DocAve® 6 Service Pack 2

Deployment Manager

User Guide

Revision E
Issued February 2013

Table of Contents

About Deployment Manager 5
Complementary Products 5
Submitting Documentation Feedback to AvePoint 5
Before You Begin 6
Configuration 6
Agents 6
Licensing and Permissions 7
Local System Permissions 8
Getting Started 9
Launching Deployment Manager 9
Understanding Deployment Manager 10
Deployment Manager Interface 11
Online vs. Offline Deployment 12
Deployment Mappings 13
Creating a Deployment Mapping 13
Deploy One Source Object to Multiple Site Collections or Sites in Destination 16
Offline Deployment for Objects in a Web Application 17
Offline Solution Deployment 18
Deployment Plans 20
Creating a Deployment Plan 20
Managing Deployment Plans 21
Configuring Queues Locally 23
Downloading Queue as Excel Files 23
Configuring Queue Excel Files 23
Uploading Queue Excel Files 25
Queue Tools 26
Managing Solutions 27
Pre-Creating Solution Queues 27
Solution Tools 28

Using Compare 29
Performing a Compare Job 29
Comparing in Different Tree Levels 30
Rules for Comparing Objects in Web Application 31
Rules for Comparing Web-Front End 32
Rules for Comparing Farm Solution 34
Rules for Comparing Shared Services 34
Advanced Settings 37
Using SharePoint Management Shell 38
Deployment Manager Use Cases 39
Basic Plan Deployment Use Case 39
Creating and Administering Advanced Mappings Use Case 39
Maintenance of Deployment Plans Use Case 40
Appendix A: Conflict Resolution – Web Application Deployment 41
Appendix B: Conflict Checks 45
Appendix C: Supported and Unsupported Elements for Web Application Deployment 46
Appendix D: Supported and Unsupported Workflow Type 48
Appendix E: Design Elements Deployment 49
Appendix F: Web Front-End Deployment 50
Appendix G: Solution Deployment 51
Appendix H: Managed Metadata Service Deployment 52
Appendix I: Deployment Manager Customization Table 53
Appendix J: Advanced Settings in Configuration Files 72
AgentCommonWrapperConfig.config 72
Restoring Specified Web Properties 72
Appendix K: Accessing Deployment Manager Using Hot Keys 73
Home Page 73
Plan Manager 74
Solution Tools for Farm Solutions 74
User Solution Tools for User Solutions 75
Queue Tools 75
Index 76

Notices and Copyright Information 78

About Deployment Manager

Effective management and automation of release operations to promote content, customizations, and design elements throughout SharePoint environments is vital to a successful deployment. Without proper planning or control, errors or changes during the staging process could result in poor application reliability, increased time-to-value, and project delays.

DocAve Deployment Manager offers a robust solution that automates the change management of SharePoint solutions, customizations, and Web-front end elements, thereby:

- Minimizing human error and cost overruns
- Accelerating service delivery
- Facilitating pre-production testing and deployment operations

Complementary Products

Many products and product suites on the DocAve 6 platform work in conjunction with one another. The following products are recommended for use with Deployment Manager:

- DocAve Content Manager for SharePoint when the deployment of customizations also includes content or structural changes
- DocAve Replicator for SharePoint for copying SharePoint content within the same SharePoint farm or from one SharePoint farm to another
- DocAve Data Protection for setting backup and recovery points prior to adjusting SharePoint governance policies in this product

Submitting Documentation Feedback to AvePoint

AvePoint encourages customers to provide feedback regarding our product documentation. Click the following URL to access the **Submit Your Feedback** form on our website:

http://www.avepoint.com/resources/documentation-feedback/?flush=1

Before You Begin

Refer to the sections for below for system requirements for Deployment Manager.

Configuration

In order to use Deployment Manager, the DocAve 6 platform must be installed and configured properly on your farm. Deployment Manager will not function without DocAve 6 present on the farm.

Agents

SharePoint Agents are responsible for running DocAve jobs and interacting with the SharePoint object model. At the minimum, DocAve must have one agent installed on at least one of the Web front end (WFE) servers. DocAve Agents enable DocAve Manager to communicate with the respective servers, allowing for Deployment Manager commands to function properly.

***Note**: The use of system resources on a server increases when the installed agent is performing actions. This may affect server performance. However, if the agent installed on a server is not being used, the use of system resources is very low and, therefore, the effect on server performance is negligible.

For instructions on installing the DocAve Platform, DocAve Manager, and DocAve Agents, see the DocAve 6 Installation Guide.

Licensing and Permissions

To install and use Deployment Manager properly, ensure that the agent account has the following permissions:

1. Local System Permissions: These permissions are automatically configured by DocAve during installation. Refer to Local System Permissions for a list of the permissions automatically configured upon installation. If there are no strict limitations on the permissions, you can simply add the **DocAve Agent Account** to the local **Administrators** group to apply all of the required permissions.
2. SharePoint Permissions: These permissions must be manually configured prior to using DocAve 6 Deployment Manager they are not automatically configured.
    - User is a member of the Farm Administrators group. Since Administrator works across farms and on all SharePoint settings and configurations, this account is needed in order to provide the best and most complete quality of service.
    - In SharePoint 2010:
        - Full control to all zones of all Web applications via User Policy for Web Applications

      In SharePoint 2013:
        - Check the Account operates as System checkbox for Web Applications
    - User Profile Service Application permissions:
        - In SharePoint 2010
            - Use Personal Features
            - Create Personal Site
            - Use Social Features
        - In SharePoint 2013
            - Create Personal Site (required for personal storage, newsfeed, and followed content)
            - Follow People and Edit Profile
            - Use Tags and Notes
    - Managed Metadata Service: Term Store Administrator
    - Search Service: Full Control
    - Business Data Connectivity Service: Full Control
3. SQL Permissions: These permissions must be manually configured prior to using DocAve 6Deployment Manager; they are not automatically configured.
    - Database Role of db_owner for all the databases related with SharePoint, including Content Databases, Config Database, and Central Admin Database

Local System Permissions

The following local system permissions are automatically configured during DocAve 6 installation:

- User is a member of the following local groups:
    - IIS WPG (for IIS 6.0) or IIS IUSRS (for IIS 7.0)
    - Performance Monitor Users
    - DocAve Users (the group is created by DocAve automatically; it has the following permissions):
        - Full control to the Registry of HKEY LOCAL MACHINE\SOFTWARE\AvePoint\DocAve6
        - Full control to the Registry of HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\eventlog
        - Full Control to the Communication Certificate
        - Permission of Log on as a batch job (it can be found within Control Panel > Administrative Tools > Local Security Policy > Security Settings > Local Policies > User Rights Assignment)
        - Local Administrator

Getting Started

Refer to the sections below for important information on getting started with Deployment Manager.

Launching Deployment Manager

To launch Control Panel and access its functionality, complete the following steps:

1. Log in to DocAve. If you are already in the software, click the **DocAve** tab.
2. From the **DocAve** tab, click **Administration** to view the Administration modules.
3. Click Deployment Manager to launch this module.

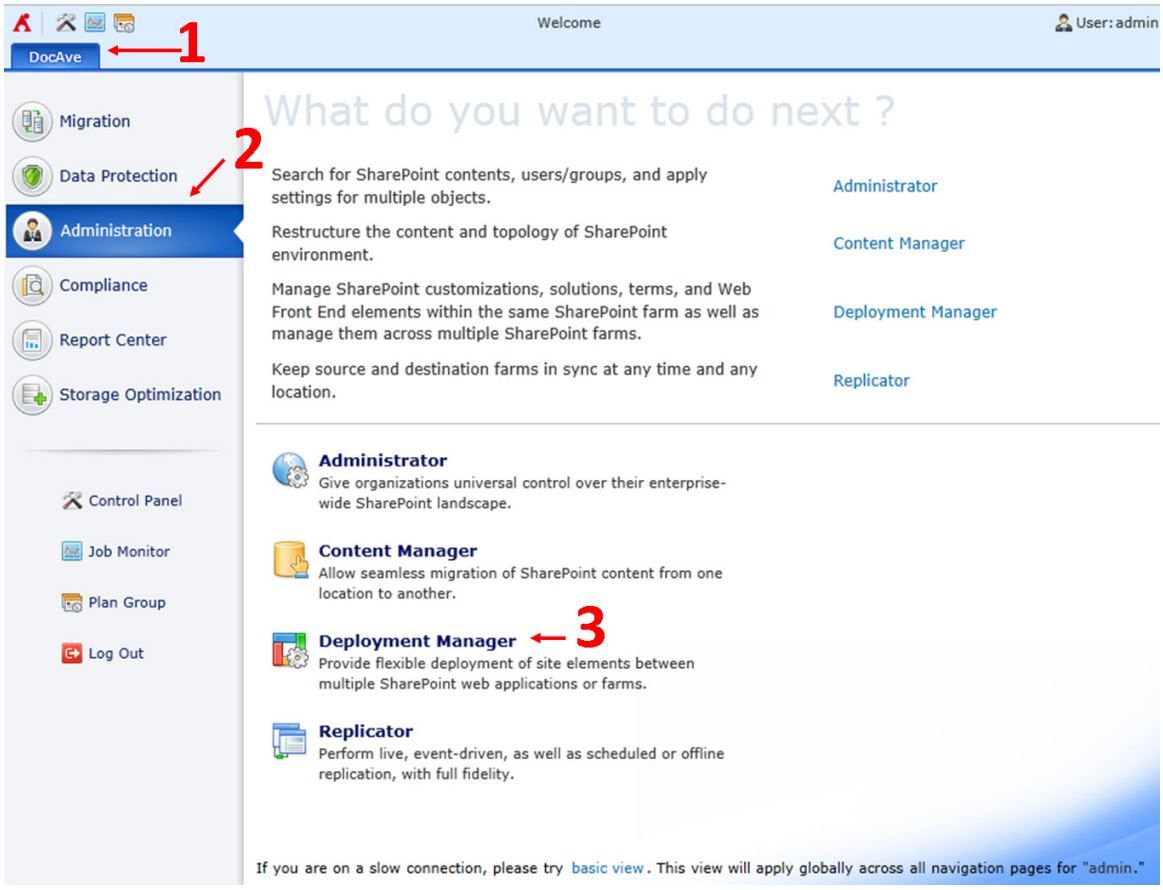


Figure 1: DocAve module launch window.

Understanding Deployment Manager

When Deployment Manager is launched, you are brought to the **Home** tab where you can manage previously deployed plans, access the individual settings control panels for customizing plans, and monitor the status of currently running and scheduled plans. This is where you can execute the majority of jobs, including solutions deployment and retraction, comparing two selected nodes of the same SharePoint object level, deploying Web applications, Web front-end deployment, and Shared Services deployment.

Deployment manager is intended for moving customizations and design changes through their lifecycle on SharePoint. A plan represents a complete set of customizations that can be moved and deployed together. We recommend using plans to track design changes corresponding to the movement of business solutions, such as custom pages, workflows, content types, or other features as one complete set. Each plan can have:

- Entire Web applications
- Design elements such as site templates
- Solutions and features
- Service applications: managed metadata
- Locally deployed assemblies and reference files: IIS settings, GAC, Hive, .DLLs, etc.

  For detailed information on what exactly is deployed for each element, refer to:

  - Appendix C: Supported and Unsupported Elements for Web Application Deployment
  - Appendix D: Design Elements Deployment
  - Appendix E: Web Front-End Deployment
  - Appendix F: Solution Deployment
  - Appendix G: Managed Metadata Service Deployment

Deployment Manager has Job Monitor integrated so that you can check the status of deployed plans without leaving the Deployment Manager interface. If Job Monitor is accessed within Deployment Manager, it will only display jobs running in Deployment Manager.

To learn more about Job Monitor, see the DocAve 6 Job Monitor Reference Guide.

Deployment Manager Interface

In Deployment Manager, you will see the following areas:

1. **Tabs** – Switch between the Deployment Manager Home tab, Plan Manager for Deployment Manager, and the Compare tab.
2. **Ribbon** – Toolbar where you can perform certain actions to your mappings, and configure related settings.
3. **Source Pane** – Here you can navigate through SharePoint farm structures to find the object you wish to deploy from.
4. **Destination Pane** – Here you can navigate through SharePoint farm structures to find the desired node to deploy to.
5. **Queue** – List of deployment mappings awaiting execution.
6. **Search bars** – Find the desired object via keyword. This is useful if you know what object you are looking for but are not certain where in your SharePoint farm(s) it lives, or if you have many multiple large environments, this can save you some time in finding the desired object.

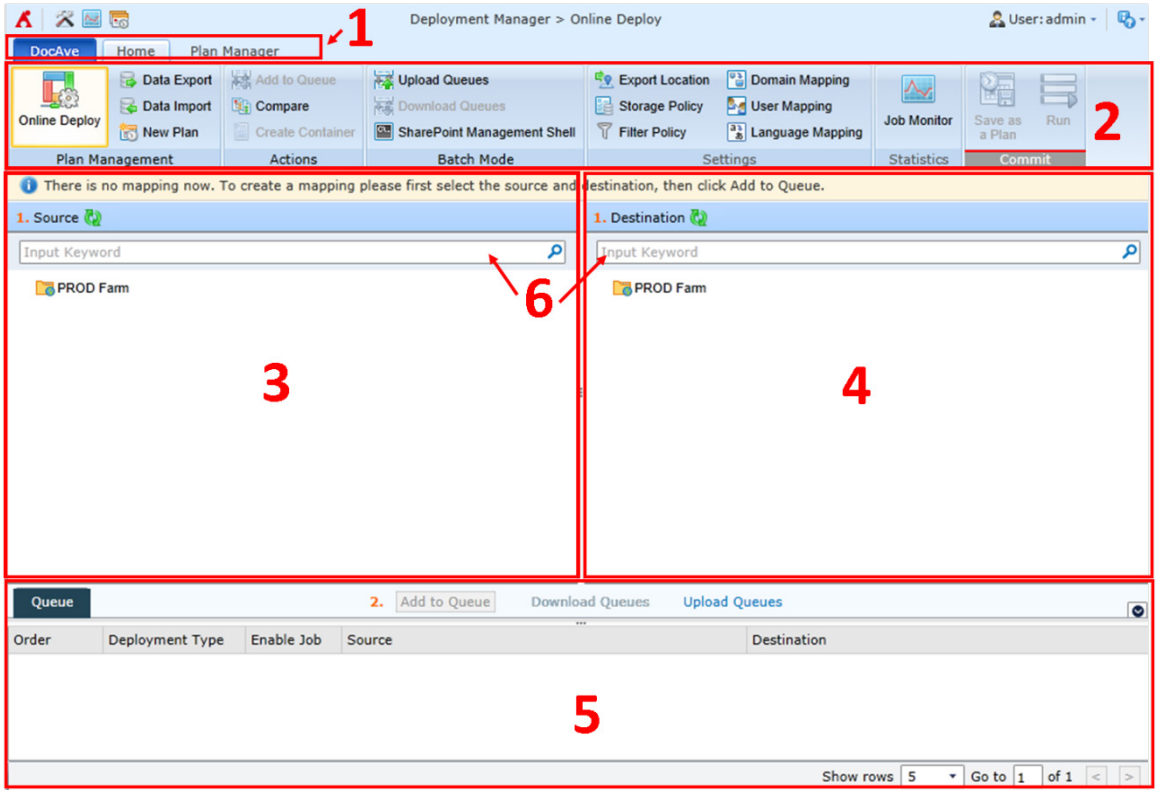


Figure 2: Deployment Manager User Interface.

Online vs. Offline Deployment

For the objects under Web application level, Deployment Manager allows you to perform an online deployment. If the source node and the destination node are able to communicate with each other, the solutions may be deployed via online deployment. To perform an online solution deployment, follow the instructions under Creating a Deployment Mapping.

If the source node and the destination node are unable to communicate with each other, whether due to a firewall or any other factor, solutions and design elements may still be deployed via offline deployment. Offline deployment involves exporting the solution(s) from the source node to an Export Location, and then importing the solutions or design elements from the Export Location to the destination node. To perform an offline solution deployment, see the Offline Solution Deployment section of this guide. For the information on how to configure a Logical Device, refer to DocAve 6 Control Panel Reference Guide.

Deployment Mappings

A deployment mapping is created by selecting a Source node and a Destination node.

Creating a deployment mapping is the first step to many of the common uses of Deployment Manager. This allows you to:

- Quickly and easily perform a singular deployment. This may be useful for when a new site is created, and you just wish to add a solution or apply a template to it.
- Configure multiple deployments to run one after another. This may be useful for if you have multiple singular deployments to perform. This way you can create all of your mappings during work hours, and then execute the deployments off hours.
- Configure multiple deployments, and save as a plan which allows you to repeat the deployment in the future without having to recreate the same mapping and reconfigure the same settings. This may be useful if you wish to keep the Destination node in sync with the Source node, and so would wish to execute the same mappings periodically. For example, if you have a development environment, a testing environment, a QA environment, and/or multiple farms. Each time you update the node on the development environment, you may wish to have the testing environment updated as well, then update the QA environment for further testing. You may then wish to update all of your farms once the testing is finished. This way, rather than creating a new deployment mapping each time, you can just rerun the plans created for each deployment.
  For more information, see the Creating a Deployment Plan section of this guide.

Creating a Deployment Mapping

To create a deployment mapping, follow the instructions below:

1. In the Source pane, click on a farm to expand its object tree. Continue clicking the relevant objects until you find the object you wish to deploy from. Select the source object.
2. In the Destination pane, click on a farm to expand its object tree. Continue clicking the relevant object until you find the object you wish to deploy to. Select the destination object.
3. Click **Add to Queue** on the ribbon or on the lower right corner of the page. The **Add to Queue** window will pop up. Depending on the mapping you are creating, some of the following settings may be configured:

   ***Note:** Deployments can only be mapped between a source and destination that are using the same version of SharePoint. If the site in SharePoint 2013 is a SharePoint 2010 mode site, it can only be deployed to the same mode site.

   - If the source and destination have different templates, a warning message will appear to warn you that deployment may cause errors. Click **OK** to continue, or click **Cancel** to return to the Source and Destination selection.**Reorder the Solutions** – If there are multiple solutions being deployed, you may configure the order that the solutions are deployed in by selecting the desired place in the order column.

- **Conflict Resolution** – Choose Skip, Merge or Replace from the Container level conflict resolution drop-down menu. Check the **Check lower objects** checkbox to configure content level conflict resolution. Choose Skip, Overwrite or Overwrite by Last Modified Time from the Content level conflict resolution drop-down menu. For detailed information on how Deployment Manager resolves conflicts based on these configurations, see Appendix A: Conflict Resolution – Web Application Deployment. For information on what criteria Deployment Manager checks to determine conflicts, see Appendix B: Conflict Checks.

- **Mappings** – If you have previously configured mapping settings in Control Panel, you may choose to apply them to this deployment mapping when adding this deployment to the Queue. For more information on these mapping settings, see the Advanced Settings section of this guide.

- **Filter Policy** – A Filter Policy allows you to designate specific object or data within each SharePoint level from site collection down to item level.

    - **Source** – Select a Filter Policy you previously created from the drop-down menu to filter the source object or data or select **New Filter Policy** to create a new one. For instructions on creating a Filter Policy, see the Filter Policy section of the DocAve 6 Control Panel Reference Guide.

    - **Destination** – Select a Filter Policy you previously created from the drop-down menu to filter the destination object or data or select **New Filter Policy** to create a new one. For instructions on creating a Filter Policy, see the Filter Policy section of the DocAve 6 Control Panel Reference Guide.

      ***Note:** A filter policy can be selected for the destination only when you deploy the source Site, List/library, Content Type Group/Content type, Column group/Column to multiple destination sites or site collections, otherwise the **Destination** drop-down menu will be greyed out.
      ***Note:** The filter policy in the **Destination** drop-down menu only filters at the site collection level and site level filter rules configured in Filter Policy. Lower level objects or data in the destination cannot be filtered even if the selected Filter Policy contains rules applicable to those objects.

- **Source Content Settings** – Select the source components that you want to deploy to the destination:

    - **Include security** – Enable this option to deploy user and/or group permissions to the destination node.

    - **Include user profile** – Enable this option to deploy user profile to the destination node. Make sure that the selected destination's Web application is connected to the User Profile Service Application before you select this option.

    - **Include User Content** – Enable this option to deploy the customized content to the destination node.

- **Workflow** – Enable the **Include workflow definition** option to also deploy the definition of existing source workflows to the destination node.

- **Deploy to Relative Lists and Sites** – Enable this option to synchronize the source content type to the destination. If you have deployed a content type from the source to the destination before, with this option selected, the content type changes will be synchronized to the destination after this deployment job. When this option is not selected, the content type changes will not be synchronized to the destination content type that has already been used by lists or sites.
- **Preserve the Null Column Values** – Choose whether or not to preserve the null value of item column(s) in the source. Some values of the newly created column(s) may be null for previous items, and this option allows you to choose whether to replace the null value with the default value in the destination. By default, we will preserve the null value for those items.
- **Web Configuration Settings** – This option appears when you perform an IIS Site Files level deployment. Choose whether or not to include Web Configuration in the deployment job. By default, the following parameters are included for searching the related configuration in web.config files:

  configuration/SharePoint/PeoplePickerWildcards;
  configuration/system.web/membership/providers;
  configuration/system.web/roleManager/providers;
  configuration/connectionStrings;
  You can customize the parameters according to the XPath format in the left pane of the interface.
  Choose whether or not to include the parent node's properties if the parent node does not exist in the destination by checking the checkbox.

4. Click **OK** to add this deployment mapping to the Queue, or click **Cancel** to return to selecting Source and Destination nodes for the deployment mapping.

To edit the deployment mapping, click on the Queue Tools tab. You will be brought to the Queue Tools tab of Deployment Manager. For more information, see the Queue Tools section of this guide.

After a deployment mapping is added to the Queue, the Queue Tools tab appears. Click the Queue Tools tab to make changes to any of the mappings in the Queue. Refer to the Queue Tools section of this guide for more information.

When you are finished adding deployment mappings to the Queue, click **Run** on the ribbon or click **Run** at the bottom of the screen.

To perform multiple deployments, create deployment mappings by repeating the steps in Creating a Deployment Mapping. Each deployment mapping you configure will appear in the Queue. You can change the order in which the deployment mappings are executed by clicking the corresponding drop-down menu in the Order column of the Queue, then selecting the desired place in the Queue. Note that by default, five deployment mappings are shown in the Queue. To change the number of deployment mappings displayed in the Queue, click the **Show rows** drop-down menu beneath the Queue, then select the desired number of deployment mappings to display.

Deploy One Source Object to Multiple Site Collections or Sites in Destination

This allows you to deploy one source object to multiple site collections or sites by adding one mapping to queue. The source supported objects are site, list/library, content type group/content type, column group/column, the destination supported nodes are Web application and site collection.

- **Deploying to multiple site collections** – Select the source node, and select a destination Web application, click **Add to Queue**, a pop-up window appears, you can select to **Deploy to Top-level site only** or **Deploy to all sites**:
    - If you select **Deploy to Top-level site only** in the pop-up window, the **Add to Queue** window appears, configure the mapping settings and Click **OK** to add this deployment mapping to the Queue. For the details on how to configure the mapping settings, refer to the Creating a Deployment Mapping section in this guide. After the deployment job, the source object will be deployed to all the top-level sites under the selected destination Web application.
    - If you select **Deploy to all sites**, the **Add to Queue** window pops up, configure the queue settings and Click **OK** to add this deployment mapping to the queue. For the details on how to configure the mapping settings, refer to the Creating a Deployment Mapping section in this guide. After the deployment job, the source object will be deployed to all the top-level sites and sites under the selected destination Web application.
- **Deploying to multiple sites** – Select the source node, and select a destination site collection, click **Add to Queue**, a pop-up window appears, you can select to **Deploy to Top-level site only** or **Deploy to all sites**:
    - If you select **Deploy to Top-level site only** in the pop-up window, the **Queue Settings** configuration page appears, configure the queue settings and Click OK to add this deployment mapping to the queue. After the deployment job, the source object will be deployed to all the top-level sites under the selected destination site collection.
    - If you select **Deploy to all sites**, the **Add to Queue** window appears, configure the queue settings and Click **OK** to add this deployment mapping to the Queue. After the deployment job, the source object will be deployed to all the top-level sites and sites under the selected destination site collection.

Note that when you select a site in the source, you can only select a Web application in the destination if you want to perform the batch settings.

The top-level site can only be deployed to the destination top-level site. If you select a top-level site in the source, and select a Web application or site collection in the destination, click Add to Queue, and the Deploy to all sites option will be greyed out.

Offline Deployment for Objects in a Web Application

To perform an offline deployment for the objects in a Web application, export the objects to an export location and then import the objects to the desired destination node. Make sure an export location is configured before this offline deployment. For the details on how to create an export location, please refer to DocAve 6 Control Panel Reference Guide.

Follow the steps below to export the objects in a Web application:

1. Click **Start with Data Export** in the left-hand pane of the landing page, or click **Data Export** on the ribbon. The **Data Export** interface appears.
2. Select the desired node in the Source pane. You can select the entire Web application or desired objects within the Web application.
3. In the Destination pane, select the export location you wish to export the objects to from the Export Location drop-down menu.
4. Click **Add to Queue** and configure settings in the **Add to Queue** window. For more information on these settings, refer to the Creating a Deployment Mapping section in this guide.
5. Click **OK** to add to the queue, or **Cancel** to return to the Source and Destination selection interface. If you wish to add other mappings, click **Exit** in the Destination pane, and the data trees will appear in the Destination pane once again.
6. Once you have finished adding mappings to the Queue, click **Save As** to save this Queue as a plan and follow the instructions in Creating a Deployment Plan. Alternatively, to execute the Queue immediately, click **Run** on the ribbon or click **Run** located at the bottom of the screen.

Follow the steps below to import the Web application level objects:

1. Click **Start with Data Import** in the left-hand pane of the landing page, or click **Data Import** on the ribbon. The **Data Import** interface appears.
2. Select the destination node in the **Destination** pane.
3. In the Source pane, select **Design** from the **Import Type** drop-down menu. The export locations where the objects have been imported will be loaded in the **Source** pane.
4. Click on the desired export location, the folder named **DesignManager2010** will be loaded. Click on the folder, the previously created exported plans will appear. You can click the exported plan name to expand to the exported job node, and then select a node. Click the exported job node to see the exported job data in the data tree.
5. Click **Add to Queue**. The **Add to Queue** window will pop up.
6. Configure settings in the **Add to Queue** window. For more information on these settings, refer to the Creating a Deployment Mapping section in this guide.
7. Click **OK** to add to the queue, or **Cancel** to return to the Source and Destination selection interface. Repeat the previous steps to add more design elements import mappings to the Queue. If you wish to add other mappings, click **Exit** in the Source pane, and the data tree will appear in the Source pane once again.

8. Once you have finished adding mappings to the Queue, click **Save As** to save this Queue as a plan and follow the instructions in Creating a Deployment Plan. Alternatively, to execute the Queue immediately, click **Run** on the ribbon or click **Run** located at the bottom of the screen.

***Note**: In the imported job, if you select an exported site collection node in the source, and select a site collection in the destination, the user solution's conflict resolutions are Skip, Overwrite, and Overwrite by Last Modified Time. But in other jobs, the user solution's conflict resolutions are Skip, Upgrade and Retract/Re-deploy.

Offline Solution Deployment

To perform an offline solution deployment, export the solution(s) to a Logical Device and then import the solution to the desired destination node. Make sure a Storage Policy is configured before this offline deployment. For the details on how to configure a Storage Policy, refer to the DocAve 6 Control Panel Reference Guide.

Follow the steps below to export the solution(s):

1. Click **Start with Data Export** in the left-hand pane of the landing page, or click **Data Export** on the ribbon. The **Data Export** interface appears.
2. Select the desired solution(s) in the Source pane.
3. In the Destination pane, select the Logical Device you wish to export the solution(s) to from the **Solution Store** drop-down menu.
4. Click **Add to Queue**. The **Add to Queue** window will pop up.
5. Enter a description for the solution(s), then click **OK** to add to the queue, or **Cancel** to return to the Source and Destination selection interface. Repeat the previous steps to add more solution export mappings to the Queue. If you wish to add other mappings, click **Exit** in the Destination pane, and the data tree will appear in the Destination pane once again.
6. Once you have finished adding mappings to the Queue, click **Save As** to save this Queue as a plan and follow the instructions in Creating a Deployment Plan. Alternatively, to execute the Queue immediately, click **Run** on the ribbon or at the bottom of the screen.

To import the solution(s), complete the following steps:

1. Click **Start with Data Import** in the left-hand pane of the landing page, or click **Data Import** on the ribbon. The **Data Import** interface.
2. Select the destination node in the Destination pane.
3. In the Source pane, select **Solution** from the **Import Type** drop-down menu.
4. Select **Solution Store** from the **Deploy from** drop-down menu to access the logical device to which you have previously exported your solution(s). Click on a logical device under **Solution Store** to see the solutions the device contains. You can also select the **File System** from the **Deploy from** drop-down menu to access the file system where the solutions you want to import

are. Select the desired solutions by checking the corresponding checkboxes then click **Add to Queue**. The **Add to Queue** window will pop up.

5. Select the desired Conflict Resolution method from the drop-down menu. For details the different Conflict Resolution methods, refer to Appendix A: Conflict Resolution – Web Application Deployment. For information on what criteria Deployment Manager checks to determine conflicts, see Appendix B: Conflict Checks.
6. If more than one solution is in this mapping, sort the solutions into your desired order.
7. Click **OK** to add to the queue, or **Cancel** to return to the Source and Destination selection interface. Repeat the previous steps to add more solution import mappings to the Queue. If you wish to add other mappings, click **Exit** in the Source pane, and the data tree will appear in the Source pane once again.
8. Once you have finished adding mappings to the Queue, click **Save As** to save this queue as a plan and follow the instructions in Creating a Deployment Plan. Alternatively, to execute the Queue immediately, click **Run** on the ribbon or at the bottom of the screen.

Deployment Plans

Deployment mappings can be executed right away, or saved as plans to be executed at a later time. This also allows you to repeat the same deployment without having to recreate all of the mappings or reconfigure all of the settings.

Creating a Deployment Plan

To create a deployment plan, create deployment mappings by repeating the steps in Creating a Deployment Mapping. Each deployment mapping you configure will appear in the queue. You can change the order in which the deployment mappings are executed by clicking the corresponding drop-down menu in the **Order** column of the queue, then selecting the desired place in the queue. Note that by default, five deployment mappings are shown in the queue. To change the number of deployment mappings displayed in the queue, click the **Show rows** drop-down menu beneath the queue, then select the desired number of deployment mappings to display.

When you are finished adding deployment mappings to the queue, click **Save as a Plan on the ribbon or** located at the bottom of the screen. You will be brought to the **Save as a Plan** interface. Configure the following settings:

- **Plan Name** – Type in a **Plan Name** for this new plan. Then type in a description for future references.
- **Backup Environment Before Running Plan** – Enable this option to back up the destination environment before running the plan. You must then select a storage policy. Enabling this option allows you to use the Rollback feature in Job Monitor.
- **Schedule Selection** – Configure a schedule for this plan:
    - Select **No Schedule** to manually execute this plan.
    - Select **Start Time** if you wish to have this plan be executed at a specified time. Select the date and time you wish this plan to be executed. If applicable, you may change the time zone by clicking on the hyperlink to select a different time zone.
- **Notification** – Configure the settings here to have e-mail notifications sent for this plan:
    - Select **Summary Report Recipient(s)** or **Detailed Report Recipient(s)** from the drop-down menu.
    - Type in the e-mail address of the desired recipient(s) in the textbox, then click **Add.** (If you wish to add numerous recipients for the same report, it may be more efficient to create mailing lists prior to configuring notification recipients.)
    - **Summary Report Level(s)** – Set when to send the summary report. By default, **Success**, **Failure** and **Warning** are all selected. After the job completed/failed/completed with exception, a summary report will be sent to the recipient.

    - **Detailed Report Level(s)** – Set when to send the detailed report. By default, **Success**, **Failure** and **Warning** are all selected. After the job completed/failed/completed with exception, a detailed report will be sent to the recipient.
    - Choose whether to have the e-mail notification be in **HTML** format or **Plain text** format.
    - **Send all logs to recipient** – Select **Yes** to send all logs to recipient when the job failed or select **No** to not send the logs.

- **Associate Plan Group** – Add the plan to one or more plan groups to manage multiple plans with common settings. Select a plan group you previously created from the drop-down menu or click **New Plan Group** from the drop-down menu to create a new one. For information on creating a plan group, see the DocAve 6 Control Panel Reference Guide.

When you are finished configuring the plan settings, click **OK** to save the plan, or **Cancel** to return to creating deployment mappings without saving the plan.

Managing Deployment Plans

Once a deployment plan has been created, you can access it by clicking on the **Plan Manager** tab. In the Plan Manager interface, you will see a list of all previously created Deployment Plans. You can customize how these plans are displayed in a number of different ways:

- **Search** – Filter the plans displayed by the keyword you designate; the keyword must be contained in a column value. At the top of the viewing pane, type in the keyword for the plan you wish displayed. You can select for search to **Search all pages** or **Search current page**. Note that the search function is not case sensitive.
- – You can manage which columns are displayed in the list so that only information you want to see is shown. Click then check the checkbox next to the column name to have that column shown in the list.
- – Filter which item in the list is displayed. Unlike Search, you can filter whichever item you want, rather than search based on a keyword. Click the of the column you want to filter, then check the checkbox next to the item name to have that item shown in the list.

***Note:** Deployment mappings in the Queue of a plan in Plan Manager display the start and finish time of the most recent execution of this plan. This information is displayed for your convenience and the plan can still be modified.

From the Plan Manager interface, you can execute the plans, edit the plans' settings, edit the plans' queue, and delete plans that you no longer need.

To execute a plan, select the plan in Plan Manager, then click **Run Now** on the ribbon. You will see the message: **The job is started, please go to Job Monitor if you want to view the job details.** Click the hyperlink to access Job Monitor for Deployment Manager. For more information on Job Monitor, see the DocAve 6 Job Monitor Reference Guide.

To edit a plan's settings, select the plan in Plan Manager, then click **Edit** on the ribbon, you will be brought to the **Queue Tools** interface. Click Edit **Plan Settings** on the ribbon. Configure the settings described in the Creating a Deployment Mapping section of this guide.

To edit a plan's queue settings, select the plan in Plan Manager, then click **Edit** on the ribbon, You will be brought to the **Queue Tools** interface. Configure the settings described in the Queue Tools section of this guide.

To delete a plan, select the plan in Plan Manager, then click **Delete** on the ribbon. A warning message will pop up to confirm the deletion. Click **OK** to delete the selected plan, or click **Cancel** to return to Plan Manager without deleting the plan.

Configuring Queues Locally

You can download the deployment queue as an Excel file to your computer to be configured locally. After it is configured, it can be uploaded to DocAve Deployment Manager. This allows you to conveniently deploy multiple objects from the source nodes to destinations instead of adding multiple mappings to the Queue in the DocAve Deployment Manager.

Downloading Queue as Excel Files

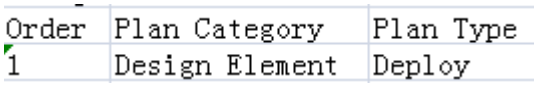
Refer to the following steps to download the Excel file:

1. Create a deployment mapping according to your requirement. The **Download Queues** button will be highlighted on the ribbon. For more information on how to create a deployment mapping, refer to the Creating a Deployment Mapping section in this guide.
2. Click **Download Queues**, the Internet Explorer download prompt appears.
3. Click **Save** and select a location where you want to store the file in the pop-up **Save As** window.

Configuring Queue Excel Files

You can configure all deployment mappings in the Excel file, including design element mappings, WFE mappings, solution mappings, and shared service mappings. This section below illustrates how to configure a queue Excel file:

- Design element type configuration:

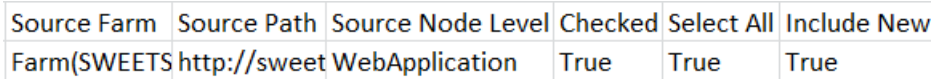


Order	Plan Category	Plan Type
1	Design Element	Deploy

Figure 3: Design element type configuration part in the Excel file.

  - **Order** – The order of which the mappings will be deployed. All cells in the same row are configurations for a single mapping.
  - **Plan Category** – This indicates the mapping type. For the design element mapping, the value of the Plan Category is design element.
  - **Plan Type** – There are three plan types for a design element mapping: Deploy, Import, and Export.

- Design element tree configuration:



Source Farm	Source Path	Source Node Level	Checked	Select All	Include New
Farm(SWEETS	http://sweet	WebApplication	True	True	True

Figure 4: Design element tree configuration part in the Excel file.

  - **Source Farm** – Enter the source farm name. If the plan type is Import, you need leave this blank.

- **Source Path** – Enter the source path information. Refer to the following table to configure the source path for each source object.

Source Object	Source Path
Web application	Web application name For example: http://webapp:2000/
Site collection	Site collection URL For example: http://webapp:2000/sites/urlname
Top-level site	Site collection URL For example: http://webapp:2000/sites/urlname ***Note:** The value of the **Source Node Level** you specified should be **Site**.
Site	Site URL For example: http://webapp:2000/sites/subsitename
Site settings	Site URL/site settings For example: http://webapp:2000/sites/subsitename/Site Settings
SharePoint designer objects (in site level)	Site URL For example: http://webapp:2000/sites/urlname ***Note:** The value of the **Source Node Level** you specified should be **DesignObjRootFolder**.
SharePoint designer objects (in list level)	List path For example: http://webapp:2000/sites/urlname/subsitename /Lists/*:{listname} ***Note:** The value of the **Source Node Level** you specified should be **DesignObjRootFolder**.
List	Site URL/lists//*:{List Name} For example: http://webapp:2000/sites/urlname/subsitename/Lists/*:{listname}
Site column	Site URL/*:{Site Column Name} For example: http://webapp:2000/sites/urlname/*:{sitecolumnname}
Content type	Site URL/content type name For example: http://webapp:2000/sites/urlname/contenttypename
List settings	List path/list settings For example: http://webapp:2000/sites/urlname/subsitename/Lists/*:{listname}/List Settings
Root folder	List path For example: http://webapp:2000/sites/urlname/subsitename/Lists/*:{listname} ***Note:** The value of the **Source Node Level** you specified should be **RootFolder**.

Source Object	Source Path
Folder	Root folder path/folder name For example: http://webapp/sites/Lists/*:{listname}/foldername
Item	Folder path/item ID or document name For example: http://webapp:2000/sites/urlname/Lists/*:{listname}/foldername/itemID or documentname
Design folder (in site level)	SharePoint designer objects path/*:{Design Folder Name} For example: http://webapp:2000/sites/urlname/*:{designfoldername}
Design folder (in list level)	SharePoint designer objects path/*:{Design Folder Name} For example: http://webapp:2000/sites/urlname/Lists/*:{listname}/designfoldername
Design item (in site level)	Design folder path/item ID or document name For example: http://webapp:2000/sites/urlname/*:{designfoldername}/itemID or documentname
Design item (in site level)	Design folder path/item ID or document name For example: http://gxzhang2010/sites/Lists/*:{ListName}/itemID or document name
File system folder	Export location name/DesignManager2010/exported plan name/exported job ID Example: exportlocationname/DesignManager2010/jobID

Uploading Queue Excel Files

Once you have finished configuring the Queue file, refer to the following steps to upload the Excel file:

1. In the **Home** tab of Deployment Manager, click **Upload Queues** on the ribbon, the Internet Explorer Open window appears.
2. Select the configured Excel file and click **Open** to upload it.
3. After clicking **Open** in the pop-up Internet Explorer Open window, you will see the following message: **The job {0} is started, please go to Job Monitor if you want to view the job details**. You can click the link in the message to go to the **Job Monitor** to see the uploading job information. The detailed mapping information will be displayed in **Job Monitor**, refer to DocAve 6 Job Monitor Reference Guide.
4. After the uploading job finished, an instant plan will be created, you can manage this plan in Plan Manager.

Queue Tools

Queue tools allow you to manage the Deployment mappings in the **Home** tab of Deployment Manager or the plan queue of a previously created deployment plans. The following actions can be performed in the Queue Tools tab:

- **Add New Mappings** – Click **Add New Mappings**. This brings you back to the **Home** tab to create a new deployment mapping.
- **Edit** – Edit the selected mapping. Your selections will appear in the **Source** and **Destination** pane where you can make changes to the mapping.
    - **Edit Mapping Settings** – Click **Edit** on the ribbon, and click **Edit Mapping Settings** in the drop-down menu or click **Mapping Settings** on the lower-left corner of the screen. The Mapping Settings interface appears. For the details on how to configure the mapping settings, refer to the Creating a Deployment Mapping section in this guide.
    - **Edit Mapping Source and Destination** – You can directly edit the selected mapping's source and the destination when you access to the **Queue Tools** interface. Or you can edit the source and destination after you editing the mapping settings.

      Once you have finished editing the selected mapping's settings, the **Edit Mapping Source and Destination** will be highlighted. Click **Edit** on the ribbon, and click **Edit Mapping Source and Destination** in the drop-down menu or click **Edit Mapping Source and Destination** on the lower-left of the screen then edit the selected mapping's source and destination.
- **Delete** – Delete the selected mapping. A warning will pop up confirming the deletion. Click **OK** to proceed with the deletion, or click **Cancel** to return to the **Queue Tools** tab without deleting the mapping.
- **Disable** – Disable the selected mapping in the plan. Disabled mappings will be skipped when the plan is run.
- **Enable** – Enable the selected mapping in the plan.
- **Create Container** – In the **Destination** pane, enter the name of a new container in the available field then click **Create Container**. The **Create Container** interface appears. Select the object type then choose the category for the new list or library from the drop-down menu.
- **Cancel** – Exit the **Queue Tools** interface.
- **Edit Plan Settings** – Click to access to the **Edit Plan Settings** interface. For more detailed on how to configure the plan settings, refer to the Creating a Deployment Plan section in this guide.
- **Save Mapping** – Save any changes made to the selected mapping.

Managing Solutions

The following two sections explain how to manage solutions through pre-creating solution queues and using the solution tools.

Pre-Creating Solution Queues

Pre-creating solution queues allows you to configure groups of solutions to be managed together with specific actions. Saved queues allow you to repeat similar actions without having to go through the configurations each time.

To create a user solutions queue, complete the following steps:

1. Click **Start with Online Deploy** in the left-hand pane of the landing page or click **Online Deploy** on the ribbon.
2. In the Source pane, click the farm name to expand its data tree. Then select a Web application to expand the data tree to the User Solution Gallery node, click the **User Solution Gallery** and select the user solution(s).
3. Click **Add to Queue** on the ribbon or on the middle lower part of this interface, the **Add to Queue** window pops up.
4. Select the actions **Activate**, **Deactivate** or **Upgrade** for the solution(s). For the details on the actions for solutions, refer to the Solution Tools section in this guide.
5. Click **OK** to add to the queue, or **Cancel** to return to the source and destination selection interface. Repeat the previous steps to add more solution import mappings to the queue.
6. Once you have finished adding mappings to the Queue, click **Save As** to save this queue as a plan and follow the instructions in Creating a Deployment Plan. Alternatively, to execute the queue immediately, click **Run** on the ribbon or click **Run** located at the bottom of the screen.

To manage farm solution(s) through adding to queue, complete the following steps:

1. Click **Start with Online Deploy** in the left-hand pane of the landing page.
2. In the **Source** pane, click the farm name to expand its data tree. Then click **Farm Solutions** and select the farm solution(s) you want to manage.
3. Click **Add to Queue** on the ribbon or on the middle lower part of this interface, the **Add to Queue** window pops up.
4. Select the actions **Retract** or **Remove** for the farm solution(s). For the details on the actions for solutions, refer to the Solution Tools section in this guide.

   You should also configure the **Solution Information** in this page. If you select to retract the farm solution(s), then choose the Web application(s) where you want to retract from. If you select to remove this farm solution(s), then you can view the solution information in the **Solution Information** field.

5. Click **OK** to add to the queue, or **Cancel** to return to the source and destination selection interface. Repeat the previous steps to add more solution import mappings to the queue.

Once you have finished adding mappings to the queue, click **Save As** to save this queue as a plan and follow the instructions in Creating a Deployment Plan. Alternatively, to execute the queue immediately, click **Run** on the ribbon or click **Run** located at the bottom of the screen

Solution Tools

Whenever one or more solution is selected in the **Source** pane, the **Solution Tools** tab will appear at the top of the Deployment Manager interface. Click on the **Solution Tools** tab to access the interface for managing deployed solutions.

For farm solutions, you can perform the following actions on any selected solution(s):

- **Details** – Review detailed information about the selected solution(s) in a popup window. In the **Details** pane, click on the tab to display information about the corresponding solution. Click **Retract** on the ribbon to retract the solution.
- **Retract** – Retract the solution(s). In the **Retract Solutions** interface, choose the Web application to retract each solution from. When you have finished making your selections, click **OK** to retract the solution(s), or **Cancel** to return to the **Solution Tools** page without retracting the solution(s). Retracted solutions remain in the Solution Store and may be redeployed later.
- **Remove** – Remove the solution(s) from the Solution Store. Once a solution has been removed, it cannot be redeployed until it has been reinstalled to the Solution Store.

For the user solutions, you can perform the following actions on any selected solution(s):

- **Activate** – Activate the solution(s) within the local farm.
- **Deactivate** – Deactivate the solution(s) within the local farm.
- **Upgrade** – Upgrade the currently active solution to the selected version.

Using Compare

The compare feature allows you to identify differences between the source object and the destination object. This feature supports: Web application, Web front-end, farm solutions, and shared services.

By using the compare feature, once the differences are identified between the source and destination, you can select objects from either the source or destination to be deployed to the other side that does not have the same object.

Performing a Compare Job

To compare objects, complete the following steps:

1. In the **Home** tab of Deployment Manager, click **Compare** on the ribbon. You will be brought to the **Compare** interface.
2. Under the **Tree** tab, within the **Source** pane, click the farm name to expand its data tree, and gain access to its SharePoint objects. Expanding the data tree in the Source pane will also expand the data tree in the **Destination** pane. Click Web applications, Web-front end, or shared services to expand the data tree to the node you wish to compare. Farm Solutions can be directly selected for comparing.

   If there is a difference between the Source and Destination nodes on a certain object level, the objects will be highlighted in light orange, and a check box will appear in front of the source node.
   To refresh an object, right click the object then click **Refresh** to refresh the object and expand it.
   ***Note:** For sites, you can right click and select **Copy URL** to copy the URL of this node, or click **Open in browser** to open it in the browser directly.
   ***Note**: The selected objects in the source and destination must be using the same version of SharePoint in order to enable the **Compare** button.

3. Check the checkbox in front of an object to create a deployment mapping.

   ***Note:** An arrow will appear between the **Source** pane and the **Destination** pane after you check the corresponding checkbox.

   - If there is an object exists in the source tree, but this kind of object does not exist in the destination, a right arrow appears. In this case, the source object will deploy to the destination.
   - If there is an object exists in the destination tree, but this kind of object does not exist in the source, a left arrow appears. In this case, the destination object will deploy to the source.
   - If the compared source and destination have the different objects, a two-way arrow appears. You can choose to deploy objects from the source to the destination or from the destination to the source by changing the arrow direction.

4. Click **Add to Queue** on the ribbon to add this mapping to the queue. The Add to Queue window will appear. For information on how to configure queue settings, see the Creating a Deployment Mapping section of this guide. To do another compare, repeat steps 1 through 3.

All of the mappings will be added to the queue in the **Home** page. To run the job directly, click **Run** in the ribbon or in the lower right corner of the **Home** page. Or you can save this queue as a plan.

Comparing in Different Tree Levels

Deployment Manager supports to compare the Web application, Web-front end, farm solutions, and shared services. The following sections illustrate the comparing rules and comparing conditions of the objects in each level.

Supported Objects	Elements Compared
Site settings	Title, description, and icon
	Welcome page
	Master page
	Page layouts and site templates
	Tree view
	Site theme
	Navigation
	RSS
	Regional settings (except local settings)
	Site event receiver
Sites	URL
Lists/libraries	Title
Site content types	ID Content type settings
Site columns	ID
List settings	Title, description, and navigation Versioning settings Advanced settings Validation settings Workflow setting Rating settings Audience targeting settings Enterprise metadata and keywords settings Event receiver
Folder	Name
Items	ID
Files	Name + file extension
User solutions	Solution name+ extension

Rules for Comparing Objects in Web Application

Refer to the following rules when you compare the objects in Web application:

- The objects in the Web application support the comparison between:
    - The source site collection and the destination site collection
    - The source site and the destination site
- You can directly select the user solution gallery node under the **Tree** tab in the **Compare** page, and then click **Compare** on the ribbon to compare the user solutions under the **Comparison** tab, or you can select the user solution's corresponding site or site collection and click Compare on the ribbon to compare the user solutions under the **Comparison** tab.
- The site collections with the same URL cannot be compared.
- The sites with the same URL cannot be compared.
- Specific rules for comparing the objects in Web application:
    - If the item, file, content type, column in the source are same as those in the destination, they cannot be loaded in the compare tree.
    - The source and destination site content types are compared by their content type IDs, if the IDs are same, the site content types will be compared by their settings.

Supported Objects and Comparing Conditions

The followings are the objects that are supported to compare and their comparing conditions:

Supported Objects	Elements Compared
Site settings	Title, description, and icon
	Welcome page
	Master page
	Page layouts and site templates
	Tree view
	Site theme
	Navigation
	RSS
	Regional settings (except local settings)
	Site event receiver
Sites	URL
Lists/libraries	Title
Site content types	ID Content type settings
Site columns	ID
List settings	Title, description, and navigation Versioning settings Advanced settings Validation settings

Supported Objects	Elements Compared
	Workflow setting Rating settings Audience targeting settings Enterprise metadata and keywords settings Event receiver
Folder	Name
Items	ID
Files	Name + file extension
User solutions	Solution name + extension

Rules for Comparing Web-Front End

Refer to the following rules when you compare the Web-front end level:

- The Web-front end level supports the comparison between:
    - The source Web-front end and the destination Web-front end
    - The source IIS site files and the destination IIS Site files
    - The source IIS site and the destination IIS site
    - The source global assembly cache and the destination global assembly cache
    - The source custom features and the destination custom features
    - The source SharePoint site definitions and the destination SharePoint site definitions
- Specific rules for IIS site files:
    - The IIS sites will be highlighted in the compare tree if their IDs or names are different. But you cannot add to queue.
    - If the source and destination IIS sites have the same ID or name, they will not be highlighted, you can continue to load the files or folders by clicking the IIS sites, these folders and files are compared by their names.
        - The source and destination folders or files will be highlighted if their names are different, you can add to queue after selecting the corresponding checkbox.
        - If the source and destination files under the IIS sites have the same name, they will not be displayed in the compare tree.
        - If the source and destination folders under the IIS sites have the same name, they are not highlighted, you can click them to expand to the file level, but if the source and destination files under these folders have the same names, they will not be displayed in the compare tree.

    ***Note:** Web.config files are not supported to compare.
- Specific rules for global assembly cache:

- The source and destination global assembly cache files with the same names will not be displayed in the tree.
- The source and destination global assembly cache files with the different names will be highlighted in the compare tree. You can add to queue by selecting the corresponding checkbox.

- Specific rules for custom features:
  - The source and destination custom features with the same feature ID will not be displayed in the compare tree.
  - The source and destination custom features with the different feature IDs will be highlighted in the compare tree, you can add to queue by selecting the corresponding checkbox.
- Specific rules for site definitions:
  - The source and destination site definitions with the same site template names or configuration IDs will not be displayed in the compare tree.
  - The source and destination site definitions with the same site templates but different configuration IDs will be highlighted in the compare tree. You can add to queue by selecting the corresponding checkbox.
  - The source and destination site definitions with the same configuration IDs but different site templates will be highlighted. You can add to queue by selecting the corresponding checkbox.
  - The source and destination site definitions with the different site templates and configuration IDs will be highlighted. You can add to queue by selecting the corresponding checkbox.

Supported Objects and Comparing Conditions

The followings are the objects that are supported to compare and their comparing conditions:

Supported Objects	Comparing Conditions	
	In the Same Farm	**Across Farms**
Web-front end	ID	Name
IIS site files	ID	Name
IIS sites	Do not compare the IIS sites, only compare the folders or files under the IIS sites, you can refer to Specific rules for IIS site files section for more information.	
Global assembly cache	Name	Name
Custom features	Feature ID	Feature ID
Site definitions	Site template name	Configuration ID

Rules for Comparing Farm Solution

Refer to the following rules for comparing farm solutions:

- The source and destination farm solutions with the same solution IDs will not be displayed in the compare tree.
- The source and destination farm solutions with the different solution IDs will be highlighted in the compare tree. You can add to queue by selecting the corresponding checkbox.

Supported Objects and Comparing Conditions

The followings are the objects that are supported to compare and their comparing conditions:

Supported Objects	Comparing Conditions	
Farm solutions	Solution ID	Solution ID

Rules for Comparing Shared Services

Refer to the following rules for comparing shared services objects:

- Specific rules for content type hub:
    - The source and destination content type hubs are compared by their content type IDs. If their content type IDs are the same, the content type hubs will be compared by their settings.
    - The source and destination content type hubs with the different content type IDs will be highlighted in the compare tree. You can add to queue by selecting the corresponding checkbox.
    - If the source and destination content type hubs have the same content type ID, but their settings are different, the content type hubs will be highlighted in the compare tree. You can add to queue by selecting the corresponding checkbox.
    - If the source and destination settings of the content type hubs are same and they have the same content type IDs, they will not be displayed in the compare tree.
- Specific rules for term group:
    - The source and destination term groups are compared by their names, if their names are same, then the term groups will be compared by their settings.
    - The source and destination term groups with the different names will be highlighted in the compare tree. You can add to queue by selecting the corresponding checkbox.
    - If the source and destination term groups have the same name, but their settings are different, the term groups will be highlighted in the compare tree. You can add to queue by selecting the corresponding checkbox.
    - If the source and destination term groups have the same name and settings, but the term sets in the term groups are different, the term groups will be not highlighted. You

can add the term sets under the term groups to queue by selecting the corresponding checkbox.

- Specific rules for term set:
    - The source and destination term sets are compared by their names, if their names are same, then the term groups will be compared by their settings.
    - The source and destination term sets with the different names will be highlighted in the tree. You can add to queue by selecting the corresponding checkbox.
    - If the source and destination term sets have the same settings and names, and the terms under them are same, the term sets will not be displayed in the tree.
    - If the source and destination term sets have the same name but different settings, they will be highlighted in the tree. You can add to queue by selecting the corresponding checkbox.
    - If the source and destination term sets have the same name and settings, but the terms in the term groups are different, the term groups will be not be highlighted. You can add the term sets under the term groups to queue by selecting the corresponding checkbox.
- Specific rules for term:
    - The source and destination terms are compared by their names, if their names are same, then the term groups will be compared by their settings.
    - The source and destination terms with the different names will be highlighted in the tree. You can add to queue by selecting the corresponding checkbox.
    - If the source and destination terms have the same name, but their settings are different, the Terms will be highlighted in the tree. But there is no checkbox in front of the term, you can only add to queue by selecting the corresponding checkbox before the term set.
    - If the source and destination terms have the same name and settings, but the deep-level terms are different, the current level terms will not be highlighted, you can click the term to expand to the deep-level terms, the deep-level terms will be highlighted. There is no checkbox in front of the term, you can only add to queue by selecting the corresponding checkbox before the term Set.

***Note:** If certain objects within the selected object cannot be changed by Deployment Manager, you will see the same object highlighted in light.

Supported Objects and Comparing Conditions

The following table includes the supported objects to compare and their comparing conditions:

Supported Objects	Comparing Conditions
Content type hub	Content type ID Settings
Term group	Name Settings

Supported Objects	Comparing Conditions
Term set	Name Settings
Term	Name Settings

Advanced Settings

For advanced users, Deployment Manager offers these additional settings that can be configured and saved to run as part of more complex plans:

- Domain Mapping is used to replace a source domain name with a domain name in the destination. The user in the source group will be mapped to the destination user which has the same name.
- User Mapping is beneficial for migrating groups of users from one domain to another (for example, if a company is acquired by another), and for migrating an individual user's content and permissions to another user.
- Language Mapping allows you to set a different language for the destination than the language used in the source. By creating a rule for Language Mapping, any plans using the rule can repeat the process without having to manually re-enter the settings.
- Export Location allows you to configure locations on external system storage that want Deployment Manager to export data to. By configuring external system storage, you can also export design elements to the file system. This is useful in cases where two farms are unable to communicate with each other. You can use export locations to perform offline deployments whereby you deploy from an external device.
- Storage Policy allows you to specify which logical device to use when storing solutions, or when performing imports and exports for offline deployment.
- Filter Policy allows you to set up filter rules so you can control what objects and data within any SharePoint level appear so that you can target content to migrate more precisely. By setting up and saving filter policies, you can apply the same filter policies to different plans without having to recreate them each time.

While these settings can be accessed in Deployment Manager, they are configured in the Control Panel. For more detailed information about these settings, see the DocAve 6 Control Panel Reference Guide.

Using SharePoint Management Shell

DocAve Deployment Manager provides you with SharePoint Management Shell to directly perform the SharePoint Management Shell Commands. Refer to the following steps to use SharePoint Management Shell:

1. In the **Home** tab of Deployment Manager, click **SharePoint Management Shell** on the ribbon. The **SharePoint Management Shell** interface appears.
2. Select a farm in the **Farm Selection** drop-down menu, the corresponding agents will be loaded.
3. Select an agent that is responsible for running the SharePoint Management Shell in the Agent Selection drop-down menu.
4. Enter the SharePoint Management Shell command.
5. You can add the command to queue by clicking **Add to Queue** below the command or on the ribbon, and then the **SharePoint Management Shell** interface will exit.
6. Repeat the previous steps to add more mappings to the queue.
7. Once you have finished adding mappings to the queue, click **Save As** to save this queue as a plan and follow the instructions in Creating a Deployment Plan. Alternatively, to execute the queue immediately, click **Run** located at the bottom of the screen.

Deployment Manager Use Cases

The following use cases demonstrate the use of features described in this guide in several real-world situations. These use cases are intended to give the user a sense of when to use certain features of Deployment Manager, as well as how the features work together to create a better user experience overall.

Basic Plan Deployment Use Case

Joe is the IT Director of his company. He works out of the headquarters located in New York. He is also the head administrator of the company's IT setup which uses SharePoint as their key collaboration tool. Recently, the company brought on a new Human Resources Director who wants to incorporate a third party SharePoint solution to improve their hiring process. As Joe had used DocAve products to perform the company's migration onto SharePoint, and to maintain content and permissions on their SharePoint farms, right away he thought of leveraging Deployment Manager for this project.

To start off, Joe installs the solution onto their primary farm. He then opens up DocAve and launches Deployment Manager. To mirror the solution onto the two other farms at their branch offices in Chicago and San Francisco, he navigates through the source farm's data tree in the **Source** pane, and selects the new solution (source object) to be copied onto the other farms. He then selects the destination node in the **Destination** pane for this solution to be deployed into on the destination farm. He clicks **Add to Queue**, and then customizes the new mapping (see Creating a Deployment Mapping). Joe repeats the process for the second destination farm. After setting up the deployment plan, he clicks **Run** to set the mapped jobs in motion. As the jobs run, he clicks Job Monitor and keeps track of the status of the jobs. After the deployment is complete, Joe uses the compare feature to make sure the two nodes are in sync. He then set up e-mail notifications to receive usage reports for the new site where the new solution is running, which he can then forward to the relevant department leaders.

Creating and Administering Advanced Mappings Use Case

Months later, Joe's company is acquired by a larger firm. The new firm asks Joe to integrate the existing SharePoint farms of the old company with those of the new company. The integration involves mapping the domain of the content on the existing farms to the domain of the new company, map the content of users on the old farm to the users with the new domain, and change the mirror sites for the Japan branch into Japanese.

To perform this integration, Joe launches Deployment Manager in DocAve 6, and first creates new Domain Mappings, User Mappings and Language Mapping in the Control Panel. Joe makes sure to then map the Managed Metadata from their old SharePoint environments to the ones of the new company so that all of their records remain intact after the merge. After creating all the mappings, and setting up the deployment plans, he runs the plans during off hours and then reviews the details in Job Monitor.

Maintenance of Deployment Plans Use Case

Now that the merge is complete, Joe is back to his daily administration duties. He deploys some new SharePoint solutions new company purchased to help some of the new departments that formed from the merge. He first installs them onto his test environment, then deploys them onto the Quality Assurance farm, test run on a live farm, then deploys to all the other farms of the different branches. Since Joe creates deployment plan in DocAve, he is able to repeat the process each time quickly while eliminating human error. After deploying a solution, Joe selects the corresponding SharePoint objects in the Source and Destination panes in Deployment Manager, and clicks compare to check for discrepancies. For some of these plans, Joe has them set to run on a repeating schedule, with e-mail notifications set up to alert him of when each job runs. With each running job, he is also able to view the status and detailed information through Job Monitor.

Appendix A: Conflict Resolution – Web Application Deployment

Check Lower Objects	Skip	Merge	Replace
• Check lower objects unchecked	• If there is no conflict between source and destination, a new SharePoint object will be created on destination. • If there is a conflict between source and destination, it will ignore the conflicting data and do nothing on source and destination.	N/A	• If there is no conflict, a new SharePoint object will be created on destination. • If there is a conflict for design list, content type or content column, it will delete the data on destination and replace it with the source data. • If there is a conflict on source and destination other than design list, content type or content column, it will update destination data based on source one. SharePoint object will be created on destination.

Check Lower Objects	Skip	Merge	Replace
• Check lower objects checked • Content level: Skip	• If there is no conflict on the container level, a new container will be created on destination. • If there is no conflict on the content level, new content will be created on destination. • If there is a conflict on the container, it will ignore the conflict and do nothing with the container on source and destination. • If there is a conflict on the content level, it will ignore the conflict and do nothing with the content on source and destination.	• If there is no conflict on the container level, a new container will be created on destination. • If there is no conflict on the content level, new content will be created on destination. • If there is a conflict on the container level, it will update destination container based on source one. • If there is a conflict on the content level, it will ignore the conflict and do nothing with the content on source and destination.	N/A

Check Lower Objects	Skip	Merge	Replace
• Check lower objects checked • Content level: Overwrite	• If there is no conflict on the container level, a new container will be created on destination. • If there is no conflict on the content level, new content will be created on destination. • If there is a conflict on the container level, it will ignore the conflict and do nothing with the container on source and destination. • If there is a conflict for content level, it will update the conflict on destination based on the source data.	• If there is no conflict on the container level, a new container will be created on destination. • If there is no conflict on the content level, new content will be created on destination. • If there is a conflict on the container level, it will update destination container based on source one. • If there is a conflict on the content level, it will update the content on destination based on the source data.	N/A

Check Lower Objects	Skip	Merge	Replace
• Check lower objects checked • Overwrite by last modified time	• If there is no conflict on the container level, a new container will be created on destination. • If there is no conflict on the content level, new content will be created on destination. • If there is a conflict on the container level, it will ignore the conflict and do nothing with the container on source and destination. • If there is a conflict on the content level, and the modified time of source content is later than the destination one, it will update the conflicting content on destination based on the source data. • If there is conflict on the content level, and the modified time of source content is earlier than the destination, it will ignore the conflict and do nothing with the content on source and destination.	• If there is no conflict on the container level, a new container will be created on destination. • If there is no conflict on the content level, new content will be created on destination. • If there is a conflict on the container level, it will update the destination container based on source one. • If there is a conflict on the content level, and the modified time of source content is later than the destination one, it will update the content on destination based on the source data. • If there is a conflict on the content level, and the modified time of source content is earlier than the destination, it will ignore the conflict and do nothing with the content on source and destination.	N/A

Appendix B: Conflict Checks

Conflict Resolution Checking Rules		
Container Level	Site Collection	URL
	Site	URL
	List	List Title
	Folder	Folder Name
Content Level	Document	Name
	Item	TP_IP
	Content type	Find and compare By Schema、id、name or parent
	Column	Find and compare By Schema、id、InternalName、StaticName or DisplayName

Appendix C: Supported and Unsupported Elements for Web Application Deployment

Source Content	Status
Web application	Supported
Site collection	Supported
Site	Supported
Site settings	Supported
SharePoint designer objects	Supported
Announcements	Supported
Calendar	Supported
Content and structure reports	Supported
Customized reports	Supported
Links	Supported
Reusable content	Supported
Shared documents	Supported
Site collection help	Supported
Tasks	Supported
Team discussion	Supported
Cache profiles	Supported
Content type publishing error log	Supported
Converted forms	Supported
Form templates	Supported
List template gallery	Supported
Long running operation status	Supported
Master page gallery	Supported
Notification list	Supported
Quick deploy Items	Supported
Relationships list	Supported
Reporting metadata	Supported
Reporting templates	Supported
Shared packages	Supported
Site assets	Supported
Site collection documents	Supported
Site collection images	Supported
Site pages	Supported
Solution gallery	Supported
Style library	Supported
Suggested content browser locations	Supported
Taxonomy hidden list	Supported
Theme gallery	Supported
User information list	Supported
Variation labels	Supported
Web part gallery	Supported
wfpub	Supported

Source Content	Status
Workflow tasks	Supported
Content types	Supported
Site columns	Supported
User solution gallery	Supported

Appendix D: Supported and Unsupported Workflow Type

SharePoint Version / Workflow Type	SharePoint 2010	SharePoint 2013
SharePoint Built-in Workflow	Supported	Supported
SharePoint Designer Workflow	Supported	Unsupported
Nintex Workflow	Supported	Unsupported
Visual Studio Workflow	Supported	Unsupported
Visio Workflow	Unsupported	Unsupported
Azure Workflow	Unsupported	Unsupported

Appendix E: Design Elements Deployment

Source Element	Destination Element	Handle
Web application	Web application	For Web application level: do nothing. For the sub levels under Web application: deploy the site collection to the destination, refer to **Site Collection to Site Collection** for details.
Site collection	Site collection	For site collection level: deploy the settings, features, users, groups, permissions and related data of services (metadata service) of site collection to the destination. For the sub levels under site collection: deploy the root site to the destination, refer to **Site to Site** for details.
Site collection	Web application	The same as **Site Collection to Site Collection**.
Site	Site	For site level: deploy features, content types, columns, site settings, navigation and securities to the destination. For the sub levels under site: deploy the following objects to destination. 1. List: refer to **List to List** for details. 2. SharePoint designer objects: refer to **SharePoint Designer Objects to Site** for details. 3. Design list: refer to **List to List** for details. 4. Site: refer to **Site to Site** for details. 5. Site settings: refer to **Site Settings to Site** for details.

Appendix F: Web Front-End Deployment

Source Element	Destination Element	Handle
IIS site	IIS site files	Deploy all the files (excluding web.config) under IIS virtual directory of relevant IIS site, FBA node in the web.config file under the virtual directory, and the FBA node in the web.config file under Security Token.
GAC	GAC	Deploy all the GAC files.
Custom feature	Custom features	Deploy related folders under **C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\TEMPLATE\FEATURES**, and referred files for custom features and dll files in GAC to the destination.
Site definition	Site definitions	Deploy related folders under **C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\14\TEMPLATE\SiteTemplates**, referred files of site definition, and features to the destination.

Appendix G: Solution Deployment

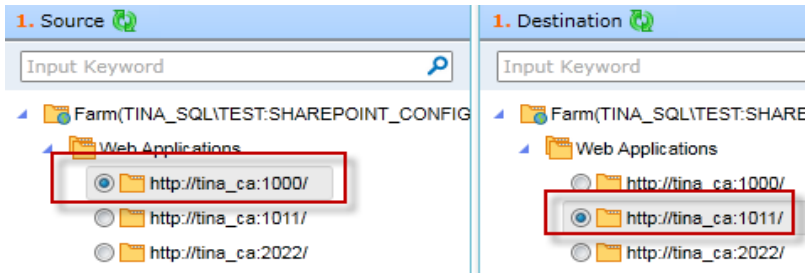
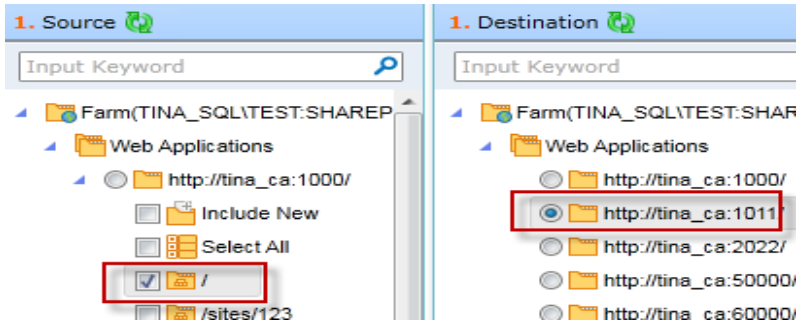
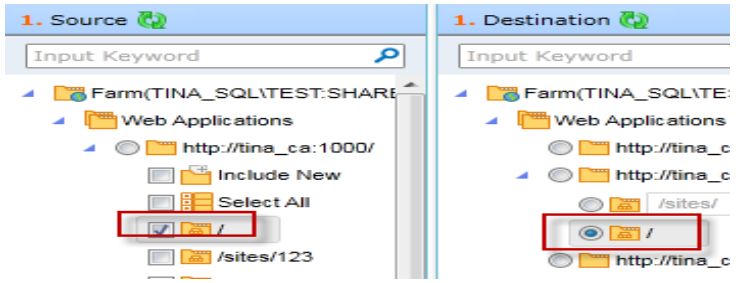
Source Element	Destination Element	Handle
Farm solution	Farm	Deploy a solution to a farm.
Farm solution	Web application	Deploy a solution to a Web application.
Farm solution	Storage policy	Export a solution to the storage policy.
User solution	Farm	Deploy a user solution to a farm.
User solution	Web application	Deploy a user solution to a Web application.
User solution	Site collection	Deploy a user solution to a site collection.
User solution	Storage policy	Export a user solution to the storage policy.
Storage policy	Farm	Import a solution from the storage policy and deploy it to a farm.
Storage policy	Web application	Import a solution from the storage policy and deploy it to a Web application.
Storage policy	Site collection	Import a solution from the storage policy and deploy it to a site collection.
File system	Farm	Deploy a solution to a farm.
File system	Web application	Deploy a solution to a Web application.
Farm solution	N/A	Retract the solution on the source under the **Solution Tools** tab separately.
Farm solution	N/A	Remove the solution on the source under the **Solution Tools** tab separately.
User solution	N/A	Activate the solution on the source under the **Solution Tools** tab separately.
User solution	N/A	Deactivate the solution on the source under the **Solution Tools** tab separately.
User solution	N/A	Upgrade the solution on the source under the **Solution Tools** tab separately.

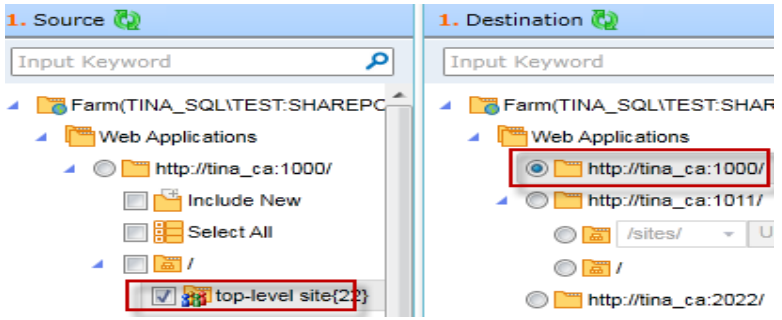
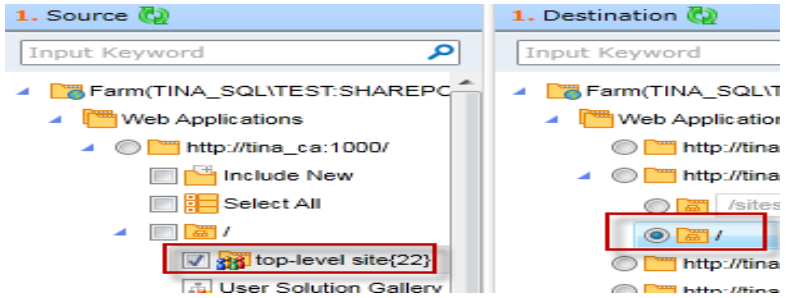
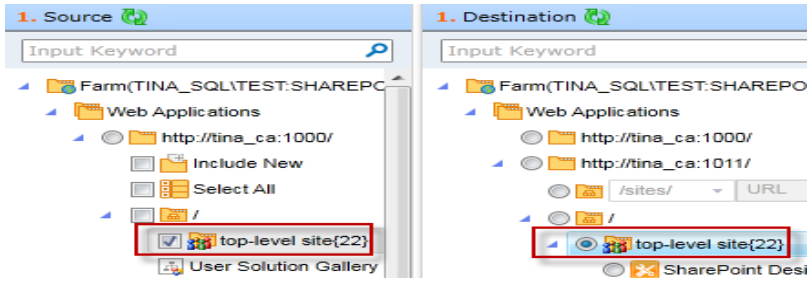
Appendix H: Managed Metadata Service Deployment

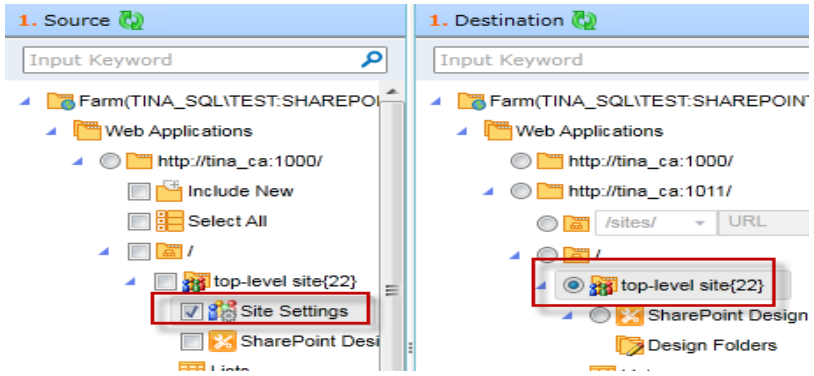
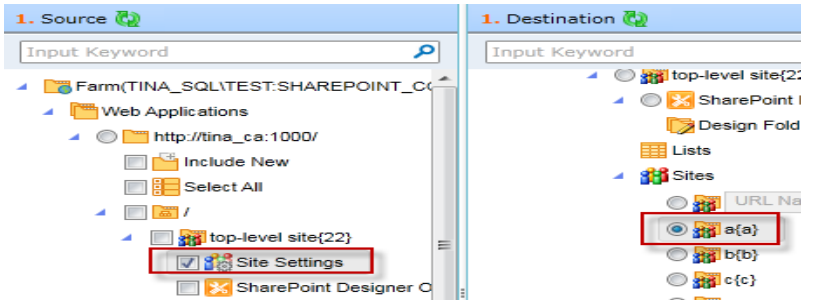
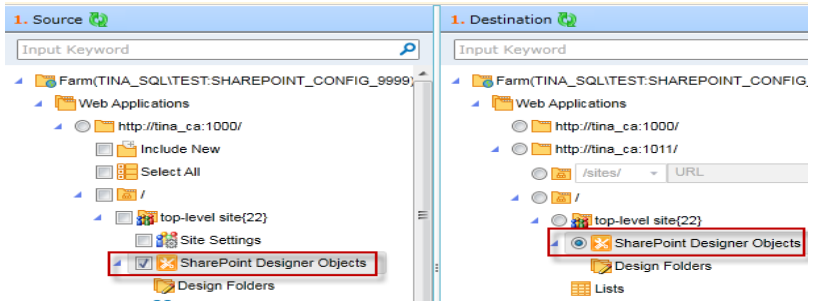
Source Element	Destination Element	Handle
Global term group	Global term group	Deploy all the term groups under global term group to the destination, refer to **Term Group to Term Group** for details.
Term group	Global term group	Deploy the term group to the destination, refer to **Term Group to Term Group** for details.
Term group	Term group	Deploy the description of term group, configurations of group managers and contributors, and all the term sets under it to the destination. For how to deploy the term set, refer to **Term Set to Term Set**.
Term set	Term group	Deploy the term set to the destination, refer to **Term Set to Term Set** for details.
Term set	Term set	Deploy the term set properties (including Description, Owner, Contract, Stakeholders, Submission Policy and configurations of Available for Tagging to destination), terms under the term set and term properties (including Available for Tagging, Description, Deprecate and other labels), and sub terms together with their properties to the destination.
Content type hub	Content type hub	Deploy all the content types under content type hub to the destination, refer to **Content Type to Content Type Hub** for details.
Content type	Content type hub	Deploy the field links and settings of the content type to the destination.

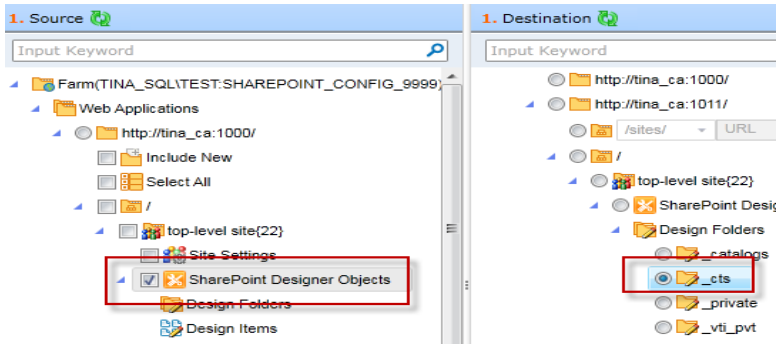
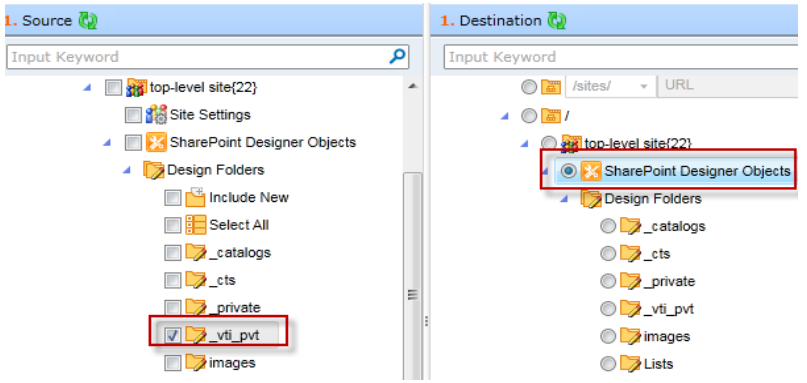
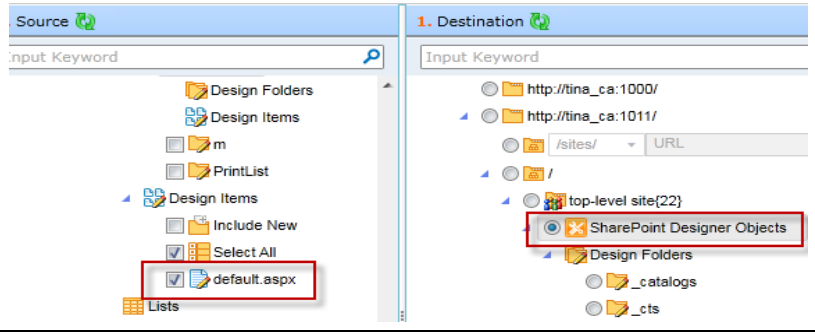
Appendix I: Deployment Manager Customization Table

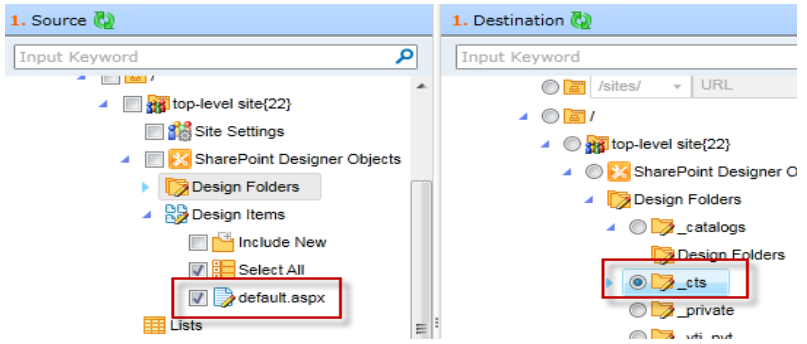
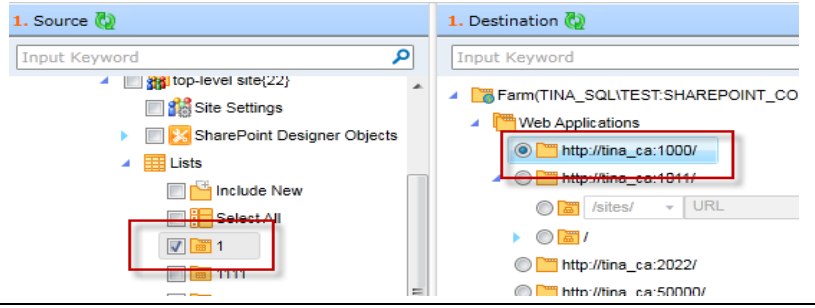
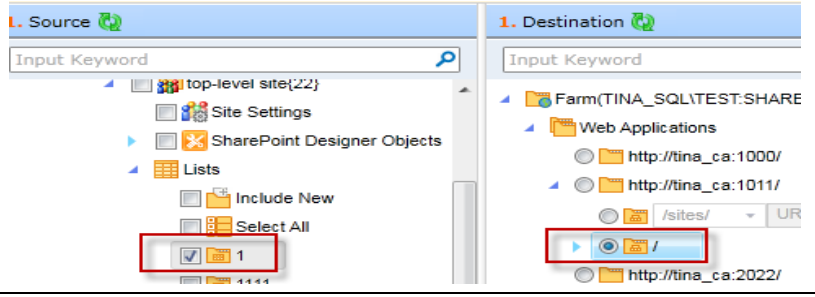
The following is the customization table of Deployment Manager.

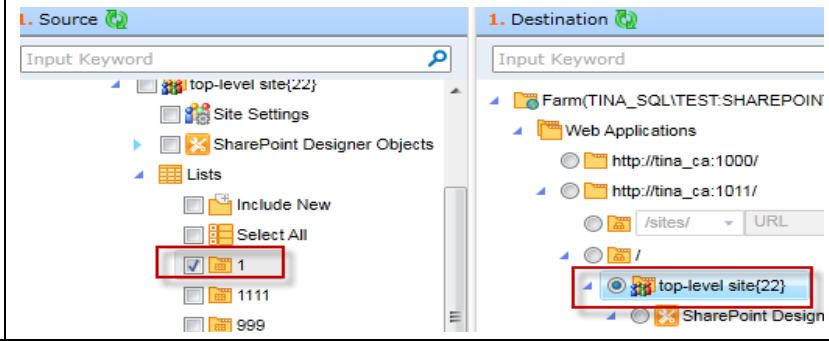
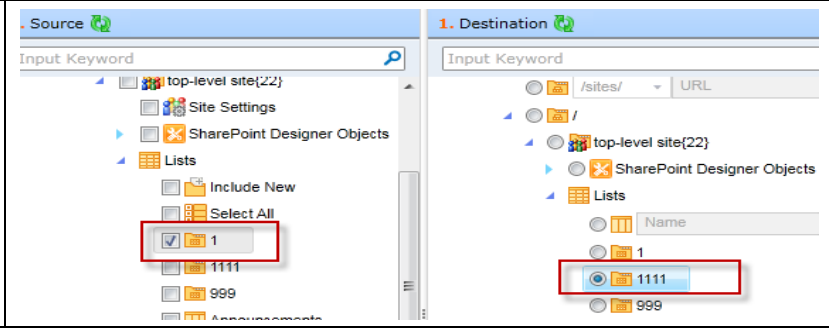
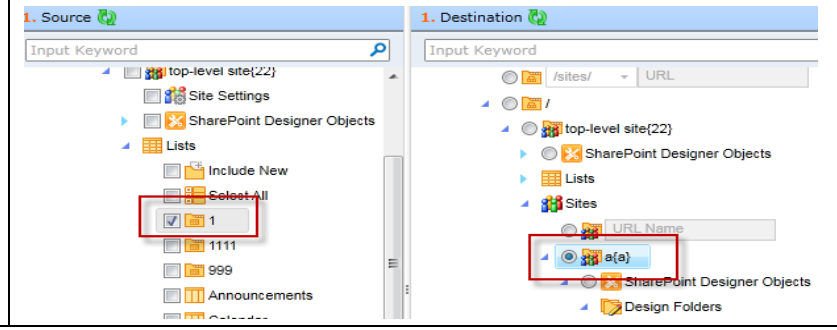
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Web application	Web application	Web application	
Site collection	Site collection	Web application	
Site collection	Site collection	Site collection	

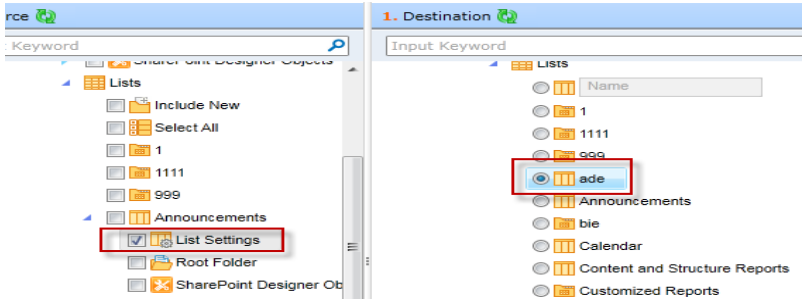
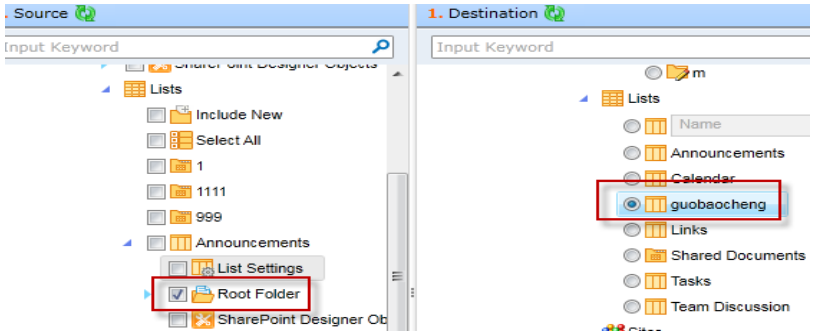
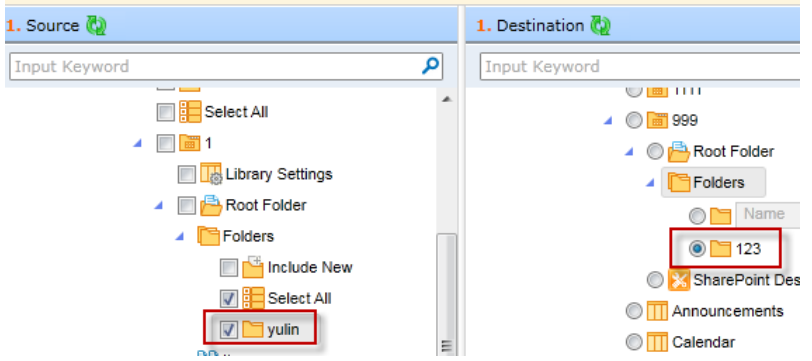
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Top-level site	Top-level site	Web application	
Top-level site	Top-level site	Site collection	
Top-level site	Top-level site	Top-level site	

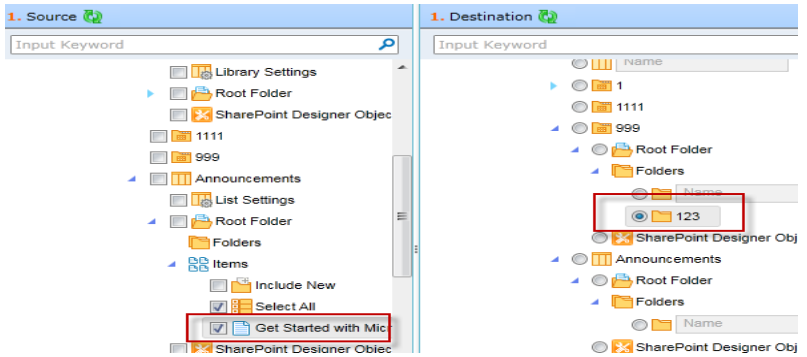
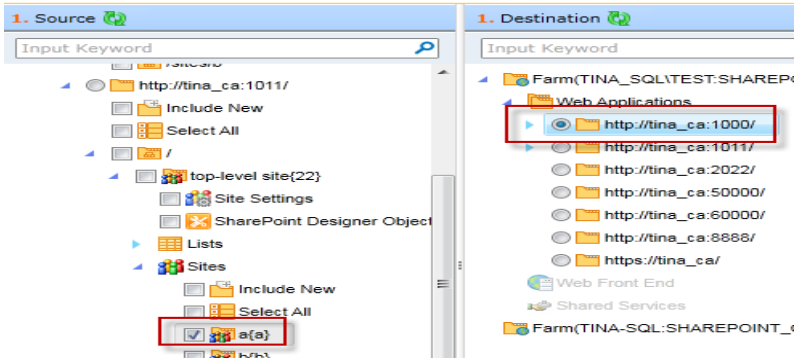
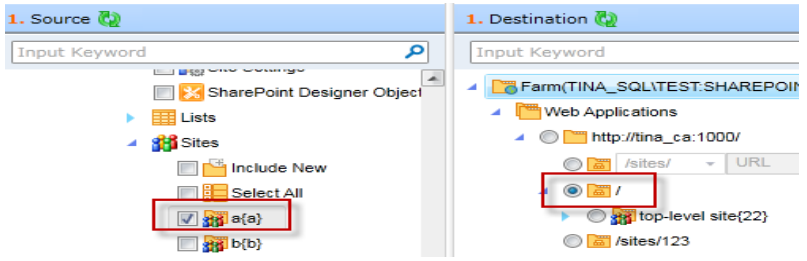
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Site settings	Site settings	Top-level site	
Site settings	Site settings	Site	
SharePoint designer objects	SharePoint designer objects	SharePoint designer objects	

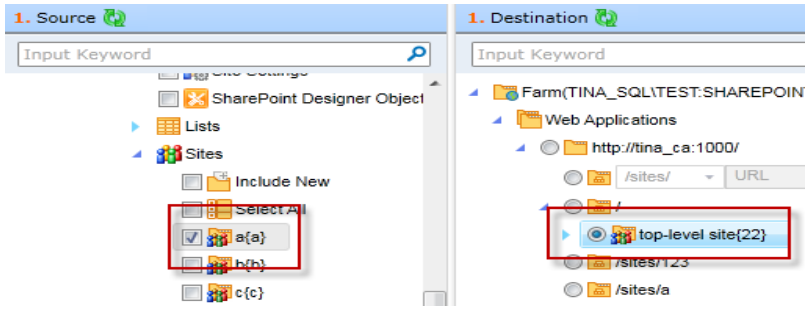
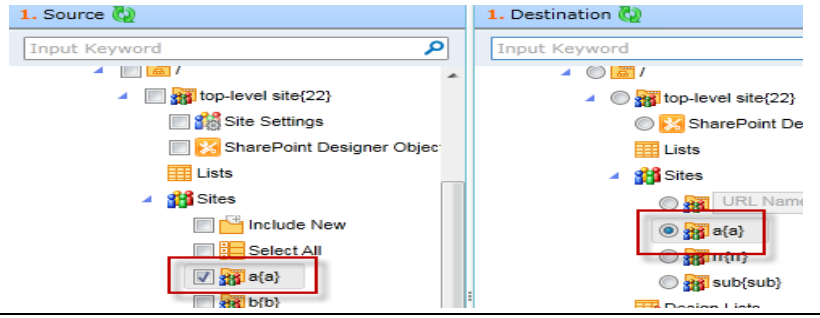
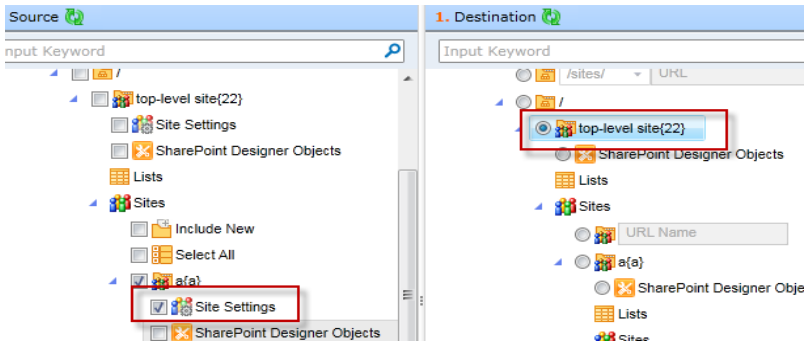
Deploy From/To/ What to deploy	Source	Destination	Screenshot
SharePoint designer objects	SharePoint designer objects	Design folder	
Design folder	Design folder	SharePoint designer objects	
Design item	Design item	SharePoint designer objects	

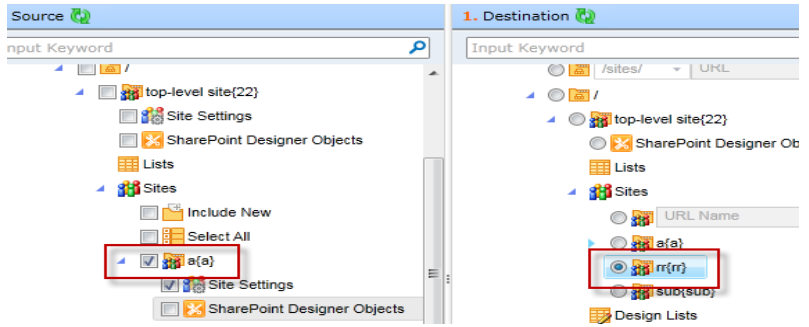
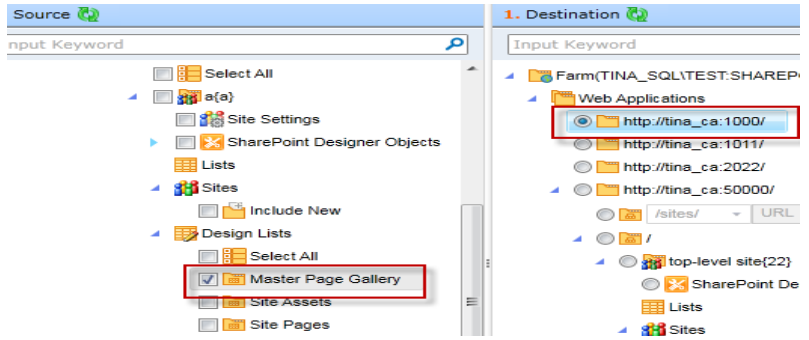
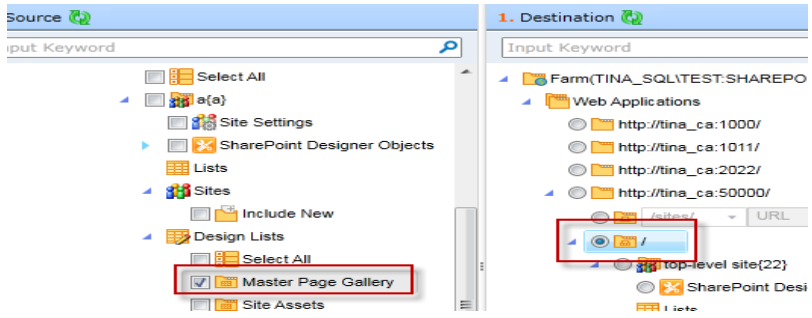
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Design item	Design item	Design folder	
List/library	List/library	Web application	
List/library	List/library	Site collection	

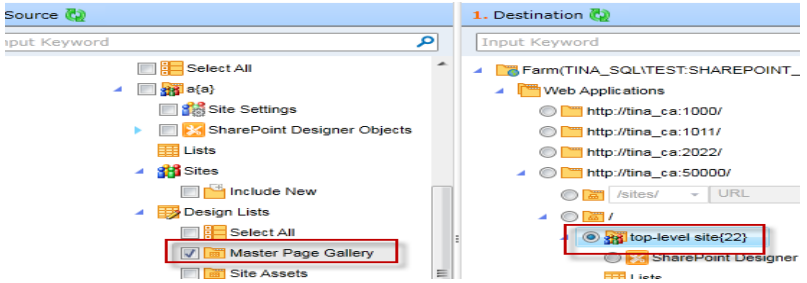
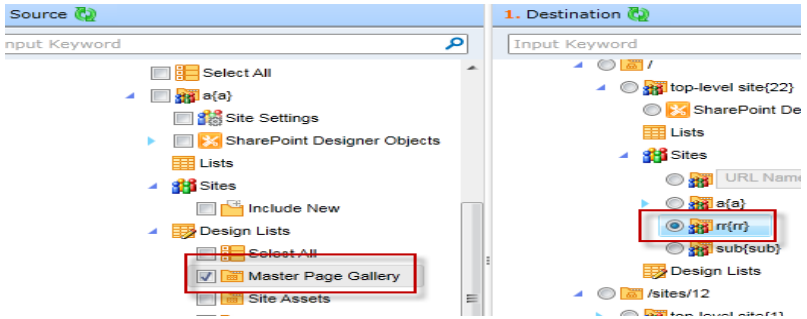
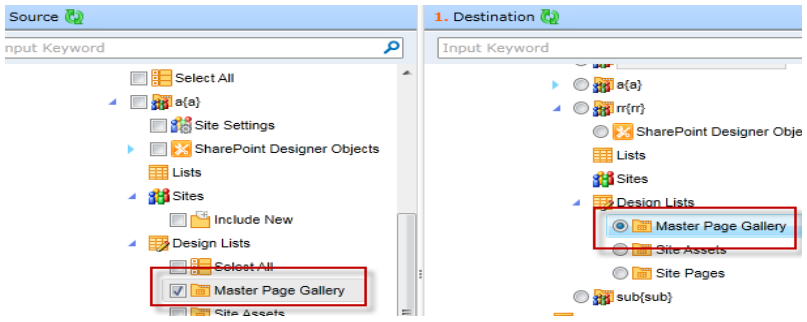
Deploy From/To/ What to deploy	Source	Destination	Screenshot
List/library	List/library	Top-level site	
List/library	List/library	List/library	
List/library	List/library	Site	

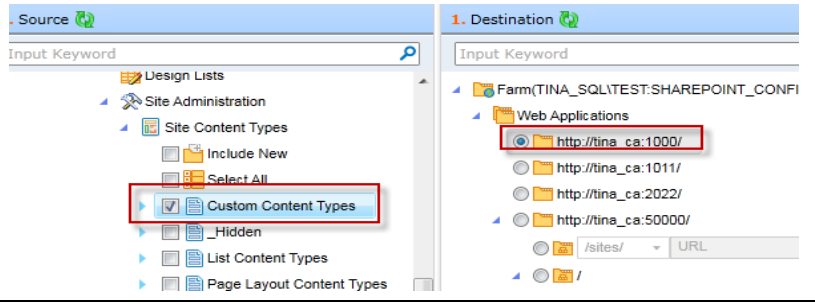
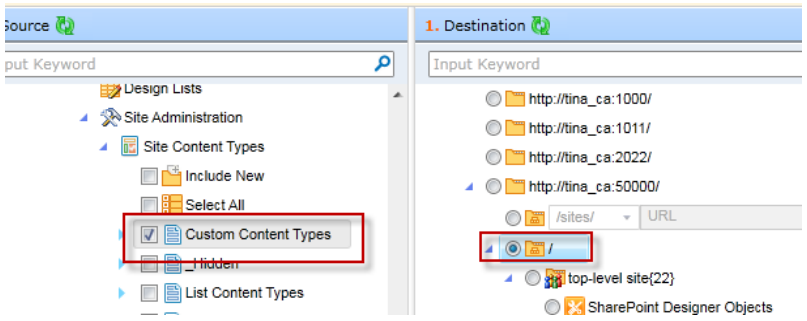
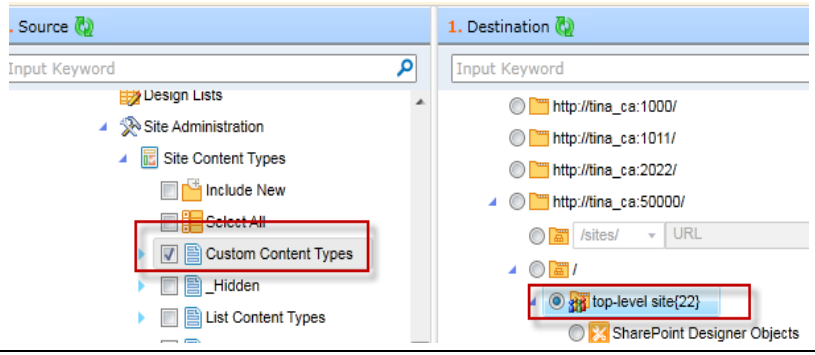
Deploy From/To/ What to deploy	Source	Destination	Screenshot
List settings	List settings	List	
Root folder	Root folder	Library	
Folder	Folder	Folder	

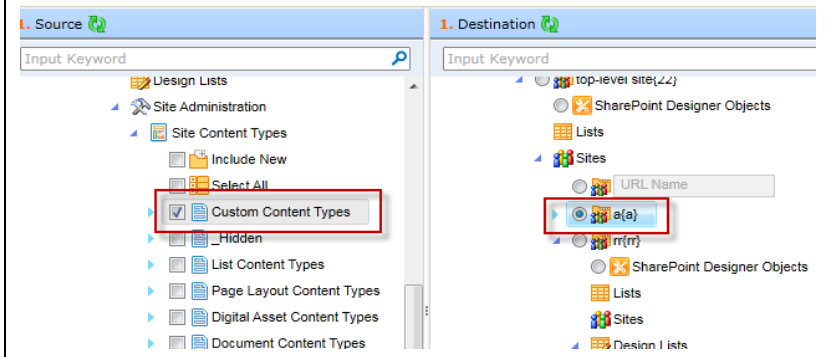
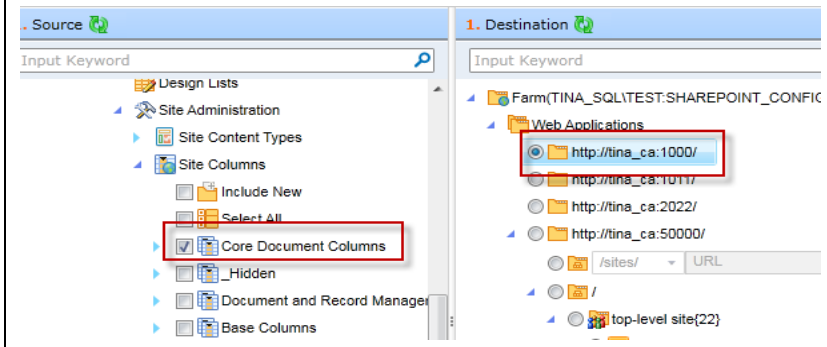
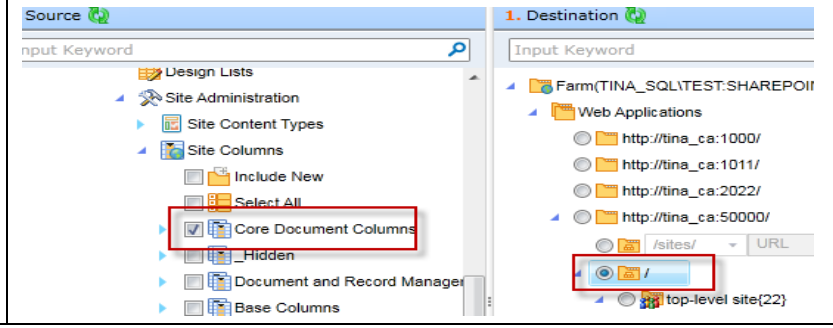
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Item	Item	Folder	
Site	Site	Web application	
Site	Site	Site collection	

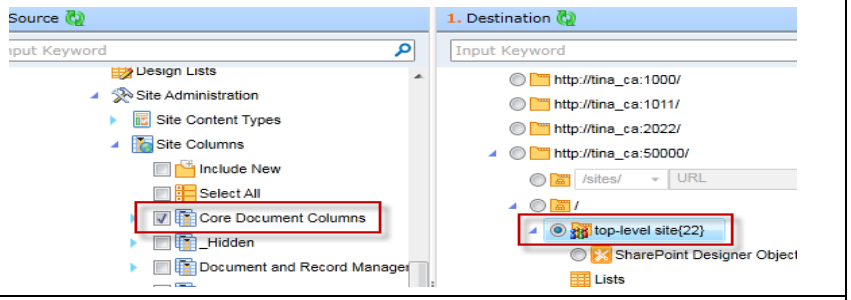
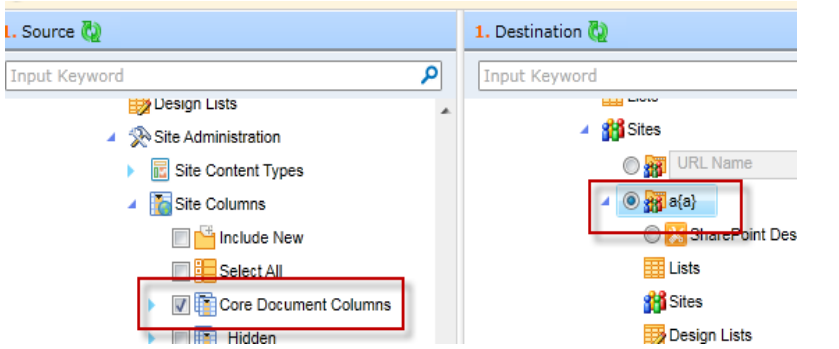
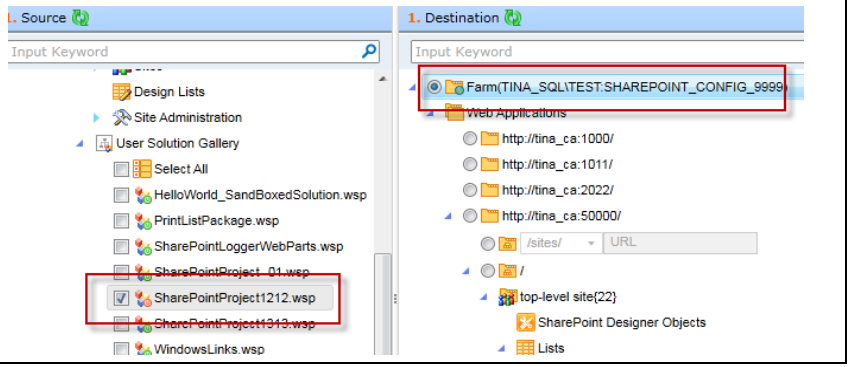
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Site	Site	Top-level site	
Site	Site	Site	
Site settings	Site settings	Top-level site	

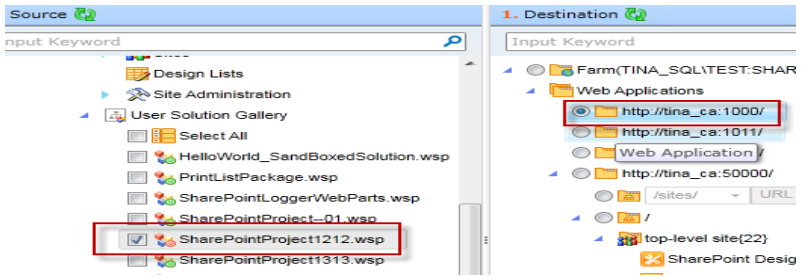
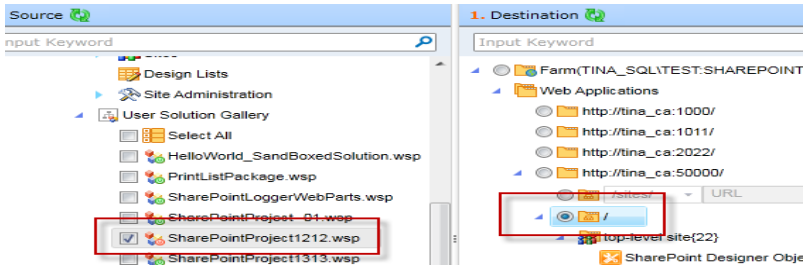
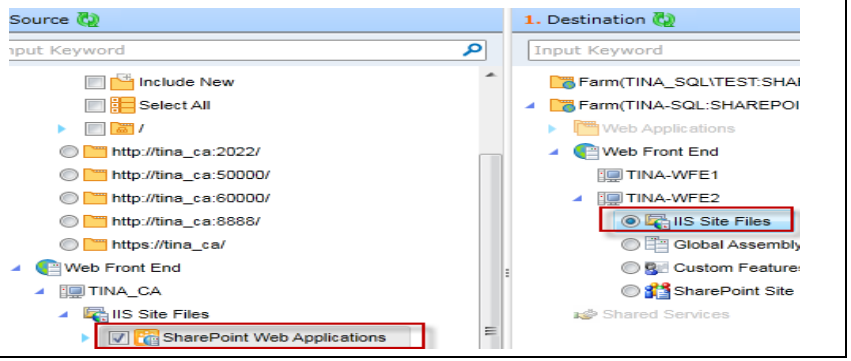
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Site settings	Site settings	Site	
Design list	Design list	Web application	
Design list	Design list	Site collection	

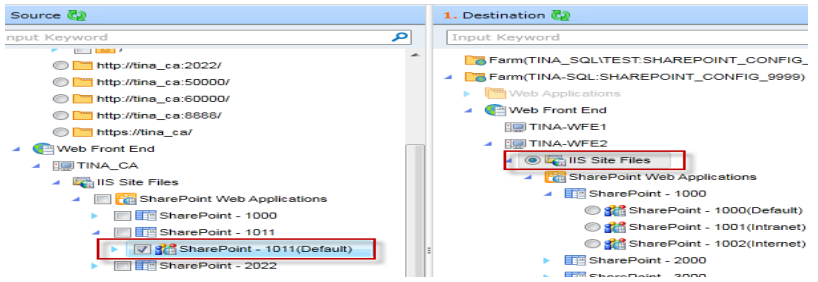
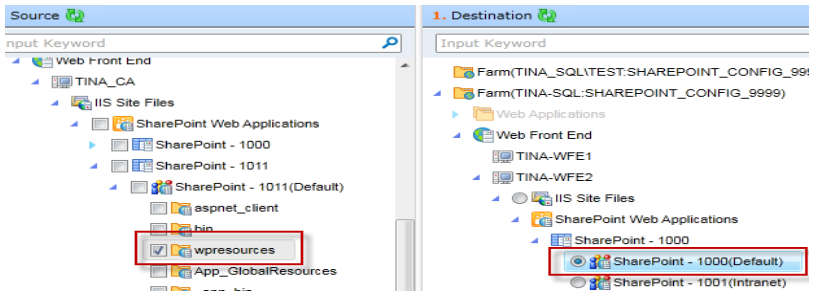
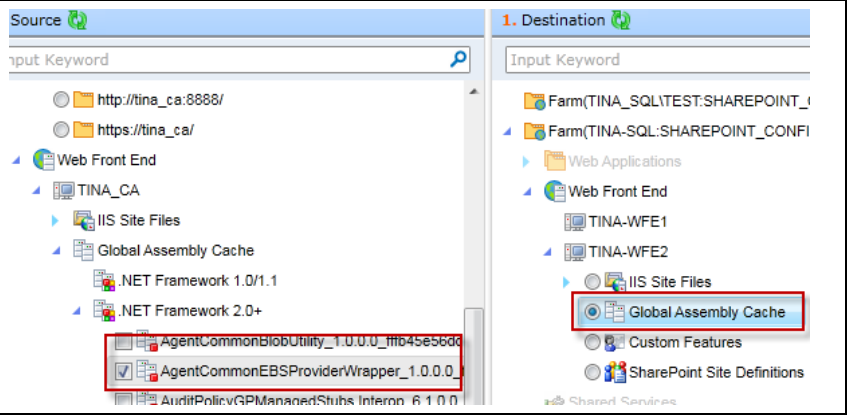
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Design list	Design list	Top-level site	
Design list	Design list	Site	
Design list	Design list	Design list	

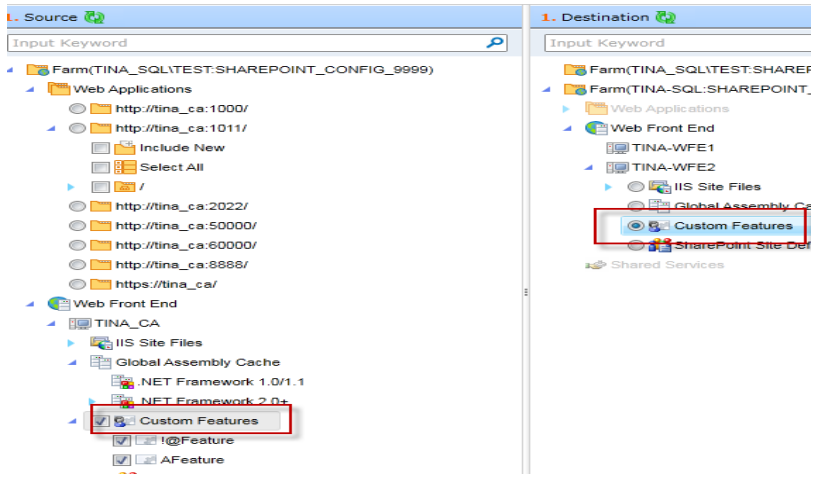
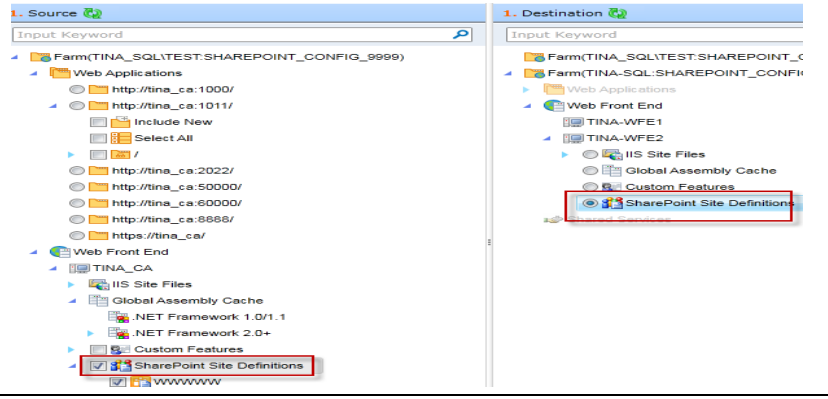
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Content type group	Content type group	Web application	
Content type group	Content type group	Site collection	
Content type group	Content type group	Top-level site	

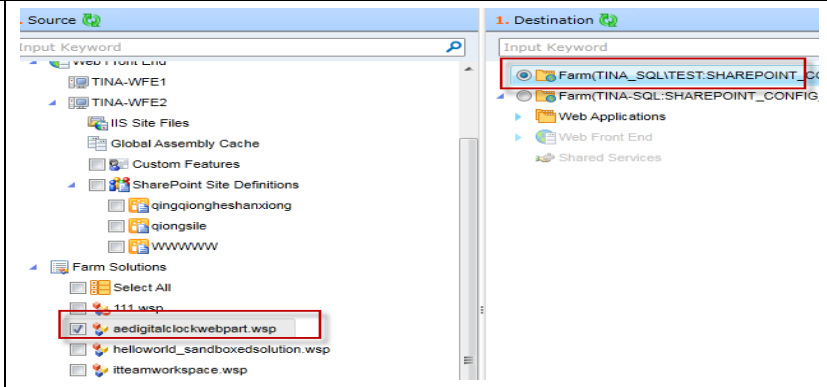
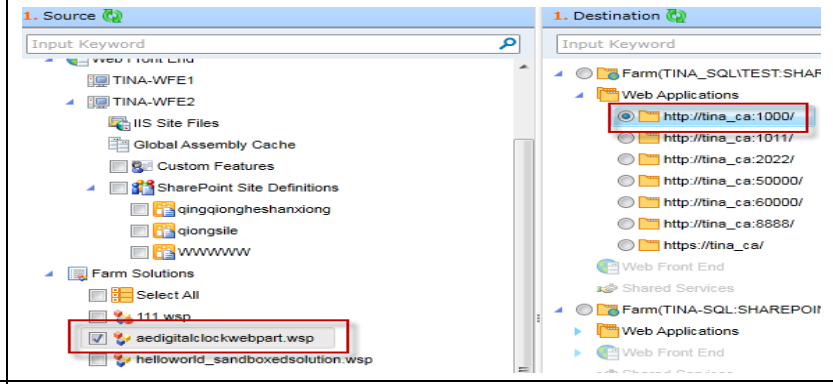
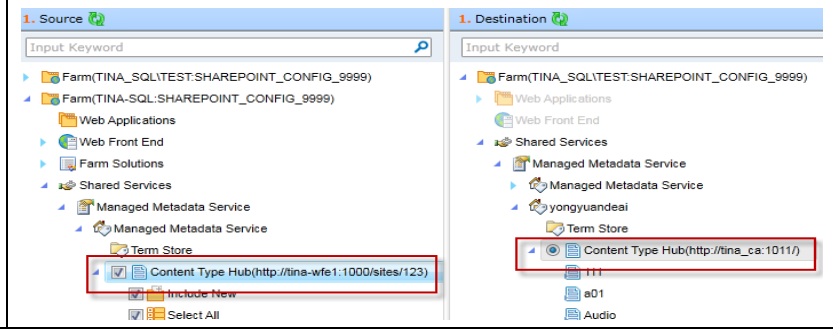
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Content type group	Content type group	Site	
Site column	Site column	Web application	
Site column	Site column	Site collection	

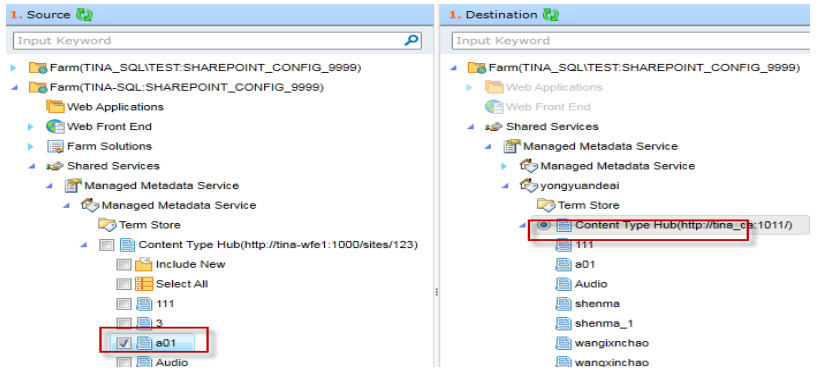
Deploy From/To/ What to deploy	Source	Destination	Screenshot
Site column	Site column	Top-level site	
Site column	Site column	Site	
User solution	User solution	Farm	

Deploy From/To/ What to deploy	Source	Destination	Screenshot
User solution	User solution	Web application	
User solution	User solution	Site collection	
SharePoint Web applications	SharePoint Web applications	IIS site files	

Deploy From/To/ What to deploy	Source	Destination	Screenshot
SharePoint websites	SharePoint websites	IIS site files	
SharePoint website	SharePoint website	SharePoint website	
GAC files	GAC files	Global assembly cache	

Deploy From/To/ What to deploy	Source	Destination	Screenshot
Custom features	Custom features	Custom features	
SharePoint site definitions	SharePoint site definitions	SharePoint site definitions	

Deploy From/To/ What to deploy	Source	Destination	Screenshot
Farm solution	Farm solution	Farm	
Farm solution	Farm solution	Web application	
Content type hub	Content type hub	Content type hub	

Deploy From/To/ What to deploy	Source	Destination	Screenshot
Content type	Content type	Content type hub	

Appendix J: Advanced Settings in Configuration Files

AgentCommonWrapperConfig.config

Configure the **AgentCommonWrapperConfig.config** file to specify whether to restore custom properties in SharePoint property bag.

Go to the machines with DocAve Agent installed and open the … \AvePoint\DocAve6\Agent\bin directory to find the **AgentCommonWrapperConfig.config** file.

Restoring Specified Web Properties

Open the **AgentCommonWrapperConfig.config** file and find the **WrapperCommon** node. Within this node, find the **<RestoredAllWebProperties>False</RestoredAllWebProperties>** node and the **<SpecialWebPropertyNames></SpecialWebPropertyNames>** node. These two nodes are added to the configuration file automatically when you first run a Deployment Manager job.

- If you do not want to restore custom properties in property bag, use the default **False** value. When using the **False** value, you can also add the specific custom properties in the **SpecialWebPropertyNames** node, and the custom properties you specified will be restored. Use the semicolon sign to separate the custom properties, for example, **<SpecialWebPropertyNames>property1; property 2; property3</SpecialWebPropertyNames>**. Note that the build-in properties in property bag are all restored.
- If you want to restore all properties including the custom and build-in properties, change **False** to **True**. When using the **True** value, you can add the specific properties in the **SpecialWebPropertyNames** node, and the properties you specified will not be restored.

Appendix K: Accessing Deployment Manager Using Hot Keys

In order to work faster and improve your productivity, DocAve supports hot key mode for you to perform corresponding actions quickly by only using keyboard. To access hot key mode from the Deployment Manager interface, press the **Ctrl** + **Alt** + **Z** key combination on your keyboard.

The following table provides a list of hot keys at the top level. Using the hot key listed below to access to the corresponding product interface. For example, continue pressing **H** to jump to the **Home** tab.

Operation Interface	Hot Key
Home	H
Plan Manager	P
DocAve Home Page	1
DocAve Online Community	2
Control Panel	3
Job Monitor	4
Plan Group	5

Home Page

To access the Home page using hot keys in the Deployment Manager interface, press the **Ctrl + Alt + Z** key combination to access hot key mode, and then press **H** on the keyboard to enter the **Home** page.

The following table provides a list of hot keys for functionalities on the ribbon of the **Home** page. For example, continue pressing **Y** to jump to the **Online Deploy** interface.

Functionality Name and Hot Key			
Online Deploy		Y	
Data Export		O	
Data Import		I	
New Plan		NP	
Add to Queue	Q	OK	O
		Cancel	C
Compare	P	Compare	P
		Add to Queue	Q
		Close	X
Create Container	CC	OK	O
		Cancel	C
Upload Queues		UQ	
Download Queues		DQ	
SharePoint Management Shell		SS	
Export Location		E	
Storage Policy		S	

Functionality Name and Hot Key				
Filter Policy		F		
Domain Mapping		D		
User Mapping		U		
Language Mapping		L		
Job Monitor		J		
Save as a Plan	A	OK	O	
		OK and Run Now	P	
		OK	Q	
		Cancel	C	
Run		R		

Plan Manager

To access the Plan Manager page by using hot keys in the Deployment Manager interface, press the **Ctrl + Alt + Z** key combination to access hot key mode, and then press **P** on the keyboard to enter the **Plan Manager** page.

Functionality Name and Hot Key	
Edit	E
Delete	D
Run Now	R

Solution Tools for Farm Solutions

To access the Plan Manager page by using hot keys in the Deployment Manager interface, press the **Ctrl + Alt + Z** key combination to access hot key mode, and then press **S** on the keyboard to enter the **Solution Tools** page.

Functionality Name and Hot Key					
Details	D	Remove	RM		
		Close	X		
		Retract	RT	OK	O
				Cancel	C
		Close	X		
Retract	R	OK	O		
		Cancel	C		
Remove	M				

User Solution Tools for User Solutions

To access the Solution Tools page by using hot keys in the Deployment Manager interface, press the **Ctrl + Alt + Z** key combination to access hot key mode, and then press **S** on the keyboard to enter the **Solution Tools** page.

Functionality Name and Hot Key	
Activate	A
Deactivate	D
Upgrade	U

Queue Tools

To access the Plan Manager page by using hot keys in the Deployment Manager interface, press the **Ctrl + Alt + Z** key combination to access hot key mode, and then press **Q** on the keyboard to enter the **Queue Tools** page.

Functionality Name and Hot Key			
Edit	E	Edit Mapping Settings	P
		Edit Mapping Source and Destination	Q
Delete		D	
Disable		I	
Enable		B	
Create Container		CC	
Add New Mappings		M	
Edit Plan Settings		EP	
Save Mapping		S	
Cancel		X	

Index

+ Icon, 21
Add, 20
Add to Queue, 13, 30
Administration, 9
Cancel, 13, 15, 21, 22, 26
Check lower objects, 14
Container level conflict resolution, 14
Content level conflict resolution, 14
Create Container, 26
Delete, 22, 26
Deployment Manager, 9
Detailed Report Recipient(s), 20
Disable, 26
DocAve, 9
Edit, 22, 26
Enable, 26
Failure, 20, 21
Filter Icon, 21
Home, 10
HTML, 21
Include security, 14
Include User Content, 14
Include workflow definition, 14
Merge, 14
New Filter Policy, 14
No, 21
No Schedule, 20
OK, 13, 15, 21, 22, 26
Overwrite, 14
Overwrite by Last Modified Time, 14
Plain text, 21
Plan Manager, 21
Plan Name, 20
Plan Settings, 22
Replace, 14
Run, 15
Run Now, 21
Save As, 20
Save as a Plan, 20
Search all pages, 21
Search current page, 21
Show rows, 15
Skip, 14
Start Time, 20
Success, 20, 21

Summary Report Recipient(s), 20
Warning, 20, 21
Yes, 21

Notices and Copyright Information

Notice

The materials contained in this publication are owned or provided by AvePoint, Inc. and are the property of AvePoint or its licensors, and are protected by copyright, trademark and other intellectual property laws. No trademark or copyright notice in this publication may be removed or altered in any way.

Copyright

Copyright © 2012-2013 AvePoint, Inc. All rights reserved. All materials contained in this publication are protected by United States copyright law and no part of this publication may be reproduced, modified, displayed, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written consent of AvePoint, 3 Second Street, Jersey City, NJ 07311, USA or, in the case of materials in this publication owned by third parties, without such third party's consent.

Trademarks

AvePoint®, DocAve®, the AvePoint logo, and the AvePoint Pyramid logo are registered trademarks of AvePoint, Inc. with the United States Patent and Trademark Office. These registered trademarks, along with all other trademarks of AvePoint used in this publication are the exclusive property of AvePoint and may not be used without prior written consent.

Microsoft, MS-DOS, Internet Explorer, Microsoft Office SharePoint Servers 2007/2010/2013, SharePoint Portal Server 2003, Windows SharePoint Services, Windows SQL server, and Windows are either registered trademarks or trademarks of Microsoft Corporation.

Adobe Acrobat and Acrobat Reader are trademarks of Adobe Systems, Inc.

All other trademarks contained in this publication are the property of their respective owners and may not be used such party's consent.

Changes

The material in this publication is for information purposes only and is subject to change without notice. While reasonable efforts have been made in the preparation of this publication to ensure its accuracy, AvePoint makes no representation or warranty, expressed or implied, as to its completeness, accuracy, or suitability, and assumes no liability resulting from errors or omissions in this publication or from the use of the information contained herein. AvePoint reserves the right to make changes in the Graphical User Interface of the AvePoint software without reservation and without notification to its users.

AvePoint, Inc.
3 Second Street
Jersey City, NJ 07311
USA