groups described below are associated with these SQL Database Roles.

**Full Shopping DB Admin Access group**

This group, specified during the Shopping Central Service installation using either the UI or the **SHOPPINGCONSOLEADMINUSERS** installer property, is associated with the db\_ShoppingConsoleAdmin Database Role in the Shopping database. The db\_ShoppingConsoleAdmin database role is granted full permissions on all objects presented through the Shopping Admin Console. This allows members of the *Full Shopping DB Admin Access* group to manage Node Security, allowing them to define the users and groups that can access each of the nodes in the Shopping Console. The specified Shopping Admin account / group is added to the Full Shopping DB Admin Access group during installation of the Shopping Central component.

The Full Shopping DB Admin Access group in this lab is **1ETRN\ShoppingConsole\_Admins**.

**Limited Shopping DB Admin Access**

This group, specified during the Shopping Central Service installation using either the UI or the SHOPPINGCONSOLEUSERS installer property, is associated with the db\_ShoppingConsoleUser Database Role in the Shopping database.

The db\_ShoppingConsoleUser role has restricted permissions in the Shopping database necessary for managing Approvers and User and Computer Categories.

The Limited Shopping DB Admin Access group in this lab is **1ETRN\ShoppingConsole\_Users**.

**SMS/ConfigMgr Access**

Definition of Sites and Applications in the Shopping Console require read access to the Principal ConfigMgr site database. This is provided through membership of the SMS / ConfigMgr Access group specified during the Shopping Central installation using either the UI or the SHOPPINGCONSOLESMSUSERS installer property. The specified group is associated with the db\_datareader Database Role on the Principal ConfigMgr site database.

The SMS / ConfigMgr Access group in this lab is **1ETRN\ShoppingConsole\_SMSUsers**.

**Group Management**

By default, as users or groups are granted access to a node within the Shopping console, the console adds these users or groups (under the context of the logged on user) to the relevant database access groups according to the access required for that particular node. This requires the *Full Shopping DB Admin Access* group to be granted full permissions on itself and the other two groups when they are first set up in AD. This automatic group management can be disabled in the Console Settings by setting the *Admin Console Manages Groups* setting to False. If this is done, users and groups will need to be manually added to the appropriate groups before they attempt to use the Shopping Console. The table below lists the Admin Console Nodes and the group memberships that provide access to them.

Console Node	Full Shopping DB Access group	Limited Shopping DB Access group	SMS/ConfigMgr DB Access group
Sites	P		P
Approvers	P	P	
User Categories	P	P	
Computer Categories	P	P	
Applications	P		P
Settings	P		
Node Security	P		
Event Log	P	P	

**Ensure users and groups have email AD attribute set**

Shopping uses email as the primary notification method. It is therefore important that all users that interact with Shopping, as well as some of the special accounts and groups identified in the previous task, have a valid email address defined in Active Directory.

## 1ETRND C

65. Log on to **1ETRND C** as **1ETRND Administrator** and start **Active Directory Users and Computers**
66. Review the following users and groups and ensure they have the specified email address defined in the General Properties tab

User or Group	Email address
svc_ShoppingCentral	SVC_ShoppingCentral@1etrn.local
Shopping_Admins (group)	shopping_admins@1etrn.local
Shopping_LicenseManagers (group)	Shopping_LicenseManagers@1etrn.local
Manager1	manager1@1etrn.local
Manager2	manager2@1etrn.local
User	user@1etrn.local
Finance Director	FinanceDirector@1etrn.local

As Shopping is used by most users throughout an organization, it is good practice to use an easily remembered DNS alias for the Shopping Central Web Server. This alias is then defined as the Host Header for the Shopping web site in IIS. This not only makes it easier for users to remember the site name, but also allows the web site to be moved to a different server in the future if required.

## Create a DNS Alias

### 1ETRND C

In this lab environment, the chosen DNS alias is **APPSTORE**.

67. Log into **1ETRND C** as **1ETRND Administrator**
68. On **1ETRND C** select **DNS** from the **Start** page
69. In **DNS manager**, expand **1ETRND C > Forward Lookup Zones** and select **1ETRND.LOCAL**
70. Select the **Action** menu and select **New Alias (CNAME)...**
71. In the Alias name field, type **APPSTORE**

72. Click the **Browse...** button next to *Fully qualified domain name (FQDN) for target host*, browse to **1ETRND C > Forward Lookup Zones > 1ETRND.LOCAL**, select **1ETRNDAP**. The new Resource Record dialog should look like the figure below. Click **OK**

73. Select **OK** to complete the New Resource Record wizard
74. From a command prompt, ping **appstore**. Ensure it returns **10.0.0.4(1ETRNDAP)**

## Review Windows Features, Roles and Role Services

**1ETRNAS** has IIS configured as required to support ActiveEfficiency up to this point in the lab exercises. The Shopping Central Server components will also be installed on **1ETRNAS** and has an additional role service that is required.

## 1ETRNAS

In most production environments, Active Efficiency and Shopping would not be hosted on a single server. This configuration is suitable for small lab environments.

75. Open **Server Manager** on **1ETRNAS**
76. Select **Add roles and features** in the *Configure this local server* section of the *Dashboard* page
77. Click **Next** on the *Before You Begin* page
78. Click **Next** on the *Installation Type* page
79. Click **Next** on the *Server Selection* page
80. In the list of roles on the *Server Roles* page, scroll down and expand **Web Server (IIS)** and then **Web Server**
81. Expand *Common HTTP Features* and select **HTTP Redirection** and click **Next**
82. Click **Next** on the *Features* page
83. Click **Install** on the *Confirmation* page and close the wizard when complete
84. Close **Server Manager**

## Create Service Principal Name (SPN)

The Shopping Website Application feature creates the Shopping Application Pools in IIS that use the **NETWORK SERVICE** identity. Connection to the web application is made through an HTTP service class request on the DNS address of the host. However, because the Shopping web site is not part of the default web site, it requires a separate Host Header and corresponding DNS alias to distinguish it from the Default Web Site on the same server.

It is therefore necessary to define the host (**1ETRNAS**) as the security principal for the HTTP service class on the address **APPSTORE.1ETRNAS.LOCAL**, so that when clients request a connection to <http://appstore.1etrn.local>, Kerberos identifies **1ETRNAS** as the actual security principal for that service. This is done by defining a Service Principal Name (SPN) as follows.

## 1ETRNAS

85. Log on to **1ETRNAS** as **1ETRNASAdministrator**  
The **1ETRNASAdministrator** account is the Domain Admin account. Service Principal Names are attributes of the security principal in AD, so it doesn't actually matter which computer you perform this task on, as long as the user you are logged on as has full permissions on the security principal (in this case the **1ETRNAS** computer account) that you are trying to update.
86. Open a command prompt and type the following command. This will list all Service Principal Names currently held by the **1ETRNAS** computer

```
SETSPN -L 1ETRNAS
```

87. The results should appear as below. Note that SPNs have already been defined for .....

```
C:\Users\Administrator>setspn -l 1etrnas
Registered ServicePrincipalNames for CN=1ETRNAS,CN=Computers,DC=1ETRNAS,DC=local:
    MSSQLSvc/1etrnas.1etrn.local:1433
    MSSQLSvc/1etrnas.1etrn.local
    TERMSRV/1ETRNAS
    TERMSRV/1etrnas.1etrn.local
    WSMAN/1etrnas
    WSMAN/1etrnas.1etrn.local
    RestrictedKrbHost/1ETRNAS
    HOST/1ETRNAS
    RestrictedKrbHost/1etrnas.1etrn.local
    HOST/1etrnas.1etrn.local
```

88. To add an SPN to **1ETRNAS** for the DNS name **APPSTORE**, run the following commands

```
SETSPN -S HTTP/APPSTORE 1ETRNAS
```

```
Checking domain DC=1ETRNAS,DC=local
Registering ServicePrincipalNames for CN=1ETRNAS,CN=Computers,DC=1ETRNAS,DC=local
    HTTP/APPSTORE
Updated object
```

```
SETSPN -S HTTP/APPSTORE.1ETRNAS.LOCAL 1ETRNAS
```

```
Checking domain DC=1ETRNAS,DC=local
Registering ServicePrincipalNames for CN=1ETRNAS,CN=Computers,DC=1ETRNAS,DC=local
    HTTP/APPSTORE.1ETRNAS.LOCAL
Updated object
```

Setting SPNs for both **APPSTORE** and **APPSTORE.1ETRNAS.LOCAL** allow connections using either the host name or the FQDN.

89. To verify the update, run the following command again

```
SETSPN -L 1ETRMAP
```

90. The results should now include the SPNs for the APPSTORE DNS address

```
Registered ServicePrincipalNames for CN=1ETRMAP,CN=Computers,DC=1ETR,DC=local:
HTTP/APPSTORE.1ETR.N.LOCAL
HTTP/APPSTORE
MSSQLSvc/1etrmap.1ETR.N.local:1433
MSSQLSvc/1etrmap.1ETR.N.local
TERMSRV/1ETRMAP
TERMSRV/1etrmap.1ETR.N.local
WSMAN/1etrmap
WSMAN/1etrmap.1ETR.N.local
RestrictedKrbHost/1ETRMAP
HOST/1ETRMAP
RestrictedKrbHost/1etrmap.1ETR.N.local
HOST/1etrmap.1ETR.N.local
```

If the NETWORK SERVICE identity of the Shopping Application Pools is replaced with a domain user account, the SPN must be added to that user object rather than the computer account of the Shopping web site, e.g. SETSPN -S HTTP/APPSTORE <domain>\<user>

## Create ConfigMgr Administrative User for the Shopping Central Service

One of the features of Shopping, OS Filtering, provides the ability to filter the applications presented to users based on operating system criteria such as Operating System Version (Windows 7 vs. Windows 10) or Operating System Architecture (32-bit vs. 64-bit). If an application installation will fail because of operating system related prerequisites, it doesn't make sense to display these applications to users in the Shopping portal.

Because the information required to filter applications based on operating system criteria resides in WMI, the Shopping Central Service will need to be granted permission to access WMI remotely.

In this task, you will grant the Shopping Central Service these rights by adding them as an administrative user with Read access to ConfigMgr objects in WMI. This will support the OS Filtering exercise later in the labs.

### 1ETRNCM

91. Log into 1ETRNCM as 1ETRNSCCMAdmin. Launch the SkyTap Shared Drive shortcut on the desktop and navigate to 1E Shopping - Course Content\Shopping 5.6 Course Content download the MiscFiles.zip to c:\temp and right click and extract all files.
92. Launch the ConfigMgr console. In the Administration workspace of the ConfigMgr console, expand Security and select Security Roles
93. Right-click on Security Roles and choose Import Security Roles
94. Browse to C:\Temp\MiscFiles and double-click on the 1E Shopping Central Service Security Role.xml file and observe that 1E Shopping Central Service now appears in the list of Security Roles  
Ensure the right XML file is being copied, there are two in the folder, we will use the second one during the Shopping Receiver installation. The 1E Shopping Central Service Security Role was created using the same permissions that are granted to the Read-only Analyst Security Role. The Shopping Central Service does not have rights to make any changes to ConfigMgr – only to read information.
95. Right-click on Administrative Users in the Administration pane and select Add User or Group
96. Click on the Browse... button and enter svc\_ShoppingCentral as the object name and click Check Names
97. Click OK when the name resolves
98. In the Assigned security roles section, click the Add... button
99. Select 1E Shopping Central Service and click OK
100. Click OK to close the Add User or Group dialog box  
By adding the Shopping Central Service account as an Administrative User in the ConfigMgr console, it also adds the account to the local SMS Admins group that has access to WMI remotely.

## Install Shopping Central

In this exercise, you will install all Shopping Central components onto 1ETRMAP.

### Install Shopping Central on Application Server

#### 1ETRMAP

101. On 1ETRMAP and log in as 1ETRMAPInstaller. Launch the SkyTap Shared Drive shortcut on the desktop and navigate to 1E Shopping - Course Content\Shopping 5.6 Course Content and download the Shopping.v5.6.0.409.zip and copy C:\Temp and right click and extract all
102. Start a command prompt (Run as administrator) and switch to the C:\Temp\shopping.v5.6.0.409 directory
103. Run the following command to start the installation wizard

```
msiexec.exe /i ShoppingCentral.msi /! *v ShoppingCentral-Install.log
```

104. On the Welcome page click Next
105. On the Shopping Prerequisite page, ensure all the checks passed and click Next
106. Accept the license agreement and click Next

107. On the *Installation Type* page, select **Complete Install** and click **Next**
108. On the *Customer Information* page, input an Organization name. Copy and paste the Shopping license key from **1E Shopping - Course Content\Shopping 5.6 Course Content\License.txt** by launching the SkyTap Shared Drive shortcut on the desktop into **Shopping License Key:** field and click **Next**  
WSA is out of scope for this course, so we will leave that blank.
109. On the *Custom Setup* page, ensure all features are selected for installation and click **Next**
110. On the *Database Server* page, leave the server as **(local)** and the Database Name as **Shopping2** and click **Next**
111. On the *1E ActiveEfficiency Server* page, enter **1ETRNASP** as the name of the ActiveEfficiency Server and click **Next**
112. On the *Active Directory Integration* page, type **1ETRNASP.LOCAL** and click **Next**

This can be either the name of a domain controller or the fully qualified domain name.

113. On the *Service Account* page, in the User name field, type **1ETRNASP\_ShopppingCentral** and in the Password field, type **Passw0rd**
114. In the field for the receiver service account, type **1ETRNASP\_ShopppingReceiver** and click **Next**

The Shopping Receiver service connects to the Shopping Central Web Site using HTTP. The Shopping Central installer checks that this is a valid account (or group) during installation of Shopping Central.

The recommended approach in production environments is to add the Receiver service account to an AD group and specify the group rather than the actual account. This allows for future changes to the Receiver service account, adding the new account into the defined group rather than having to reconfigure Shopping.

115. On the *Exchange or SMTP Server* page, type **1ETRNASP.1ETRNASP.LOCAL** and click **Next**  
For this lab, a simple SMTP application has been installed on 1ETRNASP to enable the sending of email via Shopping. In a production environment, this should be the fully qualified domain name of the SMTP server where Shopping will send emails.
116. On the *SMS / System Center Configuration Manager Integration* page, enter the name of the Principal ConfigMgr site server, in this case **1ETRNRCM.1ETRNASP.LOCAL** and click **Next**

The Principal ConfigMgr site is the site where the Packages to be offered through Shopping are defined. This is typically the Central site in ConfigMgr 2007 and the CAS (if installed) in ConfigMgr 2012. However, if you are using ConfigMgr 2007 and have Packages defined on primary sites below the Central site (e.g. on Regional Primary Sites), Shopping Central may need to be configured to use this site. In these scenarios, it is often necessary to create multiple Shopping environments – one for each Regional primary site.

117. On the *Admin Console Node Security* page, enter the following information and click **Next**  
Full Shopping DB Admin Access: **1ETRNASP\_ShopppingConsole\_Admins**  
Limited Shopping DB Admin Access: **1ETRNASP\_ShopppingConsole\_Users**  
SMS / ConfigMgr Access: **1ETRNASP\_ShopppingConsole\_SMSUsers**  
Refer to the Database Access groups information for details of these groups
118. On the *Shopping Management Accounts* page, enter the following information and click **Next**  
Admin account: **1ETRNASP\_Shoppping\_Admins**  
Reports access account: **1ETRNASP\_Shoppping\_ReportViewers**  
License manager account: **1ETRNASP\_Shoppping\_LicenseManagers**  
Refer to the Management Accounts and Groups section for more details of these groups.
119. On the *Website Configuration* page, in the Host Header field, type **APPSTORE** and click **Next**  
If a non-standard port is used, the Shopping URL will need to have the port appended to the end. e.g. If port 8081 is used, then the host header for this example would be <http://appstore:8081>.
120. On the *Shopping URL prefix* page, ensure that <http://appstore> is displayed and click **Next**
121. On the *Ready to Install the Program* page, click **Install**
122. Click **Finish** to close the setup wizard once complete

## Review the installation

In this task, you will observe the changes made by the Shopping Central installer.

### 1ETRNASP

123. Open Windows Explorer and browse to **C:\Program Files (x86)\1E\Shopping**. Note the following subfolders:

Folder	Description
Admin Console	This is the Shopping Administrator Console
Central Service	This is the Shopping Central Service and includes workflow integration components for integration with 3 <sup>rd</sup> party systems
Database	This folder contains all the binary files used to configure the Shopping SQL database. Using compiled code to manage the SQL configuration enables Shopping to be easily patched using Windows Installer patches (MSP).
Website	This folder contains the Shopping website and Shopping API components

124. From the **Start** screen start **Internet Information Services (IIS) Manager**, expand **1ETRNASP > Sites** and observe the **Shopping** website
125. Select **Application Pools** (just above Sites) and note that there are two application pools for Shopping (**Shopping Pool** and **ShoppingAPI Pool**) and that they are configured to run with the identity of **NETWORK SERVICE**
126. Start the Registry Editor (from the **Start** screen, start typing **regedit** and click **regedit.exe** when it appears in the search results) then navigate to **HKLM\Software\1E\ShoppingCentral**. Note that this only contains licensing information which is hashed

127. In the Registry Editor, navigate to **HKLM\Software\Wow6432Node\1E\ShoppingCentral**. Note that this contains basic information regarding the installation
128. Open the **Services** console (from the Start screen) and identify the **1E Shopping Central** service. Ensure this service is running
129. Open **Microsoft SQL Server Management Studio** (from the Start screen) and expand the **Shopping2** database. Note that the installer has created objects (tables, views, stored procedures etc)
130. In the **Security** node of the Shopping2 database, navigate to **Roles > Database Roles** and note that the **db\_ShopppingConsoleAdmin** and **db\_ShopppingConsoleUser** roles have been created by the Database feature installation. View the properties of both and note that the group ShoppingConsole\_Admins is added to the ShoppingConsoleAdmin role and that ShoppingConsole\_Users is added to the ShoppingConsoleUser role
131. Browse to **C:\ProgramData\1E\ShoppingCentral**. This is where you will find the ShoppingCentral diagnostic log. Double-click **ShoppingCentral.log** to open it. Review the log entries focussing on service startup tasks
132. From the **Start** screen, start typing **Shopping**. When **Shopping Administration** appears in the search results, right-click it and select **Pin to Taskbar** (you'll be using this a lot, so let's make it easy to get to)
133. Now click **Shopping Administration** on the Start screen. Ensure that the Shopping Admin Console opens without errors and note the different nodes available in the left-hand pane. We'll come on to each of these throughout this course
134. Open Internet Explorer (from the **Start** screen) and go to <http://appstore/shopping>
135. Ensure the Shopping web page opens successfully. There won't be much of interest on it currently, but the Home page should load without errors

## Configure HTTP Redirection

Now, the URL to connect to Shopping is <http://appstore/shopping>. HTTP Redirection (a Web Server (IIS) Role Service - see earlier task) can be used to simplify this to <http://appstore>.

### 1ETRNAS

136. Open **Internet Information Services (IIS) Manager** and select the **Shopping** web site
137. In the main center pane with all the icons, double-click the **HTTP Redirect** icon in the IIS section (you may need to scroll down to see it)
138. Check the **Redirect requests to this destination** option and enter **../shopping**
139. Check the **Only redirect requests to content in this directory (not subdirectories)** option  
By default, IIS will apply the redirection to all sub-sites (**/Shopping** and **/ShoppingAPI** in this case). This would cause any attempts to load the page to enter an infinite loop as /Shopping would redirect to itself! In some cases, even if this option is selected, you may find the subdirectories still have the redirection applied. To be sure, check the HTTP Redirect settings on the /Shopping and /ShoppingAPI subdirectories and ensure redirection is **DISABLED** on these.
140. Click **Apply** (in the Actions list on the right)
141. Open Internet Explorer (if the Shopping site is already open, close and reopen the browser) and browse to <http://appstore> to confirm the redirection is working and the shorter URL can be used

## Increase Shopping Central logging level

In order to use the Central Service log file to monitor processes throughout this course, you will now increase the level of detail that is written to the ShoppingCentral log.

### 1ETRNAS

142. On **1ETRNAS** browse to **C:\Program Files (x86)\1E\ShoppingCentralService**
143. Make a backup copy of **ShoppingCentral.exe.config**  
The lab environment has been modified so that file extensions are displayed, but this may not be the case in many production environments. In the default Windows Explorer view (with file extensions hidden), ShoppingCentral.exe.config will appear as ShoppingCentral.exe, and ShoppingCentral.exe appears as ShoppingCentral.
144. Right-click on **ShoppingCentral.exe.config** and select **Edit** to open the file in Notepad
145. Search for the text `<level value="INFO"/>` in the `<log4net>` section of the file
146. Replace the word **INFO** with **ALL** and save the file, then restart the **1E Shopping Central Service**  
If the 1E Shopping Central service fails to start, an error was made when editing the file.

## Reduce the Cache Duration for user access to the portal

When a user launches the Shopping portal from a given computer for the first time, Shopping will evaluate the applications that are available to the user based on the User Categories associated with that the user and Computer Categories associated with that the computer. Rather than performing this evaluation every time the user logs on to the Shopping portal, the information is cached, along with the last logon time for that particular user and computer combination. If the Shopping portal is launched within 15 minutes of the last time the user launched Shopping from the same computer, the available applications will reflect whatever was cached at that earlier time.

As we will be making many changes to categories throughout this course, we do not want to be waiting around for up to 15 minutes before we see the effect of these. In this task, you will reduce this duration down to 1 minute to make things move a bit faster.

This behavior is designed to balance performance on the Shopping Central server. While it is fine to reduce this in a small lab environment, this should not be modified in a production environment unless advised by 1E support.

### 1ETRNAS

147. Open **Microsoft SQL Server Management Studio**, select the **Shopping2** database and click **New Query** in the toolbar

148. Enter the following query and click **!Execute** in the toolbar. You should see *(1 row(s) affected)* in the Messages tab

```
Update tb_Preference set PreferenceValue=1 where PreferenceName='Cache Duration'
```

The tb\_Preference table stores all the settings that you see in the Settings node in the console. Cache Duration is defined as a hidden setting so it can only be changed directly in the database.

149. Restart the **1E Shopping Central** service for the logging info and cache duration changes to take effect  
150. If the ShoppingCentral service fails to start, an error was made when editing the config file

## Install the Shopping Receiver

In this exercise, you will install the Shopping Receiver Installer components onto **1ETRNCM**.

### Create Shopping Receiver security role in ConfigMgr

The Shopping Receiver service account requires the ConfigMgr permissions defined earlier in the *Understanding Shopping Users and Groups* section. 1E provide an XML file that can be imported to create a ConfigMgr Security Role with the required permissions.

1E provide a number of Security Roles that can be imported into Config Mgr depending on the version installed in your environment. These are available at: [Product Documentation](#), and navigate to Shopping 5.6 Preparation 1E Shopping Receivers security role, select the one appropriate for your Config Mgr version.

In this task, you will import a security role definition and then add the Shopping Receiver service account to the new role.

#### 1ETRNCM

151. Log on to **1ETRNCM** as **1ETRNSCCMAdmin**  
152. Earlier we imported the Shopping Central security role, here we will import the **1E Shopping Receivers Security Role in CB1906 and later.xml**  
153. Open the **Configuration Manager Console** from the **Start** screen  
154. Select the **Administration** workspace and expand the **Security** node  
155. Right-click **Security Roles** and select **Import Security Role**  
156. In the *Import Security Role* dialog box browse to **C:\Temp\MiscFiles\1E Shopping Receivers Security Role in CB1906 and later.xml** and click **Open**  
157. Once imported right click the new role and select **Properties**  
158. Select the **Permissions** tab  
159. Scroll to and open the **Folder Class** node  
160. Review the configuration (this is new in CB1906) and click cancel when done  
161. Right-click the **Administrative Users** node and select **Add User or Group**  
162. In the *Add User or Group* dialog box, click **Browse...** then enter **svc\_ShoppingReceiver** and click **OK**  
163. Click the **Add...** button to the right of the Assigned security roles list, select **1E Shopping Receivers** from the list of roles and click **OK**  
Do not get the receiver and central roles/users mixed up!  
164. Click **OK** to close the *Add User or Group*

### Install the Shopping Receiver on ConfigMgr Primary Site

In this task, you will install the Shopping Receiver Service on the ConfigMgr Primary site server.

#### 1ETRNCM

165. Launch Explorer from the desktop and navigate to **\\1etnrap\Temp\shopping.v5.6.0.409** and copy **ShoppingReceiver.msi** to **C:\Temp**  
166. Start a command prompt (run as administrator) and switch to the **C:\Temp** directory  
167. Type the following to start the Shopping Receiver install wizard

```
msiexec.exe /i ShoppingReceiver.msi /l*v ShoppingReceiver-Install.log
```

168. On the *Welcome* page click **Next**  
169. Accept the license agreement and click **Next**  
170. On the *Destination Folder* page, click **Next**  
171. On the *Register Service Account* page, select **This Account** and in the user name field, type **1ETRN\svc\_ShoppingReceiver** and in the password field type **Passw0rd**, then click **Next**  
172. On the *Policy Refresh* page, ensure **Native** is selected and set the Policy Refresh delay to **30** seconds then click **Next**  
Policy refresh triggers the ConfigMgr agent to perform a 'Machine Policy Retrieval & Evaluation Cycle' to accelerate the delivery of the deployed program or application. With policy refresh enabled, Shopping is able to deliver applications immediately after the approval process has been completed. Policy Refresh can be invoked directly via the Shopping Receiver (native) or by integration with 1E WakeUp. The Policy refresh delay allows ConfigMgr to process the Collection update and policy assignment before getting the client to check for the new policy. While 10 seconds is usually sufficient time, in this lab we increase the delay to 30 seconds to allow for performance of the virtual ConfigMgr server.  
173. On the *Shopping URL Prefix* page, type **http://appstore** and click **Next**  
174. On the *Default Advanced Client Flags* page, select **Default** and click **Next**

The Receiver installer allows you to enter default settings that will be used when it creates a Deployment in ConfigMgr. These settings are especially useful if integrating Shopping with 1E Nomad. The following options are available:

**Default** – Uses the default deployment options for ConfigMgr.

**Always download from DP** – The package is always downloaded from the distribution point. This should be used when integrating with 1E Nomad.

**Always run from DP** –The package is always run from the distribution point (only applicable to legacy Packages).

175. Click **Next** on the *Configuration Manager Database Connection page*. On the *Ready to Install the Program page*, click **Install**. When the installation completes, close the setup wizard

## Review the installation

In this task, you will review the effects of the Shopping Receiver installation.

### 1ETRNCM

176. Run regedit.exe and navigate to **HKLM\SoftwareWow6432Node\1E\Shopping.Receiver.v5.6.0**. Note that this contains basic information regarding the installation
177. Open the **Services** console from the Start menu and identify the **1E Shopping Receiver+5.6.0** service
178. Browse to **C:\ProgramData\1E\Shopping.Receiver\5.6.0**. This is where you will find the Shopping Receiver diagnostic log. Double-click **Shopping.Receiver.log** to open it in CM Trace and ensure the Shopping Receiver service started successfully without any errors
179. Browse to **C:\Program Files (x86)\1E\Shopping\Shopping.Receiver.v5.6.0**. This folder contains the Shopping Receiver binaries that interact with ConfigMgr
180. Double-click **Shopping.Receiver.exe.config** to open it in Notepad and observe the configurable settings for the Shopping Receiver service in the <appSettings> section. Many of these settings were specified in the Install wizard
181. Search for **level value="INFO"**
182. Change the **INFO** to **ALL**
183. Save the file  
Leave this file open, we'll be returning to it to make a configuration change in the next task.
184. Open **SQL Server Management Studio** and navigate to **Databases > CM\_PS1 > Security > Users**
185. Double-click the **1ETRNsvc\_ShoppingReceiver** user (this user was added to the ConfigMgr database by the Shopping Receiver installation) to view its properties
186. In the *Database User – 1ETRNsvc\_ShoppingReceiver* dialog box, select the **Membership** page on the left and observe that this user has been assigned only the **db\_datareader** role on the ConfigMgr database
187. In the *Database User – 1ETRNsvc\_ShoppingReceiver* dialog box, select the **Securables** page. Note that the user has been granted **Execute** permissions on the **fn\_GetAppState** and **fn\_GetSiteNumber** scalar functions
188. Click **OK** to close the user properties dialog box  
You may have observed that the Shopping Receiver folders, service and registry keys all include the version number in their name. This is to allow side-by-side upgrade from previous versions where a new instance of Shopping Central is being implemented alongside an existing instance of an earlier version.

## Configure the Default Limiting Collection

The Shopping Receiver is responsible for creating ConfigMgr objects (collections and deployments) and placing computers and users into appropriate collections to allow software to be deployed. By default, the Limiting Collections for all the collections created by the Shopping Receiver is 'All Systems' and 'All Users and User Groups'. In many environments, this is not a desired configuration.

In this task, we will modify the default limiting collection for computer collections.

### 1ETRNCM

189. Return to the **Shopping.Receiver.exe.config** file
190. Locate the <appSettings> section and observe the values in **RootDeviceCollectionId** and **RootDeviceCollectionName**
191. Replace the **RootDeviceCollectionId** value with **PS10000B**  
Be sure to input the collection name and ID exactly as they are in the console. The ID is with 4 zeros. If these values are not inputted correctly, the Shopping Receiver will fail to create objects in ConfigMgr.
192. Replace the **RootDeviceCollectionName** value with **Lab Workstations**
193. Save and close the file
194. Restart the **1E Shopping Receiver+ 5.6.0** service  
All collections created by the Shopping Receiver will now use Lab Workstations as the limiting collection. This methodology can be used to prevent certain machines (servers for example) from getting software inadvertently deployed to them by not allowing them to be members of the Shopping deployment collections

## Deploy the 1E Client

Previous versions of Shopping used the Shopping Agent to enable the Shopping website to retrieve information about the user's PC. In an effort to reduce the number of agents customers need to deploy, 1E is in the process of combining existing agent functionality into a single agent, which happens to be the Tachyon Agent. With Shopping 5.6, the functionality of the Shopping Agent and the new Windows Servicing Assistant (WSA) functionality has been implemented as a module of the 1E Client. The 1E Client must be installed on all PCs from which users will access the Shopping portal. This integration requires specific client machine identification so that Configuration Manager knows the correct client deployment target.

In this exercise, we will use the 1E Agent Endpoint Installation Solution Accelerator to create the ConfigMgr deployment objects and deploy the 1E Client to all ConfigMgr clients.

## Prepare to Deploy the 1E Client

### 1ETRNCM

195. Launch the SkyTap Shared Drive shortcut on the desktop and navigate to **1E Tools** and download the **1EClientDeploymentAssistant.v1.4.0.27.zip** to **C:\Temp\** and right click and extract all of the contents
196. Browse to the **C:\Temp\1EClientDeploymentAssistant.v1.4.0.27** folder and double-click on **1EClientDeploymentAssistant.exe** to launch the wizard  
You might have to change the resolution of the remote computer session to fit the wizard to the screen depending on the size of your display.
197. On the *Welcome* page, click **Next** to continue
198. Accept the license terms on the *License Terms* page and click **Next**
199. On the *ConfigMgr Connection* page, with **Local ConfigMgr Site Server** selected, click **Connect**. When the status changes to **Connected**, click **Next**
200. On the *General Settings* page, Set the fields to contain the following and then Click **Next**  
**1E License File:** Browse to C:\Temp\1EClientDeploymentAssistant.v1.4.0.27\1EClientDeploymentAssistant.v1.4.0.27\ and select Licenses.txt  
**1E ActiveEfficiency Server URL:** <http://1etnmap.1etn.local/activeefficiency>  
**Application Content Source:** \\1etrndc\ConfigMgrSource\Software  
**Package Content Source:** \\1etrndc\ConfigMgrSource\Software  
**Distribute Content:** Check  
**Distribution Point Group:** All Distribution Points
201. On the *Agent Selection* page, deselect all items except **1E Client 4.1.0.267** and click **Next**
202. On the 1E Client 4.1.0.267 page, verify that the limiting collection is set to **Lab Workstations** and click **Next** to continue
203. On the *Tachyon Settings* page, verify that **Enable Shopping Module** and **Edge Windows App browser support** are ticked and also ensure that Shopping Web URL has <http://appstore/shopping/> address is entered. Click **Next** to continue

**Enable Shopping Integration :** Enables support for the 1E self-service portal and Windows Servicing Assistace, Any previous Installation of Shopping Agent will be removed when Tachyon Agent starts.

**Shopping Central URL :** It should be set to the URL for the Shopping website. The Shopping website uses a host header, for which a DNS alias was defined earlier

<http://appstore/shopping/> The Tachyon Shopping module uses a loopback mechanism that enables the browser to make calls to the Shopping Agent via the local computer. The Tachyon Shopping module contacts the Shopping Central website to get the appropriate URL to use for the local loopback mechanism and the URL is no longer locally configured, as was the case for the previous Shopping Agent Installer.

**Enable Edge/Windows App Support:** If users are likely to access the Shopping web site using Microsoft Ede or other Metro Browsers.

204. Click **Next** on the Nomad Client Settings Page and arrive on the *Summary* page, once the list is finished compiling, take a moment and review the actions that are about to be taken. When ready, click the **Create** button

If Shopping Integration is enabled, when the 1E Client starts it will attempt to automatically remove any previous installations of the 1E Shopping Agent.

205. The actions will be recorded as they are completed on the *Progress* page. When the **Status** changes to **Successful**, you may review the completed actions and click **Next** when ready
206. Click **Finish** on the *Completion* page to close the wizard

## Observe the Results of Running the 1EClientDeploymentAssistant Wizard

Once we have run the Client Deployment Assistant wizard, we will look at the objects that were created in the ConfigMgr console.

### 1ETRNCM

207. In the ConfigMgr console, select the **Assets and Compliance** workspace and click on **Device Collections**
208. Note that the **1E Client 4.1.0.267 - Required** collection has been created and has zero members at this point
209. Click on the **Deployments** tab at the bottom of the page and note that the **1E Client 4.1.0.267** application has been deployed to the collection
210. In the **Software Library** workspace, expand **Application Management** and select **Applications**
211. Note the **1E Client 4.1.0.267** application has been created and the content has been distributed to the distribution point

## Deploy the 1E Client to Lab Workstations

Now that all the required components are created in the ConfigMgr console, we simply need to add our desired targets to the **1E Client 4.1.0.267 - Required** collection and force a machine policy update cycle to deploy the Tachyon Agent.

### 1ETRNCM

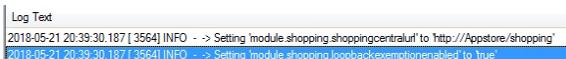
212. In the ConfigMgr console, go to the **Assets and Compliance** workspace and select **Devices**
213. Multi-select the **1ETRNW71, 1ETRNW72, 1ETRNW73, 1ETRNW101 and 1ETRNW102** computers
214. Right-click on any of them, select **Add Selected Items > Add Selected Items to Existing Device Collection**
215. Select the **1E Client 4.1.0.267 - Required** collection and click **OK**
216. Click on **Device Collections**, select the **1E Client 4.1.0.267 - Required** collection and refresh the view until the **Member Count** shows **5**
217. Right-click on the **1E Client 4.1.0.267 - Required** collection, select **Client Notification** and choose **Download Computer Policy**

## Validate the 1E Client installation on each client

After a few minutes, complete the following tasks to ensure the 1E Client is installed and functioning.

### 1ETRNW71

218. Log on as **1ETRNuser**
219. Open **Programs and Features** from Control Panel and verify that the **1E Client** is installed  
Might take a minute or two after policy refresh for the application to install. Hit F5 after a minute to refresh the view. If you don't see it after a few minutes, manually run computer policy on the client.
220. Open the **Services** applet from the desktop and note the 1E Client service running
221. Open the **1E.Client.log** file in **C:\ProgramData\1E\Client**
222. Search for the following in the log file: **module.shopping, loopbackexemptionenabled** and note that it is set to **true**
223. Note the line above it, showing the URL to the Shopping API



```

Log Text
2018-05-21 20:39:30.187 [ 3564] INFO - -> Setting 'module.shopping.shoppingcentralurl' to 'http://Appstore/shopping'
2018-05-21 20:39:30.187 [ 3564] INFO - -> Setting 'module.shopping.loopbackexemptionenabled' to 'true'

```

## Lab Summary

We started this lab identifying the key users and groups that Shopping uses both internally and for administration. We reviewed the permissions and security rights that these specific users and groups require, and which of these are normally configured by the Shopping Central and Receiver installers.

We learned how to use a DNS alias, combined with HTTP Redirection, to enable Shopping to be accessed using an easily remembered URL. You also understand therefore why it is necessary to define a Service Principal Name for the HTTP service class on the alias address.

We prepared the environment for the installation of Shopping. We installed the Shopping Central service on the application server, and then installed the Shopping receiver on the ConfigMgr Primary site server.

Lastly, we deployed the 1E Client to our lab workstations. The 1E Client allows for the proper identification of the machine/user accessing the Shopping portal. It is also used for WSA orders.

## Next Page

[Ex 3 - Shopping 5.6 - Exploring the Shopping User Interfaces](#)