Creating an In-place Upgrade WSA Deployment Application

Who can do this?	**What is it for?**	**Before you start**
Shopping administrators with the privileges to create WSA applications in Shopping.	To enable users to self-service their OS deployments using the Windows Servicing Assistant.	You must create the deployment task sequence in Configuration Manager – you'll need this for the General Details screen.

Preparation

Before creating an In-place Upgrade Windows Servicing Assistant Deployment Application in Shopping, ensure you have completed the following in Configuration Manager

1. Create an In-place Upgrade Task Sequence following the guidelines referenced in Creating an In-place Upgrade task sequence.
2. Create an empty Collection that will be targeted with a deployment of the In-place Upgrade WSA Task Sequence.
3. Deploy the WSA In-place Upgrade Task Sequence created in step 1 to the empty Collection created in step 2. The deployment should be configured as **Available** (not Required), and scheduled to become available **10 years in the future** as indicated below. This prevents the deployment from appearing in Software Center until the available date, thereby preventing the user from executing the task sequence outside of the Windows Servicing Assistant.

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- Preparation
- Creating the In-place Upgrade WSA Deployment Application
- Configuring the In-place Upgrade WSA Deployment

Creating the In-place Upgrade WSA Deployment Application

1. In the **Shopping Admin Console**, right-click the **Applications** node and from its context menu, choose **New Windows Servicing Assistant Deployment**.
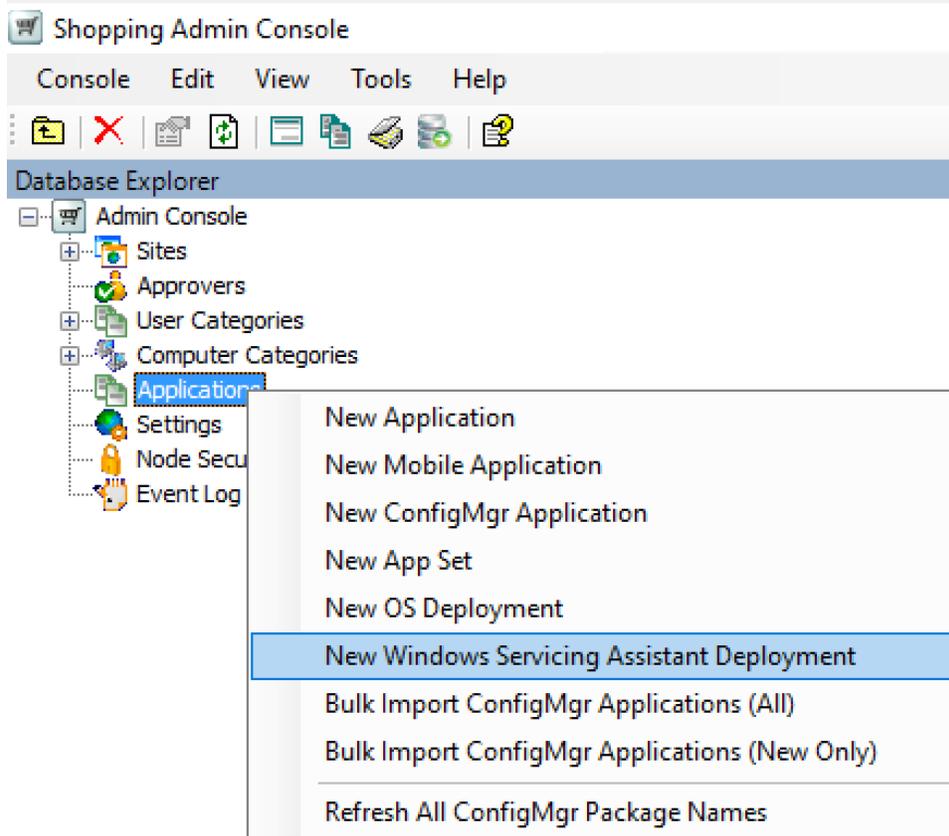
2. On the **Welcome** screen, click **Next**
3. On the **General Details** screen:
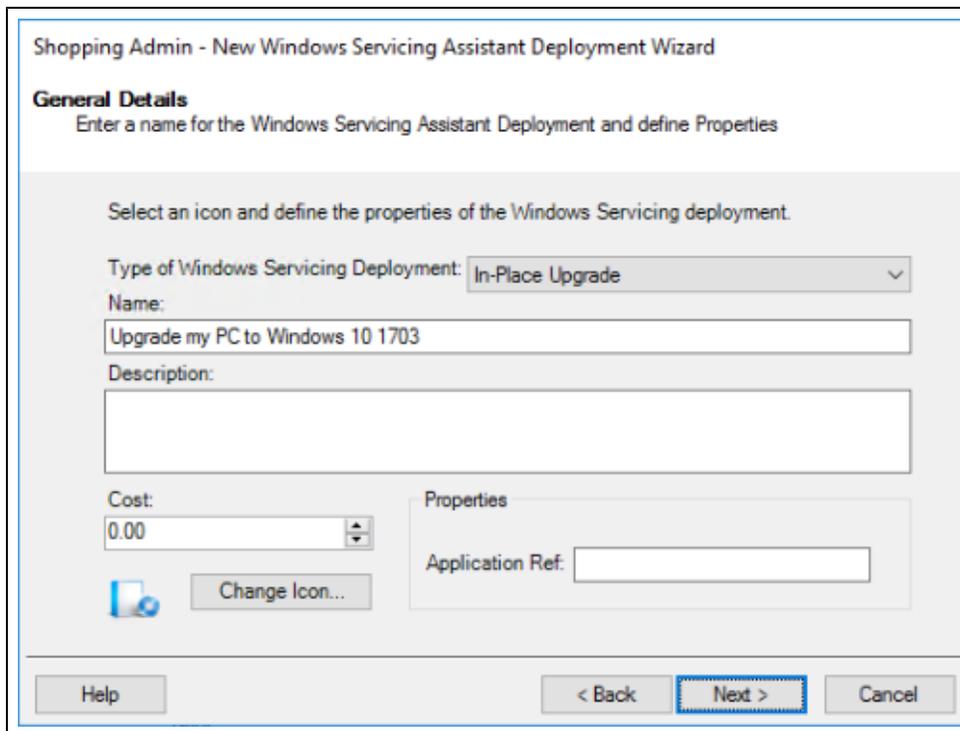
a. Select **In-place Upgrade** from the Type of Windows Servicing Deployment drop-down.
b. In the Name field, enter the name of this application as you want it to appear to the end-user in the wizard.
c. Optionally enter a brief description in the Description field (the description, cost and icon are never displayed to the end-user for WSA Deployment Applications).
d. Click **Next**.

4. On the **Config Mgr collection** screen:
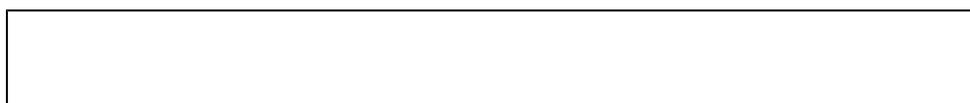
a. Select the Collection that the In-place Upgrade Task
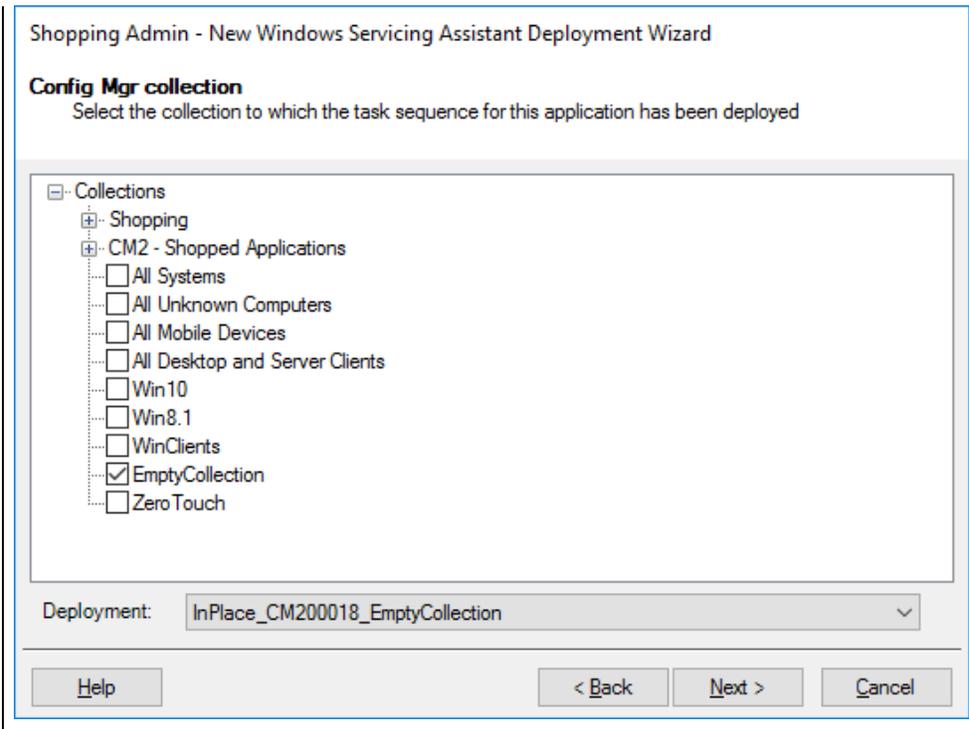
Sequence was deployed to (see Prepa ration above).

b. From the Deployment drop-down list, select the deployment that was created to deploy the In-place Upgrade Task Sequence to the Collection selected previously.

c. Click **Next**.

5. On the **Permissions** screen:
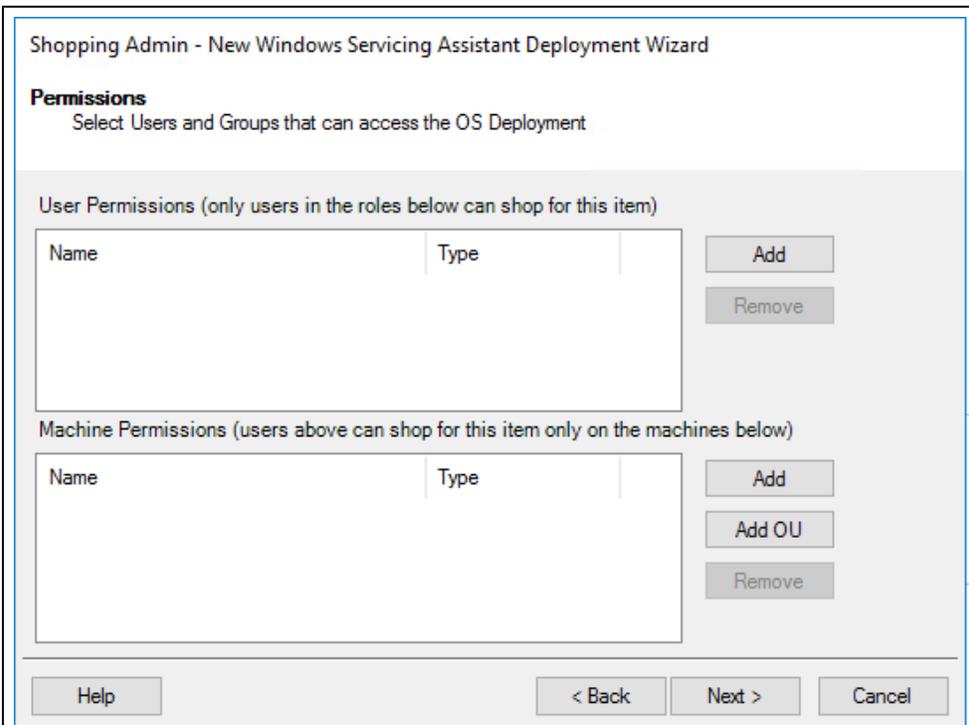
a. To set permissions on this deployment:

- If you want this In-place Upgrade Deployment to be available to everyone, go to step b (i.e. do not restrict the deployment to any users or computers)

- If you want to restrict this In-place Upgrade Deployment to specific users, click Add to the right of the User Permissions list and add the user or group that you want to restrict access to. Repeat to add multiple users or groups.

- If you want to restrict this In-place Upgrade Deployment to specific computers, click Add to the right of the Machine Permissions list and add the computer or group that you want to restrict access to. Alternatively, click Add OU to add the OU that contains the computers that

you want to restrict access to. Repeat to add multiple computers, groups or OUs.

b. Click **Next**.

6. On the **Completing the Windows Servicing Assistant Deployment Wizard** screen, click **Finish**.

Configuring the In-place Upgrade WSA Deployment
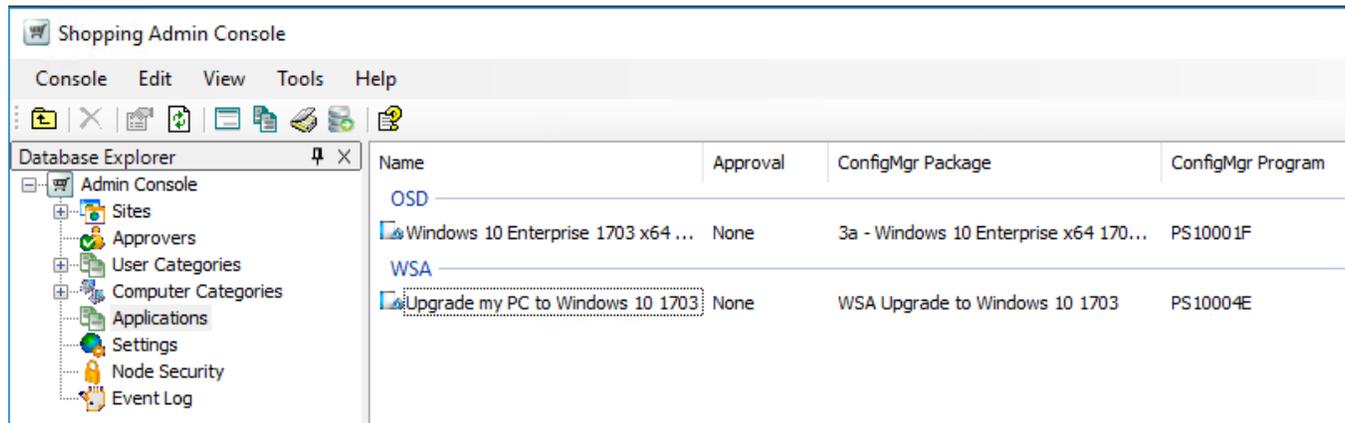
In the Shopping Admin Console, select the Applications node and double-click the In-place Upgrade WSA application you just created (it will be listed under WSA as illustrated – use the search feature if necesary) to open the Properties dialog box.

We are going to walk you through the each of the tabs in the Properties dialog for the In-place Upgrade WSA Deployment and show you what the respective settings do and how they impact the behavior of the deployment in terms of the user experience. There is a masterclass in how to create this deployment at the end of this section.

The General tab

The **General tab** is populated with the settings defined when the application was created. It controls what is displayed in the **Start** screen. You can change the name of the deployment (changing the description, cost and icon has no effect as these are never displayed to the end-user). However, **Type** cannot be changed.

For example, if you change the name of the deployment from Upgrade my PC to Windows 10 1703 to Upgrade to Windows 1703, users see this when in the Start screen:
Your browser does not support the HTML5 video element

The ConfigMgr Collection tab

The **ConfigMgr Collection tab** is populated with the selections made when the application was created.

These can be modified if necesasry, but not recommended unless it is to correct an error. If you do modify these, ensure you selcet a deployment of an In-place Upgrade Task Sequence.
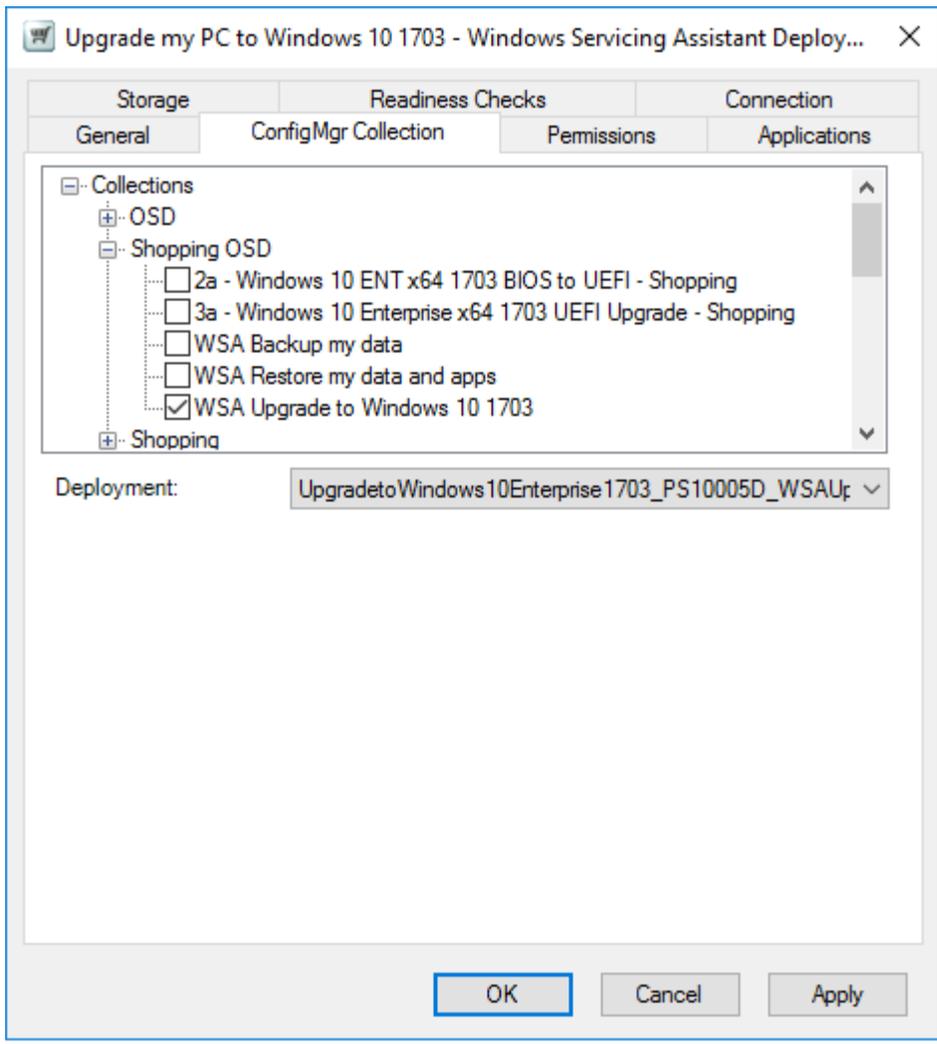
The Permissions tab

The **Permissions tab** is populated with the selections made when the application was created. You can modify the permissions from this tab to restrict access to specific users and/or computers.

Upgrade my PC to Windows 10 1703 - Windows Servicing Assistant Deploy... ✕

| Storage | Readiness Checks | | Connection |
| General | ConfigMgr Collection | Permissions | Applications |

User Permissions (only users in the roles below can shop for this item)

Name	Type	
		Add
		Remove

Machine Permissions (users above can shop for this item only on the machines below)

Name	Type	
		Add
		Add OU
		Remove

[OK]   [Cancel]   [Apply]

The Applications tab

The **Applications tab** controls what users see on the **Applications** screen.

Your browser does not support the HTML5 video element

Only displayed:

- if the **Display Application Migration list to WSA User** option is selected
- if you do not select the **Display Application Migration list to WSA User** option, any application exceptions that are encountered are displayed when you click Next on the Location screen when you run the deployment
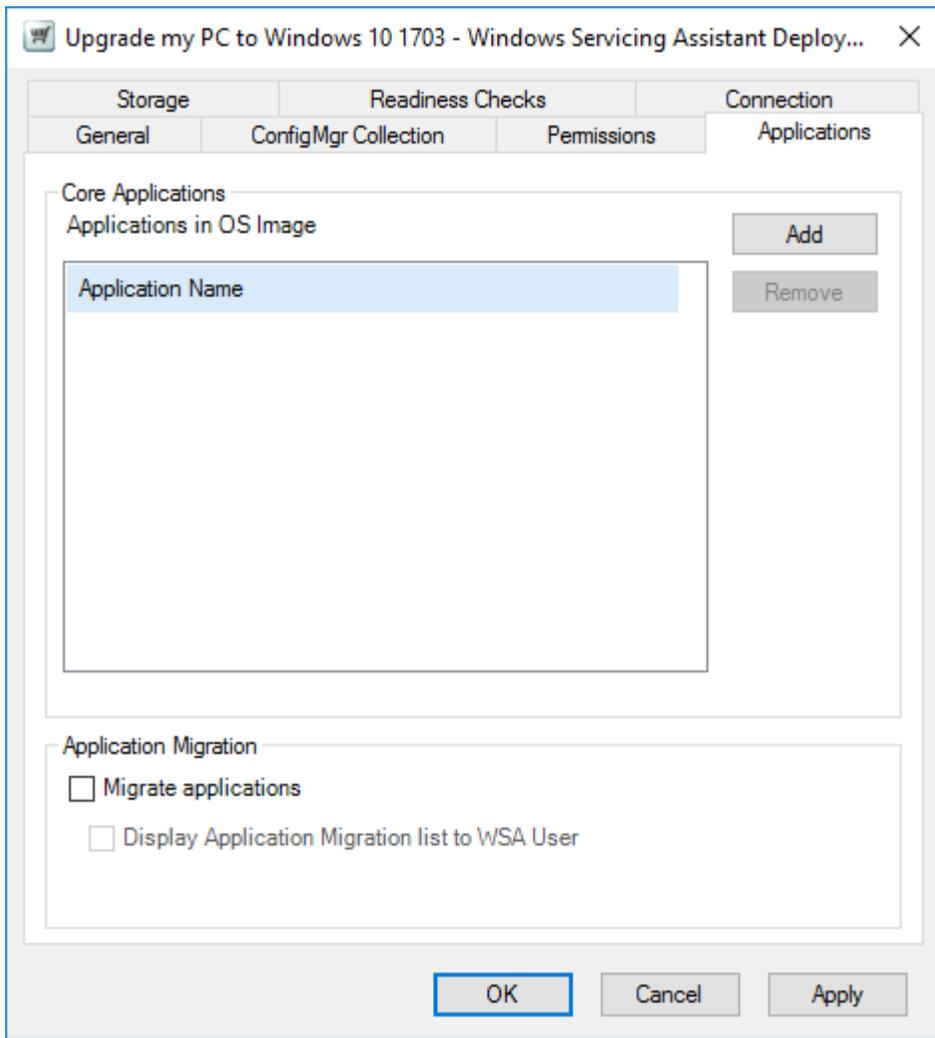
- If the In-place Upgrade Task Sequence includes steps to install additional applications, you can let the user know which applications will be installed automatically by adding them to the Applications in OS Image list.

  > Core Applications - Applications in OS Image is simply a list of free text strings entered by the administrator. The user is shown the list as it appears in this dialog. This is usually not relevant in an In-place Upgrade scenario.

- If the In-place Upgrade Task Sequence includes the 1E Application Migration steps to upgrade or replace applications during the OS upgrade and you want Application Migration to run for this In-place Upgrade deployment:
  1. Check the Migrate Applications check box.
  2. Optionally, check the Display Application Migration list to WSA User option. When selected, the user will see the applications to be upgraded or replaced on the Applications screen of the Windows Servicing Assistant

  > If Migrate Applications is unchecked, when the task sequence runs the WSA Initialize step will set the `1EWSA_AppMigrationEnabled` task sequence variable to False. This variable should therefore be used in a condition on the Migrate Applications group in the task sequence so the group does not execute if `1EWSA_AppMigrationEnabled=False`. If this condition is not applied to the Migrate Applications group in the task sequence, Application Migration steps will be executed even though the Migrate applications option was unchecked in the WSA Deployment properties.

Applications exceptions and how to fix them

These must be resolved before the deployment can continue:

- We've found something that prevents us from continuing at this time. Please retry later, or contact your administrator if the issue continues to occur.

Error	Likely	Remedial action

| code	causes	
0x0000 1001	Communication error – failure to send a size estimation message to the Tachyon service.	Ensure the Tachyon service is up and running.
0x0000 1002	Timeout duration exceeded – the Tachyon service was not able to send a size estimation message for over the 1 minute timeout duration.	
-1	Task is cancelled.	
0x0100	Unable to retrieve task sequence references from the Shopping API.	1. Ensure that the Shopping Web is up and running. 2. In Configuration Manager, ensure that the Shopping AppPool user is granted the Read-only Analyst role.
0x0101	1. Source machine does not exist in the SLA platform. 2. Missing or invalid SLA platform credentials under **Settings** in the **Shopping**	1. Ensure that the source machine exists in the SLA platform. If it does not, run a synchronization to refresh the da 2. Ensure that the SLA platform credentials are correct under **Settings** in the **Shopping Admin Console**.

		g Admin Console.	
0x0103	Unable to get the task sequence XML as: 1. The Shopping server is unavailable. 2. The Shopping AppPool user has not been granted the Read-only Analyst role in Configuration Manager.	1. Ensure that the Shopping Web is up and running. 2. In Configuration Manager, ensure that the Shopping AppPool user is granted the Read-only Analyst role.	
0x0204	Missing details in the WSA order.	Contact 1E Support for assistance.	
0x0300	Unable to fetch Nomad cache size details.	Ensure that the Nomad service is running and get the user to retry.	
0x0301	Unable to get content location.	Ensure that Nomad service is running and the client machine is present in the required boundary groups and get the	
0x0302	Unable to find PBA host.	Ensure that the PBA hosts are responsive by running a ping, check the PBA configuration and get the user to retry.	
0x0409	Unable to identify an applicable OS Upgrade package	If the option **Download only applicable OS Upgrade packages** is checked on the Storage tab, ensure that one of and architecture of the OS being upgraded.	
0x0602	ScanState.exe	Ensure that the Tachyon service is up and running. If it is running, check scanstate.log (its location is found in T	

	unable to estimate user state data size.	
0x0603	Unable to locate a compatible version of Nomad.	Ensure that you have Nomad 6.3.200 or later installed.

The Storage tab
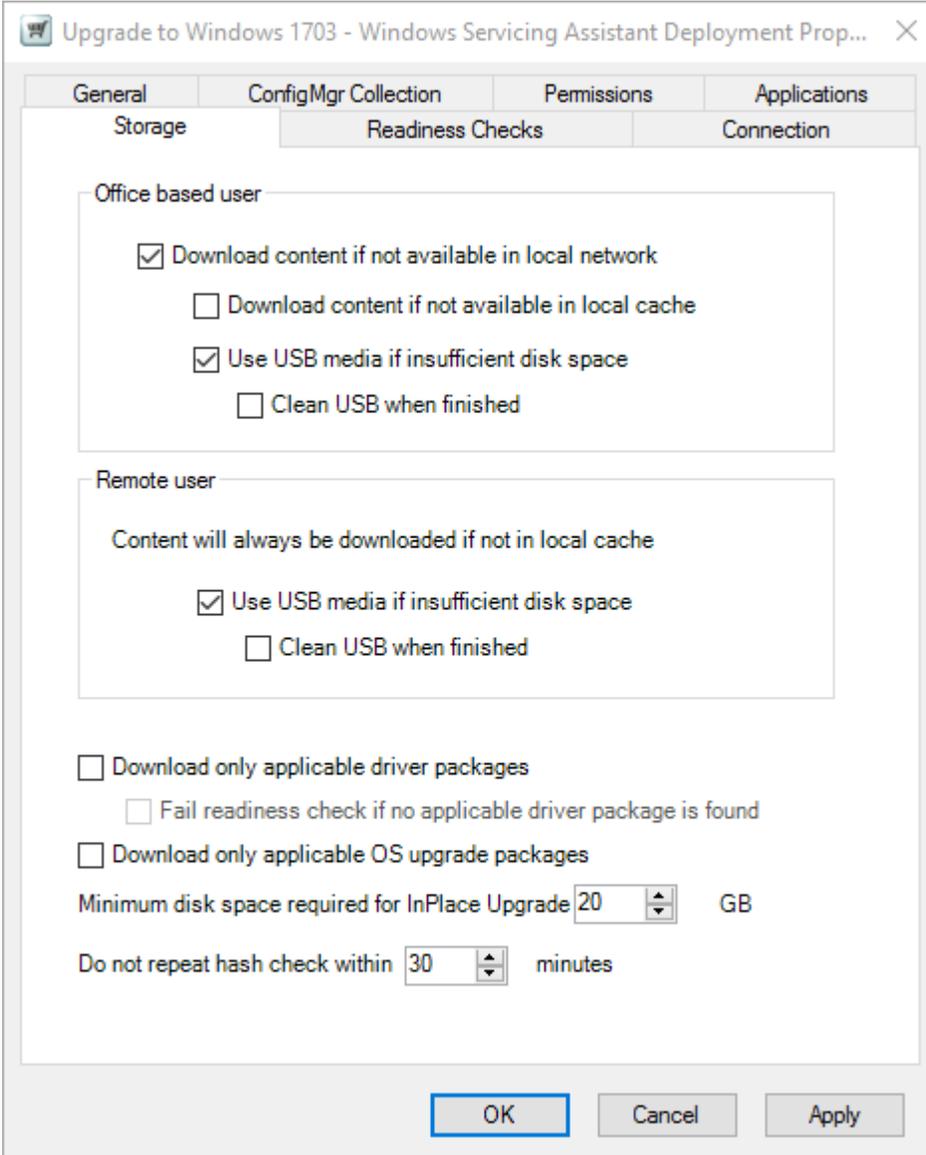
The **Storage tab** controls what options or remote (connected via VPN with no l

Only displayed:

- if the use of USB media is not proh
- if there is insufficient disk space to
- if the **Use USB media if insufficie**

For Office based users:

- Check the **Download content if not available in local network** option (default) to ensure the WSA downloads any reference content for the ta Migration) that is not available in its own Nomad cache or from any peers on the local network
    - Check the **Download content if not available in local cache** option to ensure the WSA downloads all reference content for the task sequ complete the readiness stage of the wizard but will speed up the actual deployment once the task sequence is executed.

For In-place Upgrade deployments, this option must be selected if your In-place Upgrade task sequence includes one or more reboots into
the Connection tab.

- Check the **Use USB media if insufficient disk space** option (default) if you want to enable users to use USB media to store content to be
drives are prohibited in your environment you will need to uncheck this option – the WSA wizard will prevent the user from executing the ta
required task sequence content.

  USB media must be NTFS format

  USB media must be formatted to the NTFS file system to be able to store content. When prompted to insert/select USB media, the user wi

  - Check the **Clean USB when finished** option (only enabled if **Use USB media if insufficient disk space** is checked) to have the WS
  sequence has finished

For Remote users:

Content will always be downloaded to the local Nomad cache as the assumption is there will be no local peers:

- Check the **Use USB media if insufficient disk space** option (default) if you want to enable users to use USB media to store content to be dow
are prohibited in your environment you will need to uncheck this option – the WSA wizard will prevent the user from executing the task sequenc
sequence content

  USB media must be NTFS format

  USB media must be formatted to the NTFS file system to be able to store content. When prompted to insert/select USB media, the user will not

  - Check the **Clean USB when finished** option (only enabled if **Use USB media if insufficient disk space** is checked) to have the WSA rer
  sequence has finished

Driver Packages:

- Check the **Download only applicable driver packages** if the task sequence includes any Install Driver Package or Download Driver Package
By default, the WSA will download all driver packages referenced in the task sequence. With **Download only applicable driver packages** ena
drivers that meet the condition defined on the Install Driver Package or Download Driver Package steps. If unchecked, the WSA will download a
and disk space.

  WSA is only able to evaluate single WMI conditions in the Install Driver Package steps. If multiple conditions are defined, only the first will be ev

- Check the **Fail readiness check if no applicable driver package is found option** to fail the readiness checks if the Task Sequence does not

  ⚠ Typically, virtual machines will not have any applicable drivers, so ensure the **Fail readiness check if no applicable driver package is f**

OS Upgrade Packages:

- Check the **Download only applicable OS upgrade packages** if the task sequence includes multiple Upgrade Operating System steps and you
WSA will download all operating system (OS) packages referenced in the task sequence. With **Download only applicable OS upgrade packa**
download OS upgrade packages that match the locale and architecture of the current OS. If unchecked, the WSA will download all referenced C
space.

  If this option is selected and the task sequence does not include an Upgrade Operating System that references an upgrade package that match
  applicable Upgrade Operating System step cannot be determined, the upgrade will not be attempted and error 0x0409 will be returned.

The **Minimum disk space required for In-place Upgrade** value defines the amount of disk space that the WSA will allocate, in addition to space re
value is set to the Microsoft recommended minimum (20GB).

Hash checking:

WSA will perform a content hash check on all downloaded content as part of the readiness checks. As the readiness checks may be run a second ti
hash checks being repeated within the time period defined in the **Do not repeat hash check within** option. The value is defined in minutes between
being performed.

The Readiness Checks tab
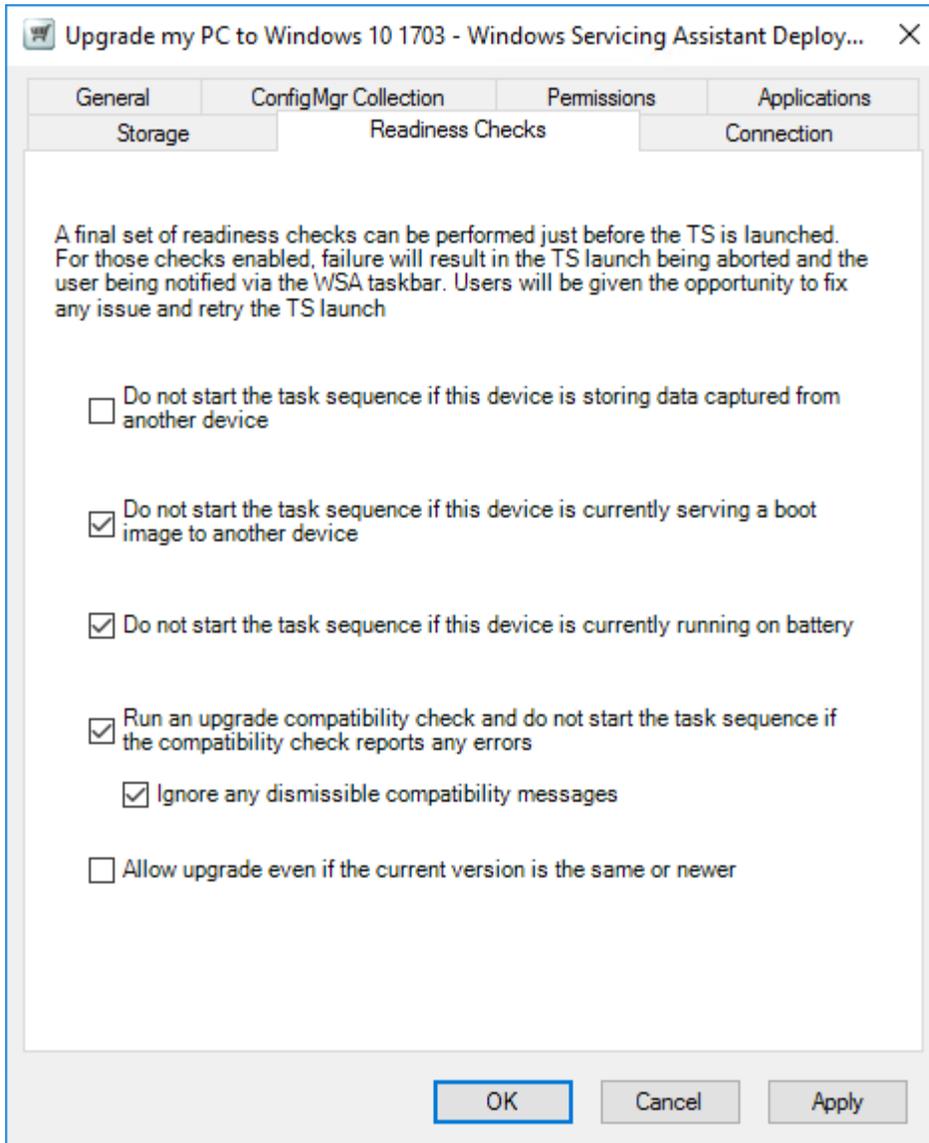
The **Readiness Checks tab** controls w
readiness.

Getting things ready

This may take some tim
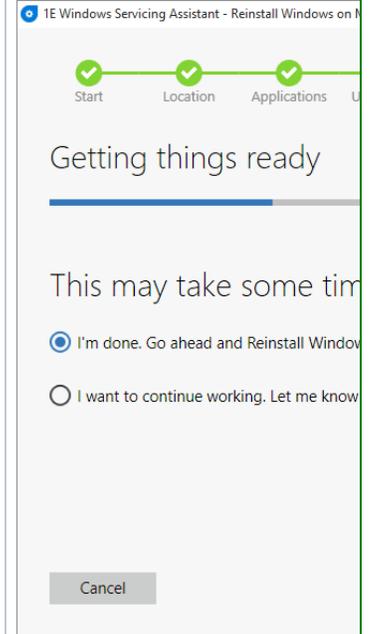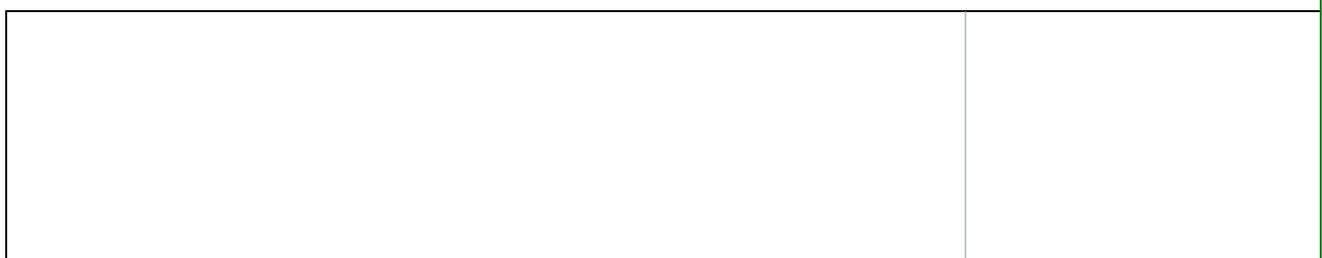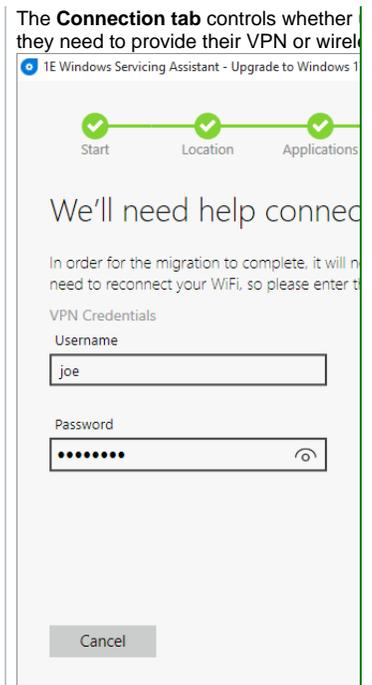
- ● I'm done. Go ahead and Reinstall Window
- ○ I want to continue working. Let me know

Cancel

- Check **Do not start the task sequence if this device is currently storing data captured from another device** if you want the WSA to preve
  machine is currently storing user data from one or more peers.
- Check **Do not start the task sequence if this device is** currently serving a boot image to another device if you want the WSA to prevent t
  serving a boot image to a peer.
- Check **Do not start the task sequence if this device is currently running on battery** if you want the WSA to prevent the task sequence from
- Check **Run an upgrade compatibility check and do not start the task sequence if the compatibility check reports any errors** if you want
  issues are identified. By default, when this option is selected, **Ignore any dismissible compatibility messages** is also selected. This will allow
  warnings but not errors. This setting should correspond to the same setting defined in the Upgrade Operating System step in the task sequence
- Check **Allow upgrade even if the current version is the same or newer** if you want the upgrade task sequence to execute when the currentl
  upgrade package in the task sequence.

The Connection tab

The **Connection tab** controls whether
they need to provide their VPN or wirel...

1E Windows Servicing Assistant - Upgrade to Windows 1...

✓ Start   ✓ Location   ✓ Applications

We'll need help connec

In order for the migration to complete, it will n...
need to reconnect your WiFi, so please enter t...

VPN Credentials

Username

joe

Password

•••••••• 👁

Cancel

In order for the deployment task sequence to complete, it may require that local WiFi details and VPN connection credentials are provided. WSA can be configured to gather connection information from the user for later use in the task sequence

☐ Require user enter VPN credentials

☐ Allow deployments over WiFi

    ☐ Require user enter SSID and password

OK   Cancel   Apply

Only displayed:

- if Location is I am out of the office:
  - and if Require user enter VPN
  - or if over Wifi and if Require u...

- Check **Require user enter VPN credentials** if the task sequence includes a step to establish a VPN connection that requires user credentials.

  > If this option is enabled and if the user selects remote location (i.e. not in the office) they will be required to enter their VPN credentials in the WS...
  > WSA Initialize step, these credentials are stored in the `1EWSA_VpnUserName` and `1EWSA_VpnPassword` Task Sequence variables.

- Check **Allow deployments over WiFi** if you want users to be able to execute the deployment on a wireless connection.

  > If you enable In-place Upgrade deployments over WiFi and your In-place Upgrade task sequence includes one or more reboots into Windows P...
  > **local cache** on the Storage tab.

  - The **Require user enter SSID and password** option is only enabled if Allow deployments over WiFi is checked. Check this option if the ta...
    requires the SSID and password to be entered.

    > If this option is enabled, when the WSA runs it will prompt the user to select a WiFi SSID (from those currently available) and enter the pas...
    > step, these credentials are stored in the `1EWSA_WifiSsid` and `1EWSA_WifiPassword` Task Sequence variables.

Other operational errors

Exceptions on Completion screen and how to fix them

Error code	Likely causes	Remedial action
0xA0070700	The task sequence failed to start.	This is not likely to happen happen unless the Windows Management Instrumentation (WMI) is corrupted. If this happens, get the user to rerun the deployment. Error is displayed on the **Completion** screen as follows: • Something went wrong with the deployment. Please contact your local administrator.
0xA0070701	SCCM execution history is missing.	Check the status messages in Configuration Manager for the task sequence deployment as well as the ExitCode in the WSA execution history for the Task Sequence package id (`HKEY_LOCAL_MACHINE\SOFTW ARE\1E\WSA\TSExecutionHistory\TSPkgID`) Error is displayed on the **Completion** screen as follows: • Something went wrong with the deployment. Please contact your local administrator.
0xA0070702	WSA execution history is missing – most likely cause is that the task sequence failed in WinPE.	Check the status messages in Configuration Manager. Error displayed on the **Completion** screen as follows: • Something went wrong with the deployment. Please contact your local administrator.
0xA0070703	Unable to establish a WIFI connection.	Get the user to run the deployment again with the emphasis on providing their correct connection credentials – on the **Connection** screen, click **Reveal** to check the accuracy of the password they entered. Error displayed on the Completion screen: There was a problem connecting to the WiFi network. Please rerun the Assistant and ensure that the WiFi connection details are entered correctly
0xA0070704	Unable to establish a VPN connection.	Get the user to run the deployment again with the emphasis on providing their correct connection credentials – on the **Connection** screen, click **Reveal** to check the accuracy of the password they entered. Error displayed on the **Completion** screen: There was a problem connecting to the VPN. Please rerun the Assistant and ensure that the VPN connection details are entered correctly
0xA0070705	WSA execution history is invalid.	Contact 1E Support for assistance. Error displayed on the **Completion** screen as follows: • Something went wrong with the deployment. Please contact your local administrator.

A masterclass in creating an In-place Upgrade WSA Deployment Application