

Creating a Capture Data and Settings WSA Deployment Application

Who can do this?

Shopping administrators with the privileges to create WSA applications in Shopping.

What is it for?

To enable users to self-service their OS deployments using the Windows Servicing Assistant.

Before you start

You must create the deployment task sequence in Configuration Manager – you'll need this for the General Details screen.

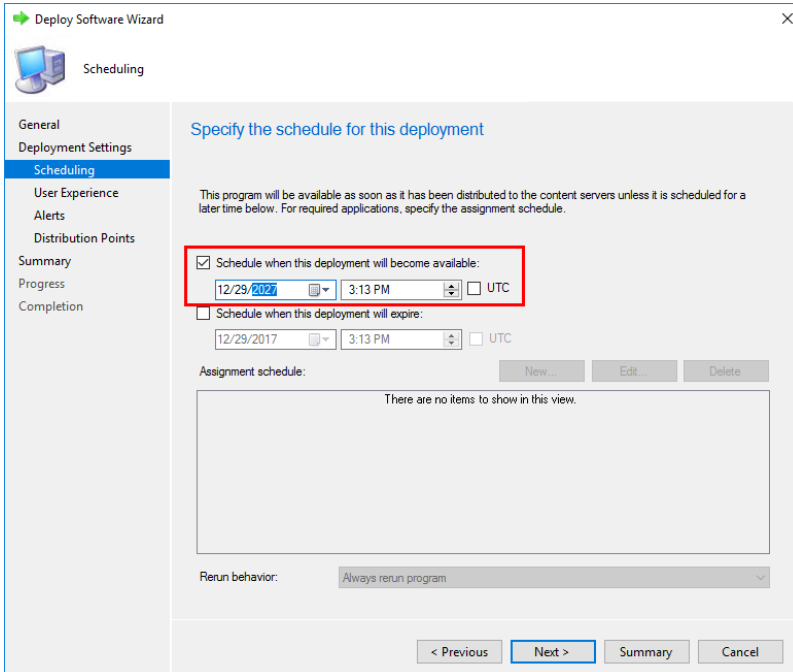
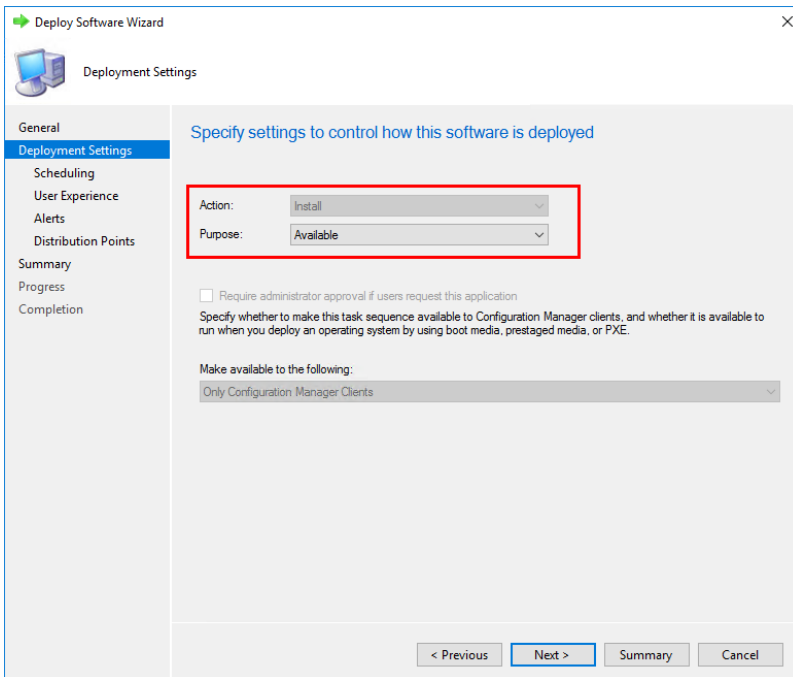
Preparation

Before creating a Replace Capture Windows Servicing Assistant Deployment Application in Shopping, ensure you have completed the following in Configuration Manager:

1. Create a capture task sequence following the guidelines for [creating a Capture Data and Settings Task Sequence](#).
2. Create an empty Collection that will be targeted with a deployment of the WSA Replace Capture Task Sequence
3. Deploy the WSA Replace Capture 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.

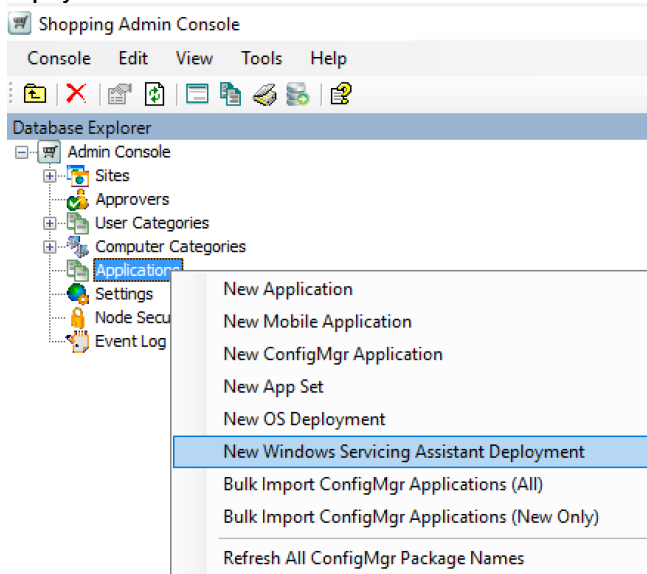
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Creating the Replace Capture WSA Deployment Application

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:

Shopping Admin - New Windows Servicing Assistant Deployment Wizard

General Details
Enter a name for the Windows Servicing Assistant Deployment and define Properties

Select an icon and define the properties of the Windows Servicing deployment.

Type of Windows Servicing Deployment:

Name:

Description:

Cost:

Change Icon...

Properties

Application Ref:

Help < Back **Next >** Cancel

- a. Select **Replace Capture** 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 (note that 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:

Shopping Admin - New Windows Servicing Assistant Deployment Wizard

Config Mgr collection

Select a Collection to deploy the Windows Servicing Assistant Deployment to.

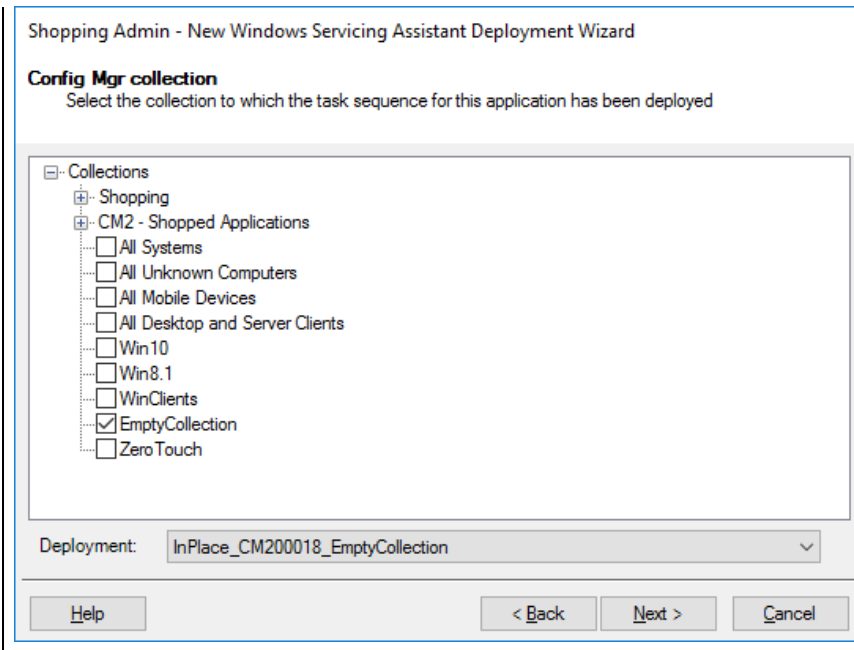
Collection:

Deployment:

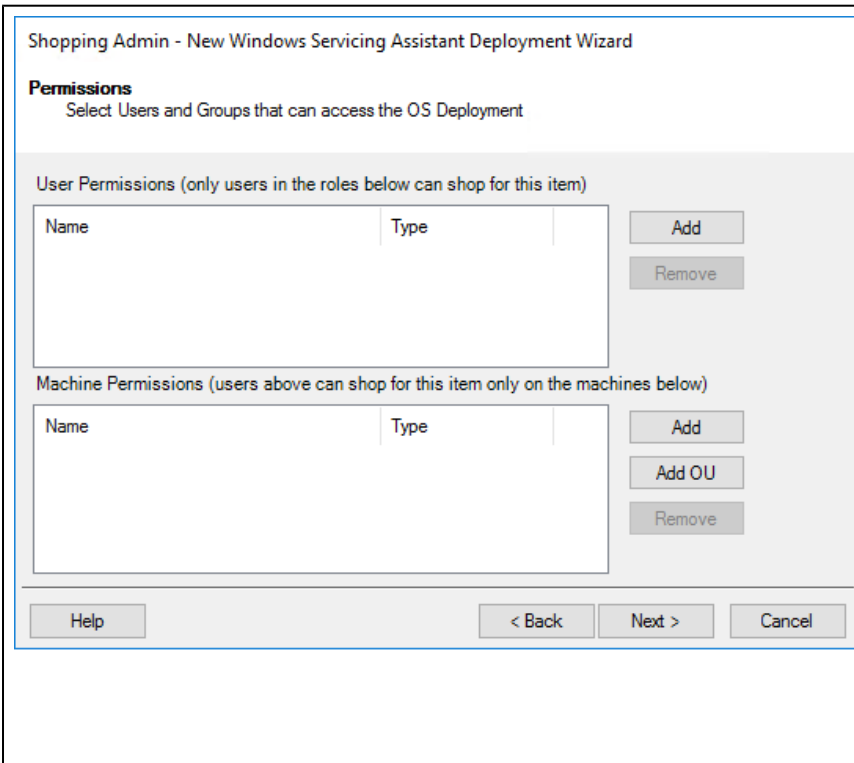
Application Ref:

Help < Back **Next >** Cancel

- a. Select the Collection that the Capture Task Sequence was deployed to (see [Preparation](#) above).
- b. From the Deployment drop-down, select the deployment that was created to deploy the Capture 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 Replace Capture WSA 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 Replace Capture WSA 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 Replace Capture WSA 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 Replace Capture WSA Deployment

Once the **Replace Capture WSA Deployment** has been created, it may be necessary to configure additional properties that are applicable specifically to Replace Capture deployments.

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

We are going to walk you through the each of the tabs in the Properties dialog for the Replace Capture 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.

Shopping Admin Console

Console Edit View Tools Help

Database Explorer

Name	Approval	ConfigMgr Package	ConfigMgr Program	Type
ConfigMgr				
Backup My Data	None	4a - Backup My Data	*	ConfigMgr
WSA				
Backup my data	None	WSA Backup my data	PS10004C	WSA

The General tab


Backup my data - Windows Servicing Assistant Deployment Properties

General ConfigMgr Collection Permissions Applications Storage Data Capture

Type: Replace Capture

Name: Backup my data

Description:

Icon:  Change Icon...

Cost: 0.00

Application Ref:

OK Cancel Apply

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.

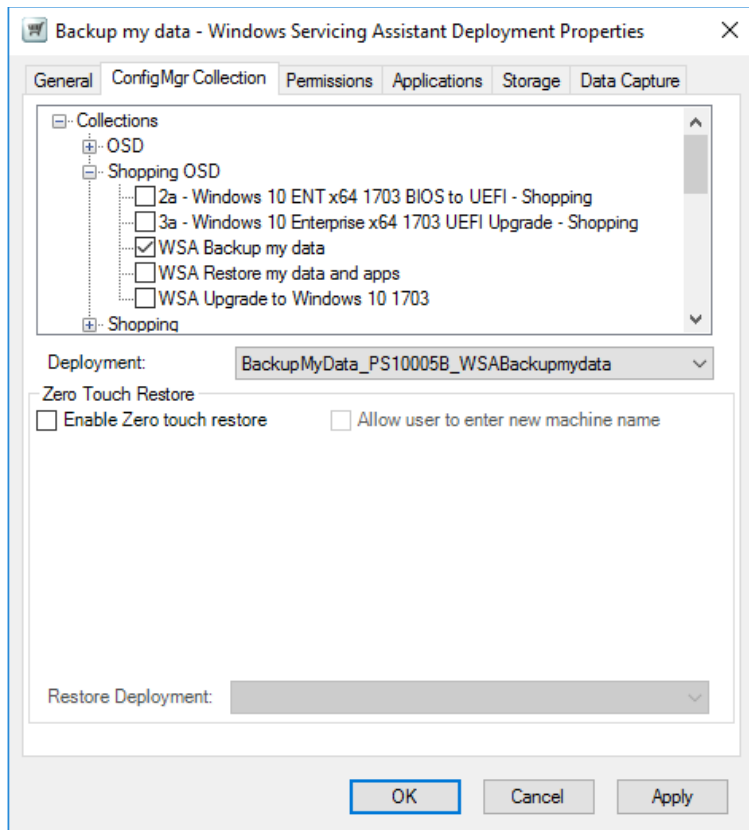
For example, if you change the name of the deployment from Backup my data to Prepare My Old PC for Replacement, users see this on the Start screen.

The ConfigMgr Collection tab

The **ConfigMgr Collection** tab is populated with the selections made when the application was created. These can be modified if necessary, but not recommended unless it is to correct an error. If you do modify these, ensure you select a deployment of a Replace Capture Task Sequence.

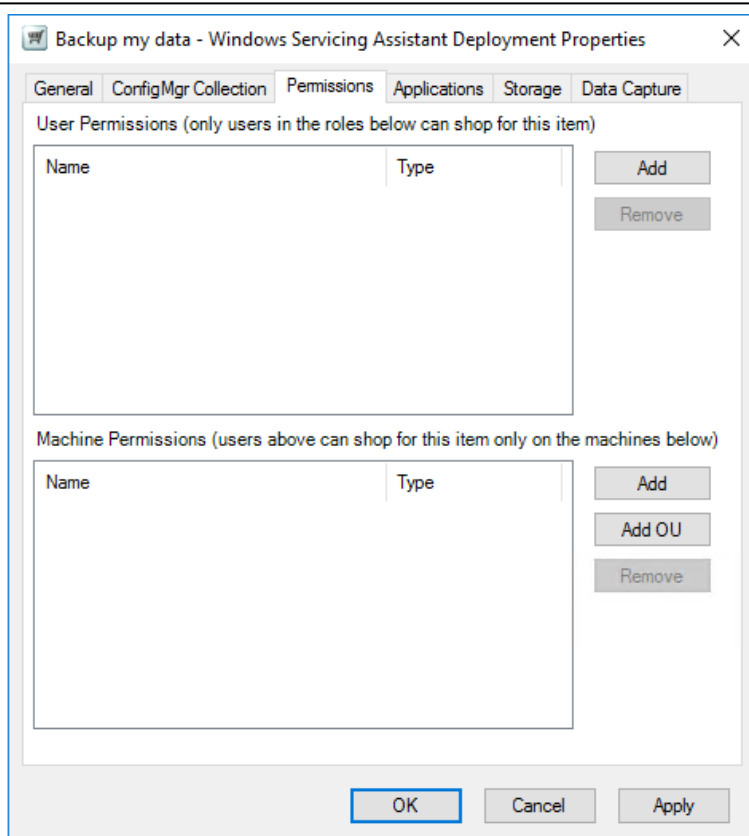
If a [Zero-touch Restore Deployment](#) has been created and you want to enable zero-touch restore:

1. Select the **Enable Zero-touch restore** option.
2. Select the restore deployment from the **Restore Deployment** drop-down. Refer to [Creating a Restore User Data and Applications WSA Deployment Application](#) - for more detail about preparing and configuring a Zero-touch restore.



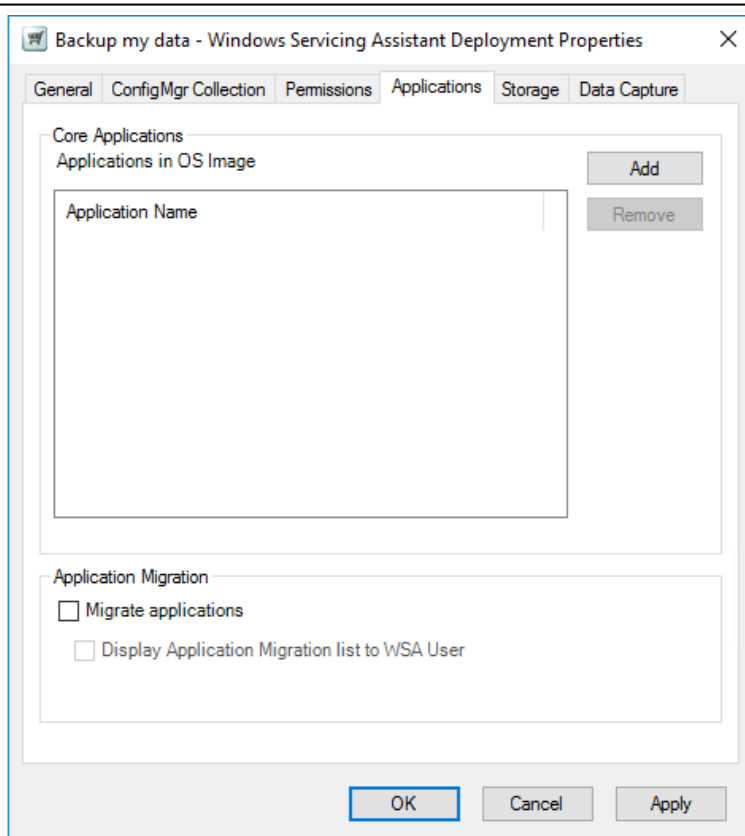
3. **Allow user to enter new machine name** will enable the user to enter the target machine name if computer association is not defined in the Configuration Manager for the machine being captured.

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.

The Applications tab



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

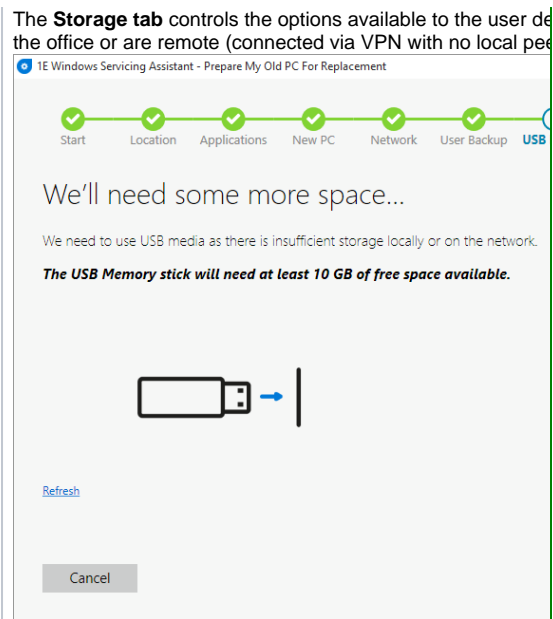
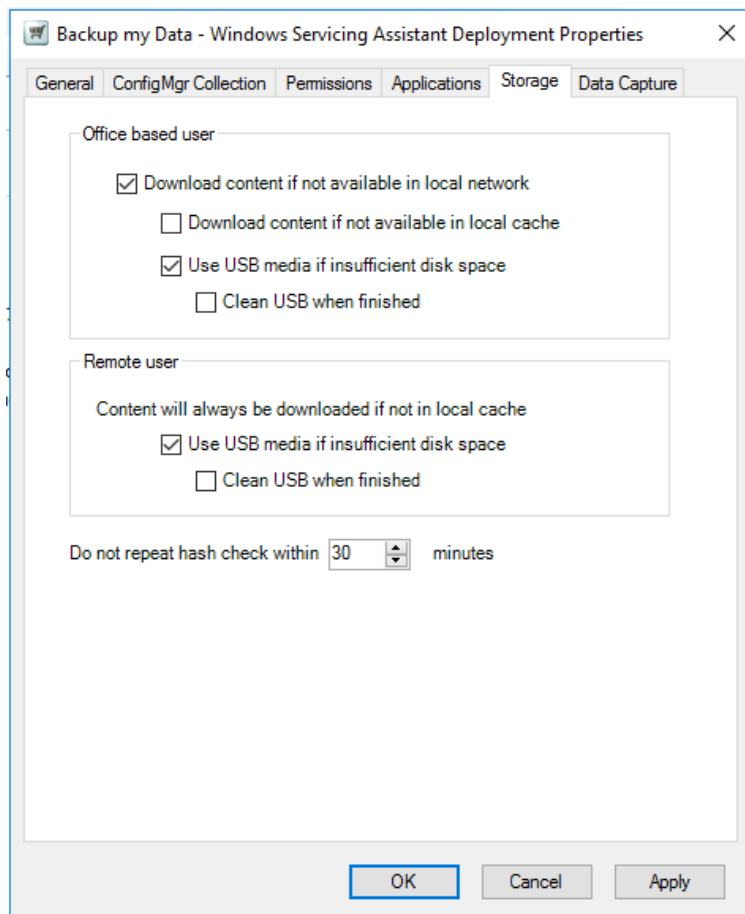
- If there are standard applications that will be included on the user's *replacement* machine, you can let the user know which applications are included by adding them to the Applications in OS Image list.

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.

- If 1E Application Migration is being used (specifically, if the Replace Restore Task Sequence includes the 1E Application Migration steps):
 1. check the Migrate Applications option.
 2. optionally, check the Display Application Migration list to WSA User option. When this option is selected, the user will see the applications that will be migrated to their new computer 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 it 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.

The Storage tab



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 C: drive available in its own Nomad cache or from any peers on the local network.

If Zero-touch Restore has been enabled in this Replace Capture deployment and the new computer can be contacted when the WSA runs the F: drive checks, it will also download reference content for the Restore Task Sequence (and any Application Migration content) if there is sufficient disk space on the local network for the new computer to execute the Restore Task Sequence. If there is insufficient disk space on the local computer cannot contact the new computer when the WSA runs the Replace Capture readiness checks, zero-touch restore will not be possible manually launch the WSA on the new computer to initiate the restore.

- Check the **Download content if not available in local cache** option to ensure the WSA downloads all reference content for the task sequence content is available on the local network for the new computer to execute the Restore Task Sequence.
- 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 saved on the hard disk. If USB drives are prohibited in your environment you will need to uncheck this option – the WSA wizard will prevent the sequence if there is insufficient disk space to download all 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 will be prompted to insert media with any other format.

- Check the **Clean USB when finished** option (only enabled if **Use USB media if insufficient disk space** is checked) to have the WSA remove content from USB media when the task 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 downloaded to the hard disk. If USB drives are prohibited in your environment you will need to uncheck this option – the WSA wizard will prevent the sequence if there is insufficient disk space to download all required task sequence content.

USB media must be NTFS format

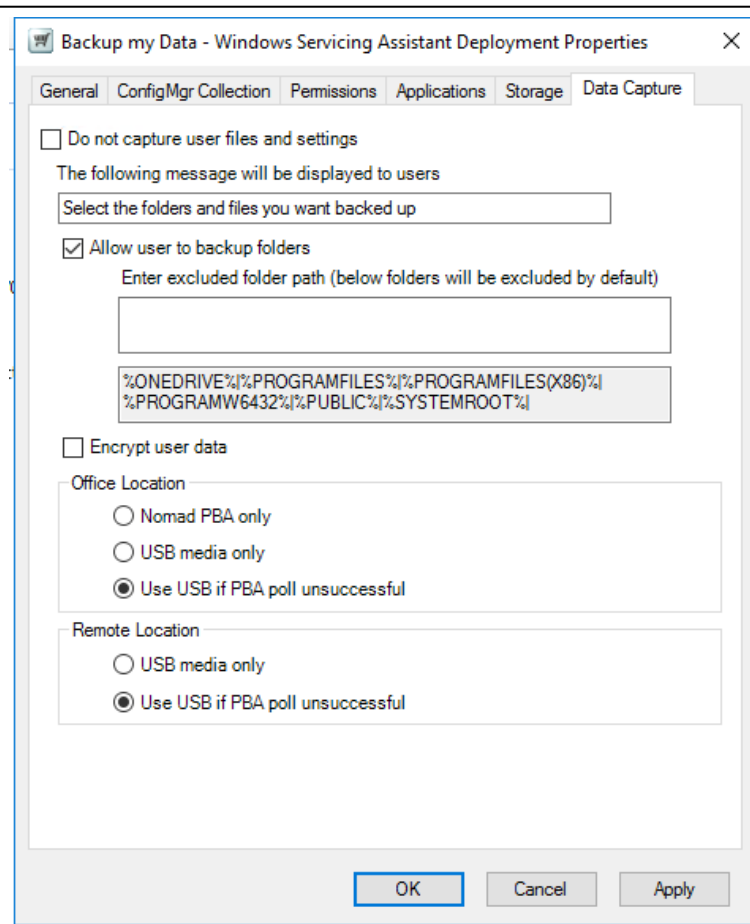
USB media must be formatted to the NTFS file system to be able to store content. When prompted to insert/select USB media, the user will not with any other format.

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

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 time (the deployment), including the hash check at this time can be time consuming and confusing to the user. This option prevents content hash checks in the last 30 minutes. The value is configurable between 0 and 480 minutes (8 hours) - 0 will result in hash checks always being performed.

The Data Capture tab



The **Data Capture** tab controls the options available to the user on the **User Backup** screen.

- Check **Do not capture user files and settings** if the users do not have local files or settings that must be preserved. If this option is checked the following options are disabled and the following points do not apply.



When you select this option, WSA will not attempt to calculate space required for user data. When the WSA Actions - Initialize step runs in the task sequence, a variable named 1ESkipUserStateCapture will be created and set to true. If the task sequence includes steps to capture user data, these should be conditioned to only execute if 1ESkipUserStateCapture is not true.

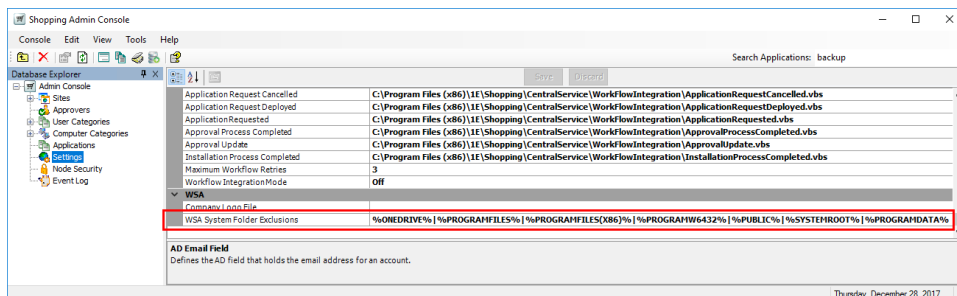
Specifically for a Replace Capture WSA application, if you select this option, Migrate Applications will be enforced on the Applications page. This is by design - the Replace Capture application only migrates data and applications. If data migration is not required, application migration is the only thing that WSA will be doing.

- The message the user sees on the WSA User Backup screen (the default is Select the folders and files you want backed up) can be customized by modifying the contents in the text box under The following message will be displayed to users heading.

If you do not want users to select their files and folders to be backed-up, modify this message as they will not be prompted to do so and no controls are displayed apart from this message. It is useful to warn the user that it is likely to take several minutes to calculate the storage requirements when the click Next.

- Check the **Allow user to backup folders** option to allow users to select which folders they want to be included in the capture. To prevent them selecting certain folders, enter the name of the folders, separated with the pipe (|) character, in the text box using under the Enter excluded folders heading.

The greyed-out text box lists the global folder exclusions defined in the WSA System Folder Exclusions setting in Shopping. These can be modified in the Shopping Admin Console as illustrated below.



- Check the **Encrypt user data** option if you want the captured user data to be encrypted.

If a Computer Association exists in Configuration Manager for the machine being captured, the encryption key defined in the Computer Association will be used. If there is no Computer Association in Configuration Manager, the WSA will create an encryption key and store it in the Shopping database in a 'custom Computer Association'.

For the office location:

For machines in the office, select one of the following:

- Nomad PBA only – user data will only be stored on a local peer using Nomad Peer Backup Assistant. If no local peers are available to store the data, the WSA will prevent the user from executing the capture.
- USB Media only – user data will only be stored on USB media. The user will be required to insert an NTFS format USB disk to store the capture and will need to insert the same USB disk into the new machine when they run the WSA for the restore.
- Use USB if PBA poll unsuccessful (default) – the WSA will attempt to find an available peer to store user data on. If that is unsuccessful the user is prompted to insert USB media.

For the remote location:

For machines that are remote (Remote Location), select one of the following:

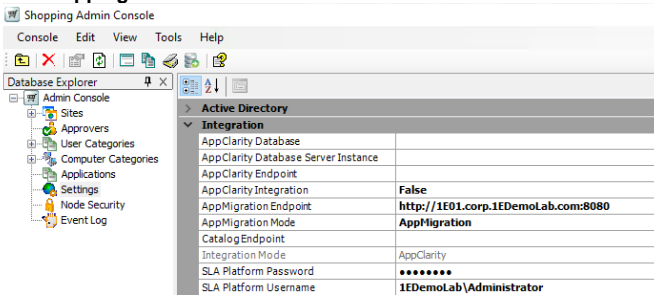
- USB Media only – user data will only be stored on USB media. The user will be required to insert an NTFS format USB disk to store the capture and will need to insert the same USB disk into the new machine when they run the WSA for the restore.
- Use USB if PBA poll unsuccessful (default) – the WSA will attempt to find an available peer to store user data on. If that is unsuccessful the user is prompted to insert USB media

Data capture 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 code	Likely causes	Remedial action
0x00001001	Communication error – failure to send a size estimation message to the Tachyon service.	Ensure the Tachyon service is up and running.
0x00001002	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 get task sequence references from the Shopping API.	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Source machine does not exist in SLA platform. 2. Missing or invalid SLA platform credentials under Settings in the Shopping Admin Console. 	<ol style="list-style-type: none"> 1. Ensure that the source machine exists in the SLA platform. If it does not, run a sync to refresh the data. 2. Ensure that the SLA platform credentials are correct under Settings in the Shopping Admin Console. 
0x0102	Unable to get USMT Capture step configuration.	Ensure that the task sequence contains a Capture step.
0x0103	Unable to get the task sequence XML as: <ol style="list-style-type: none"> 1. The Shopping server is unavailable. 2. The Shopping AppPool user has not been granted the Read-only Analyst role in Configuration Manager. 	<ol style="list-style-type: none"> 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 user to retry.
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.
0x0602	ScanState.exe unable to estimate user state data size.	Ensure that the Tachyon service is up and running. If it is running, check scanstate.log (its location is found in TachyonAgent.log).
0x0603	Unable to locate a compatible version of Nomad.	Ensure that you have Nomad 6.3.200 or later installed.

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.	<p>This is not likely to 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:</p> <ul style="list-style-type: none"> • Something went wrong with capturing your data. 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

		<p>Sequence package id (HKEY_LOCAL_MACHINE\SOFTWARE\1E\WSA\TSExecutionHistory\TSPkgID)</p> <p>Error is displayed on the Completion screen as follows:</p> <ul style="list-style-type: none"> • Something went wrong with capturing your data. Please contact your local administrator.
0xA0070702	WSA execution history is missing – most likely cause is that the task sequence failed in WinPE.	<p>Check the status messages in Configuration Manager.</p> <p>Error displayed on the Completion screen as follows:</p> <ul style="list-style-type: none"> • Something went wrong with capturing your data. Please contact your local administrator.
0xA0070703	Unable to establish a WIFI connection.	<p>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.</p> <p>Error displayed on the Completion screen:</p> <p>There was a problem connecting to the WiFi network. Please rerun the Assistant and ensure that the WiFi connection details are entered correctly</p>
0xA0070704	Unable to establish a VPN connection.	<p>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.</p> <p>Error displayed on the Completion screen:</p> <p>There was a problem connecting to the VPN. Please rerun the Assistant and ensure that the VPN connection details are entered correctly</p>
0xA0070705	WSA execution history is invalid.	<p>Contact 1E Support for assistance for assistance.</p> <p>Error displayed on the Completion screen as follows:</p> <ul style="list-style-type: none"> • Something went wrong with capturing your data. Please contact your local administrator.