DocAve® Version 5.6.0.0 IBM® TSM

For Microsoft SharePoint
User Guide

AvePoint™

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1. Preface

About This Guide

This guide describes how to install DocAve Version v5 for Microsoft SharePoint , how to configure the DocAve platform for the needs of your environment, how to pre-configure all of the options in the Control Panel, and how to use the features found in the Report Center, Data Protection-module.

This guide does not explain how to install, configure, or use Microsoft SharePoint, SQL Server, or Windows Server. This guide also does not cover standard system or network administration topics (such as IP addressing, routing, and other network topology) that are necessary for DocAve functionality.

Audience

This guide is for system and SharePoint administrators who possess a working knowledge of Microsoft SharePoint , SQL Server, and Windows Server. The audience must be familiar with the following topics:

- Microsoft SharePoint Server administration
- Network Architecture functions and operations
- Operating system usage, intermediate network configuration, and advanced storage system configuration.

Technical Support

For technical support, please call 1-800-IBM-SERV or visit www.ibm.com.

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2. Installation

The following sections describe the steps required to install DocAve v5 for your SharePoint environment. The installation process requires the setup and configuration of two components: the DocAve Manager and the DocAve Agents. The DocAve Manager is comprised of several services which can be installed across multiple machines, however, certain Manager components (specifically the Control Service) must be installed first. The DocAve Agent Package is comprised of multiple agent services which can be installed on different machines according to the role of the machine and the necessary DocAve services you wish to install.

2.1 Overview Of Installation

DocAve v5 consists of two basic modules: the DocAve Manager and the DocAve Agent.

DocAve Manager

The DocAve Manager consists of several components which can either be run on the same environment as your DocAve Agents, or split across several servers. Using the DocAve Manager Installation Package, users can install:

- *Web Service* : Represents the access point to the DocAve GUI, allowing users to interact with the software. The web service can be installed on multiple machines and allows administrators to access the DocAve GUI using a web browser (such as Internet Explorer 8). If the web service is installed on multiple machines, this will ensure high availability of the DocAve GUI, in the case that one web service fails.

- *Control Service* : Manages all DocAve operations. All agent machines will use the control service port and address to communicator with the manager, so it is imperative that the machine you install the control service on is accessible by all agent machines. This service can be run on a server cluster to ensure high availability; if the control service were to go down, a standby service in the cluster would be enabled by an administrator.

- *Media Service* : Manages all data storage for the DocAve platform. These can be installed on multiple machines and can manage multiple Logical Drives. Using multiple media agents will allow for high availability and load balanced access to the data storage locations.

- *Search Service* : Manages all data by generating a full text index. This service is critical for using the DocAve Item-level backup and Compliance Archiver.

Although it is possible to deploy both the DocAve Manager and DocAve Agents on a single server, this is not a recommended configuration. For the best performance, install the Manager's services across multiple servers and install only the necessary Agents on each Agent machine.

DocAve Agent

DocAve Agents can be installed on any Microsoft Office SharePoint Server (MOSS) 2007, Windows SharePoint Server (WSS) Version 3 environment (with Service Pack 1 installed)*, Windows SharePoint Server 2010, or Windows SharePoint Foundation 2010 that meets the system requirements specified in the next section. There are several types of agents that must be installed to run the various DocAve modules. A description of each module's agent type and specific permissions required for each are listed in greater detail below.

*Note: SharePoint Front End Web ServeriSharePoint Web Application Service since the service is required for the DocAve Jobs. If the service is not enabled, for example, SharePoint Web Application Service of the Central Admin Server(which installed the DocAve Agent) is not enabled, all the Web Parts will be missing in the destination site after the job completes.

2.2 Supported Platforms

DocAve supports the following platforms:

- Windows Server 2003 (x86 and x64)
- Windows Server 2003 R2 (x86 and x64)
- Windows Server 2008 (x86 and x64)
- Windows Server 2008 R2 (x86 and x64)
- SQL Server 2000 (x86 and x64)
- SQL Server 2005 (x86 and x64)
- SQL Server 2005 SP2 (x86 and x64)
- SQL Server 2005 SP3 (x86 and x64)
- SQL Server 2008 (x86 and x64)
- SQL Server 2008 SP1 (x86 and x64)
- SQL Server 2008 R2 (x86 and x64)

*Note: SQL Embedded Edition is not supported, SQL Express is supported except for Platform level incremental backups.

DocAve can run on the following versions of Microsoft SharePoint:

- Microsoft Office SharePoint Server (MOSS) 2007 (x86 and x64)
- Microsoft Office SharePoint Server (MOSS) 2007 SP1 (x86 and x64)
- Microsoft Office SharePoint Server (MOSS) 2007 SP2 (x86 and x64)
- Windows SharePoint Services (WSS) v3 (x86 and x64)
- Microsoft SharePoint Server 2010
- Microsoft SharePoint Foundation 2010

Certain modules and features may not be supported for Microsoft SharePoint Server 2010 or for Microsoft SharePoint Foundation 2010.

2.3 System Requirements

To ensure that your system is compatible with DocAve v5 for IBM, please refer to the requirements below. Note that the minimum system requirements for the DocAve Manager and the DocAve Agent are slightly different.

2.3.1 DocAve Manager

In order to install the DocAve Manager, all services listed below must be present. The requirements for each are specified in the following sections.

2.3.1.1 All-In-One Installation

Requirements for an "all-in-one" installation (with all manager services on a single server):

- *Computer and Processor* : PC with an Intel Pentium III-compatible 1000-MHz processor minimum, Intel Pentium 4-compatible processor recommended.

- *Memory* : 2GB of RAM minimum, 4GB recommended.

- *Hard Disk* : 1GB of available space minimum, 3GB recommended.

- *OS* : Requires one of the following: Microsoft Windows XP, Microsoft Windows Server 2008, Microsoft Windows Server 2008 R2, Microsoft Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition, Windows Server 2003 Datacenter Edition, or Windows Server 2003 Web Edition (includes x64 editions).

- *Framework* : .NET Framework v2.0 and higher.

2.3.1.2 Control Service

Requirements for installation:

- *Computer and Processor* : PC with an Intel Pentium III-compatible 1000-MHz processor minimum, Intel Pentium 4-compatible processor recommended.

- *Memory* : 1.5GB of RAM minimum, 3GB recommended.

- *Hard Disk* : 1GB of available space minimum, 3GB recommended.

- *OS* : Requires one of the following: Microsoft Windows XP, Microsoft Windows Server 2008, Microsoft Windows Server 2008 R2, Microsoft Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition, Windows Server 2003 Datacenter Edition, or Windows Server 2003 Web Edition (includes x64 editions).

- *Framework* : .NET Framework v2.0 and higher.

2.3.1.3 Web Service

Requirements for installation:

- *Computer and Processor* : PC with an Intel Pentium III-compatible 1000-MHz processor minimum, Intel Pentium 4-compatible processor recommended.

- *Memory* : 1.5GB of RAM minimum, 3GB recommended.

- *Hard Disk* : 1GB of available space minimum, 3GB recommended.

- *OS* : Requires one of the following: Microsoft Windows XP, Microsoft Windows Server 2008, Microsoft Windows Server 2008 R2, Microsoft Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition, Windows Server 2003 Datacenter Edition, or Windows Server 2003 Web Edition (includes x64 editions).

- *Framework* : .NET Framework v2.0 and higher.

2.3.1.4 Media Service

Requirements for installation:

- *Computer and Processor* : PC with an Intel Pentium III-compatible 1000-MHz processor minimum, Intel Pentium 4-compatible processor recommended.

- *Memory* : 1.5GB of RAM minimum, 3GB recommended.

- *Hard Disk* : 1GB of available space minimum, 3GB recommended.

- *OS* : Requires one of the following: Microsoft Windows XP, Microsoft Windows Server 2008, Microsoft Windows Server 2008 R2, Microsoft Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition, Windows Server 2003 Datacenter Edition, or Windows Server 2003 Web Edition (includes x64 editions).

- *Framework* : .NET Framework v2.0 and higher.

*Note: Since the media agent will be managing the backup data, it is recommended that it is placed on a machine with high availability. The logical drives responsible for storing the data should have high reliability and a large capacity.

2.3.1.5 Search Service

Requirements for installation:

- *Computer and Processor* : PC with an Intel Pentium III-compatible 1000-MHz processor minimum, Intel Pentium 4-compatible processor recommended.

- *Memory* : 1.5GB of RAM minimum, 3GB recommended.

- *Hard Disk* : 1GB of available space minimum, 3GB recommended.

- *OS* : Requires one of the following: Microsoft Windows XP, Microsoft Windows Server 2008, Microsoft Windows Server 2008 R2, Microsoft Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition, Windows Server 2003 Datacenter Edition, or Windows Server 2003 Web Edition (includes x64 editions).

- *Framework* : .NET Framework v2.0 and higher.

2.3.2 DocAve Agent

In order to install the DocAve Agent, the desired server must meet the requirements specified below:

- *Computer and Processor* : PC with an Intel Pentium III-compatible 1000-MHz processor (dual Intel Xeon 3.0 GHz or faster recommended).

- *Memory* : 1.5 GB of RAM minimum, 3GB recommended.

- *Hard Disk* : 1GB of available space minimum, 3GB recommended.

- *OS* : Requires one of the following servers: Microsoft Windows Server 2008 R2, Microsoft Windows Server 2003 Standard Edition, Windows Server 2003 Enterprise Edition, Windows Server 2003 Datacenter Edition, or Windows Server 2003 Web Edition.

- *SharePoint* : Front-End Web Server for SharePoint: MOSS2007/WSS3.0

- *Framework* : .NET Framework v2.0 and higher.

- *Hotfix* : For x64 Machine: Office_Server_2007_SP1_x64_en_us.exe and WSS 3-sp1-kb936988-x64-fullfile-en-us.exe;
  For x86 Machine: Office_Server_2007_SP1_x86_en_us.exe and WSS 3-sp1-kb936988-x86-fullfile-en-us.exe

Other Supported Platforms

For some DocAve functions,

- *TSM Client Version* : 5.5.1.0

- *TSM Server Versions:* : 5.3, 5.4, 5.5, and 6.1

*Note: The version for DocAve manager and DocAve agent must be the same.

2.4 DocAve v5 Manager Installation

To install the DocAve Manager components, follow the installation steps below.

Please note that the account performing the installation must have local administrative rights on the machine where you will be installing the DocAve Manager.

*Note: If the system installing the server package is running an FDCC environment, please consult the Appendix at the end of this document to ensure that the DocAve system is fully functional in this type of environment.

(2-1) DocAve Manager Installation And Configuration

Step	Action
1	Download the DocAve Manager installation package to the machine that you plan to use as the DocAve Manager (or one of its services) and unzip the package.
2	Open the unpacked DocAve5_Manager directory created in the last step. Run the file `Setup.exe.`
3	After being presented with the welcome screen, click **Next** and review the license agreements presented.
4	Enter your name and organization in the screen provided. Select a location from the drop-down dialog box. This represents the location that the product was purchased through. Verify all information, and then click **Next**.
5	Carefully review the Software License Agreement. After you have read the terms in the license agreement, click on the radio button to select **I accept the terms in the license agreement**, then click **Next**.
6	Choose a directory for the installation. The default path is C:\Program files\Tivoli\TSM\SharePoint You can select a different location by clicking Browse. The Feature Description will let you know the hard drive space requirement for this installation. Click **Next**.

Step	Action

7	Select which DocAve Manager services you wish to install. Please refer to section 2.1 above for detailed descriptions of each service.
	
	The options available are:
	
	    • *Control Service* : Business logic and communication service
	    • *Media Service* : Manages and coordinates storage devices
	    • *Web Service* : Used to access the DocAve interface
	    • *Search Service* : Generates full text index and performs search
	
	By default, all services are selected.

8	In the "Advanced Configuration" window, select the database that you want to use for the DocAve database, the options being either "Build-in Database" or "IBM DB2". The DocAve database stores DocAve user account information, DocAve setting, and saved backup plans. <table><tr><td>**If…**</td><td>**Then…**</td></tr><tr><td>Build-in Database</td><td>Click OK, proceed to step 10.</td></tr><tr><td>IBM DB2</td><td>The required field for this option will be displayed. Fill in the relative information, and click OK. Then preceed to step 10. ***Note**: The code set for creating database should be UTF-8.</td></tr></table>
9	Review the options selected in the previous steps. If any changes must be made, click **Back**; otherwise, click **Install** to proceed with the installation.

Step	Action
10	Once the installation has completed, you will be presented with several port and account configuration options. These can also be set at a later time from the Manager Configuration Tool, located in the DocAve installation directory or in the DocAve Manager Tools folder in the Start menu. Please refer to the following table for more details on these settings. ***Note**: It is recommended to use the default settings unless a known conflict with an existing port exists. ***Note**: If you are installing these services on separate machines, the Control Service must be installed before any other services on other machines are installed. All other services will require you to input the Control Service Host Name and Port number in order to communicate within the Manager network. Also make note of any SSL or HTTPS settings when installing these components, as these must be consistent throughout your environment
	If… **Then**…

Step		Action
	Control Service	• *Control Service Host name* : Current machine's host name or IP address. • *Control Service Port* : The default port number is 22000. • *Manager Web Service* : This port is used to access the CLI from other servers. The default port is 12011. Additional Server Settings (must be consistent across all DocAve Manager servers in order to properly function): • *Enable HTTPS* : By default, https is disabled. If checked, allows users to access the DocAve GUI securely using https. See section 2.4.2 for additional details • *Enable SSL Communication* : By default, SSL is disabled. See section 2.4.1 for additional details. • *Enable IPv6* : By default, IPV6 is disabled. The IP address of the machines installed the manager services must be in IPV6 protocol.
	Web Service	• *Web Services Host Name* : Current machine's host name or IP address. • *Web Services Port* : The default port number is 9080. • *Web Network Port* : The default port number is 22002.

Step	Action	
	Media Service	• *Media Service Host Name* : Current machine's host name or IP address. • *Media Service Control Port* : The default port number is 22001.
	Search Service	• *Search Service Host Name* : Current machine's host name or IP address. • *Search Service Port* : The default port number is 22004.
11	Click **Next**. The Installation wizard will perform a brief pre-scan of your environment to ensure that all ports are available, and will then install the selected services. After the installation is complete, click **Finish** to complete the installation. During the installation process, if some file could not be installed or some GAC file could not be registered, it will prompt you to select one operation on the pop-up window.	

If...	**Then**...
Retry	The process will retry the operation.
Ignore	The process will skip the file which could not be installed or registered and continue the installation. The installation result will be *completed with exceptions*. Click *View installation log* to get more detailed information about the exception in the log file.
Cancel	The installation will fail and all the files will be rolled back. Click *View error log* to get more detailed information about the error in the log file.

*Note: You can check the installation information in Control Panel.

• *In Windows server 2003 environment* : Navigate to *Start > Control Panel > Add or Remove Programs*. The product name is displayed in the list, like DocAve v5 Manager.

- In Windows server 2008 or 2008 R2 environment : Navigate to S*tart > Control Panel > Uninstall a program*. The product name is displayed in the name column, like DocAve v5 Manager. DocAve version is displayed in the version column, like 5.6.0.0.

2.4.1 Setup Instructions for SSL Communication

DocAve supports data transmission over SSL to protect data transmission during the communication process. These settings must be configured for all Manager services and all corresponding Agent machines.

SSL may be either be configured during the installation as specified above, or after the installation by following the steps below:

(2-2) Setup Instructions For Security Communication

Step	Action
1	Open the Manager/Agent Configuration Tool. Go to *Start > All Programs > Avepoint DocAve v5 > DocAve v5 Manager/Agent Tools > Manager/Agent Configuration Tool*.

Step	Action
2	Check the **Enable SSL Communication** checkbox, and select a certificate option: **Built-In Certificate** or **User Defined Certificate** (details listed below). *Note: The certificate option selected must be consistent among all Manager and Agent servers in your environment. *Note: If SSL communication is enabled, the additional media port 12012 will be opened to improve SSL data transfer performance. If this port is used by another service, please follow the steps below to change it: 1. Go to the Manager installation directory, the default path is ..\AvePoint\Manager\ZeusMedia\etc and open *zeus-media.properties* file. 2. Change the value of Zeus.NonSSLPort to another available port. 3. Navigate to *Start > All Programs > AvePoint DocAve v5 > DocAve v5 Manager Tools > DocAve Services* and restart *AvePoint DocAve5 Media Service* to apply the changes.

If...	Then...
Built-In Certificate	Uses the certificate provided by DocAve. No additional configuration is necessary.
User-Defined Certificate	Allows you to provide a customized certificate. You may apply two types of certificates: **Subordinate Certification Authority** for the Manager, and **Web Server** for the Agents. The certificate name must be the same as the local machine's name *Note: If you install the Manager and Agents on different machines, the machines must either be bound to the same domain or the domains must have a trusted relationship configured.

Step	Action
3	Click **Confirm** to save any changes to the Manager Configuration tool.

2.4.2 Setup Instructions for HTTPS Access

For those administrators wishing to do so, DocAve supports accessing the DocAve GUI using the HTTPS protocol. This will encrypt the page requests and page information between the DocAve Broswer Interface and the DocAve Web Service.

*Note: The HTTPS settings within DocAve can also be configured to support FDCC (Federal Desktop Core Configuration). Please perform the additional steps in section 10.1.1 of the Appendix first in order to ensure full functionality.

2.4.2.1 Enable HTTPS in the DocAve Manager Configuration Tool

This section describes how to enable HTTPS communication in DocAve between the Manager components. This option can be configured either during installation or from the Manager Configuration Tool.
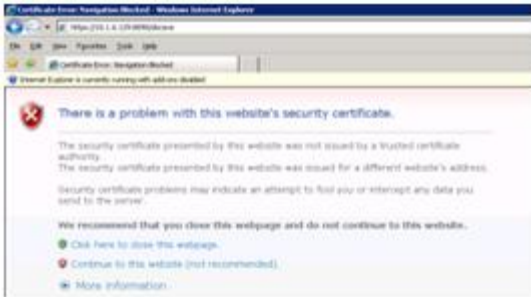
(2-3) Enable HTTPS
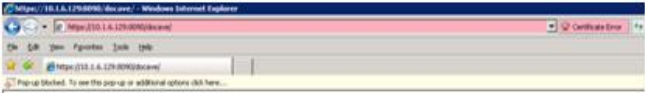
Step	Action
1	Open the Manager Configuration tool. Go to *Start > All Programs > Avepoint DocAve v5 > DocAve v5 Manager Tools*.
2	Check the **Enable https** option and select a corresponding certificate. For a description of these, please refer to the SSL Configuration section above in figure (2-2), step 2.
3	Click **Confirm**.

2.4.2.2 Internet Explorer Setup

After you have enabled HTTPS in the Manager configuration tool, you must next follow the steps below to enable https access in Internet Explorer:

(2-4) Internet Explorer Setup

Step	Action
1	When first accessing DocAve using Microsoft Internet Explorer (IE), certain initial security settings must be configured. Access the DocAve broswer interface, and follow the steps below. ***Note**: In order to be sure that Internet Explorer https access is available for FDCC environments, navigate to *Internet Explorer > Internet Options > Advanced*. Under this tab, enable the **Use TLS 1.0** line under Security options.

Step		Action
2		When first accessing DocAve using Microsoft Internet Explorer (IE), certain initial security settings must be configured. Run DocAve's server application found in the start menu, and follow the steps below.

	If…	**Then**…
	IE6	A message will appear. Click **OK**.
	IE7/IE8	The Browser will display a security certificate prompt : Select the option **Continue to this website** listed by the red bullet.

Step	Action
3	Select the corresponding security alert depending on your version of IE. <table><tr><td>**If…**</td><td>**Then…**</td></tr><tr><td>IE6</td><td>Click **OK** in the Security Alert pop-up.</td></tr><tr><td>IE7/IE8</td><td>Click **Certificate Error** next to the Address URL: </td></tr></table>
4	Click **View Certificates** on the pop-up.
5	Click **Install Certificate**… at the bottom of the window.
6	Click **Next** to continue with the Certificate Import.
7	Select the **Automatically select the certificate store based on the type of certificate** option and click **Next**.
8	Click **Finish** to complete the certificate import.
9	Click **Yes** to install the certificate in the pop-up.
10	Click **OK** in the prompt acknowledging the successful import.
11	Click **Yes** in the security alert window.
12	Click **Yes** to allow pop-ups on the DocAve site if you are using IE 6:

Step	Action
13	You can now log into DocAve from Internet Explorer. If you are using IE 6, you must click **Yes** in the security prompt before using the DocAve GUI.

2.5 DocAve v5 Agent Installation

The DocAve SharePoint Agent must be installed on a SharePoint Front-End Web Server. In order to install it, follow the steps below:

*Note: The installation user must have administrative rights to the SharePoint and SQL machines in order to install DocAve Agents.

(2-5) SharePoint Agent Installation And Configuration

Step	Action
1	Download the DocAve Agent installation package to the SharePoint Front-End Web (FEW) and unzip the content.
2	Open the DocAve5 Agent directory created in the last step and run the file Setup.exe.
3	After being presented with the Welcome screen, click **Next** and review the license agreement.
4	Enter your name and organization in the screen provided. Verify all information. Click **Next**.
5	Review the license agreements and click **I accept the terms in the license agreement**. Click **Next**.
6	Choose a directory for the installation. The default path is C:\Program files\Tivoli\TSM\SharePoint\DocAve5. You can change this location by clicking **Browse**. The Feature Description will give you the hard drive size requirement for this installation. Click **Next**.

Step	Action
7	If you have installed the DocAve agent on the environment without SharePoint, please select the SharePoint version you want to use. This is only used for certain Migrator modules.
8	Choose **Next** and review the options selected in the previous steps. If any changes must be made, click **Back**; otherwise, click **Install** to proceed with the installation. During the installation process, if some files cannot be copied, it will prompt you to select one operation on the pop-up window. <table><tr><td>**If**…</td><td>**Then**…</td></tr><tr><td>Retry</td><td>The process will retry the operation.</td></tr><tr><td>Ignore</td><td>The process will skip the file which cannot be copied and continue the installation. The installation result will be *completed with exceptions*. Click *View installation log* to get more detailed information about the exception in the log file.</td></tr><tr><td>Cancel</td><td>The installation will fail and all the files will be rolled back. Click *View error log* to get more detailed information about the error in the log file.</td></tr></table>
9	Once the installation is complete, you will be presented with several port and account configuration options. These can be set at a later time from the Agent Configuration Tool, located in the DocAve installation directory or in the DocAve Agent folder accessed in the start menu. It is recommended to use the default settings unless a known conflict with an existing port exists, further explanation of these ports is provided below.

Step	Action
10	The following configuration options for MOSS 2007 are available in Agent Configuration Tool. • *DocAve Control Service Name* : The computer's host name or IP address for the machine in which the DocAve Server is installed • *DocAve Control Service Port* : The default port number is 22000 • *Manager Web Service* : The defaut port is 12011 • *DocAve Agent Name* : Current machine's host name or IP address • *DocAve Agent Address* : Current machine's host name or IP address • *DocAve Agent Port* : The default port number is 20103 • *Enable SSL Communication* : This option should be configured to match the Manager configuration. • *Enable IPv6* : This option should be configured to match the Manager configuration. The IP address of the machines installed the agent service must be in IPv6 protocol. • *AgentType* : Check the box in front of the agent function. These will be explained in detail in the following sections. ***Note**: When clicking **Test** or **Next** button, DocAve will check the farm name of this server. If there is anther Agent with the same farm name as this installing agent for one manager, it will prompt you to rename the farm name. You need to go to ..\Tivoli\TSM\SharePoint\DocAve5 \Agent \data and open *VCEnv.cfg* to change the value of *FarmName*, and then continute to install this Agent. For the farm with several Front-End Web, the values of FarmName for all the Front-End Web must be the same one. If the agent is reinstalled in the future, the value of FarmName must be the same as the changed one to ensure all the previous data can be loaded.

Step	Action
11	After you configure the Agent Type, it will prompt you to restart IIS. ***Note**: The IIS reset performed does not restart the IIS service, but performs a no-force reset of the IIS processes. Any processes currently running will be allowed to finish before this reset takes place. If you choose to reset IIS at a later time, any pre-existing web parts or features installed by this platform will not be upgraded.
12	The agent types are defined in the installation sections of the modules below.
13	Click **Next**, followed by **Finish** to complete the installation. If some service cannot be installed, it will prompt you to select one operation on the pop-up window. <table><tr><td>**If**…</td><td>**Then**…</td></tr><tr><td>Retry</td><td>The process will retry the operation.</td></tr><tr><td>Ignore</td><td>The process will skip this service which cannot be installed and continue the installation. The installation result will be *completed with exceptions*. Click *View installation log* to get more detailed information about the exception in the log file.</td></tr><tr><td>Cancel</td><td>The installation will fail and all the files will be rolled back. Click *View error log* to get more detailed information about the error in the log file.</td></tr></table>

*Note: You can check the installation information in Control Panel.

- In Windows server 2003 environment : Navigate to *Start > Control Panel > Add or Remove Programs*. The program name is displayed as product for SharePoint platform information, like DocAve v5 Agent for SharePoint 2007.

- In Windows server 2008 or 2008 R2 environment : Navigate to S*tart > Control Panel > Uninstall a program*. The name column is displayed as product for SharePoint platform information as DocAve v5 Agent for SharePoint 2007. DocAve version is displayed in the version column, for example 5.6.0.0.

2.5.1 Required Permissions for the DocAve Software Agents

When installing the DocAve Agents to interface with your SharePoint deployment, you must configure these with a service account (only one is accepted in the installation package) for initiating all jobs and performing all actions within SharePoint. Below is a summary of the minimum local system, SharePoint, and SQL permissions for the accounts provided, grouped by DocAve Module and Agent type. In all cases, the recommended permissions are presented first.

(2-6) Permissions for the DocAve Software Agents

DocAve Module/ Agent Type (Installation Location)	Permission		
	Local System	**SQL Server**	**SharePoint**
Data Protection - Granular Backup (includes Criticality Matrix) (with Item-Level Restore Granularity) SharePoint Front-End Web (FEW)	Local Administator or Full Control to the DocAve root folder	Local Administator or DBOwner for all SharePoint Content Databases (WSS_Content_Application_Pools or db-owner for SharePoint_Config DB, WSS_Content_Application_Pools or db-owner for Central Admin DB, and and WSS_Content_Application_Pools or db-owner for SSP DB) ***Note**: If an SSO is present in SharePoint, an account with local Administator rights must be provided.	Farm Administrator ***Note**: To granularly backup and restore MySites, the account used also requires permissions to the "Personalization Services" with all granular permissions beneath in the SSP/admin site collection.

Data Protection - Platform Backup
 	
Control Agent
 	
*Note: The Member Agent roles can be combined depending on the deployment of SharePoint's Index, SQL, and Front-End Web servers (i.e., "all-in-one" installations require all permissions listed).
	Local Administator or
	
	• Full Control to the DocAve root folder
	• Member of the IIS Administator group
	
	*Note: If an SSO is present in SharePoint, an account with local Administator rights must be provided.
		• View Server State permission
		• DBOwner for all SharePoint databases
		• Server Role of:
		  # DBCreator
		  # Security Administator
			Farm Administrator

Data Protection - Platform Backup Member Agent (SQL)	Local Administator or • 'Full Control' to the DocAve root folder • 'Full Control' to the SQL server database file and log folder *Note: If VSS is to be used as a backup method, the account must also have the rights to start Windows Services for Volume Shadow Copy Service and SQL Server VSS Write Service, as well as to the vssapi.dll file located in c:\Windows\System32\.	Server Role of Sysadmin for VDI Server Role of Security Administator and DBOwner for VSS	N/A

	Local Administator or • 'Full Control' to the index files • Permission to start the following Windows Services: # Office SharePoint Server Search Windows # SharePoint Services Search	Server Role of DBOwner for: • SSP Database • SSP Web Application • Search Database	Farm Administrator
Data Protection - Platform Backup Member Agent (Index)			
Data Protection - Platform Backup Member Agent (FEW)	Local Administator or 'Read/Write' access to: • DocAve root folder • Microsoft SharePoint .DLLs/GAC • All file system folders intended for backup • IIS • Custom settings folder	N/A	Farm Administrator
Data Protection - Restore from SQL Backup Control Agent	Local Administator	N/A	Farm Administrator
Data Protection - Restore from SQL Backup Member Agent	• 'Read' to the SQL backup files' directory • 'Full Control' to SQL backup files • 'Full Control' to the temp DBs' root folder	System Administator	Farm Administrator

2.6 Verifying the DocAve v5 Installation

In order to verify that DocAve has installed correctly, you will check for the presence of the services listed below. Also, you can check any firewall or port settings for data transfer.

(2-7) Verify The Installation

Step	Action
1	Under the Administrative Tools menu in Windows, open the **Services** running on the machine where any DocAve component, Manager or Agent, is installed.
2	In the services listing, multiple services are listed for the DocAve Manager and Agent.

	If...	**Then**...
2	Agent Service	DocAve Communication Service.
	Manager Services	Check for the DocAve Control Service, DocAve Media Service, DocAve Search Service, DocAve Web Service.

Step	Action
3	To ensure proper communication between the DocAve Manager and Agent, the following ports must be open and available if a firewall is in place.
	The DocAve Manager uses the following TCP ports:
	22000, 22001, 22002, 22004, 9080, 9443
	The DocAve Agent uses TCP port 20103.

2.7 Accessing DocAve v5

The DocAve GUI can be launched from any web browser within the same network as the DocAve Manager. In order to connect to the interface, you must record the IP/Host Name for the DocAve Manager - Web Service, as well as the Web Service Port if it was changed.

*Note: All pop-up blockers: browser-based or in third party toolbars and LAN firewalls must be disabled.

(2-8) Accessing DocAve v5

Step	Action
1	Open an Internet Explorer window and enter: http://\<machine\>:9080/docave Where \<machine\> is the host name or IP address of the machine running the DocAve Web Service. If the default port number has been changed from 9080, enter the new port number. ***Note**: If you enabled HTTPS during installation or from the configuration tool, you must enter: https://\<machine\>:9443/docave
2	The DocAve login screen will pop-up. Select **Local System** and enter the default login account information: • *Login ID* : admin • *Password* : admin Click **Login**.

You can configure DocAve to work with Active Directory and with additional users and groups after the initial setup. Please refer to section 3.4.1.4 in the Control Panel chapter for more details.

2.8 Uninstallation Instructions

Uninstallation can be used to either to remove individual features of DocAve, or the entire Manager/Agent configuration.

2.8.1 Adding and Removing Features

The DocAve modules, Data Protection, Platform Level Backup, SharePoint Administrator, etc., are controlled by a license. However, if you wish to configure your Agents to only run Backup and Recovery, or only SharePoint Administrator, this can be done from each SharePoint Agent individually.

(2-9) Enabling and Disabling Features from DocAve SharePoint Agent

Step	Action
1	Navigate to the SharePoint Web Front End where the DocAve Share-Point Agent is installed.
2	Open the Start menu and navigate to *All Programs > AvePoint DocAve v5 > DocAve v5 Agent Tools > Agent Configuration Tool*.
3	From the Agent Configuration Tool, navigate to the appropriate tab for the module you would like to enable or disable features for. These will be listed under the **Agent Type** section at the bottom. From here you can either check or uncheck DocAve features according to your needs.
4	Click **Confirm** to save these changes.

*Note: Enabling Extension Archiver will require an IIS Reset. You can choose to perform this reset later, but not all features will be enabled if this step is skipped.

2.8.2 Removing DocAve Manager/Agent

In order to uninstall the DocAve Manager or Agent from your system, please make sure there are no current restore jobs running on the Agent, or that the Manager service being removed is not currently in use by another process.

(2-10) Uninstalling DocAve Services /Agents

Step	Action	
1	Open the Start Menu in Windows on either the DocAve Manager or Agent server and navigate to *All Programs > Avepoint DocAve v5*.	
2	Choose to uninstall one of the following:	
	If…	**Then**…

Step	Action

Agent	In order to uninstall the SharePoint Agent:
	
	1. Open the DocAve v5 Agent Tools Folder.
	
	2. Select the **Agent Uninstall** tool.
	
	3. Select the **Remove SharePoint solutions/features installed by DocAve** option will remove all of the DocAve solutions installed on SharePoint.
	
	4. Select the **Disable EBS/RBS settings in SharePoint farm** option to disable the EBS/RBS settings in SharePoint farm.
	
	   ***Note**: This option is selected by default and the EBS/RBS settings will be disabled after uninstallation. For some usage reason, it is recommened selecting this option.
	
	5. Click **Uninstall** to remove the agent.
	
	6. If some files cannot be uninstalled, it will prompt you to select the operation in the pop-up window.
	
	   • *Retry* : The process will retry the uninstallation operation.
	
	   • *Ignore* : The process will skip the file which cannot be uninstalled.The uninstallation result will be *completed with exceptions*. Click *View uninstallation log* to get more detailed information about the exception in the log file.

Step		Action
		7. Check the checkbox next to **Remove configuration data** if you wish to do a clean uninstallation.
		*Note: Selecting the **Remove configuration data** option, all the files which are not being used under the installation path will be deleted. However, it is recommended deleting the installation path to remove any remaining data after the uninstallation.
		8. Click **Finish**.
		9. Proceed to ...\Program files \Tivoli \TSM \SharePoint\DocAve5, delete the Agent directory.
		*Note: This step will remove any remaining configuration data.

Step	Action
Manager	In order to uninstall the SharePoint Manager: 1. Open the DocAve v5 Manager Tools Folder. 2. Select the **Manager Uninstall** tool. 3. Select the **Remove** radio button, and click **Next**. 4. Select the service you want to uninstall. 5. Click **Next** to remove the Service. 6. If some files cannot be uninstalled, it will prompt you to select the operation in the pop-up window. • *Retry* : The process will retry the uninstallation operation. • *Ignore* : The process will ignore the file which cannot be uninstalled.The uninstallation result will be *completed with exceptions*. Click *View uninstallation log* to get more detailed information about the exception in the log file. 7. Check the checkbox next to Remove configuration data if you wish to perform a clean uninstallation. **Note*: Selecting the **Remove configuration data** option, all the files which are not being used under the installation path will be deleted. However, it is recommended deleting the installation path to remove any remaining data after the uninstallation. 8. Click **Finish**. 9. Proceed to ...\Program files\Tivoli\TSM\ SharePoint\DocAve5, delete the Manager directory. **Note*: This step will remove any configuration data, as well as plan and job details.

3. Control Panel

The DocAve Control Panel offers the following general administrative services:

Agent Services

- *Agent Monitor* : Monitor and restart DocAve software agents, set up DocAve agent work areas for temporary work files, and control access rights to agent hosts.

- *Agent Groups* : Monitor agent groups.

Manager Services

- *Manager Monitor* : Monitor, delete, and restart DocAve services.

- *System Performance* : Monitor the CPU usage and memory usage for all managers.

Data Management

- *Data Manager* : Configure data pruning profiles, job pruning profiles and data coalescing profiles. You may also import or export bakup data.

- *Filter Policy* : Set filter profiles for backups at multiple levels.

- *Device Manager* : Add physical storage devices and configure logical drives for data storage with various DocAve Media Services.

- *Security Manager* : Configure the security profiles for DocAve modules.

- *Language Mapping* : Set up custom language mappings for internationalized configu-rations.

DocAve System

- *Account Manager* : Control group permissions and user access to DocAve.

- *System Recovery* : Set up and schedule backup and restore plans for DocAve Data-bases.

- *System Settings* : Specify basic system settings such as language or time format for DocAve.

Reporting

- *Email Notification* : Set up e-mail notification profiles for different services at different log levels for reporting.

- *Log Manager* : Set up and manage DocAve log quotas and notifications.

- *Log Viewer* : View the logs generated by the DocAve Server.

- *MOM Logging Settings* : View the logs generated by the DocAve Server in the MOM server.

- *SCOM Logging Settings* : View the logs generated by the DocAve Server in the SCOM server.

Patch Management

- *Patch Manager* : Manage software upgrades for all DocAve solutions.

- *Patch Report* : View details of patch updates.

*Note: The ability to access the DocAve control panel should be limited to users with the highest level of administrative privileges.

3.1 Agent Services

All general administrative services contained within the Agent Services section are described in further detail in the following sections.

3.1.1 Agent Monitor

The DocAve Agent Monitor provides a central interface to add remote agents, and monitor, restart, disable and remove all registered DocAve Agents.

Agent Monitor displays the following information: Agent Name, Status, Mode, Agent Address, Version, Agent Type, SP Version, Registration Time, Message and Control. By hovering over the content under Agent Type column, you will be able to view all the agent types enabled for the specified agent.

For the columns in the Agent Monitor, please refer to the detailed information below:

- *Agent Name* : Shows the name of the Agent Host machine.

- *Status:* : Shows the status of the agent, the red arrow means the agent status is down, the green arrow means the agent is available and the arrow in the status column will turn yellow if the username and password are not configured or the account password is invalid.

- *Mode* : There are two modes for the agent.
  Regular: the agent is a regular agent.
  Remote: the agent is a remote agent for the Replicator Web Service.

- *Agent Address* : Shows the name or IP address of the Agent Host machine.

- *Version* : Shows the version of the agent.

- *Agent Type* : Shows all the Agent Types selected for the agent.

- *SP Version* : Shows the version of the SharePoint environment. The values of this column could be one of the followings: SPS 2003 SP1, WSS v2 SP1, MOSS 2007 SP1, WSS v3 SP1, MOSS 2010 SP1 and WSS v4 SP1.

- *Registration Time* : Shows the registration time of the agent.

- *Message* : When the status of the agent is available, this column will be blank. If there are any issue with the agent, there will be a red hyperlink *Message...* in the column. Clicking this link, a pop-up window will appear and the corresponding information will be shown in it. For example, if you see the message *The version number for this agent does not match the manager version number*, please check the version of the manager and the agent.

Under the Control column:

If the customer uses another customized upload.aspx file, they will have the same problem.

- *Restart* : Restarts any DocAve Agent servicesservice(DocAve Communication Service) on the Agent machine (Communication Service). This does not reset all services, only those pertaining to this platform.

- *Disable* : Suspends all backup or restore jobs corresponding to this Agent. All plans that were scheduled are skipped if an agent is disabled, but they will still be visible from all the modules.

- *Remove* : Removes the specific Agent from the DocAve Manager. The plans for this Agent no longer run, and this Agent is not available from either the Backup or the Restore modules. This also means that the Agent Monitor no longer shows this agent in the interface. This option should be used only in instances when uninstalling an Agent does no remove it from the Agent Monitor. Also, you can click the corresponding box in the pop-up to remove all backup data and plans associated with the agent as well. However, the register information of the Agent will be kept in the Agent Monitor interface for reviewing. The plans for this Agent no longer run, and this Agent is not available from all the DocAve modules. This option should be used when you want to delete the plans or/and data associated with the agent after uninstalling the Agent. And you can check the corresponding check box in the pop-up to remove all backup data associated with this agent or/an d remove all plans associated with this agent.

  *Note: The related backup data or plans will be removed when all the agents in the Agent Group are uninstalled.

- *Configure* : Configures Agent information, follow the steps below for an explanation of the configurable options:

(3-1) Agent Configuration

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Agent Services > Agent Monitor.*
2	Click **Configure**. A dialog box will open that allows you to configure the Agent account, specify its data location, select the agent type, and enable the web service. ***Note**: The Web Service Tab could only be seen if the Replicator Agent Type is selected.
3	On top of the dialog box, you can select the log level from the drop-down box. There are five options: **Error**, **Warning**, **Info**, **Debug and Log to file**. For troubleshooting, we recommend setting the level to Debug.
4	Click the *Account Configuration* tab. Enter the SharePoint Domain\Username and the corresponding Share-Point password. Please make sure that the SharePoint account has the required permissions for the modules enabled (see section Required Permissions for the DocAve Software Agents).
5	Click the *Data Location Settings* tab. Set the location where you wish to store temporary data generated by this agent. The default location is on the DocAve software agent's host machine: <DocAve v5 Install Directory>\Agent\temp To customize the location specified for saving the temporary data, please enter the path in ether local path or UNC path. Temporary data is typically small in size, but varies based on deploy-ment.

Step	Action
6	Click the *Agent Type* tab. Enable the agent functions by checking the corresponding checkboxes. After making any changes to the Agent Type, DocAve will prompt you to restart the Agent Service. ***Note**: If the changes you made requires an IIS reset, please note that the IIS reset performed does not restart the IIS service, but performs a non-force reset of IIS processes. Any currently running progcess will be allowed to finish before this reset takes place. If you choose to reset IIS at a later time, any pre-existing web parts or features installed by this platform will not be upgraded.

3.1.2 Agent Groups

Agent Groups provides a central interface to monitor farm and agent configurations. It also allows you to group agents for load balancing. When an agent group is specified, DocAve will execute its commands using the Agent which has the most available resources in the agent group. Furthermore, in this section, you can view each default agent group which contains the agent(s) under the corresponding farm. On the whole, the Agent Group configuration is a prerequisite to certain modules.

3.1.2.1 Adding Agents to Group

(3-2) Adding Agents to Group

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Agent Services > Agent Group.*
2	Select a farm under the **Farm** drop-down box. This will allow you to see all available agents under this farm.

Step	Action
3	You can add the agent to a new group or to an existing group. **If…** / **Then…** Adding an agent to a new group. / Click the **New** button and input the group name into the Group Name field. Adding an agent to an existing group / Click the group name in the Agent Group area.
4	Drag the agent icon from the Available Agents field to the Agents In Group field.
5	Click **Save**. After the group has been saved successfully, it will be displayed under the Agent Group column on the right. By default, All is selected in the Farm drop-down box, and all the farms specific to this manager is listed underneath. You can select one specific farm from the drop-down list, and all the related agent groups for this farm will be shown.

3.1.2.2 Modifying a Group

You can modify a group after clicking the corresponding Group Name in the Agent Group list on the right. You can also modify the Group's name by using the **Group Name** box. Once all modifications are completed, click **Save** to save the changes. By clicking **Save As**, if the group name already exists, a suffix of **(1)/(2)/(3)/**… will be automatically added to the original name of the agent group. You may then edit the group name by opening that group, changing the name, and clicking save.

*Note: The default group cannot be modified.

3.1.2.3 Deleting a Group

You can delete a group by clicking the corresponding ✕ delete button in the Agent Group list.

*Note: The default group cannot be deleted.

3.2 Manager Services

Manager Services is composed of two components: the Manager Monitor and the System Performance monitor. They provide a central interface to monitor the status of all the manager services and of the system performance respectively. You may also configure certain options from the interface.

3.2.1 Manager Monitor

The DocAve Manager Monitor provides a central interface to monitor the status of all of the manager services configured for DocAve and you can configure, restart, and delete certain available services here. The interface displays the service's Service Name, Host, Status, Type, Version, and Port.

*Note: Please note that the ability to restart services should be limited to users with highest level of administrative privileges.

Configuring the Manager Services

Certain services can be configured by click the Configure button under the Configure column. You can modify the control port and host name for the Media Service, Audit Service, Search Service, Report Service, and Report Database Service.

(3-3) Configuring the Manager Services

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Manager Service > Manager Monitor*.
2	Click **Configure** button of the service you want to update. The control port and host name for the specified service will be listed in the pop-up.
3	Enter the new port you want to use for the service. Click **Save**. ***Note**: The service host name cannot be modified.
4	Click **Refresh** icon to refresh the configuration. The port for the specified service will be changed to the new one.

3.2.2 System Performance

System Performance function provides an interface to view your configured hosts, including a list of the services running on this host, status of the host, CPU Usage, and Memory Usage. The data in the information table can be refreshed by clicking the green refresh button on the top left.

*Note: This data reflects overall CPU and Memory Usage - it is not specific to DocAve processes. High server loads may not be a result of only running DocAve, and could be caused by any other process running on that machine.

3.3 Data Management

DocAve Data Management provides a central interface to set up data processing policies, device locations for data storage, filter and security policies, and language mapping. Many of the DocAve Data Management configurations must be set up before any DocAve modules will operate.

3.3.1 Data Manager

The Data Manager is split into five tabs: Data Pruning, Job Pruning, and Data Coalescing, Data Import, Data Export. These five sections will be described in more detail below.

3.3.1.1 Data Pruning

The DocAve Data Manager allows administrators to permanently delete old backup data by defining pruning and expiration policies. A Data Pruning Rule allows you to specify the time period to keep the backup data for or the number of the previous jobs that should retain, and the types of backup processes that trigger Data Pruning. To configure a basic data pruning policy for granular or platform level backups, follow the steps below.

Creating a Pruning Rule for Granular or Platform Level Backups

(3-4) Data Pruning for Granular & Platform Level Backups

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Data Manager > Data Pruning.*

Step	Action
2	Select **Granular Backup & Platform Backup** from the Module drop-down list. ***Note**: The Pruning policy will only apply to content specified by the chosen module.
3	Select the Backup Types to trigger Data Pruning from the following types: **Full Backup**, **Incremental Backup**, **and Differential Backup**. One, two, or all of the avaliable backup types can be selected.
4	Select the options for Trigger Data Pruning when a backup has from the following status: **Completed** and **Completed with exception**. One or two of the avaliable backup status can be selected.
5	Select the Trigger Time from: **Before Backup** and **After Backup**. Only one option could be selected.
6	Select the number of full backup cycles to keep before data pruning begins. For example, if the number of the full backup cycles is 2, once a third backup cycle runs and completes, data pruning will begin and the data of the first backup cycle will be removed or moved to a separate tier. However, despite the fact of being removed from the logical device and timeline in Restore Controller, the backup job still exists in Job Monitor unless **Remove Backup Job** is selected. ***Note**: When the *Keep at Least* checkbox is checked, pruning will occur only on backup data older than the time specified, regardless of the number entered in the Full Backup Cycle(s) field.
7	If you select the Keep Backup Data for Failed Jobs check box, the data of the failed jobs will be pruned according to the pruning rule.

Step	Action
8	If you select Enable Tiered Storage check box, specify how many cycles you wish to retain in the selected tier and then go on with the lower tier. To add or delete one tier, please click the corresponding icons. ***Note**: When saving the pruning profile, all the Tiered Storage rows will be listed in accordance with the order of the number of the tiered storage ascendingly regardless of your configuration.
9	Select an email notification profile from the corresponding drop-down box. DocAve will send a report based on the profile selected. For more information on adding or editing email notification profiles, please refer to Section Configuring a General Email Notification of this Manual.
10	Click **Save** to save this profile. After the profile has been saved successfully, it will be listed under the Pruning Profiles on the right column and can now be applied when building a backup plan. If you click **Save As** and the profile name already exists, a suffix of **(1)/(2)/(3)/**... will be automatically added to the original name of the pruning profile.

*Note: In order to leverage tiered storage pruning, you must assign a tier to the logical devices created in the Device Manager beforehand. Tiered pruning rules will be applied to the data current tier and those below, which means that if you just use a Tier3 logical device for storage, data written directly to tier 3 will skip all pruning rules defined for tiers 1 and 2. In a word, it is the logical device that determines the tiered pruning rules to be used.

Creating a Pruning Rule for System Recovery

(3-5) Data Pruning for System Recovery

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Data Manager > Data Pruning.*
2	Select **System Recovery** in the Module drop-down list.

Step	Action
3	Select the Trigger Time from: **Before Backup** and **After Backup**. Only one option could be selected.
4	Specify the number of backup data to keep in the **Select the Latest Backup Data to keep**: text box.
5	If you selcect the **Remove Backup Job** checkbox, DocAve will remove the job records of the pruned data from the Job Monitor.
6	Select an email notification profile from the corresponding drop-down box. Then DocAve will send a report based on the profile specified. For more information on adding or editing email notification profiles, please refer to Section Configuring a General Email Notification of this Manual.
7	Click **Save**. After you save the profile successfully, it will be listed under the Pruning Profiles column on the right. If you click **Save As** and the profile name already exists, a suffix of **(1)/(2)/(3)/**... will be automatically added to the original name of the pruning profile.

After saving your data pruning profiles, you will now be able to select one data pruning profile in the Pruning section of the corresponding modules.

*Note: DocAve does not support the manual removal of backup data directly from the file system, so either a data pruning rule or removal from the Job Monitor must be used. If any data has been removed manually, please make sure that all files and folders are restored to their original location in the file system before using the restore controller.

Removing data from TSM manually

The Tivoli Storage Manager (TSM) node for DocAve should have the 'dtBackupID' permission.

If the TSM node has this permission, it will mark the content which can be deleted, and delete it when the deletion operation is performed.

If the TSM node do not have this permission, you can run the following administrative command on the TSM server to assign the 'dtBackupID' permission to the TSM node. To issue this command, you must have system privileges, unrestricted policy privileges, or restricted policy privileges for the policy domain to which the client node belongs:

> update node MyTSMNode backdel=yes
>
> (MyTSMNode is the node used by DocAve)

Or the data will be deleted according to the setting in TSM Policy Domain Properties. You can set up the value of **If client data is deleted** and **Number for days** to **0**, and the data will be deleted when the deletion operation is performed.

Files will not be completely deleted from server storage using client delete operations, so you should run the following administrative command to completely remove them from storage. You can run the command manually or define an administrative schedule to do that. To issue this command, you must have system privileges:

> expire inventory
>
> define schedule delete_data type=administrative cmd="expire inventory" active=yes start-time=20:00 period=2
> (This command defines a schedule named 'delete_data' which will run 'expire inventory' command at 8 p.m. every two days)

To view the permission of the TSM node, you can run the following command:

> query node node_name f=d
> (If the value of the Backup Delete Allowed is no, this presents the TSM node does not have the permission.)

See 'IBM Tivoli Storage Manager for Windows Administrator's Reference' for more information. http://publib.boulder.ibm.com/infocenter/tivihelp/v1r1/index.jsp?topic=/com.ibm.itsmcw.doc/b_adminref_windows02.htm.

3.3.1.2 Job Pruning

The Job Pruning tab allows you to set up a pruning rule for all job records across your farms. It is highly recommended to configure a Job Pruning policy if you are running backups frequently. This will ensure your databases not be overloaded with job data.

General Job Record Pruning Rule

There are three general job record pruning rule types:

- *No Pruning*: all types of job records will be saved.
- *By Job Life Cycle*: Set the number of days, weeks, or months to keep the job records.
- *By Job Count*: Set the number of job records to keep.

Setting a Pruning Rule for Each Feature

This allows you to set up a pruning rule for each feature within Data Protection. By default, all the features will use the General Job Record Pruning Rule until a rule for the individual feature is applied.

*Note: The **Remove backup data** checkbox will only be available when a job containing Granular Backup data is selected.This option will allow you to remove the backup data with its job record simultaneously.

Defining the Location for Export Report

Job Pruning allows you to specify a location to export a report of **Job Pruning** jobs. Click **Define Location**, and enter the location information (username, password, and path) in the pop-up window. Please notice that the path has to be formatted in UNC path form. Click Test to verify the access, then click **OK**. The URL will be listed in the corresponding text box.

Setting a Schedule for the Pruning Rule

You can setup a schedule for the pruning rule by unchecking the *No schedule* check-box. Using the calendar icon next to the *Start Time* field, select a date and time for the pruning job to run, and then set an interval for recurring rules based on a schedule using the option of **Only Once**, **Day**, **Week** or **Month**.

Apply the Rule or Prune Now

Once a job record pruning rule has been set, click **Save** or **Prune Now**. By clicking **Save**, the rules will be saved and DocAve will prune the job records according to the scheme that you setup. By clicking **Prune Now**, DocAve will remember the rule and will prune the job records at once, the detailed information of the pruned job records will be exported to the path you defined.

You can view the status of pruning jobs in the process bar at the bottom of the window.

3.3.1.3 Data Coalescing

Data Coalescing merges Incremental or Differential data chunks into the previous Full Backup to save disk space. Data Coalescing allows DocAve administrators to effectively stretch out Backup Cycles to Full Backups plus the number of incremental and differential backups until the next Full Backup without any added risk of losing data.

For example, an administrator could set up a monthly backup schedule where a Full Backup is performed on the 1st day of every month, and an Incremental Backup is performed daily. By using Data Coalescing, the resulting data is one set of only Full Backups residing on your local/ network drive or SAN (Storage Area Network) environment.

Within *Manual Coalescing*, you can select a Backup Type, and then click Backup Data to expand the data tree. Select the data you wish to coalesce by checking the corresponding check-box. Click **Coalescing** to run the job.

After the coalescing, the index file as well as the data will be coalesced. There will be only one time point of the Full Backup which is generated by the coalescing operation in Restore Controller.

Within *Auto Coalescing*, you can create an auto coalescing plan. Select a trigger to automatically coalesce backup data: specify a number in **When the number of incremental or differential backups reaches** or specify a start time with an interval. Select an Email notification profile, DocAve will notify the recipients if the auto coalescing plan meets the notification levels specified in the Email notification profile. Click **Save**, the profile will appear on the right. You can view the status of data coalescing jobs in the process bar at the bottom of the window.

3.3.1.4 Backup Data Import

Data Import allows administrators to import backup data copied or pruned from other logical devices to another location on the same server or among different servers.

*Note: Before you import any backup data, ensure that you have already manually copied the backup data to the desired logical device.

*Note: If the imported data is enciphered, it cannot be restored.

Importing Data for Different Modules (Granular Backup, or Platform Backup)

To import the data from Granular Backup, or Platform Backup follow the steps below:

(3-6) Importing Data for Different Modules

Step	Action
1	Click on *Control Panel > Data Management > Data Manager > Data Import.*
2	Select a module, *Granular Backup, or Platform Backup* from the drop-down list.
3	Select a logical device containing the appropriate Physical Device from the drop-down box.

Step	Action
4	Click **Devices** to expand the data tree. If you are importing data from an extended location for Extender, you must also select the corresponding Index Logical Device.
5	Select the plan you want to import by checking the corresponding box, and then click **Import**. You can view the status of import jobs in the process bar at the bottom of the window.

3.3.1.5 Backup Data Export

You may export data immediately or periodically to one logical device at a different tier. Data which are able to be exported includes the data of Granular Backups, and Platform Backups. After the export job, the information on the target logical driver will be kept in the source database.

To export data, follow the steps below:

(3-7) Export Data

Step	Action
1	Navigate to *DocAve v5 > Data Management > Data Manager > Data Export.*
2	Select the source tier whose data you want to move from the drop-down box.
3	If you want to keep the source data after exporting, you should select the *Keep the source data* option. This will create duplicate data.
4	You can click the icon to refresh the data. Also, you can click the icon to delete the data.
5	Select the destination tier where you want to move the data to, and then click the tier's name to expand the node. Select the logical device you want to move the backup data to.

Step	Action
6	Click **Export** to run this export job. The backup data under the source device will be moved to the destination device. You can view the status of the export jobs in the process bar at the bottom of the window.

3.3.2 Filter Policy

This section provides a central interface for the Filter Policies configured for DocAve's modules. These filters allow you toinclude or exclude files from SharePoint lists down to item versions. If your environment is exceptionally large, you can speed up your backup process by using Exclusion Filters from this section to ensure that only the content you need to back up is backed up. Likewise, you can leverage Inclusion Filters to broaden the scope of the backup.

*Note: In DocAve 5.6.0.0, the default *.bak filter which filters out all the .bak files inside all the folders is removed from the Filter Policy. If you have plans created by the former versions of DocAve with this filter rule, the corresponding jobs will fail if you run the filter job by DocAve 5.6.0.0, it is recommended to update the plans setting.

(3-8) Set Up A Filter Policy

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Filter Policy*.
2	Click **New**, and then enter the Filter Name in the provided field.
3	Select the type of the content you want to filter in the corresponding tab.
4	You can select *Case sensitive filtering* to make the filter result matches the case as typed in the filter field.

Step	Action
5	If configuring a version filter, you can either filter major versions only or major and minor versions. ***Note**: If you select to filter Major Versions Only, but the current version is a minor version, this minor version will still be included in the backup. For example, the versions of one file is 1.0, 1.1, 2.0, 2.1, 2.2 and you choose to backup the latest 3 major versions. The versions that will be backed up are: 1.0, 2.0 and 2.2.
6	Click *AD Profile* to configue a AD profile filter: You can select Refresh data from Active Directory every 30 days to refresh the data in cache and you can reset the time. When runnning Retrieve Auditor Data job in Audit Controller, the data in the cache will be refreshed if the data is expired. It will improve the efficiency of retrieve job. Enter the type you want to filter into Column column and input the corresponding value of the AD user profile you want to exclude. ***Note**: Only the *country* is supported for the filter type, so only the *country* can be specified into the Column.
7	Set the Inclusion Filter and Exclusion Filter rules: Enter either the name of the file or folder, or a full file name such as *.doc to include/exclude all Microsoft Word documents in the job. Click **Add** to include/exclude a new item, and click **Remove** to delete one item. ***Note**: the filter rule can contain illegal characters such as &,%, and $.
8	Click **Save** to save the filter. If you click **Save As** and the filter name already exists, a suffix of **(1)/(2)/(3)/**... will be automatically added to the original name of the filter. After the filter is successfully saved, it will be displayed in the column under Filter Policies section.

3.3.3 Device Manager

In the Device Manager, administrators can add physical devices to logical devices and also arrange the order of the physical devices in one logical device. The Physical Device section allows an administrator to define Net Share, FTP, and TSM devices as data storage locations.

There are two types of logical devices: Storage, and Search. The Search logical devices can only be edited by creating, editing, and deleting their physical devices.

3.3.3.1 Physical Device

There are three types of drives that can be configured as Physical Devices: Net Share, FTP, and TSM.

Note that when creating net share physical devices, you can specify a tier for each physical device, which could be used for data pruning or retention rules. If tiered storage is used, DocAve will move the data to the lower tier instead of deleting it while performing a pruning/retention job. It only deletes the data when the tier is the lowest one and the old data needs to be moved down to another tier.

*Note: Only UNC and local addressable storage devices, specifically Net Shares, can be assigned with tier values.

Creating a Net Share Device

(3-9) Creating a Net Share Device

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Device Manager*.
2	Select one logical device type from the *Logical Device Type* drop-down box.
3	Click **Add** next to Physical Device in the right-hand side section. A pop-up window will appear.
4	Enter a name for the new device in the Physical Device text box.

Step	Action
5	Select the content you want to store in the device. You can select only to store content data, only to store index data, or to store both data and index by checking the corresponding check-box(es). Please note that an index physical device is used for storing the index data of Granular Backup, Platform Backup and some other modules. ***Note**: A logical device must include at least one physical device for storing data and one for index.
6	Input a valid path in the format in accordance with your selection in step2. • *Load Balanced* : The path must be provided in UNC-format: "\\[network share]\ [network directory path]" • *Dedicated* : The path must be provided in Local format: "[local disk]\ [local disk directory path]". ***Note**: The specified path needs to be an existing path. The device builder will not automatically create such folder. Consequently, the job data will be failed to store under such path though the device appears to be built successfully.
7	Select a tier for this physical device from the drop-down box. There are ten tiers you can select.
8	Input the Domain, Username, and Password to set up access to the path that data will be written and stored to. The data will be failed to get stored if the information entered here is incorrect.
9	Click **Save** to save the profile for the new physical device and it will be listed under Physical Device.

Creating an FTP Device

(3-10) Creating an FTP Device

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Device Manager*.
2	Select FTP from the Data Type drop-down box.
3	Click **Add** next to Physical Device in the right-hand section. A pop-up window will appear.
4	Enter a name for the device in the Device Name text box.
5	Input the Host, Port, Username and Password to set up access to the network path that data will be written and stored to.
6	Click **Save** to save the profile for the new physical device and it will be listed under Physical Device.

Creating a TSM Device

(3-11) Creating a TSM Device

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Device Manager*.
2	Select TSM from the Data Type drop-down box.
3	Click **Add** next to Physical Device in the right-hand section. A pop-up window will appear.
4	Enter a name for the device in the Device Name text box.
5	Select a Communication Method from the corresponding drop-down box, there are three options: TCP IP, SHARED MEM, and NAMED PIPES.

Step	Action
6	Input the TCP Port, TCP Server Address, Node Name, Management Class, and Password to set up access to the network path that data will be written and stored to.
7	Click **Save** to save the profile for the new physical device and it will be listed under Physical Device.

*Note: If both the TSM server and client have been previously installed, please make sure the TSM client version is higher than or equal to the TSM server version. Now TSM 6.2.1 or lower version is supported.

Editing, Displaying, or Deleting a Physical Device

To edit a physical device, please select a device from the list to the right and click .The configuration window will pop up for editing.

To display the details of one physical device, please select a device from the list to the right and click . It will list all the plans stored in the specified physical device in the pop-up window.

To delete a physical device, select a device from the list to the right and click . If there is no data stored in the selected device, the device will be deleted immediately. If there is backup data stored in the selected device, there will be a pop-up window to warn you that there is data present.

3.3.3.2 Logical Device

Logical devices, formed by the cooperation of several sequenced Physical devices and media services, is used as the storage device in DocAve modules.

Creating New Logical Device

(3-12) Creating New Logical Device

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Device Manager.*
2	Input a name for the device in the Logical Device Name field.

Step	Action
3	Select a Data Type from the drop-down box and the corresponding physical devices will be listed under the Physical Device column on the right-hand side of the screen.

You should select the data type according to the type of the physical devices you would like to add to the logical device.

If Net Share is selected in Data Type, you have to select a Logical Device Type as well, either Load balanced or Dedicated, as well as a tier from the corresponding drop-down box. Device Manager will only list the appropriate physical devices in the Physical Device column. |

Step	Action
4	Click the Physical Device tab and drag the icons of the Physical Drives you wish to be included in the new logical device to the area under the Physical Device tab.

If you select FTP or TSM Type, you also need to select a Cache Storage. The Cache Storage is any previously defined Net Share(Load Balanced/ Dedicated) Physical Device. This location is used to consolidate the index data for each plan stored in the storage devices for this logical device at the time of restore, and will be cleaned up after each restore job completes. Depending on the average size of your index data, the Cache Storage should not require more than 1GB of disk space.

There are two attributes in the *zeus-media.properties* file in the following path: ...\Tivoli\TSM\SharePoint\DocAve5\Manager\ZeusMedia\etc and you can use them to specify the conditions of deleting the files in the Cache Storage. Please refer to the following instructions to configure the attributes:

- *Zeus.CacheDeviceMinSpaceMB* : the minimum space to leave in the Cache Storage. The default value is 2048(the unit is the megabyte).

- *Zeus.CacheIndexDBKeepDays* : the attribute's value means the cache file has not been modified for the specified days. The default value of *Zeus.CacheIndexDBKeepDays* is 7(the unit is the day).

By default, DocAve will check and clean the Cache Storage according to the settings every 3 hours if DocAve Control Service is not restarted. When DocAve Control Service is restarted, DocAve will also perform the check.

When DocAve performs the checking, if there is no enough space in the Cache Storage, all the files in the Cache Storage will be deleted; if there is enough space in the Cache Storage, then DocAve will delete the oldest files according to the *Zeus.CacheIndexDBKeepDays* that you set.

*Note: Once you have configured a media service with a physical net-share device, this configuration cannot be changed in the future. |
| 5 | Select the *Media Service* tab. |

Step	Action
6	Drag the icons of the Media Services you wish to be included in the new logical device to the area under the Media Service tab. *Note: You can select multiple media services to manage the physical devices so as to provide continuous access to storage locations should one or more services go down. However, please make sure the media services you selected have access to each of the paths set in the selected physical devices.
7	Click **Save** to save the device settings. By clicking **Save As**, if the logical device name already exists, a suffix of (1)/(2)/(3)/... will be automatically added to the original name of the logical device. The new logical device will be listed under the *Logical Device* column on the left-hand side.

Troubleshooting TSM Logical Device

If some of the configurations of the TSM Logical Device is modified or changed, the media service may need to be restarted. Please refer to the following chart for the actions which require the media service to be restarted.

(3-13) The Actions Requring the Media Service Reset

Action	Requires Media Service Reset
Modifying Cache Storage	No
Modifying Physical Device Name	No
Adding a Media Service	No
Deleting a Media Service	No
Modifying TCP Server Address	Yes
Modifying Node Name	Yes
Modifying Password	Yes
Modifying TCP Port	Yes
Changing the communication method (TCP IP, SHARED MEM, NAMED PIPES)	Yes

*Note: After restarting the Media Service successfully, you need to save this TSM Logical Device again.

Deleting a Logical Device

To delete a Logical Device, click "✗" on the right of the corresponding device. All the plans associated with this logical device will be listed in the pop-up window, you can choose another logical device for each of the plans from the Change Logical Device drop-down box or delete the plans under the storage path manually. Click OK to proceed with the deletion.

DocAve v5 also helps you delete the backup data together with the logical device from the interface directly. You can click **OK** to ignore the request on changing storage, and then view and select the backup data that you want to delete together with the logical device in the pop-up window later, and finally click **OK** to confirm.

*Note: When deleting one logical device, the **Change Logical Device** column only updates the infomation of the original logical device (the one which is going to be deleted) in the plans, which means that the data of the original logical device will be saved where it is if you do not delete them by DocAve or remove them manually.

3.3.4 Security Manager

Security Manager allows you to set up an access control password for Granular Backup, Platform Backup, Inactive Template.

To set up a security policy, follow the steps below:

(3-14) Setup a Security Policy

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Security Manager.*
2	Click **New**, and then enter a Security Policy name in the provided text box.
3	Select an Application Type from the drop-down box. There are six options in the drop-down list: All, Granular Backup, and Platform Backup.
4	Input the Password you want to use and confirm it.

Step	Action
5	Click **Save** to save the security policy. It will be listed in the Security Policy column on the right.
6	To edit a security policy, first select the policy from the column on the right. ***Note**: Security Policy names cannot be modified.

If...	Then...
Only change the Application Type	1. Select the new Application Type. 2. Click **Save**, a pop-up window will appear. 3. Enter the password you set in the steps above to confirm the modification, and then click **OK**. If you want to cancel this operation, click **Cancel**.
Only change Password	1. Click **Change Password**. 2. Input the old password, new password, and confirm it. 3. Click **Save**.
Change the Application Type and the Password	1. Select the new Application Type. 2. Click **Change Password**. 3. Input the old password, new password, and confirm it. 4. Click **Save**.

To delete a security policy, please click the delete icon following the policy name under the Security Policy column on the right.

3.3.5 Language Mapping

Language mapping is used for replicating the content between different SharePoint environments with different languages.

To setup a language mapping, please follow the steps below:

(3-15) Language Mapping

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Data Management > Language Mapping*.
2	Click **New** and enter a name for the language mapping profile.
3	Click **Language Setting** button, you can determine which language(s) is(are) available to be mapped in List/Column tab. ***Note**: By default there are three kind of language: Japnese, German, and English. If you want to map more languages, please navigate to ..\Tivoli\TSM\SharePoint\DocAve5\Manager\ZeusJob\etc\languageMappingMessages and open *languageMappingMessages.properties*. Input the language name and the corresponding Code for the representation names of the language. Navigate to Start > All Programs > TSM for SharePoint > TSM for SharePoint Manager Tools > Manager Configruation Tool, and then restart AvePoint DocAve5 Control Service and DocAve5 Web Service to apply the changes.
4	Under the List tab, enter the list names you wish to map in different environments with different languages. For example, if the language of the source is English, but the language of the destination is Japanese, you want to map the list named "List Library" to an existing list whose name is in Japanese in the destination, you should enter the "List Library" into the "English" column, and the Japanese name into the "Japanese" column. When you run an out-of-place restore job, DocAve will restore the content under the "List Library" to the specified list in the destination.

Step	Action
5	Under the Column tab, enter the column name you wish to map in different environments with different languages. *Note: You only need to configure the customized column for the mapping, the SharePoint default columns, such as Modified By, Created By, etc., will be mapped according to the List Language Mapping settings.
6	Click **Save**, the saved mapping profile will be listed on the right. If you click **Save As** and the mapping profile name already exists, a suffix of **(1)/(2)/(3)/**... will be automatically added to the original name of the mapping profile.
7	Click **Upload** and **Download** to upload or download XML file to configue the list and column mapping in it.

To delete the language mapping profile, please click the delete icon following the profile under Language Mappings on the right.

3.4 DocAve System

The DocAve System section is designed for customization of DocAve, and is capable of configuring DocAve system accounts and its settings, backing up\restoring DocAve system, and specifying a location for CA Admin Search results. DocAve System consists of four sections: Account Manager, System Recovery, and System Settings.

3.4.1 Account Manager

In DocAve v5, you can create groups and add users. You can assign specific permissions to each group, and then add users to groups to assign them the specified permissions. This allows you to easily control and maintain the access permissions to DocAve from a central location.

Please be aware that only the user(s) in a group with the permission to update the Account Manager will have the permission to edit users and groups. The users in the *DocAve Administrators* group will always have this permission.

3.4.1.1 Groups

There are two kinds of groups in DocAve: Local Groups and Active Directory (AD) Groups.

Local Groups

You can create local groups in DocAve and assign a series of permissions to the group. You can also add users to a specific DocAve group. **Only by adding the users to a group in DocAve can you assign permissions to them**.

There are three built-in groups, including Administrators, Managers, and Operators. They have pre-defined permission levels and cannot be deleted.

Administrators: owns full and global access permissions to any feature in any module. This group is never editable, which indicates you cannot delete any group permissions or specify this group to any farm.

Managers: editable built-in group with full access to the Control Panel only.

Operators: by default, has no permissions configured.

Active Directory Groups

DocAve can fully integrate with Windows Active Directory. You can assign AD groups a series of permissions, which will then be applied to all users within this group.

Please note:

- The current server must belong to the same domain as the AD.
- Adding a domain user will automatically add its group in DocAve, with all associated permissions during login.

*Note: If a domain user belongs to many groups, they will be granted random permissions from all groups when logging in.

3.4.1.2 Users

There are two kinds of users in DocAve: Local users and AD users.

Local Users

Both the username and the corresponding password are required to log in and use DocAve. The system only has one default local user and its username and password are "admin" and "admin." The "admin" user has full permissions and this account owns editable password, however, this account cannot be deleted. Logging in as the "admin" will allow you to create other users and assign specific permissions to those new users. New users can also have the same permissions as an "admin" user or they can be restricted from certain actions by limiting their permissions.

For example, if you create a user named *user1* and assign the permission as *Item Level Backup*, when user1 logs on to the system, it can only perform Item Level Backups rather than other functions (such as Site Level Backup, Item Level Restore, etc.)

AD Users

AD users can also be added to DocAve. It can own full control permission or get restricted from certain modules to the DocAve globally or some farms in DocAve. The differences between AD users and local users mainly lie in the login mode, creation, and modification. For more information on this, please check the following sections: Login Modes, Enable Active Directory Integration, Creating a New Group or User, and Editing a User.

*Note: You cannot directly assign permissions to a single user as it is its group that determines its permission level. Also, you can add local users and AD users together to the same local group. However, DocAve does not support adding users to AD groups.

3.4.1.3 Login Modes

There are two kinds of login modes: Local User and AD User login.

Local User Login

A local user is also called a DocAve User. It should be created and added to a DocAve group first. To log in to DocAve using a local user account, please check the instance below:

Initially, a DocAve user can only use the local user mode to login, with the initial username and password respectively being admin and admin. This account is prestored in the local database since the installation of the system and cannot be deleted.

When logging in as a local user, remember to choose Local System mode on the login page.

*Note: You will be only provided two more chances to log in DocAve v5 once your password is proved to be incorrect. Once your login fails anyway, please click the hyperlink in the pop-up window to write an email to your DocAve Administrator.

AD User Login

If you want DocAve to support AD user login mode, you need to perform the following steps:

(3-16) Support AD User Login Mode

Step	Action
1	When installing DocAve, both DocAve Manager and Agent, you need to input a Domain Username and a corresponding Password.

Step	Action
2	After logging in as a DocAve user of the DocAve Administrator group, or the user that has the permission to manage accounts (initially you will only be able to use the admin account), choose an AD user and add it to a group which has permissions specified in DocAve. The AD user will then be able to log in to DocAve.

When logging in as an AD user, remember to choose the corresponding domain from Log on to drop-down box on the login page.

Login DocAve by domain\username Credentials

If there are many users from multiple domains, it is too difficult to find the corresponding domian from the *Log on to* drop-down box which lists all the integrated domains. DocAve provides you a easy method to hide the *Log on to* drop-down box, and the users can only enter a domain\username credentials to login DocAve.

To hide the *Log on to* drop-down box, perform the following steps:

(3-17) Hide Log on to drop-down box

Step	Action
1	Navigate to ..\Tivoli\TSM\SharePoint\DocAve5\Manager\WasCE\repository\avepoint\zeus\1.0\zeus-1.0.war\WEB-INF.
2	Open the file named *zeus-web.properties* and change the value of Zeus, LogOnToFlag to "0" (by defaut it is "1"). • *0* : DocAve will hide the Log on to drop-down box. • *1* : This is the default value, you need to select the *Log on to* option when logging in DocAve.
3	Navigate to *Start > All Programs > TSM for SharePoint > TSM for SharePoint Manager Tools > Manager Configruation Tool* and restart AvePoint DocAve5 Web Service.
4	Reopen the Login page and you will see the Log on to drop-down box is hidden now.

3.4.1.4 Enable Active Directory Integration

This option is essential for the AD users to log on to DocAve using domain mode. If you want to add an AD user or group to DocAve, you must enable the active directory integration first to configure the corresponding domains. The domains saved after the configuration will provide the user with possible login methods.

To enable the active directory integration, please follow the steps below.

(3-18) Enable Active Directory Integration

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.
2	Check the *Enable Active Directory Integration* option to enable **Configure** button.
3	Click **Configure**, and enter the domain name, username, and the corresponding password in the pop-up.
4	Click **Test** to verify the access. After the test is successful, the **Save** button will be enabled.
5	Click **Save** to save the configuration, and then click **OK** to end the configuration.

3.4.1.5 Creating a New Group or User

The following steps are required for either the creation of a new user or a new group:

(3-19) Creating a New DocAve Group or User

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.

Step	Action	
	Configure a new group. User permissions are defined by group, not individually.	
	If…	**Then…**
2	Creating a new Local Group	To add a new local group to the DocAve platform, follow the steps below: 1. Click the **Groups** tab on the left side of the window. 2. Click " ", a window will appear for adding a new group. 3. By default, the *Local* radio button is selected. 4. Input the Group Name and a brief Description of this group. The Description field is optional. 5. You can add this new group to the three default groups by selecting the corresponding default group from the *Member of* drop-down box. This new group will have both its own permission and the permissions of the selected default group. 6. You can also click **Save** directly and specify the unique permissions for the group later in the *Permission* Tab to the right of the page. 7. Click **Save** to save the group, or click **Cancel** to quit the configuration.

Step		Action
	Adding a AD Group	To add a new group already created in Active Directory, follow the steps below: 1. Click the *Groups* tab on the left side of the window. 2. Clicking , a window will appear for adding a new group. 3. Select the *Active Directory* radio button. 4. Input the Group Name, or click the icon to search for the group. This searching field supports wildcards (*). 5. Click to verify this group. 6. Enter a brief Description of this group. The Description field is optional. 7. You can add this AD group to the three default groups by selecting the corresponding default group from the *Member of* drop-down box. This new group will have both its own permission and the permissions of the selected default group. 8. You can also click **Save** directly and specify the unique permissions for the group later in the *Permission* Tab to the right of the page. 9. Click **Save** to save the group, or click **Cancel** to quit the configuration.

Step	Action	
	Once you have defined DocAve user groups, you may add users to these groups following the steps below.	
	If...	**Then...**
3	Creating a new Local User	Add users to previously defined groups by setting the parameters listed below: 1. Click the Users tab in the left side of the window. 2. Clicking , a window will appear for adding a new user. 3. By default, the Local radio button is selected. 4. Input a Username and the Email address in the text boxes provided. The Email address is optional, however, if you want to input the Email Address, its format must be correct. 5. Select a Group from the Member of drop-down box. 6. Click **Next** to setup the password and confirm it. There are four options that you can choose from, which stand for different password policies and require different operations from the user. When you neglect the four options, by default, your password will be expired after 30 days. 7. While entering your password, you can view its strength and it is recommended to enhance it in accordance with the tool tips of the password strength for your privacy.

Step	Action
	8. Click **Finish** to complete the setting or **Cancel** to quit the configuration. 9. Click **Next**, and then check the information of the Local account. 10. Click **Finish** to complete the setting or **Cancel** to quit the configuration. You can also click **Back** to modify the settings. ***Note**: The password policy can be configured, please refer to Password Policy Setting Section.
Adding a new AD user	Active Directory users can be added to DocAve using the steps below: 1. Click the Users tab on the left side of the window. 2. Clicking [icon], a window will appear for adding a new user. 3. Select the *Active Directory* radio button. 4. Specify a username, or click the [icon] icon to search for a user. This searching field supports wildcards (*). 5. Click [icon] to verify the user. 6. Select a group in the Member of drop-down box. 7. Click **Save** to save the user, or click **Cancel** to quit the configuration.

Password Policy Setting

To set up the password policy, please follow the instructions below.

(3-20) Password Policy Setting

Step	Action
1	Open the file *password-configuration.properties* in the following path ...\Tivoli\TSM\SharePoint\DocAve5\Manager\ZeusJob\etc.
2	You can set up the password policy for the LocaL User in DocAve in this file.
3	Please specify the following properties of the password policy: • *PasswordLength* : You can specify the length of the password here. By default, the value is 6, which means that the length of the password is at least 6. • *Character* : You can specify whether a password needs to contain characters or not by setting "Character=y"(needs to contain characters), or "Character=n" (does not need to contain characters). By default, the password needs to contain characters.. • *Number* : You can specify whether the password needs to contain numbers or not by setting "Number=y" (needs to contain numbers), or "Number=n"(does not need to contain numbers). By default, the password does not need to contain numbers. • *CapitalLetter* : You can specify whether a password needs to contain both uppercase and lowercase letters or not by setting "CapitalLetter=y" (needs to contain both uppercase and lowercase letters), or "CapitalLetter=n"(does not need to contain uppercase and lowercase letters). By default, the password does not need to contain uppercase and lowercase letters. • *SpecialCharacter* : You can specify whether a password needs to contain special characters or not by setting "SpecialCharacter=y"(needs to contain special characters), or "SpecialCharacter=n"(does not need to contain special characters). By default, the password does not need to contain special characters.
4	Close the file and save the change.

3.4.1.6 Assigning Permissions to a Group

After a group is created, you must define its permissions. Permissions are separated into two groups: the permissions to access specific modules for all the farms in DocAve, and the permissions to access or view specific modules of an individual farm.

To assign permissions to a group, please follow the steps below.

(3-21) Assigning Permissions to a group

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.
2	Select the group you want to assign the permissions to in the left side of the screen. The detailed information of the group permissions will be listed under *Permission* tab on the right side of the screen.

Step	Action	
3	Within the *Permission* tab, there are two radio buttons: Global and Selected Farms.	
	If…	**Then…**
	Global	This option allows you to assign the permissions to access specific modules for all the farms, as well as their farm severs, features, SSP, and solutions displayed in DocAve. 1. Select the module from the corresponding drop-down box. Its features will be listed underneath. 2. Select the features you want the specific group to visit by checking the corresponding check-boxes. 3. You can click **Select All** to select all the features or **Clear** to clear the selection.
	Selected Farms	This option allows you to assign the permissions for accessing or viewing specific modules of the individual farms as well as their farm severs, features, SSP and solutions in DocAve. 1. Select one farm. 2. Select the module from the corresponding drop-down box. Its features will be listed underneath. 3. Select the features you want to assign to the specific group by checking the corresponding check-boxes. 4. You can click **Select All** to select all the features or **Clear** to clear the selection.
4	Click **Apply** to save the settings.	

Assigning a Group with the Permissions to Control Panel and Job Monitor

For better privacy protection and smarter job scoping, DocAve provides you with the specific permissions (View, Update, and Control) to all operations in Control Panel and all the possible jobs created in the corresponding modules. These permissions formulate a quite accurate scope of the functions:

- *View* : This permission allows you to view the settings for the specified module.

- *Update* : Based on the permission View, you can also create/modify the settings in the specified module.

- *Control* : There would be no limitation on your operations.

Please follow the steps below to assign the detailed permissions of Job Monitor or Control Panel to a group.

(3-22) Assign a Group with the Permissions of Job Monitor or Control Panel

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.
2	Select the group you want to assign the permissions to in the left side of the screen. The detailed information will be listed under *Permission* tab on the right side of the screen.
3	Select *Job Monitor* or *Control Panel* under this tab. By default, the View Option is checked automatically.
4	Check the corresponding check-box before the feature you would like the group to get access to and then you can specify the permissions for the group.

Integrate with SharePoint Permissions

DocAve allows you to add a group for assigning the permissions to. The AD users in this group should only view the data tree where they have the access permission and they should only view or edit the jobs created by themselves.

Integration with SharePoint permissions will allow site collection administrators to leverage the functionality of the Central Admin module, Content Manager module, Design Manager module, and Replicator module directly from DocAve while only being able to see their own content. Note that the permission required for Active Directory users to leverage this feature is Site Collection Administrator or better.

*Note: By selecting this option, only the Farm administrator can create new site collections through manul input job.

(3-23) Integrate with SharePoint Permissions

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.
2	Add an AD group in DocAve v5 and select it.
3	Within the *Permission* tab select the *Administration* module, and then the *Integrate with SharePoint Permissions* option could be seen under the corresponding feature in the list. Assign this permission to this AD group by checking the corresponding check-box.
4	Click **Apply** to save the configuration. After assigning the permission and checking the option, the AD users in this group can only view the data tree they have the access permission to and the jobs created by themselves.

3.4.1.7 Editing a User

User modification includes four sections: Delete, Edit, Change Password, and Account Options. To edit the configurations of users in DocAve, please refer to the following steps:

(3-24) Editing Configurations of a User

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.
2	Select a user on the left side of the window under the Users tab. The details of the user will be listed in the window on the right.
3	You can click the **Delete** button or "✕" to delete the user.

Step	Action
4	Click **Edit,** a drop-down box next to the Edit button will appear. You can select the group you wish the user to belong to. ***Note**: The default user *admin* cannot be moved to another group. Only the password of this user can be modified.
5	Click **Change Password**, and then enter the correct information in the text-boxes following Old Password, New Password and Confirm Password. Click the button again to quit the password configuration and the password will not be changed. ***Note**: The password must contain at least six characters and must include letters. ***Note**: The original password will be memorized by DocAve so that it can never be reused once the password is changed to another one. ***Note**: Only the local users can use **Change Password** and **Account Options**.

Step	Action
6	Click **Account Options,** and then you can modify the settings of this account. • *Unlock account* : If this account is locked, you can select this option to unlock the account. • *Account options* : You can select only one of the options to determine whether the users need to change their passwords after logging in. • *Password expires* : You can setup a time period for the validity of the password by using this option. By default, the password will either never expire or expire after 30 days. • *Time Zone* : You can modify the time zone by using this option. It is only available when you specify a certain expiration date and time for the password of the account. • *Idle timeouts* : Using this option, you can limit the Timeout Time by minute or hour for the idle user. If the user idles longer than the specified time, he/she will need to login DocAve again. ***Note**: Compared with the *Idle Timeout* in System Settings, the Timeout Time for the specific user will be executed in accordance with this one. ***Note**: Only the local users can use **Change Password** and **Account Options**.
7	Enter the email address and its detailed description to the corresponding fields, it will send an alert if there are some changes for your account.
8	To save any change, click **Save**.

3.4.1.8 Editing a Group

Group modification includes two sections: Delete and Edit. To edit a DocAve group. please refer to the following steps:

(3-25) Editing a Group

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.
2	Select a group on the left side of the window under the *Groups* tab. The details of the group will be listed in the window on the right.
3	To change the DocAve group for this specified group, you can click **Edit** following the *Member of* field.
4	You can change the description of the group in the text box.
5	Click **Add member**. You can select the users or the groups you want to add to the specified group in the drop-down box. You can also delete users listed in the Members field by clicking the corresponding delete icon. ***Note**: The users/groups cannot be added to AD groups in DocAve.
6	After you finish the modification, click **Save** to save the configurations.
7	Click the Permission tab, you can specify the permissions for the group. After you finish the modification, click **Apply** to save the config-uration. For more information, please refer to section Assigning Per-missions to a Group.

*Note: The description of the three default groups, by default, are blank. After you edit the groups, they will change to their group names. You can change their descriptions and add mem-bers to the default groups.

3.4.1.9 Deleting a User or Group

This section enables you to remove any user or group except for the default ones. Please refer to the steps below.

(3-26) Deleting a User Or a Group

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.
2	In order to delete a user or a group, follow the corresponding steps below.

If...	Then...
Deleting a user	Please follow the steps below: 1. Click the *Users* tab and the users will be listed underneath. 2. Find the user(s) you wish to delete. Click "✕".
Deleting a group	Please follow the steps below: 1. Click the *Groups* tab and the groups will be listed underneath. 2. Find the group(s) you wish to delete. Click ✕.

*Note: The default groups and the user Admin cannot be deleted.

3.4.1.10 Exporting the DocAve User Permissions

DocAve supports you to export the specific DocAve user permission to local disks.

(3-27) Exporting the DocAve User Permissions

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > Account Manager*.

Step	Action
2	Click the [DocAve User Permissions] button on the top-right corner to go to the DocAve User Permissions section, and all the users' information is listed in this page. You can click the ⊓ icon to change the displayed columns.
3	Select the DocAve user(s) you want to export by checking the corresponding check-boxes.
4	Click the **Export** button at the bottom right corner of the page, and then you can choose to Include Administration\Central Admin Granular Permissions in the user permission export by selecting the corresponding option in the pop-up.
5	Click **Export** in the pop-up to download the DocAve User Permissions Report to a local path.
6	Click the [Account Manager] button at the top right corner of the page to return to DocAve Account Manager.

3.4.2 System Recovery

DocAve System Recovery enables the user to setup a manual or scheduled backup job for the DocAve System and then restores the DocAve System when needed. The saved DocAve System Recovery backup job can also be used on a separate, newly installed DocAve Server, enabling a quicker setup. The System Recovery backup data can be saved to a local drive or a network drive. There are two parts in the System Recovery feature: System Backup and System Restore.

3.4.2.1 System Backup

The System Backup includes two parts: Backup Destination and the Backup Schedule.

Setting up the Backup Destination

(3-28) Setting Up The Backup Destination

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > System Recovery > System Backup*.
2	Select the database(s) you want to backup, there are two kinds of databases in DocAve: DocAve Database and Report Database.
3	Select the location where the System Recovery backup job files will be saved to. <table><tr><td>**If…**</td><td>**Then…**</td></tr><tr><td>Local Drive</td><td>Input a path such as C:\data (By default the path is C:\Program Files\Tivoli\TSM\Share-Point\DocAve5\Manager\ZeusJob\BackupDocAve-Data).</td></tr><tr><td>Network Drive</td><td>Input a path such as \\server\c$\data and fill in the Username and Password for that drive. The account used should have the Write Permission on the drive.</td></tr></table>
4	After the path has been specified, click **Test**. ***Note**: Please ensure the path you specified is an existing one. Otherwise, the Test will fail.
5	Click **Save** to save the settings, and then click **Run now** at the bottom right corner of the page to execute the backup job immediately. You can click **Go to Job Report** to view the job process, or click **Cancel** to close the pop-up window. ***Note**: If a Backup job is running when you click **Run Now**, the latter job will be skipped.

You can view the process of the backup jobs via the Backup Job Report at the bottom of the screen. The report includes the Start Time, Path, User, Status, Data Size, Progress, and Operation fields. You can delete the job record by clicking **Delete,** and view the detailed information

by clicking **Detail**. To return to System Backup page, please click " ⬇ " button to collapse the current page.

Setting up the backup schedule

(3-29) Setting Up the Backup Schedule

Step	Action
1	Navigate to *DocAve v5 > Control Panel > DocAve System > System Recovery > System Backup*.
2	By default, the **No Backup Schedule** option is not selected and the default schedule is set to every 7 days which means the System Backup Job will run every 7 days using the Default Data Pruning Policy. This shedule begins as you finish installing DocAve Manager. This schedule is to ensure the consistent protection of DocAve's databases. ***Note**: You can check the No Backup Schedule option to disable the backup schedule, however, it is not recommanded to do that.
3	Click on the calendar icon (🖩) next to the *Start Time* field to set a start date and time for your System Backup jobs in the window provided.

Step	Action
4	Specify the interval at which the backup will occur. The choices are: Only Once, By Hour, By Day, By Week, or By Month.

If…	Then…
Only Once	The backup job will only run once at the specified time.
By Hour	Either set this plan to run every___hour(s) or set it to run at several specified time point(s). The time point(s) you specified can be in the morning or in the afternoon, and you can also enter the exact minute(s) past the hour in the text-box provided.
By Day	Either set the plan to run every___days, or set it to run on weekdays or at weekends.
By Week	Either set the plan to run every___weeks, or select the day(s) of the week to rerun this plan on.
By Month	You can choose this plan to run on the specified day of every month(i.e., on the 14th of every month). You can also set this plan to run on the specified day of the week in the specified month(s) of the year.

3.4.2.2 System Restore

Once a Backup Job completes successfully, the associated information will be listed on the System Restore page along with the Backup Time. Select the backup job you want to restore by clicking the corresponding radio box, and then click **Restore** to start DocAve System Recovery process.

Or you can browse for the backup file location and execute the System Recovery. Just select Backup File radio button and find the location for the backup file after clicking **Browse**, then click **Restore** to start DocAve System Recovery process.

*Note: The advantage of the Backup Location Restore method lies in its durability. You can always find the restore job directly under the specified directory as long as you can get access to it. Since the backup data could be pruned, you could manually move the backup data to another location before the automatic deletion and in this case, only the Backup Location Restore method could be used.

While clicking **Restore** button, a pop-up will appear to prompt you with the database (s) to restore. The database to be restored depends on the one you backed up. Select one or both of them to proceed with the restore process.

*Note: Restoring your DocAve System to an earlier recovery point will stop the Control Service and any jobs is running. In addition, you will lose any index or job data since your last backup.

During this process, you can get a view of the restore job in System Recovery interface, which provides you the following information: Service name, Status, Progress, and Message. The detailed information will be displayed in the panel below.

When the restore job completes, you need to log on again to DocAve in order to see the recovered system.

You can also use the CLI(Command Line Interface) to restore the Control Service. Please refer to the detailed information below:

(3-30) Restore the Control Service Using CLI

Step	Action
1	Navigate to the installation path of DocAve Manager and then go to ...\Tivoli\TSM\SharePoint\DocAve5\Manager\ZeusSystemRecovery\bin.
2	Find the *SystemRecoveryRestore.bat* file, and then double click it.
3	Follow the instructions in the tool and enter **Y** to continue the recovery.
4	Please enter the path that you set to store the data when backing up in the following format: ...\Path\the Exact Backup Job For example, C:\Program Files\Tivoli\TSM\SharePoint\DocAve5\Manager\ZeusJob\BackupDocAveData\FB1288061481699.
5	The restore process is starting. Once it completes, you can follow the instruction to exit this tool.

When using System Restore to transport the backup plans and DocAve Control Panel profiles to a new machine, simply copy the System Recovery Backup Job files to the default location on the new machine. You can also change the default path where the System Recovery Backup Job files are located. This can be done by going to the System Backup tab and resetting the Path.

3.4.3 System Settings

In this section you can set some basic settings for DocAve. You will be redirect to your Home Page (which is the Welcome Page by default) automatically after you click **Apply** and the settings are successfully saved.

Language Setting

Language setting allows you to specify the language to use for DocAve v5. There are three options: Default, English and Chinese and Japanese. If you select the Default option, it will setup the language for DocAve v5 according to your browser's default language. Click **Apply** at the bottom right corner of the page to apply the setting.

*Note: If you change the language to another one, it is recommended to log on again to DocAve v5 to ensure the language has been changed successfully.

*Note: The Default option in the language field of DocAve currently only supports simplified Chinese, English and Japanese.

Time Format

Time Format allows you to specify the location(Locale), the date and time display type. Select the option from the corresponding drop-down box, it will display the time format accordingly.

Farm Name

In this area, you could specify the farm's display name in DocAve. Enter the name you want the specific farm to be displayed in DocAve, and it will change the farm display nameaccordingly.

Idle Timeout

Idle Timeout enables the user to setup the expiration time of the login session for all the users without their own specific expiration time.

To set the expiration time, please enter a number in the corresponding field and select the corresponding time unit in the drop-down box(Minutes/Hours). Click **Apply** to save the configuration. You can also setup a unique time-out setting for each user in Editing a User section.

Custom Logo for Report and E-mail Templates

In this area, you can set the logo for the report and e-mail templates. Click **Browse** to find the logo file, and then click **Apply** to save the modification. After applying the change, you can view the logo in the *Preview* area, you can drag it to change its location and click **Reset** to reset the location of the logo. You can click on the corresponding magnifier to zoom in or zoom out the logo. You can also click **Restore to default** to roll back to the original setting.

3.5 Reporting

Reporting section, capable of configuring email notifications, logs, MOM logging, and SCOM logging, is used in each module of DocAve Manager to notify you about the status of services or jobs. Also, it allows the administrators to view and refresh the log status of DocAve services in Log Viewer. It is composed of five subsections: Email Notification, Log Manager, Log Viewer, MOM Logging Settings, and SCOM Logging Settings. Please check the following introductions for your reference.

3.5.1 Email Notification

Reporting includes the Email Notification section, which allows the administrator to create various email profiles containing different mailing lists. All the communication between you and DocAve could then be configured to email to different profiles for different Failure, Success, or Warning conditions.

Email Notification allows the administrator to specify exactly what is reported, from simple summary reports to detailed URL specific reports. There are four Email Notification Types available: General, Replicator, Service Status, and Site Bin.

Follow the steps below to begin configuration of the mailing list profile.

3.5.1.1 Configuring a General Email Notification

General Email Notification is designed to inform the users with the formation on the common jobs, logs, or even the warning about the license expiration. To set up a Generaln Email Notification, please follow the steps below:

(3-31) Configuring A General Email Notification Profile

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Reporting > Email Notification*.

Step	Action
2	Select General from the Notification Type drop-down box.
3	Click **New**, and enter an Email Notification Name in the provided box.
4	Enter your Microsoft Exchange Outgoing Mail Server (SMTP) in either the host name or an IP Address format.
5	You need to select the Secure Password Authentication option if you setup this option in your E-mail Account Configuration.
6	Specify a port. The default port is 25.
7	In the *Sender* field, enter the email address you would like the notifications to come from, and then enter Username on SMTP and Password on SMTP in the corresponding fields. Select the SSL Authentication option according to your E-mail settings. Click **Test Account** for verification and DocAve v5 will send you a test email to confirm that the account you input is valid.
8	Enter the email recipients in the text-boxes of the Summary Report Recipient(s) and Detailed Report Recipient(s). Multiple recipients can be added to the recipient(s) text box, separated by a semi-colon ";". The Detailed Report Recipient(s) will receive the notification with an attachment which is the Job Report of the job.
9	Select a notification level from both Summary Report Notification Level(s) and Detailed Report Notification Level(s). The options are: All Levels, Success, Failure and Warning. By default, all the notification levels of the two fields are selected. ***Note**: Notification levels can be customized by profile. For instance, you may want a specific person or group of people to only receive reports for Backups that have failed. Add a new email notification for each person or group.
10	Select the format which the message will be delivered in: HTML or Plain Text.

Step	Action
11	If the check-box for Send All Logs To Recipient is selected, it will send logs to the recipient when the backup job failed.
12	You can also click **Configure a custom logo for these reports** to go to System Settings and configure a custom logo. For the detailed information, please refer to the Section System Settings. ***Note**: If you click on the hyperlink to go to System Settings, all the unsaved configurations will be lost, it is recommended you to configure a custom logo beforehand.
13	Click **Save**. All mail notifications profiles will be selectable within DocAve's various plans. If you click **Save As** and the email notification profile name already exists, a suffix of **(1)/(2)/(3)/**... will be automatically added to the original name of the profile.
14	Later you will receive test messages from DocAve to verify if the email notification profile has been saved successfully.

You should now see the profile you have created listed in the Profile Viewer on your right hand side. To modify a profile, simply click on the profile name in the list and make your modifications. Once you are done, click **Save** to save the changes.

3.5.1.2 Configuring a Service Status Email Notification

Service Status Email Notification is used to send an Email automatically when any DocAve Service(except DocAve Control Service) is down. To setup a Service Status Email Notification, please follow the steps below:

(3-32) Configuring A Service Status Email Notification Profile

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Reporting > Email Notification*.
2	Select Service Status from the Notification Type drop-down box.

Step	Action
3	Click **New**, and enter an Email Notification Name in the provided box.
4	Enter your Microsoft Exchange Outgoing Mail Server (SMTP).
5	You need to select the Secure Password Authentication option if you setup this option in your E-mail Account Configuration.
6	Specify a port. The default port is 25.
7	Under the Sender field, enter the email address you would like the notifications to come from, as well as the login credentials: Username on SMTP, Password on SMTP, and Confirm Password in the following fields. Select the **SSL Authentication** option according to your E-mail setting. Click **Test Account** for verification and DocAve v5 will send you a test email to confirm that the account you input is valid.
8	Enter the report recipients in the corresponding text box. Multiple recipients can be added to the text box, separated by a semi-colon ";".
9	Select the format which the message will be delivered in: HTML or Plain Text.
10	If the check-box for Send All Logs To Recipient is selected, it will send logs to the recipient when any service (except the Control Service) is down.
11	You can also click **Configure a custom logo for these reports** to go to System Settings and configure a custom logo. For the detailed information, please refer to Section System Settings. ***Note**: If you click on the hyperlink to go to System Settings, all the unsaved configurations will be lost, it is recommended you to configure a custom logo beforehand.

Step	Action
12	Click **Save**, and then it will be listed under the Profile Viewer column on your right hand side. If you click **Save As** and the email notification profile name already exists, a suffix of **(1)/(2)/(3)/**... will be automatically added to the original name of the profile.
13	Later you will receive test messages from DocAve to verify if the email notification profile has been saved successfully.

3.5.2 Log Manager

The DocAve Log Manager provides several options for managing the logs associated with Share-Point Agent, DocAveWeb, DocAveSearch, DocAveControl, and DocAveMedia services. Also, you can find your unique CIID in this section. These DocAve log records show all actions that were performed under the specified service. The amount of logs to record is set via the Log Level Setting panel, and the amount of data to retain is set via the Log Data Download panel. Additionally, you can send these logs via the Log Email Notification panel. With these configurations, you will be able to send the issue logs or CIID string to DocAve for the quickest feedback and the best solution.

3.5.2.1 CIID

CIID, known as the abbreviation for Customer Issue Identification, provides you with a string to identify your installation license. It contains your license type and the characters created at random to keep itself unique. You can copy and send the string to us as an replacement of the logs to obtain the customer service as well as the new license.

Beside the one in Log Manager, you can find the same CIID by clicking 🖥 icon after logging in.

3.5.2.2 Log Data Download

Log Data Download is used to download logs for SharePoint Agent, Media Service, Web Service, Search Service, Control Service. You can select the logs to be downloaded by checking any of the agents or services from the drop-down box and clicking **Apply**. By default, all the agents and services are selected, you can also uncheck the ones whose logs you do not want to download. Clicking **Download** will create a zip file that will contain all the specified logs. You can select a location for the download from the pop-up.

3.5.2.3 Log Level Settings

Log Level Settings can be used to set Log Levels for the following services:

- *Agents* : The agents connected to this Manager.

- *Media Service* : Backup data processing and storage management service. Here, administrators can choose different log levels for recording across multiple DocAve media services using the drop-down list.

- *Web Service* : DocAve GUI hosting service.

- *Search Service* : Search the data after generating full text index.

- *Control Service* : Manage all DocAve operations.

Logs could be configured to generate on each of the following levels: Debug, Info, Warning, Error, Fatal or Log to File. To change the log level, please select the Agent or the host machine of the specified Manager Service in the corresponding drop-down list, choose one level afterwards, and then click **Apply** to save the configuration.

You can click the button **Open Debugger** to troubleshoot GUI related problems. It is not recommended to open the debugger under normal circumstances as any GUI navigation will slow down with the debugger open.

3.5.2.4 Log Email Notification

Log Email Notification is used to send the logs to some specified recipient(s) directly from the GUI. Within the panel you can add a Subject or write a Description to go along with the logs.

*Note: The log email, because of Junk E-mail options in Outlook, will be automatically sent to the Junk E-mail folder. Please move it to the inbox to view the attachment of logs in a zip file.

3.5.3 Log Viewer

Log Viewer is used to view the logs generated in the job process. You can limit the logs to be shown by selecting the Level or Service.

In the Log Viewer, there are four options:

- *Level* : In this drop-down box, you can select to view the logs at all levels, at Error level or at Info Level. By default, Select All is selected.

- *Refresh* : It is used to refresh the view at a regular interval. There are three options available: 10s, 30s, and 120s. By default, the value is set to 120s. You can also refresh the view immediately by clicking **Refresh**.

- *Service* : You can select to view all services or either the: Control Service, Media Service, Web Service, Search Service. By default, Select All is selected.

- *Per Page* : You can select either 5, 10 or 20 items to list per page from the drop-down box. By default, the value is 20.

You can click **Refresh** to refresh the log viewer immediately.

To view the detailed message of one listed log, please click the ID number under ID column in the log viewer list and then check the log content in the pop-up window. You can also click **Previous** or **Next** to check the former log or the latter one in the pop-up.

3.5.4 MOM Logging Settings

For those users who make use of Microsoft Operations Manager, DocAve's reporting services can be integrated here.

3.5.4.1 Enable MOM Integration from DocAve

You can enable the MOM integration from MOM Logging Settings tab of Reporting section under Control Panel. Check the box in the front of Enable Microsoft Operations Manager Integration and enter the information as required. After entering the configuration information, click **Test** and you will receive a complete message if DocAve can connect to the MOM server successfully.

3.5.4.2 Viewing the logs from MOM

The DocAve logs will be displayed in the MOM server. Please see the following picture for details:
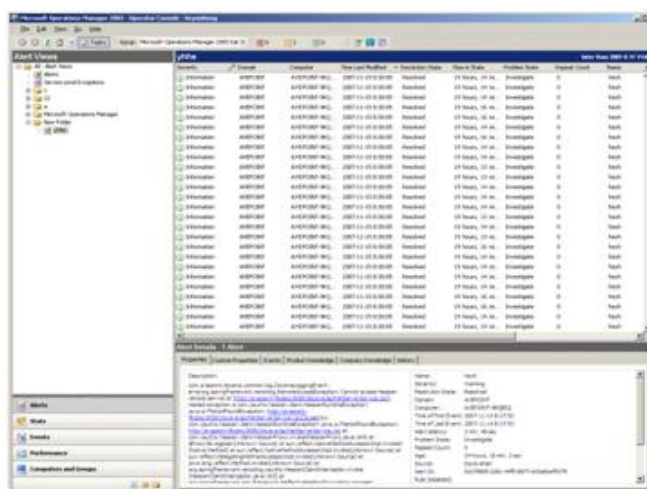
3.5.5 SCOM Logging Settings

For those users who make use of System Center Operations Manager, DocAve's reporting services can be integrated here.

3.5.5.1 Enable SCOM Integration from DocAve

You can enable the SCOM integration according to the following steps:

(3-33) Enable SCOM setting

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Reporting > SCOM Logging Settings*.

Step	Action
2	This report concerns your inquiry regarding how to properly setup SCOM reporting in our DocAve software. Following are the instructions: • *Enable System Center Operations Manager* : Yes, you need to check the checkbox to enable it. • *SCOM Server Name* : This is simply the full computer name of the configuration needs to be added to this field. • *Local Host Full Name* : This is the full computer name of the machine that has the DocAve Web server and SCOM client installed, which will communicate with the SCOM server. • *Event Source Name* : In this field, you only need to put the name DocAve or any other name that you desire. It is just an identifier. • *Records Per Sync* : This is up to your discretion. It is the number of records that the SCOM client will wait to collect before it sends them over to the server. This number can range from 10 - 100 and the default number is 25. The lower the number, the slower the performance, as the client will waste resources sending line of log individually to the SCOM server. • *Log Level* : The Log Level can be set to Error, Warning or Info, it is up to your preference. ***Note**: When selecting **Enable Active Directory Integration** in *Control Panel > DocAve System > Account Manager*, this user information must be configured in *Domain* field since this user will also be used to connect SCOM.
3	After entering the configuration information, click **Test**. You will receive a complete message if DocAve can connect to the SCOM server successfully using the configuration.
4	Click **Apply** to save the settings.

3.5.5.2 Viewing the logs from SCOM

The DocAve logs will be displayed in the SCOM server.

3.6 Patch Management

This section, capable of managing patches for the modules in DocAve, provides you with several methods to update and prolong the use of DocAve agent. It is composed of three subsections: Patch Manager, and Patch Report.

3.6.1 Patch Manager

DocAve Patch Manager allows you to update the current version of DocAve within the DocAve GUI, which will reduce the time and risk of manual update.

3.6.1.1 How to Update the Manager or Agent

To update the Manager or Agent, please follow the steps below:

(3-34) Update The Manager Or Agent

Step	Action		
1	Navigate to *Patch Manger* under the *License Management* section of the *Control Panel*.		
		If...	**Then...**
		You are applying a patch to the Manager	You can browse for the Manager Patch(".zip" file), then click **Load**.
		You are applying a patch to the Agent	1. Browse for the Agent Patch (".zip" file), then click **Load**. 2. Select the Agent machine(s) from the drop-down list under *Agent Host* on which you wish to upgrade the DocAve Agent(s).

Step	Action
2	Click **Apply** next to the loaded patch. If you have applied patch(es) before, it will list all the applied patch(es) in the pop-up window. You can force to install the patch by checking the agreement option. t is recommended you contacting your AvePoint support representative for more information prior to upgrading your environment. *Note: To update multiple agents, you can select the *Select All* check-box or select the corresponding agents in the Agent Host drop-down box.
3	The DocAve update page will emerge later with the following information columns: Service Type, Host, Progress, Old version, New version, Patch version, and Status. While updating DocAve Manager, you can check the detailed information on the updating process under the panel Detailed Information. You can view the detailed information of the update process of different services by clicking the corresponding radio button.
4	After the update completes, you have to select the agent by checking the corresponding check-box and reset the IIS service by clicking **Reset**.
5	Click **Finish** to end the update process after IIS service is reset successfully.

*Note: During the upgrade process, if some file cannot be upgraded, all the files will be rolled back and the upgrade will fail. You can navigate to *DocAve > Control Panel > Patch Report* to view the detailed information.

For more information on the update patch, you can navigate to the corresponding storage folder. By default, the storage path for the update patch is: C:\Program Files\Tivoli\TSM\SharePoint\DocAve5\Manager\UserData\patches\unzipPatches.

*Note: DocAve Manager should be updated in prior to its DocAve Agents, otherwise the agents will be invalid.

3.6.1.2 Automatic Update Setting

Under Automatic Update Setting, you can choose from several options regarding when and how often you would like to check if there are any new updates available:

- *Download updates…* : This option will automatically download any product updates from AvePoint and will prompt you upon logging in to perform the installation.

- *Notify me…* : This option will automatically prompt you if an update from AvePoint is ready, but it will wait for you to download and install it.

- *Turn off automatic updates* : This option will disable automatic updates and require you to check for product updates on the AvePoint website independently.

You can click **Update Registration** to update the registration, and then click **Preview Register File** to view the detailed information in the pop-up. Clicking **Save** will save your current selection and profile. Clicking **Check Now** will immediately check to see if there are any new update patches.

The progress of the update process can be monitored here as well.

3.6.1.3 Proxy Server Setting

If you need to download the patch through Proxy Server, you can specify the kind of Proxy from the drop-down box, and enter the Proxy Host, Proxy Port, User Name and Password. Click **Apply** to save the configuration.

3.6.2 Patch Report

The DocAve Patch Report offers a centralized interface that allows you to see which patches were applied and when they were applied. In addition, it will display the following detailed information of the patches in a history table format: *Service Type, Host, Patch Type, From, To, CI Patch No., Applied Date* , and *Message.*

- *Service Type* : The name of the service which applys the patch.

- *Host* : The name of the host that the service is installed on.

- *Patch Type* : The type of the patch, the values could be : Official Patch, Problem Specifical CI Patch or Diagnostic CI Patch.

- *From* : The version of the service before applying the patch.

- *To* : The version of the service after applying the patch.

- *CI Patch No.* : The number of the CI Patch. The column for the Official Patch should be empty.

- *Applied Date* : The date when the patch is applied.

- *Message* : The status of the installation of the patch.

For each column except the Applied Date column of the table, you can click down arrow to sort or filter it.

To export the patch report, click **Export** and it will export all the report with the default sort order to *Patch_Report.csv*. Click **View Current Version**, it will list all the services versions in the pop-up window.

3.7 Job Monitor

This section, providing a central interface, enables the users to monitor, update, and control the jobs in the corresponding modules. Through different permissions, the operations that the users could perform differ from each other. By monitoring, you could only view detailed job information like Plan Name, Progress, Status, Detail, Time Zone, Start Time, Finish Time, and (Source) Agent information in theDefault View or all the details in the All Items view. By updating, you can create\modify the views in Job Monitor besides just monitoring. Finally, by controlling, you will be able to access all the functions in each view of Job Monitor without any limitation whatsoever.

Also, Job Monitor provides you with Default View and All Items view, and you can customize them by yourself. The All Items View enables you to access all the details of the jobs in Job Monitor.

3.7.1 Job Monitor

This section is designed for users to monitor, update, and control the running jobs as well as the ones in the past. It contains several views for your preference. Follow the steps below to view the detailed information about the jobs.

(3-35) View the Detailed Information in Job Monitor

Step	Action
1	Go to the Job Monitor interface by clicking next to the Control Panel on the top right corner of the screen and then click *Job Monitor*.

Step	Action
2	Click **Jobs** and then a drop-down box will appear. You can then select a module to view specific job information.
	You can click **Configure** to set up the Job Type Collection in the pop-up by checking the corresponding check-box to select the item to list.
	If you wish to set a function as the default one to be displayed in Job Monitor, please select its function group and itself in the corresponding check-boxes.
	Click **Apply** to save the configuration, or click **Cancel** to exit without saving.

Step	Action	
3	If you have not made any configuration changes, you will now be viewing the information about the job in the Default View. If you want to change the view, you can click the button next to View to select another view. You can change it to All Items view, Modify This View or Create View.	
	If…	**Then**…
	Modifying a view	Please follow the steps below: 1. Select the view you wish to modify. 2. Click **Modify This View**, a modification window will appear. 3. Modify the target items. 4. Click **Apply** to save the changes, click Delete to delete the view or click **Cancel** to quit without saving. ***Note**: Default and All Items views cannot be deleted. ***Note**: You can choose to Create a Public View or Create a Personal View. The Public view can be seen by all the users and the Personal one could only be seen by the user who create the modifi-cations.

Step	Action	
	Creating a new view	Please follow the steps below: 1. Click **Create View,** a pop-up window will appear. 2. Input a View Name into the View Name text box. 3. You can check Make this as the default view check-box to make it the default view. 4. Select the radio button to specify the audience (Public View\Personal View) for a specified module. In contrast to Public View, you can create a Personal View for the specified user. This setting is specially designed for your privacy as even DocAve Administrator has no access to your Personal View. 5. Check the corresponding check-box to select the items and their positions to be displayed in the current page. 6. Specify the number of jobs to display per page. 7. Click **Apply** to save the configuration, or click **Cancel** to exit without saving.
4	To filter the jobs according to the plan name, please click the down arrow icon at the right of **Plan Name** column. Then you can view all the plans in this module. Check the checkbox of the plan you want to filter. Click **OK** button to save the configuration, or click **Cancel** to exit without saveing.	

Step	Action
5	To view the detailed information of the jobs, please click **View detail report** under **Detail** column. Then you can view the detailed information and download the job report in three formats: CSV, XLS, and TXT. Also, from the report, you can check the information on the Logical Device, Media Service, as well as the Physical Device of this job. For Livelink Migration module, the job report file is named as PlanName_JobID to ensure you can track all items that have been successfully migrated from Livelink to SharePoint easily.
6	If there are any hung, running jobs that you do not want to continue to run, you can click the **Stop** button in the **Control** column to stop the job completely. You can also click the corresponding button to **Pause** and **Resume** the corresponding jobs in the **Control** column.
7	You can click the ⟳ icon to refresh the job report. Select a job report by checking the corresponding check-box, then click the 🗑 icon to delete the job report. Select a job report by checking the corresponding check-box, then click 📄 icon to download the job report to your local disk. You can also click 🕐 icon to change the current time zone. Select the time zone from the drop-down box in the pop-up window. Click **OK** to save the change, or Click **Cancel** to exit without saving. ***Note**: The 🕐 icon is not available when some job types are selected.

Remove backup data manually

To remove or prune backup data manually, please follow the steps below.

(3-36) Remove The Backup Data

Step	Action
1	Go to the Job Monitor interface by clicking 📊 next to the Control Panel on the top right corner of the screen.

Step	Action
2	Select the completed job from the granular backup/platform level backup list in the Job Monitor using the checkboxes on the left.
3	Select the check-box in the **Remove Backup Data** column. ***Note**: If your current view does not have this column, you can add this column into your view, or select All Items after clicking the button next to View.
4	Click the trash can icon on the top. This will remove the job record and the data of this job. This will also remove the restore point from the Restore Controller timeline. ***Note**: Manually removing backup data directly from your storage devices is not supported, and may cause errors on restore. If you wish to move data to a different location or import new backup data, please refer to the Backup Data Import section and the Backup Data Export section.

3.7.2 Scheduled Job Monitor

You can view, enable, and disable the scheduled jobs in Scheduled Job Monitor to effectively schedule the jobs to be run in the future.

Please follow the steps below to view the detailed information of the scheduled jobs.

(3-37) View the Information of Scheduled Jobs

Step	Action
1	Navigate to *DocAve v5 > Control Panel > Job Monitor > Scheduled Job Monitor*.
2	Select the module from the Module drop-down box.
3	Select the time range for the jobs you want to view in the Time Window area. Either *Next* or *From To* is available.

Step	Action
4	Select one number from the Per Page drop-down box to specify the number of the jobs to be displayed in each page.
5	Click **Show Results** to load and then display the corresponding jobs. You can view the No., Start Time, Farm, Restore Setting and Status (Provided that you have selected the Granular Restore Module) in the result list.
6	You can click **Disable All Jobs** to disable all the scheduled jobs, or **Enable All Jobs** to enable all the disabled jobs.
7	You can also check the check box of one enabled job and click **Disable Selected Jobs** to disable it or check the check box of one diabled job and click **Enable selected Jobs** to enable it.
8	When Granular Restore Module is selected, you will be provided with the column of Restore Setting in the result list. You will be able to view its restore method and click the **Detail** button to view the detailed information about this restore job.

4. Discovery

The "Discovery" module provides a real time overview of your SharePoint environment and auto-matically discovers new sites regardless of the numbers of servers. It provides information on server topology, functions, and roles in a graphic display. The module consists of four parts listed as tabs along the top of the "Discovery" GUI: "Dashboard," "Topology," and "Explorer". The following sections will provide a detail explanation of each.

*Note: This section is not supported for Microsoft SharePoint Server 2010 or for Microsoft SharePoint Foundation 2010.

4.1 Dashboard

This module can be divided into three parts. You can view the structure of your DocAve environment. The first part is the tip of the day. You can view it by clicking the Previous and the Next icons

The second part is also a pie chart. It indicates the DocAve Manager System Health. It records all logs that came from DocAve. Display these logs into four log types "Info", "Warning", "Error", "Fatal". You can specify an interval and the scope from the drop-down box. The number for the logs during this period will be included in the pie chart below. The exact number for each type can be browsed in the square chart. Click different color parts in the pie chart, it will go to the detail page.
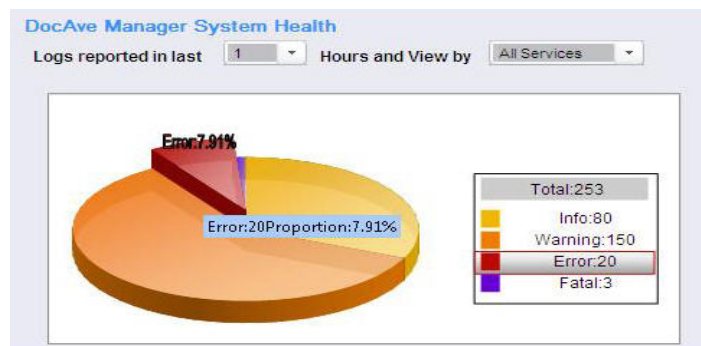
In the third part, you can see the job status in the different levels.
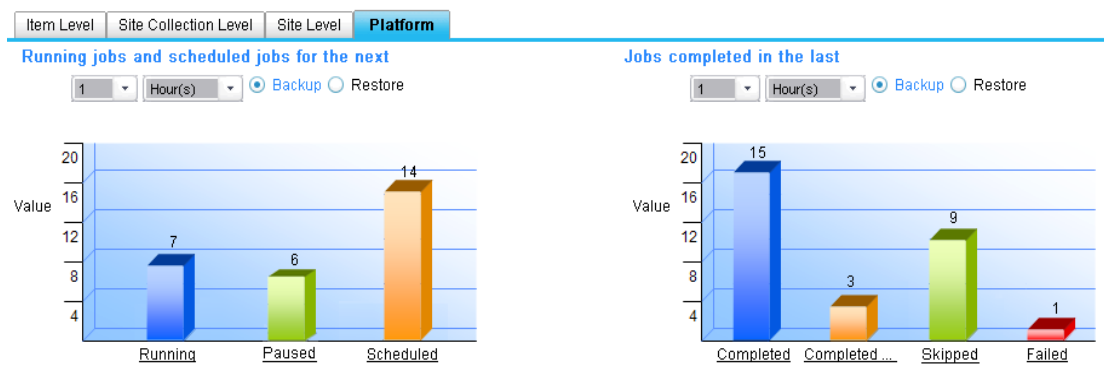
Select the level tab you wish to view. You can view running and scheduled jobs by selecting a number and an interval from the drop-down box. You can also select a Backup or Restore option. From the corresponding column chart, you can see the status for the completed jobs. Different colors represent different job status.

4.2 Topology

This page can display the Agent names. It also allows you to zoom in and out on your topology by clicking the icons. Point on the agent image and click to open another page to get detailed information such as server name and SharePoint components installed on a specific SharePoint farm.
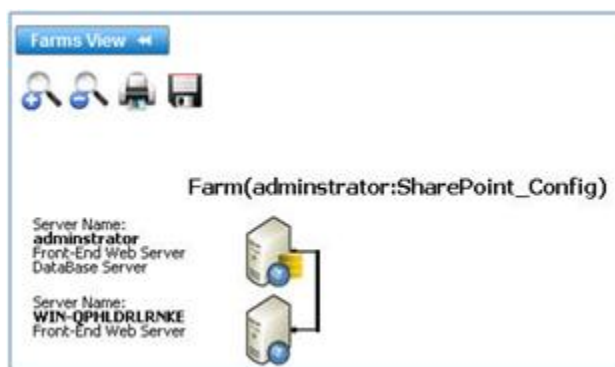
You can also zoom the detail image in and out print and save this image by clicking the corresponding icon.

Click **Farms View,** you will go back to the Farm Topology.

4.3 Explorer

It allows you to search for SharePoint components by using Domain, Server Name, IP address, and Site Collection filters. Click **Search** to begin the search. This will display the desired search results in the Farm Browser on the right-hand side of the screen. Please refer to the explanation for each option as follows:

4.3.1 Explanation of the legend

Inclusion and Exclusion usage options:

(4-1) Inclusion And Exclusion Usage Options

Step	Action
1	Input the rules for searching in a given scope (e.g. domain), or just search the corresponding content (e.g. Site Collection).
2	When you are performing a basic search, use the logic indicators as follows: • + : This represents a rule for objects to be "included" • - : This represents a rule for objects to be "excluded" You can change these by clicking on the icon.
3	After entering a valid rule, you can add additional rules using the "Add" button. Each rule can be removed using the "Delete" button. <table><tr><td>**If…**</td><td>**Then…**</td></tr><tr><td>(+) and (+)</td><td>This serves as an "or" logic, all search results listed will include filter1 or filter2.</td></tr><tr><td>(-) and (-)</td><td>This serves as an "and" logic, all search results listed will include filter1 and exclude filter2.</td></tr><tr><td>(+) and (-)</td><td>This serves as an "and" logic, all search results listed will exclude filter1 and filter2.</td></tr></table>

4.3.2 Domain Search Filter

To search a server or site rules within a certain domain, select the checkbox next to "Domain Filter" and enter the domain name(s) to search. Inclusion and Exclusion can also be used; Domain Search Filter is an optional field.

Note: Wildcard operator "" can also be used for searching. This is helpful for finding content let's say you forgot a word or two, but you remember the gist, as in ["*point"].

You can also use the wildcard character without searching for anything specific, as in this phrase search: ["*"].

This character applies to all search options.

4.3.3 Server Name Filter and IP Address Filter

You must select one of the two options as your search criteria.

If you would like to search content using server name as part of the condition, please select the radio box for the Server Name Filter then define rule(s) for the search.

Similarly, select the radio box for the IP Address Filter, then define rule(s) for the IP address search.

4.3.4 Site Collection Filter

This is an optional search field, if you would like to search for Site Collections with specific conditions, you should select the check-box for the Site collection Filter and define rule(s) for your search. You must also set Inclusions and Exclusions in the Site Collection filter. By specifying multiple Inclusions and/or Exclusions in the Site Collection filter, the search results will be more accurate. After specifying the search conditions, click **Search**, the desire results will be displayed in the Farm Browser on the right-hand side of the screen.

5. Data Protection

The Data Protection module contains the Automation Center, the Custom Backup Builder, High Availability, and the Restore Controller. The sections below will detail the functionality of each.

5.1 Automation Center

The Automation Center allows you to perform automated SharePoint backups on sites or site collections while still maintaining item level granularity on restore. It is the intelligent approach to protecting SharePoint content and optimizing storage resources. In order to utilize the Criticality Matrix, you only need to define the business importance of each site or site collection and allow DocAve to automatically track usage activity for the content within that site. By combining these two criteria, each site is automatically associated with its appropriate pre-defined backup template.

5.1.1 About the Criticality Matrix

The sections below will introduce you to the concept of Business Importance and the Criticality Matrix interface.

5.1.1.1 Overview of the Criticality Matrix Concept

Each cell of the matrix represents a separate ranking and behind each cell lies your SharePoint content categorized by its appropriate ranking (more on enabling the content later). The ranking is composed of two values: the amount of activity / modifications your SharePoint site receives, and the Business Importance to your organization. This means that the most important content in your organization will be on the right of the matrix (i.e., payroll sites), while the least important sites will be categorized on the left (i.e., my-sites). Likewise, the most actively used content will appear on top of the matrix, while inactive or slightly used content will appear on the bottom.

Once the contents of your SharePoint farm have been categorized, you can then roll out templates to cover each cell of the matrix. This will allow you to concentrate your most frequent backups to only content that is either frequently modified or of high importance, and allows you to create infrequent backups for content that you know has very little business importance or activity.

For more information regarding effective SharePoint backup strategies, please read the additional literature available on the AvePoint website.

5.1.1.2 Overview of the Criticality Matrix Interface

The Criticality Matrix is shown in the figure below:
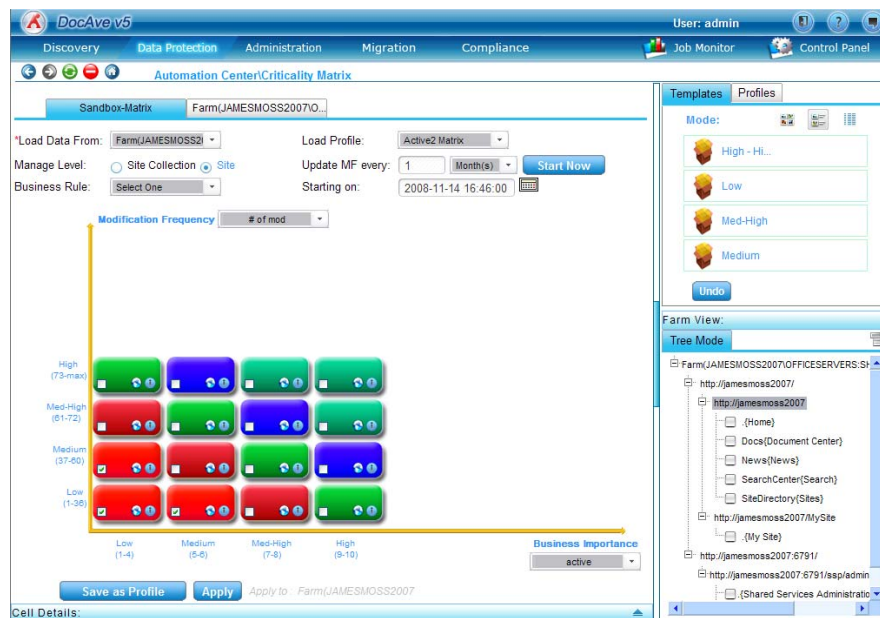
Along the top of the GUI you will notice several tabs. These tabs represent all of the SharePoint farms with registered DocAve Backup Agents installed, as well as an additional Sandbox - Matrix which represents the editable interface for setting up the Matrix of all farms. Using this interface, you can monitor the distribution and backup coverage for each farm and alter your backup strategies accordingly.

The principle areas defined above are as follows:

- *Settings* : The area at the top of the GUI allows you to configure all settings regarding matrix updates and management settings. These will be described further in later sections of this guide.

- *Criticality Matrix* : The center of the GUI shows the Criticality Matrix and all appropriate axis values / settings.

- *Templates / Profiles* : The area at the top right of the GUI represents the available backup templates and profiles available for applying to the matrix. The templates work on the cell-level of the matrix, while profiles represent all matrix settings, including applied templates.

- *Preview Tree* : The tree shown in the bottom right of the GUI will show the entire SharePoint farm, including details regarding which cell / template each node is covered by.

*Note: The screenshot and description above represents the Sandbox - Matrix. The matrix for each farm is similar, except it is in read-only format.

5.1.1.3 Viewing the Contents of a Matrix Cell

After you have performed the steps in the sections below regarding activating content for the Criticality Matrix and assigning a Manage Level, DocAve will automatically assign the content to the appropriate cell. Depending on which managed level is used, you will either see a breakdown by site collection or by site.

To view the contents of an individual cell, click the Preview icon on the cell you wish to view. A pop-up window with a tree view of all contents with this ranking will be displayed. The tree will have the granularity level to which your Manage Level is set.

5.1.1.4 Viewing the Plan Details of a Matrix Cell

Each matrix cell can represent an individual backup template. Each template is configured as a backup plan, with drive locations, filter policies, schedules, etc. In order to view details regarding the template applied to a specific cell, click the icon . The Cell Details page provides all relevant information with regard to the activity and status of the Cell and its content. This includes the data configuration, previously run schedules and upcoming ones, and the status of the most recent jobs. To return to the matrix, simply click the title-bar or down-arrow in the window to collapse the Cell Details page.

5.1.1.5 Viewing SharePoint Coverage

On the farm view window in the lower-right corner of the Criticality Matrix screen, you are able to view all the sites / site collections organized as a tree. Click on the farm name to expand the content.

In addition to checkboxes (which will be described later), each site or site collection within the selected farm has a colored box representing its coverage level in the Criticality Matrix. The color of this box corresponds with the color of the template applied to that node's cell. By hovering over this colored box, you will be able to see the exact location in the matrix for this node, represented by coordinates of the form **Business Importance * Modification Frequency**.

*Note: You must have applied templates and set the business importance for sites in your farm prior to viewing the information above.

If you wish to view a comprehensive table showing sites with their importance setting, last modification frequency, cell location, and template details, you can use the preview tree to select any sites or site collections in your farm. After clicking the icon in the top right of the preview frame, a window with a downloadable report will open.

5.1.2 Configuring Content for Automation

In order to be automated backed up, sites must first be ranked according to their Business Importance. By default, all content within SharePoint is given a business importance of zero (0). This means that the DocAve Criticality Matrix will not include it in its intelligent backup strategy. In order to include any Site or Site Collection into the Criticality Matrix backup routine, you must prescribe it a business criticality above zero within either the DocAve product or a SharePoint web part.

5.1.2.1 Setting the Business Importance in SharePoint

In order to set the importance directly from SharePoint, a web-part must first be installed. This can be installed through the DocAve Installation module.

*Note: From DocAve version 5.5, DocAve supports the site importance web part for SharePoint 2010.

Installing the Business Importance Feature

This feature only needs to be deployed at the Site Collection level, and will automatically be deployed to all sites beneath.

(5-1) Installing the Important Feature

Step	Action
1	After installing the DocAve Agent, you can find the web part installation file named *DocAve Lite Feature Installer.exe* under the directory ...\Tivoli\TSM\SharePoint\DocAve5\Agent\bin.
2	Double click this installation file, a pop-up window will appear.
3	Click **Install**, and then click **Yes** in the dialogue window. It will install this webpart on all sites.

Setting the Business Importance

The importance web-part will allow you to set the importance of multiple sites in your deployment. In order to set the Business Importance, follow the steps below:

(5-2) Setting the Importance in SharePoint

Step	Action		
1	Open the specific site or site collection in SharePoint using your internet browser.		
2	Launch the importance web part for the appropriate site.		
		If…	**Then**…
		Site Collection	Go to *Site Actions > Site Settings > Site Collection Administration > Define Site Collection Importance.*
		Site	Go to *Site Actions > Define Site Importance*.
3	Using the slider and text-box, set the importance level between 1 and 10. A value of zero (default) indicates that this site will not be included for automated backup.		
4	Select where you would like to deploy the importance to:		
		If…	**Then**…
		Unique Importance Level	By default, *Set Uniqe Importance Level* is selected. This will set the importance for this site / site collection only.
		All Sites / Site Collections	To set the importance to all sites in bulk, choose the *Set importance Level In Bulk* option. Select to apply the same importance level to all sites or site collections under the same site collection, web application, or farm.
		Specific Sites / Site Collections	Choosing the third radio button allows you to define site importance by URL. Multiple URLs can be entered by using the **Add** and **Delete** buttons.
5	Click **OK** at the bottom of the web part. This will set the business importance of the specified sites or site collections.		

5.1.2.2 Setting the Business Importance in DocAve

DocAve provides the fastest and easiest way to set the importance level. Please note that you can set the business importance in DocAve Central Administration module, which also allows you to define inheritance relationships between sites and their subsites, it is limited to this function only, for other functions of this module, the license is still required. However, you can set the importance in bulk using the Preview tree in the Sandbox - Matrix.

Using the Criticality Matrix Preview Tree

In the Sandbox - Matrix window on the lower-right corner of the GUI, you are able to view all of the contents for your selected farm via the tree view. To set the importance for your sites / site collections, follow the steps below:

(5-3) Defining Business Importance from the Criticality Matrix

Step	Action
1	Navigate to *Data Protection > Automation Center > Criticality Matrix* and open the Sandbox - Matrix.
2	Select a farm from the *Load Data Form* field on top.
3	In the lower right corner of the GUI, click on the farm name underneath the Farm View option. This will expand the tree. You can continue expanding the tree by clicking on the node names to the site or site collection you wish to edit.
4	Next to the nodes you are able to define importance, you will see a checkbox. Use this to select the content you wish to configure. ***Note**: The checkboxes will be available based on the *Manage Level* selected for this farm. If *Site Collection* is selected, checkboxes will only be available on the site collection level.
5	Click on the ▤ icon to set the importance. The pop-up will allow you to drag the slider and specify a value between 1 and 10. A setting of 0 (zero) will remove this site from the Matrix.
6	Click **OK** to apply these settings to the site.

5.1.3 Configuring the Matrix Settings

Since the templates, axis settings, and manage levels for each matrix (as well as the other options) can each affect the backup policy for your farm in significant ways, all editable functions have been placed in the Sandbox - Matrix. This mode allows you to preview how each change will affect your farm's backup coverage before it takes effect.

Before configuring these settings for the matrix, you should be familiar with the definitions below:

- *Criticality Matrix Cell* : Each cell within the Criticality Matrix represents a site or site collection's ranking, determined by its corresponding business importance and modification frequency.

- *Templates* : Backup Templates represent the implementation for your backup strategy, and can be defined and applied to each cell of the matrix.

- *Manage Level* : You may set the Manage Level to either Site Level or Site Collection level. This determines whether content will be analyzed and distributed in the Criticality Matrix cells as individual sites or site collections.

- *Modification Frequency Axis* : The vertical axis of the Criticality Matrix measures the Modification Frequency of content within each site or site collection. This information will be automatically collected for sites with a defined business importance, and will be gathered as frequently as the Matrix Updates are specified. For more information on configuring this axis, see the sections below.

- *Business Importance Axis* : The Horizontal axis measures the pre-defined Business Importance of the site or site collection. For more information on configuring this axis, see the sections below.

- *Business Rule* : The Business Rule option will allow you to define the rate at which sites are upgraded or downgraded in business importance due to activity or inactivity. DocAve can also disregard modification frequencies that occur during pre-selected dates and times.

- *Modification Frequency Report* : You can get the current modification frequency of a specified farm by generating a Modification Frequency Report of the specified farm. The report contains the following columns: Web Application, Site Collection, Web, Number of Modifications, Percent Modified, Business Importance and Manage Level.

In order to perform backups from the Criticality Matrix, you will need to define Active Templates. These are described in the Template Builder section of the User Guide.

All of the settings listed in the section below can be found by navigating to *Data Protection > Automation Center > Settings*.

5.1.3.1 Business Rule Engine

When users are asked to rank their sites in SharePoint, the natural response will tend to be a higher importance than what may be appropriate for their site. Additionally, project sites may be created with a very high importance, but after the completion date the activity and importance may drop. In these cases, the Business Rule Engine will allow you to specify rules to upgrade and downgrade the importance.

The Rule Engine tab under the Settings page is the interface used to build rules governing the movement of a site along the Business Importance axis. The options are broken into sections to help in creating rules.

*Note: Because of the customizability of the rules, the options must be set for each farm individually. Although each farm may have multiple profiles defined, one profile cannot work for multiple farms.

Business Importance Update Rules

The general rules can be defined to either upgrade or downgrade importance based on modification times. For information on how to configure this section, see the table below:

(5-4) Configuring the Business Importance Update Rules

Step	Action
1	Select a farm from the Farm drop-down list on top of the interface.
2	To upgrade and downgrade the importance, select the check boxes next to the appropriate line. You must specify a threshold for a site to upgrade and downgrade its importance, which will be set as either a number of modifications or a percent modified based on the current modification frequency axis settings of your farm. ***Note**: To avoid frequent changes of your business importance values, you should monitor the activity of your SharePoint environment and adjust these settings according to your needs. Also, if you change your axis values from number of modifications or percent of content modified to the other one, you should readjust these profiles.
3	Use the *Exclude Modification Frequency Values* section to ignore excessively low or excessively high modification frequency values during a specific date range. Using the checkboxes, select either the days of the week to ignore on a regular basis (such as weekends).

Step	Action
4	You can also specify date-ranges to ignore (such as company holidays or planned maintenance times) by using the calendar icons and the **Add** and **Delete** buttons.
5	Some users may have an accurate assessment of the Business Importance of their site, and this should be left untouched regardless of modification frequency (for instance, the CEO of an organization). To lock the site according to a specific user, use the checkbox and the fields provided next to the owners and administrators fields. You can enter multiple users by separating them with a semicolon (';'). ***Note**: You can also search the active directory or verify usernames by selecting the 👤 📖 icons. To lock the site by selecting the individual site, use the checkbox and click **Browser** to select the site from the farm's tree in the pop-up. If you have a site locked but the user switches to the Site Collection manage level, DocAve will automatically lock the site collection. ***Note**: The setting of *Lock Site Importance* will only take effect when DocAve updates the Business Importance automatically according to the rules set, and you can manually adjust the importance of the site or site collection in Sandbox-Matrix at the same time.
6	Select the *Upgrade* or *Downgrade* of the Business Importance by checking the corresponding check-box, and select a email notification profile from the drop-down box. It will send the email to the recipient when the business importance upgrade or downgrade.
7	Click the calendar icon 📅 next to the Update Business Importance at field. In the pop-up calendar/clock window provided, set a date/time you wish the update to execute. Click **OK**.
8	Specify the interval at which the update will occur, following the start date/time. Choices are: every Week(s) and every Month(s). ***Note**: If you set the Update Business Importance frequency to a shorter interval than your matrix is updated, the value will automatically update on every matrix update, not more frequently.
9	Click **Save** to save the profile for use in the matrix.

5.1.3.2 Editing Axis Values

The Axis settings tab contains two sub tabs, one for Modification Frequency, the other for Business Importance. The table for editing axis values behaves in the same way for each.

Adding Rows or Columns to an Axis

In order to add an axis value to an axis, follow the steps below:

(5-5) Adding Columns or Rows

Step	Action
1	In the axis values table, click **Add** in the row before the new row to be inserted.
2	In the pop-up window, enter the name you wish to assign to the inserted row or column in the field provided.
3	Specify a maximum value for this column. Inserting an axis value will essentially divide the next row's data range into two: the per-existing minimum value the new entered value, and the new entered value the pre-existing maximum value.
4	Click **OK** to add the new value.

*Note: The maximum row-column structure of the Matrix is 6×6.

Editing or Removing Axis Values

In order to change a pre-existing axis value or remove it, follow the steps below:

(5-6) Editing Axis Values

Step	Action
1	Click **Edit** in the table of axis values.
2	Modify the maximum value for this interval. You can only adjust the maximum value for these settings, the minimum must be set from the maximum of the previous value. Click **OK** when you are finished.

Step	Action
3	Click **Delete**, if you wish to delete the corresponding row or column. The two options provided will allow you to either divide the data range of the column or row into two parts and add the respective values to the neighboring two cells, or allows you to redistribute the values evenly across all other axis values.

5.1.3.3 Modification Frequency Settings

When you configure the modification frequency, you must specify the following settings:

(5-7) Modification Frequency Settings

Step	Action
1	Choose either Percent Modified or Number of Modifications for the modification frequency axis. • *Percent Modified* : This will offer a ratio of the number of modifications averaged over the size of the site in items. This is the default value and the easiest way to break the axis up into a reasonable scale. • *Number of Modifications* : This will allow you to view the number of modifications. This is the most flexible option for the axis settings, but it is necessary to guage this setting for each environment. For instance, one site may have 5 modifications per day in a small environment, but an large site could have 500. There are advantages and drawbacks to each method. The percent modified setting may be the easiest to scale, but be inaccurate for sites with versioning enabled or infopath sites (where the number of objects increases with each modification). The number of modifications will be the most accurate representation of the activity of the site, but may take a good deal of tracking to pick accurate axis values.
2	Set the Scaling Factor in the space provided. In order to make the axis more meaningful, the percent modified (or the number of modifications) can be represented in percentage (or number) modified per hour(s), day(s), week(s) or month(s).

Step	Action
3	Use **Save** to save the axis profile.

5.1.3.4 Business Importance Settings

The business importance settings are very simple to set up, and they represent the range of importance settings from one to ten. You can save multiple axis profiles.

5.1.3.5 Report Settings

The Report Settings is used to generate the modification frequency report(s) of a SharePoint farm covered in the Criticality Matrix module.

(5-8) Configuring Report Settings

Step	Action
1	Navigate to *DocAve > Data Protection > Automation Center > Settings*, and then switch to the *Report Settings* tab.
2	Select one farm from the Farm drop-down box. If you have already configured the Report Settings of the specified farm, you can click the **Delete** button to delete all the excisting settings.
3	Select a start time for generating the modification frequency report(s) by clicking the calendar icon in the corresponding field and then spec-ify a Start Time.
4	You can specify an interval for generating the report(s) by choosing *Only Once* or *Every___Hour/Day /Week/Month* and then entering a number in the corresponding textbox. By default, *Only Once* is selected.
5	You can choose the report format by selecting **CSV** or **TXT** in the Report Format field. By default, the report format is CSV.

Step	Action
6	In the *Export Location* field, please configure the following settings: • *Path* : Please specify a path for saving the report(s). The format of the path should be like \\server\c$\data. • *Username* : Please specify the corresponding user to connect to the path. The format of the user name should be like *Domain\Username*. • *Password* : Please enter the password to connect to the specified path. After you finish configuring the settings above, please click **Test** to test the configuration.
7	Click **Save** to save the settings after the test completes successfully.

5.1.4 Using the Sandbox-Matrix

The Sandbox-Matrix represents the editable version for all farm matrixes. You can configure the settings for farms here by using the sections below.

5.1.4.1 Configuring the General Options

When you first load the Sandbox-Matrix, several general options must be configured:

(5-9) Setting Up the Matrix

Step	Action
1	Select a farm in the Load Data From drop-down box. This will fill in the contents of the cells after you have specified the importance levels of the sites or site collections and the preview tree with meaningful data.
2	Load a Profile from the corresponding drop-down box. This is not required, but can be used if you have previously configured a matrix.

Step	Action
3	Select the Manage Level of the matrix. This will organize the contents of the matrix according to either site level groupings or site collection level groupings.
4	Choose a Business Rule from the drop-down box. This is not a required field, but is used if you wish to upgrade or downgrade the sites or site collections importance automatically.
5	Select the axis profiles for both the modification frequency axis and business importance axis.

5.1.4.2 Applying templates in the Matrix

You can apply a template to individual cell in the Matrix. Please refer to the section Template Builder to learn how to build Templates to be used on the Matrix.

(5-10) Applying The Templates

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Automation Center > Criticality Matrix*.
2	You will see the Matrix on the left of the screen. By default, the display color of the Matrix cells is grey. Grey is the color used when no plans have been associated with the given cell. Check the boxes for the cells you wish to apply a template to.
3	Select the template tab from the window in the upper-right hand of the screen. Simply drag a template icon to the cell you wish to associate with that template. You can also double click the template to apply it. *Note: Only the active templates can be applied.
4	If you want to unapply the last template, you can click **Undo**.

Step	Action
5	To remove the template of a cell, select the corresponding check box and right click on the cell. Use the Remove template option.

5.1.4.3 Moving a Matrix Profile to Production

After configuring the options and templates, follow the directions below to move the settings into production:

(5-11) Applying the Matrix

Step	Action
1	Use the Update Matrix Every... field to choose an interval to update the matrix. Since this is only intended to show a trend of data, it is not intended for frequent updates. You must choose between a weekly or monthly interval.
2	Choose a start-time to begin the matrix updates. You can use the calendar icon to choose a date and time.
3	After you are satisfied with your settings, click **Apply**. ***Note**: Since deploying these settings should be done in consideration of its effects on your SharePoint data, you can only apply these settings to the farm selected in the Load Data From field. ***Note**: For a new matrix profile which does not use any of the former templates, you should click **Save as Profile** to activate the **Apply** button.
4	Check the check-box to enter a profile name for this matrix. Although you do not need to save these settings as a profile, it is recommended to save them for quick editing later.
5	Choose from the options of when to apply: Apply Now, Apply at a later time or Apply with next Matrix Update. To avoid changing data coverage frequently, we recommend the setting Apply with Next Matrix Update.

5.1.5 Best Practices for Configuring the Criticality Matrix

Although you can configure your matrix in any order you choose, we recommend the following:

- Analyze the needs of your farm and determine the ideal Manage Level. In order to manage your backup plans and policies with the most discrimination and flexibility between plans, we recommend setting this to the Site level. In general, this will allow you to set importance for individual project sites, meeting sites, and other collaboration spaces. It will also target the most active sites very specifically, allowing you to save backup space with your frequent backups.
- Analyze the size of your environment and the number of backup plans you intend to use. By default, your matrix will be set to 3x3. This will break up your environment into 9 different jobs, and should be sufficient for most cases. However, if you have a larger environment and wish to break your content into smaller jobs with greater discrimination, we recommend increasing the number of axis values. The maximum matrix size is 6x6.
- Have your administrators rank the business importance of their own SharePoint sites or site collections using the Business Importance web part, or submit rankings for you to enter them through the DocAve console. We recommend offering guidelines, such as My-Sites being given a 1 or a 2, and your legal / payroll sites being given a 10. These should be customized according to your organization.
- Configure templates to meet your SLA needs and according to the size of your matrix.
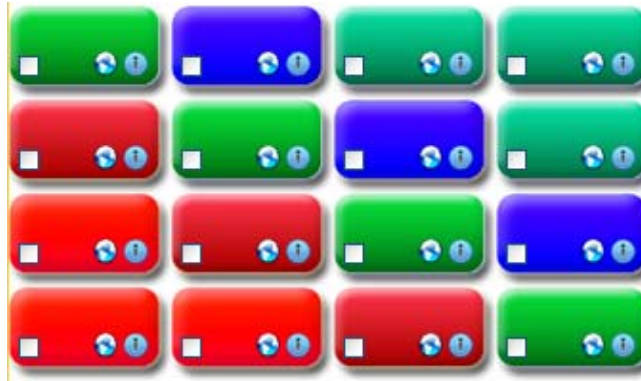
  The most typical configuration appears in this picture, with the templates applied symmetrically on the diagonal. You should count on having one or two templates including frequent (hourly) incremental backups and daily fulls, a template with daily incrementals and weekly fulls, and one with weekly backups and monthly fulls (if not less frequent).
- Decide whether you wish to monitor your modification frequency based on number of modifications or percent modified. Although percent modified may seem to be the simplest implementation in finding appropriate intervals, there are drawbacks. Sites that are constantly generating new items (i.e. document workspaces with versioning, infopath form sites, etc.) without proper pruning in SharePoint will typically dip closer towards the bottom of the matrix over time. For this reason, we recommend auditing your sites to obtain a raw number for average modifications for your environment.

This will help you set the high, medium, and low thresholds during the initial setup and allow them to be the most accurate.

- Set the update frequency of your matrix. It is important to remember that this matrix is intended to only show data trends, not real-time data regarding SharePoint. Changing backup plans as frequently as would be required of real-time or even daily updates is not recommended, which is why the matrix can only be updated on a weekly or a monthly basis.

5.2 Template Builder

Templates are used in the DocAve Criticality Matrix and are required to automate your SharePoint backups.

5.2.1 Basic Options

The first task when constructing a new template is selecting the various options. Options available here must be configured ahead of time in the Control Panel. Please refer to Section 3 of this manual for more clarification.

Each option is displayed as a drop-down box, and these options can be added or modified from the Control Panel. Clicking the blue hyperlink over the feature's description will take you to the appropriate Setting Page.

Data Manager

- *Logical Device* : This contains a list of logical device profiles that will designate where the backup data will be stored. For more information on adding a new location for backup data, please refer to the Section Device Manager of this Manual.

  *Note: This module supports the following device types: NetShare, FTP, TSM, EMC and Cloud (RackSpaceCloudFiles/MSFT Azure/AmazonS3/EMC Atmos/AT&T synaptic)

- *Filter Policy* : This drop-down list shows the data filter schemes configured in the Section Filter Policy of this Manual. Please note that this feature is optional.

- *Data Pruning* : This is where the administrator can specify the pruning policy for the data generated by this backup plan. By selecting a Pruning Profile, the administrator can specify how long the data generated by this plan is retained. For more information on adding new profiles, please refer to Section Data Pruning of this Manual. Please note that this feature is optional.

- *Data Coalescing* : This is where the administrator can specify the coalescing policy for the data generated by this backup plan. For more information on adding new pro-

files, please refer to Section Data Coalescing of this Manual. Please note that this feature is optional.

Data Configuration

- *Data Configuration* : This is where the administrator can specify whether the encryption and compression will be carried out; and if so whether such activities will be carried out on the Media Agent or the SharePoint Agent. Please note that by default no Compression and Encryption is enabled. If you select the *Encryption* option, the *Security Policy* drop-down box will be activitied. It contains a list of Security policy profiles. For more information on adding a new security policy, please refer to Security Manager of this Manual.

Reporting

- *Email Notification* : This contains a list of profiles that have an associated email account. For more information on adding or editing new email reporting profiles, please refer to the Section Email Notification of this Manual. Please note that this feature is optional.

Advanced

- *Workflow Definition* : This option allows you to back up the workflow state of the contents that you have selected. For details concerning the backup of workflows themselves, please see the section below.

- *Generate Full Text Index* : This option will generate a full text index for the content you selected in the backup plan. Then you can use Full Text Type to search for the content when you do the restore.

Workflow Definition

In order to support backup and restore for most customizations and workflows:

- The backup plan defined by the user must include the site collection (or content database in platform level backup) containing these customizations, as well as the related resources for these customizations on the front-end.
- At the time of the restore, customizations may require front-end resources that do not exist on the destination front-end server(s). These must be searched / restored first. This can either be done through the platform level backup's front-end restore capability, or may need to be re-installed to the front-end directly via a separate installer (if the customization originally came as a part of a separate application).
- Only in-place restore at site collection or database level is supported.

All customizations and workflows are not guaranteed and will not be covered by this backup due to the flexibility of SharePoint and the lack of unified deployment strategies. As a result, it is

impossible to programmatically detect the links to external sources (either application databases or front-end files) that are common in customizations, workflows, and web parts are as follows, such as:

- Front-end resources or separately installed packages
- The SharePoint GUID and/or URL of any objects associated with the customization (list items, images, documents, etc.)
- External SQL databases for management of workflows or states

For issues that depend on the GUID or URL, an in-place restore at the site collection / database level will keep these parameters intact. Other parameters will not be automatically covered. However, you are encouraged to use DocAve to test the backup and restore of your workflows or other customizations.

5.2.2 Difference between active / inactive templates

Active templates are used for both Business Importance mode and Custom Backup mode. When you want to create a new active template, you need to select a color by clicking the box next to Active Template Color. If you have assigned a color for an active template, the color which you have used will no longer appear as a color choice.

Inactive template are only used for Custom Backup mode. If you want to create a new inactive template, you need to keep the Active Template Color box blank.

5.2.3 Significance of assigning colors

Assigning different colors to active templates lets you distinguish the different templates applied to each importance level more clearly in the Criticality Matrix.

5.2.4 Setting up the schedule

To setup a schedule, please follow the steps below:

(5-12) Setting Up A Schedule

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Template Builder*.

Step	Action
2	In the Schedule area, you can set up to six unique schedules associated with that plan. (each represented by one of the Clock icons at the top of the Schedule window) Click on the clock icon and it will become highlighted in yellow.
3	Check the Schedule check-box to activate a Schedule. The clock icon you are setting currently will be highlighted in green. When you configure another schedule, this active clock icon will be highlighted in blue.
4	Select a Backup Type for the selected schedule. • *Full* : A full backup of the selected source. • *Incremental* : A partial backup where only data that has been added since the last incremental or full backup is backed up. • *Differential* : A partial backup where only data that has been added since the last full backup is backed up. ***Note**: Frequent consecutive differential backups have a tendency to backup the same data over and over again and fill server space quickly. For best results when conducting high frequency backups, it is recommended to use incremental backups. Incremental backups save time and storage space by backing up only the differences between incremental backups or an incremental backup and a full backup, instead of backing up the entire source location.
5	Click on the calendar icon located to the right of the Start Time field.
6	Select a date and time in the calendar pop-up window and click **OK**.
7	Select a time zone in the TimeZone drop-down box. By default, it will be selected according to the Browser's.

Step	Action
8	Specify the interval at which the backup will occur. The basic intervals are: • *Only Once* : This plan will run at the specified time • *Every Hour, Day, Week or Month* : This plan will run over a specified interval. The Advanced intervals are as follows: • *Hourly* : You can set the plan to run during production hours only, specified in the time window(s) provided, or at specific hours set in the *Select Time Below* fields. • *Daily* : This will let you run the plan once a day on weekends only or weekdays only. • *Weekly* : Specify the days of the week to run the plan on, and after how many weeks to recur. • *Monthly* : This will let you set up a custom monthly plan.
9	Specify a Exclude for this job under the Advanced schedule options. This will allow you to prevent plan from running during scheduled maintenance, holidays, etc.
10	Specify a Time WindowPlan Duration for this job under the Advanced schedule options. This will allow you to terminate the plan after a number of occurrences, or by an appointed date and time.
11	Repeat these steps to create additional schedules (if necessary).
12	Save the template by clicking **Save Template**. After the template has successfully been saved, it will be displayed in the column area on the right.

5.3 Custom Backup Builder

DocAve v5 Custom Backup Builder contains two types of backup function: Granular Backup and Platform Backup. It allows administrators to backup their SharePoint environment on any level, from an entire Farm down to a specific Folder/ List.

According to Microsoft, STSADM backups are not recommended for sites greater than 15 GB. As a result, the Site/Site Collection backup restore levels, which leverage STSADM, are not recommended to be used in these cases. We recommend using Item Level or Platform Level backups in most instances, both of which offer the ability to restore on the Site/Site Collection level. These modules offer significant advantages in speed and in granularity of backup plans.

5.3.1 Granular Backup

You can set up backup plans on three levels: Item; Site; and Site Collection.

5.3.1.1 Basic Options

In order to configure a new backup plan, you must first configure the following several settings in the Control Panel. Where necessary, links are provided to the Control Panel.

- *Farm* : This contains a list of farms currently connected to SharePoint.

- *Agent Group* : This allows administrators to specify an agent group.

The following tabs are provided in the Granular Backup interface:

Data Manager

- *Filter Policy* : This drop-down list display the available data exclusion schemes, as configured in Section Filter Policy of this Manual. Please note that this feature is optional.

- *Data Pruning* : This is where the administrator can specify the pruning policy for the data generated by each backup plan. By selecting a Pruning Profile, the administrator can specify how long the data generated by this plan is retained. For more information on adding new profiles, please refer to Section Data Pruning of this Manual. Please note that this feature is optional.

- *Data Coalescing* : This is where the administrator can specify the coalescing policy for the data generated by this backup plan. For more information on adding new profiles, please refer to Section Data Coalescing of this Manual. Please note that this feature is optional.

- *Logical Device* : This contains a list of logical drive profiles that will designate where the backup data will be stored. For more information on adding a new location for backup data, please refer to Section Device Manager of this Manual. This field is required to back up data.

  *Note: This module supports the following device types: NetShare, FTP, TSM, EMC and Cloud (RackSpaceCloudFiles/MSFT Azure/AmazonS3/EMC Atmos/AT&T synaptic)

Data configuration

- *Data Configuration* : This is where the administrator can specify whether encryption and compression will be carried out; and if so whether such activities will be carried out on the Media Agent or the SharePoint Agent. Please note that by default, no Compression and Encryption is enable. If you select the Encryption option, the Security Policy drop-down box will be activated. It contains a list of Security Policy profiles. For more information on adding a new Security Policy, please refer to Section 3.3.5 of this Manual.

Reporting

- *Email Notification* : This contains a list of profiles that have an associated email account. For more information on adding or editing new email reporting profiles, please refer to the Section Email Notification of this Manual. Please note that this feature is optional.

Advanced

For Site Collection Level or Site Level

- *Lock Site Collection* : locks the specified site collection while this particular backup job is running. The site collection will be read only for users accessing the site collection while this job is running. The site will be unlocked once the job completes.

- *Skip Large Site or Site Collection* : skips any site or site collections greater than the specified size. You can view the skipped sites in job report. It is recommended to use this option to skip large sites and use the item level Granular Backup or Platform Backup to back up these large sites.

For Item Level

- *Generate Full Text Index* : This option will generate a full text index for the content you selected in the backup plan. Then you can use Full Text search options to search the content when you do the restore.

- *Workflow Definition* : This option allows you to back up the workflow state of the contents that you have selected. For details concerning the backup of workflows themselves, please see the section Workflow Definition.

- *Exclude Orphaned My Sites* : If you select this option, it will not backup the orphaned my sites.

- *Archived Data* : You can also select the operation on the archived data by checking the corresponding radio button. Please note this option only works on the item level.

*Note: If you select the *Backup links to content only* option for the Archived Data, only the stubs of the real data will be copied to the destination when restoring, and this may result in orphaned stubs in SharePoint (stubs with no corresponding BLOB data). This may happen When

the real data is deleted, but the corresponding stubs are still pointing to the original BLOB location. For more details, please refer to section Stub Retention Policy of this manual.

5.3.1.2 Choosing Content

To associate data with the custom backup plan, select content via the data tree on the left section of the screen. Prior to the selection, the Farm, Agent Group, and Restore Level must be chosen.

(5-13) Selecting Content

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Custom Backup Builder > Granular Backup*.
2	On the left section of the Custom Backup Builder screen select the desired farm from the drop-down box, and then select an agent group.
3	Select the "Tree Mode" radio button.
4	Select the level from the drop-down box next to Restore Granularity Level. After selecting the desired Restore Level, you may expand the tree to the level you specified.
5	On the data tree, click on the name of the Farm that is currently selected. This will expand the farm node to display all of the SharePoint instances installed within it.
6	Clicking on the name of the SharePoint instances will expand the tree further to display the Site Collections present within the SharePoint instances.
7	Clicking on the name of a specific Site Collection will expand the tree further to display a "." (also referred to as a dot or root directory), as well as the Sites located underneath that specific Site Collection.

Step	Action
8	Clicking on the dot expands the tree to display Folders/Lists and content located directly on the Site Collection. Clicking on individual Site names expands the tree to display Folders/Lists and content located in those individual Sites. ***Note**: By default, when the Items you browse exceed 10, the tree may split across multiple pages. To browse multiple pages, select the page number below the tree.
9	There is a check-box corresponding to each level on the Backup Builder tree which is, by default, unchecked. Check the check-box next to the URL and the entire Site's content will be selected. If you wish to backup only a Site's content, and not backup any of the content within the Site's subsites, click the check-box next to the Site's URL twice, revealing becomes a sideway arrow (▶) in the check-box. When checking a check-box to specify the content to be backed up, the folder icon will include a colored triangle (☑ 📁). The triangle indicates that all new data created in those sites or folders/lists will be automatically picked up by the backup plan. This option is turned on by default. To exclude the new SharePoint content, you need to expand the data tree under the specific node. Click the triangle symbol at the bottom right corner of the node icon **once**, all the expanded nodes except the top node will exclude the new SharePoint content. Click the the triangle symbol at the bottom right corner of the node **twice**, all the nodes besides the top node will exclude the new SharePoint content. ***Note**: It is recommended you to select the Include New feature (making the folder icon with the triangle) when backing up the entire Site. Also note that if you remove the triangle of the Site Collection node, no new Sites created under this Site Collection could be discovered, however, new Lists/Folders/Items could still be discovered in the selected Sites.

*Note: You may refresh the data tree by clicking 🔄 .

*Note: If you want to backup mysite, please make sure the user who is registered for the corresponding agent in Agent Monitor has the Personalization Services Permissions.

5.3.1.3 Choosing Content by Filter Mode

Filter mode allows searching or filtering of sites, subsites, documents or files. This can be done by typing either the exact URL or using wildcards (*) in the appropriate fields.

(5-14) Choose Content by Filter Mode

Step	Action
1	Click the *Filter Mode* radio button.
2	By default, the *Case Sensitive* option is unchecked. To turn on the case sensitive, check this option.
3	There are four options: Rule for Web Applications, Rule for Sites Collections, Rule for Sites and Rule for Lists. Check the box next to each level to activate the filter function for that level.
4	Underneath each activated Rule, input the desired URL. Wildcards (*) are supported here. For example, if your filter must identify all the lists whose names contain test, then *test* can be typed in the corresponding space. Any Web Application. Site Collection, Site containing a list whose name contains test will either be diaplayed or removed from the final list according to your choice in Step 5. You can also filter the content by regular expressions. For example, • *http://server:port/sites/[A-Z]** : find all the site collections whose name is begin with capital letter. • *http://server:port/sites/\d** : find all the site collections whose name is begin with number. • *http://server:port/sites/\D** : find all the site collections whose name is not begin with number.

Step	Action
5	The check box next to each input represents the negate feature. If you want the filter to:

If…	Then…
Include matches	Click this box to set as a + to ensure matching results are displayed.
Remove matches	Click this box to set as a - to ensure matching results will not be displayed.

Step	Action
6	To add an additional URL/wildcard for the Rule, click on the **Add** icon and repeat Step 4. To delete a filter, click the **Remove** icon.
7	Click **Preview** to view the filter result.

5.3.1.4 Searching for Content

For larger SharePoint environments and those with unknown content (including Web Applications, Site Collections, Sites, Lists, Databases, and Folders), we recommend using the search button for rapid targeting of content.

(5-15) Searching For Content

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Custom Backup Builder > Granular Backup*.
2	Click 🔍 located to the right of the URL for each object (when the node is moused over) within the data tree. An Advanced Search pop-up window will appear.

Step	Action
3	Input the exact content name or use wildcards in the text box, Click **Add** to add additional criteria. ***Note**: "*" represents a group of unknown characters during a search (such as *.exe, whereas using "?" represents one character. If two documents, ABC and AXC exist, a search on "A?C" will return both results.)
4	For case-sensitive searches, check the *Case Sensitive* box located in the lower-left of the window.
5	Click **OK** to execute the search. The search result will be listed under the corresponding parent node. Click **Cancel** to cancel the Search and close the Advanced Search pop-up window. ***Note**: If the search does not return any results, please click 🔃 to refresh the data tree, and then search for the content you want to load again.

5.3.1.5 Setting up the Schedule

In order to run the backup plans on a schedule, you must configure them according to the instructions below.

(5-16) Setting Up A Schedule

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Custom Backup Builder > Granular Backup*.
2	In the Schedule area, you can set up to six unique schedules associated with that plan(each represented by one of the Clock icons at the top of the Schedule window). Click on the clock icon and it will become highlighted in yellow.
3	Check the Schedule check-box to activate a Schedule. The clock icon you set currently will be highlighted in green. When you configure other schedules, this active clock icon will be highlighted in blue.

Step	Action
4	Select a Backup Type for the selected schedule. • *Full* : A full backup of the selected source. • *Incremental* : A partial backup where only data that has been added since the last incremental or full backup is backed up. • *Differential* : A partial backup where only data that has been added since the last full backup is backed up. ***Note**: Frequent consecutive differential backups have a tendency to backup the same data over and over again and fill server space quickly. For best results when conducting high frequency backups, it is recommended to use incremental backups. Incremental backups save time and storage space by backing up only the differences between incremental backups or an incremental backup and a full backup, instead of backing up the entire source location.
5	Click on the calendar icon located to the right of the Start Time field.
6	Select a date and time in the calendar pop-up window and click **OK**.
7	Select a time zone in the TimeZone drop-down box. By default, it will be selected according to the Browser's. If the time zone you select is affected by the Daylight Saving Time, the *Automatically adjust clock for Daylight Saving Time* option will appear. It is recommended to select the option.

Step	Action
8	Specify the interval at which the backup will occur. The basic intervals are: • *Only Once* : This plan will run at the specified time • *Every Hour, Day, Week or Month* : This plan will run over a specified interval. The Advanced intervals are as follows: • *Hourly* : You can set the plan to run during production hours only, specified in the time window(s) provided, or at specific hours set in the Select Time Below fields. • *Daily* : This will let you run the plan once a day on week-ends only or weekdays only. • *Weekly* : Specify the days of the week to run the plan on, and after how many weeks to recur. • *Monthly* : This will let you set up a custom monthly plan.
9	Specify an Exclude for this job under the Advanced schedule options. This will allow you to prevent plan from running during scheduled maintenance, holidays, etc..
10	Specify a Time WindowPlan Duration for this job under the Advanced schedule options. This will allow you to terminate the plan after a number of occurrences, or by an appointed date and time.
11	Repeat these steps to create additional schedules (if necessary).
12	Save the plan by clicking **Save**. After the plan has successfully been saved, it will be displayed in the column area on the right.

Step	Action
13	To run the plan immediately, click **Run now**. A pop-up window will appear, select a backup type and whether include detailed job report for all items if you run a item level backup job, and then click **Run** to run this plan. ***Note:** If you check the *Include detailed job report for all items in this plan* box, the detailed report information of this job you download in Job Monitor will be down to item level, or it will be down to list/library level. You can click **Go to The Job Report** to be redirected to Job Monitor to view the job's process, or click **Close** to return from the pop-up window.

5.3.1.6 Loading from Templates

You can also use an existing template in the Granular Backup. Just select a template from the drop-down box next to Use Template. All settings in this Template will be filled in the corresponding fields. Enter the name you wish to give this plan in the Plan Name field. Click **Save** to save the plan with settings of this applied template.

For more information on creating a new template, refer to the Section Template Builder of this Manual.

5.3.1.7 Back Up Workflow Instance at Item Level

In order to back up the workflow state, history and related tasks using the Item Level Backup, please follow the instructions below:

(5-17) Back Up Workflow Instance at Item Level

Step	Action
1	Go to *...\Tivoli\TSM\SharePoint\DocAve5\Agent\data\SP2007* and find the XML file *DocAve.Common.LS.SPWorkflow.Configuration.xml.*

Step	Action
2	There are three attributes in the XML file, which are: • *Configuration ProcessAssociation* : There are two values for this attribute, **True** means to back up the defination of the workflow. By default, the value is **False**. • *ProcessInstance* : There are two values for this attribute, **True** means to back up the instance of the workflow. By default, the value is **False**. • *PerformanceMonitor* : This attribute is used to generate a TXT file in the following path *...\Tivoli\TSM\Share-Point\DocAve5\Agent\temp* to save the detailed information of the performance. Since the content is used for reviewing, the content under this folder will not be cleaned automatically. Please change the value of *Configuration ProcessAssociation* and *ProcessInstance* to **True** and then run the backup job. ***Note**: If one of the following two conditions is met, DocAve will back up the workflow definition: The *Configuration ProcessAssociation* attribute is **True** or the GUI option *Workflow Definition* is checked.

*Note: Backing up the Workflow Instances is only supported for the Item Level Backup and Restore of SharePoint 2007 environment. .NET Framework v3.5 or higher must be installed in the environment.

5.3.1.8 Fast Backup Configuration

DocAve v5 supports a new backup method for incremental backups, resulting in an order of magnitude increase in backup speed over the original backup. This feature is enabled by default, but the original backup method is still configurable.

*Note: This setting is configured on the Agent machine.

(5-18) Configuration for Fast Backup

Step	Action
1	Open the file Env.cfg which is under the directory ...\Tivoli\TSM\Share-Point\ DocAve5\Agent\data\SP2007.

Step	Action
2	Change the attribute to "useOriginalBackup"='true'.
3	After configuring the flag, manually run a new full backup of your plans.

*Note: If you are having trouble with the fast backup please make sure the retention time of the Change Log in SharePoint Content Database is longer than the interval between an Incremental backup and the last backup, or between a differential backup and the last full backup. If the retention time of change log is too short, please edit it according to the following step.

To configure the *changelog* setting, you need to navigate to *Central Administration > Application Management > Web Application General Settings* and select the *Change Log* option.

You can configure the amount of days before the Change log will be deleted. If the interval between an Incremental backup and the last backup(or between an differential backup and the last full backup) is longer than the default days in the Change Log, please change the value of this setting to the greater one.

Changing Backup Method for Agent

For the load balance of backup, if you change the backup method, you need also to configure the *Zeus.BackupMethod* attribute to specify the same backup method for all the agents.

*Note: This setting is only used for Item level backup.

(5-19) Changing Backup Method for Agents

Step	Action
1	Navigate to the file *zeus-job.properties* under directory ...\Tivoli\TSM\SharePoint\DocAve5\Manager\ZeusJob\etc\.
2	Change the attribute of the node Zeus.BackupMethod. *Zeus.BackupMethod=1* represents backing up the content by using the Regular backup method; *Zeus.BackupMethod=2* represents backing up the content by using the Fast backup method. ***Note**: The backup method must be the same as the method you set up in the *Env.cfg* file.

Step	Action
3	After saving the modification, you need to restart the control service to apply the configuration.

5.3.1.9 Currently Supported and Unsupported Elements for Backup

(5-20) Currently Supported and Unsupported Elements for Backup

Source	Type	Status
Libraries	Document Library	Supported
	Form Library	Supported
	Wiki Page Library	Supported
	Picture Library	Supported
	Translation Management Library	Supported
	Data Connection Library	Supported
	Slide Library	Supported
	Report Library	Supported
Communications List	Announcements	Supported
	Contacts	Supported
	Discussion Board	Supported
Tracking Lists	Links	Supported
	Calendar	Supported
	Tasks	Supported
	Project Tasks	Supported
	Issue Tracking	Supported
	Survey	Supported
Custom Lists	Custom List	Supported
	Custom List in Datasheet View	Supported
	Languages and Translators	Supported
	KPI Lists	Supported
	Import Spreadsheet	Supported

Source	Type	Status
Web Pages	Basic Page	Supported
	Web part Page	Supported
	Sites and Workspaces	Supported
Workflow		Customization required
RSS		Customization required
Alerts		Supported
My Alert	Alerts in SharePoint 2003 Personal Site & My Site	Supported
Metadata	Single line of text	Supported
	Multiple lines of text	Supported
	Choice (menu to choose from)	Supported
	Number	Supported
	Currency	Supported
	Data and Time	Supported
	Lookup	Supported
	Yes/No	Supported
	Person or Group	Supported
	Hyperlink or Picture	Supported
	Calculated	Supported
	Business Data	Supported
Security & Properties	Version settings	Supported
	Column Settings	Supported
	Permissions	Supported
Version Histories	Documents	Supported
	Lists	Supported

5.3.2 Platform Backup

Platform Level Backup is a Farm-level recovery solution which enables SharePoint Administrators to backup Web Applications, Content Databases, KnowledgeLake Imaging, search and index servers, Front-End servers and Fast Search servers. Platform Level Backup can also backup file system resources on Front-End servers.

For the minimum permissions required, please refer to the Section Required Permissions for the DocAve Software Agents of this Manual.

*Note: If you want to backup and restore KnowledgeLake Imaging, it is recommended to apply the update patch named *KnowlegeLke September 2010 Cumulative Update Utility_Version 2.0.*

5.3.2.1 Installation

Before the administrator can use SharePoint Platform Level Backup, the Platform Level Backup module needs to be enabled.

*Note: When you setup the DocAve Agent on a SQL server, please make sure the agent host name is a hostname not the IP address. If you setup it as an IP address, it will cause some issues.

To ensure that Platform Level Backup is enabled on the DocAve Agent Host, please proceed as follows:

(5-21) Installation

Step	Action
1	Log onto the server where the DocAve Agent is installed.
2	Click **Start** located on the menu taskbar and navigate to *All Programs > TSM for SharePoint.*
3	Open the **Agent Configuration Tool** on the Agent machine.
4	Specify all appropriate port and machine configurations.

Step	Action
5	Proceed to the *Data Protection* tab and select the type of DocAve Agent to install.

	If…	Then…
	The Agent is specified to be a Control Agent.	This component is required to be installed on the SharePoint Front-end Web server. In a SharePoint farm with multiple Front-end Web servers, only one SharePoint Front-end Web server can be configured as *Platform Level Backup Control Agent*.
	The Agent is specified to be a Member Agent.	This component can be installed on any server in the SharePoint Farm. For example, Platform Level Backup Member Agent can be installed on the Database server, Fast Search server, Index server and/or Front-end server.

Step	Action
6	Click **Confirm** to finish the configuration and restart the DocAve Agent Services.

DocAve Platform Level Backup loads and browses for the Member Agents through the Control Agent. It also performs backups for both Control and Member Agents.

*Note: To backup Fast Search servers, you must install Member Agents on all of them.

*Note: Platform Level Backup supports SQL clustering. If cluster failover support is required, a member agent must be installed on each SQL cluster node, otherwise a member agent only needs to be installed on the active node. When configuring the member agent, be sure the 'Agent Name' field matches the cluster physical node name.

Additionally, the DocAve agent account must have the following permissions:

- View Server State permission on SQL server to query the SQL cluster nodes.

The administrator must have the following general permissions to enable platform-level backup (i.e. not only for SQL clustering):

- Member of the local administrator group
- Granted the following privileges in local security policy: Act as part of the operating system and Replace a process level token. (log off and log back in to let these changes take effect)

- For a SharePoint Control Agent User, also needs SharePoint Farm Admin, SQL 'Security Admin' and 'Database Creator' roles, and SQL 'View Server State' permission
- For a SQL Server Member Agent User, need SysAdmin server role

5.3.2.2 Basic options

The first and most important thing when constructing a new backup plan is selecting the various options. Options available here apply to Platform Backup and must be configured ahead of time in the Control Panel. Please refer to Section 3 of the manual for further description of Platform Backup-Related options configuration.

Each option is displayed as a drop down box. Each selection in the drop down box can be added or modified from the Control Panel.

- *Agent Host* : This allows administrators to specify an agent Host.

Data Manager:

- *Backup Method* : The Backup Method drop-down box is where the administrator can specify the method for backing up the database. Here DocAve v5 supplies two options. One is VDI, the other one is VSS. The VDI method is selected by default. See the section below for a description both of VDI and VSS.

- *Data Pruning* : This is where the administrator can specify the pruning policy for the data generated by this backup plan. By selecting a Pruning Profile, the administrator can specify how long the data generated by this plan is retained. For more information on adding new profiles, please refer to Section Data Pruning of this Manual. Please note that this feature is optional.

- *Logical Device* : This contains a list of logical drive profiles that will designate where the backup data will be stored. For more information on adding a new location for backup data, please refer to Section Device Manager of this Manual.

  *Note: This module supports the following device types: NetShare, FTP, TSM, EMC and Cloud (RackSpaceCloudFiles/MSFT Azure/AmazonS3/EMC Atmos/AT&T synaptic)

Data Configuration:

- *Data Configuration* : This is where the administrator can specify where the encryption and compression will be carried out, whether on the Media Agent or the SharePoint Agent. Please note that NO Compression and Encryption is the default option.

Reporting:

- *E-mail Notification* : This contains a list of profiles that have an associated email account. For more information on adding or editing new email reporting profiles,

please refer to the Section Email Notification of this Manual. Please note that this feature is optional.

Advanced

- *Perform copy-only full backups* : Copy Only will allow the user to only execute full Platform Level backups. It will backup the database directory without any SQL transaction logs. It will avoid the influence of the database which is backed up by using the SQL backup feature or the third parties software when restore the database.

- *Perform log backup after full backup* : If you select this option, it will backup the log after the full backup job completed. If you select the copy-only option, this option will be disabled. By default, this option is checked.

VDI versus VSS

VDI option uses SQL Server Virtual Device Interface (VDI) to protect the SharePoint databases. It is a flexible stream based backup/restore method.

VSS option uses Microsoft Volume Shadow Copy Service (VSS) snapshot technology. A VSS Backup will have less impact on the SQL server because the length of time to perform the snapshot is usually much shorter than a regular backup. In addition, it does not need to pause the SharePoint indexing crawl during backup.

In order to use the VSS option for the Platform Level Backup module please make sure that the following SharePoint hotfixes are applied:

- http://support.microsoft.com/kb/940349/ - VSS update for Windows Server 2003
- http://support.microsoft.com/kb/936867/ - Security Update for SPS 3.0
- http://support.microsoft.com/kb/937832/ - Security Update for SPS 2007
- http://support.microsoft.com/kb/941422/ - Security Update for SharePoint

*Note:

- If the first backup run is a differential or incremental backup, it will be forced to run as a full backup.
- After changing the attribute of a plan, such as adding a database, changing it into copy-only, etc, you must save this plan again.
- VSS supports multi-plan parallel running. Although you can create a multi-plan to assign the task, these plans cannot be run at the same time.
- VSS cannot support SQL Server Cluster 2000
- VSS cannot backup SharePoint Learning Kit
- VSS cannot backup Alias DB and Full DNS DB
- VSS cannot backup the DB if its data is stored in mount point volume. (for more information about mount point volume, please reffer to http://msdn.microsoft.com/en-us/library/aa365733(v=VS.85).aspx)

- DocAve v5 does not support SSP differential restore due to a known Microsoft VSS issue. If the users select the differential or incremental node on the restore GUI, the related nodes for SSP are not available.

The following is a comparison chart to help decide which method best fits your needs:

(5-22) VDI versus VSS

Feature	VDI	VSS
Backup's impact on SQL server	Small	Minimal
SQL 2005 support	Full, Diff., Incr.	Full, Diff., Incr.
Out-of-place restore (DB, Index)	Yes	No
Pause index crawl during backup	Yes	No
High Availability: Log Shipping from Platform-level Backup	Yes	No
Requires SharePoint Hotfix	No	Yes
SSP restore from differential backup	Yes	No
Multiple plans run in parallel	Yes	Yes

5.3.2.3 Choosing Content

After completing the configuration of the basic Platform Backup options listed in the previous section, proceed to selecting the data to be backed up.

To back up a SharePoint 2007 farm, complete the following steps.

(5-23) Choosing Content in SharePoint 2007 environment

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Custom Backup Builder > Platform Backup*.
2	On the backup tree builder window, name of the Agent Host selected will now be displayed in the area directly underneath. Clicking on the Agent displays the SharePoint Farm topology.

Step	Action
3	The expanded tree mode lists the SharePoint_Config, Windows SharePoint Services Web Application, WSS_Administration, KnowledgeLake Imaging, SharedServices1, Global Search Settings, Windows SharePoint Services Help Search, Info Path Form Services, Windows SharePoint Solutions FAST Search Server Farms and SharePoint Front-End Web Servers. Excepting the SharePoint Front-End Web Servers, the tree can be expanded to the lowest level. For each selected level:

If…	Then…
SharePoint_Config	It will display the SharePoint configuration database. You can click the *Browse Content* icon to view all the site collections stored in this database in the pop-up window. The registered user of control agent must have read or higher permission to the corresponding web application of the database besides the required permissions for Agent.
Windows SharePoint Services Web Application	It will display the SharePoint Web Application and the web application's Content Database(s).
WSS_Administration	It will display the WSS_Administration Database.
KnowledgeLakeImaging	It will display the following components: Index Component, View Component, Export Component, Search Component, Search Component and print Componnet.
SharedServices1	It will display the SharePoint Shared Service Provider (SSP) related components, including SSP database, search database and index. If project server is installed, project server databases are also listed under SSP.
Global Search Settings	It will display the Global Search Setting database.

Step		Action
	InfoPath Form Services	It will display all the form templates that are installed on the SharePoint Web Front End and Form Services Configuration.
	Windows SharePoint Solutions	It will display the SharePoint solution's installation files.
	Front-End Web Servers	It will display the IIS settings, SharePoint template hive, custom features, GAC (Global Assembly Collection) and custom site definitions. File system folders can also be expanded and included. *Note: If you want to select the GAC to restore, please make sure that only SharePoint customization related assemblies are selected for restore. Restoring system assemblies are not recommended. They must be installed using original installer.
4	There is a check-box corresponding to each level on the data tree, the box is unchecked by default. Checking the box indicates that all content on that level and underneath that level will be backed up.	

To back up a SharePoint 2010 farm, complete the following steps.

(5-24) Choosing Content in SharePoint 2010 Environment

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Custom Backup Builder > Platform Backup*.
2	On the *Backup Tree Builder* window, name of the Agent Host selected will now be displayed in the area directly underneath. Clicking on the Agent displays the SharePoint Farm topology.

Step	Action
3	The expanded tree mode lists the SharePoint_Config, SharePoint Server State Service, Microsoft SharePoint Foundation Web Application, WSS_Administration, SharePoint Server State Service Proxy, SPUserCodeV4, Microsoft SharePoint Server Diagnostics Service, Global Search Settings, Application Registry Service, Microsoft SharePoint Foundation Diagnostics Service, Shared Services, InfoPath Form Services, Windows SharePoint Solutions, Fast Search Server Farms and SharePoint Front-End Web Servers. Excepting the SharePoint Front-End Web Servers, the tree can be expanded to the lowest level. For each selected level:

If…	Then…
SharePoint_Config	It will display the SharePoint configuration data-base.
SharePoint Server State Service	It will display the database of the SharePoint Server State Service.
Microsoft SharePoint Foundation Web Application	It will display the SharePoint Web Application and the web application's Content Database(s), and the node named [Time Jobs Group] contains the status of all the Job Definations defined under the Web Application. ***Note**: If you back up the status of a Customized SharePoint Job Defination and then want to restore it to a specific Farm, please ensure that the related Customized Solutions or Features are deployed in the Farm beforehand.
WSS_Administration	It will display the WSS_Administration Database.
SharePoint Server State Service Proxy	It will display the Proxy of the SharePoint Server State Service.

Step		Action
	SPUserCodeV4	It will display the properties of SharePoint 2010 Sandbox Solution, including [Solution Validators Group], Sandboxed Code Load Balancer Provider using Popularity, [Resource Measures Group] and [Execution Tiers Group].
	Microsoft SharePoint Server Diagnostics Service	The node contains the diagnostic information of Microsoft SharePoint Server.
	Global Search Settings	It will display the Global Search Setting database.
	Application Registry Service	It will display the Application Registry Service and its database.
	Microsoft SharePoint Foundation Diagnostics Service	The node contains the diagnostic information of Microsoft SharePoint Foundation.
	Shared Services	Shared Service Applications will display the Search Service Application and its Administration Database,Crawl Database and Property Database. And some other Service Applications and the corresponding databases. Shared Service Proxies will display the corresponding proxies of the Service Applications.
	InfoPath Form Services	It will display all the form templates that are installed on the SharePoint Web Front End and Form Services Configuration. The Data Connection Files and Exempt User Agents are also displayed.
	Windows SharePoint Solutions	It will display the SharePoint solution's installation files.

Step		Action
	Fast Search Server Farms	It will display all the Fast Search Server Farms associated with SharePoint. When you select Fast Search Server Farm, there will be a popup message to prompt you to backup the content SSA together. If you click **OK**, the content SSA will be selected automatically. It is recommended to backup and restore the content SSA together. You can refer to the link for more information: http://technet.microsoft.com/en-us/library/ff460221.aspx
	Front-End Web Servers	It will display the IIS settings, SharePoint template hive, custom features, GAC (Global Assembly Collection) and custom site definitions. File system folders can also be expanded and included. ***Note**: If you want to select the GAC to restore, please ensure that only SharePoint customization related assemblies are selected for restore. Restoring system assemblies are not recommended. They must be installed using original installer.
4	There is a check-box corresponding to each level on the data tree, the box is unchecked by default. Checking the box indicates that all content on that level and underneath that level will be backed up.	

*Note: If a database has been selected in an existing backup plan, it cannot be selected in other plan.

5.3.2.4 Setting up a schedule

After selecting the content to be backed up, specify the frequency of the backup job.

(5-25) Setting Up A Schedule

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Custom Backup Builder > Platform Backup*.
2	In the Schedule area, you can set up to six unique schedules associated with that plan(each represented by one of the Clock icons at the top of the Schedule window). Click on the clock icon and it will become highlighted in yellow.
3	Check the Schedule check-box to activate a Schedule. The clock icon you are setting currently will be highlighted in green. When you configure other schedules, this active clock icon will be highlighted in blue.
4	By selecting the Restore Granularity Level check-box, you can set the level of granularity on restore. Choosing Item Version Level will allow you to restore individual files and file versions during a Platform Level restore, while choosing Item will allow you to restore individual files. ***Note**: Generating index files to increase restore granularity will result in longer backup duration.
5	Select a Backup Type for the selected schedule. • *Full* : A full backup of the selected source. • *Incremental* : A partial backup where only data that has been added since the last incremental or full backup is backed up. • *Differential* : A partial backup where only data that has been added since the last full backup is backed up. ***Note**: Frequent consecutive differential backups have a tendency to backup the same data over and over again and fill server space quickly. For best results when conducting high frequency backups, it is recommended to use incremental backups. Incremental backups save time and storage space by backing up only the differences between incremental backups or an incremental backup and a full backup, instead of backing up the entire source location. ***Note**: Between the incremental job and the full job before it, you cannot use the third party's tool to backup the database or backup the database manually. They will make the incremental backup job failed.

Step	Action
6	Click on the calendar icon located to the right of the Start Time field.
7	Select a date and time in the calendar pop-up window and click **OK**.
8	Select a time zone in the TimeZone drop-down box. By default, it will be selected according to the Browser's. If you select the time zone which is affected by Daylight Saving Time, the Automatically adjust clock for Daylight Saving Time checkbox will appear. It is recommended to select this option.
9	Specify the interval at which the backup will occur. The basic intervals are: • *Only Once* : This plan will run at the specified time • *Every Hour, Day, Week or Month* : This plan will run over a specified interval. The Advanced intervals are as follows: • *Hourly* : You can set the plan to run during production hours only, specified in the time window(s) provided, or at specific hours set in the Select Time Below fields. • *Daily* : This will let you run the plan once a day on week-ends only or weekdays only. • *Weekly* : Specify the days of the week to run the plan on, and after how many weeks to recur. • *Monthly* : This will let you set up a custom monthly plan.
10	Specify an Exclude for this job under the Advanced schedule options. This will allow you to prevent plan from running during scheduled maintenance, holidays, etc..
11	Specify a Time WindowPlan Duration for this job under the Advanced schedule options. This will allow you to terminate the plan after a number of occurrences, or by an appointed date and time.
12	Repeat these steps to create additional schedules (if necessary).

Step	Action
13	Save the plan by clicking **Save**. After the plan has successfully been saved, it will be displayed in the column area on the right.
14	To run the plan immediately, click **Run now**. A pop-up window will appear, you should select a Backup Type, and then click **Run** to run this plan. If you want to restore the content of the database at a specified granularity level, you can check the **Restore Granularity Level** option and choose the desired level. If you select this option, it will take some time to generate the corresponding index for restore. You can click the **Go to The Job Report** button to be redirected to Job Monitor to view the job's process, or click **Close** to return from the pop-up window.

*Note: When scheduling an Incremental or a Differential backup, a Full backup must also be included within the same plan by including it in another available Schedule. Incremental and Differential backup require a Full backup in order to function properly. We recommend using Schedule A as a Full Backup on Sunday and Schedule B as an Incremental backup every day except Sunday.

5.3.2.5 Supported In-place and Out-of-place Features for SharePoint 2007 Environment

Please refer to the following table for the detailed information of the currently supported in-place and out-of-place features for SharePoint 2007 environment.

(5-26) Supported In-place and Out-of-place Features for SharePoint 2007 Environment

Features	Supported in In-place Restore	Supported in Out-of-place Restore	Notes
Configuration Database	√	×	
SharePoint Web Service	√	×	Windows SharePoint Service Web Application and WSS_Administration
Central Admin Web Application	√	×	

Features	Supported in In-place Restore	Supported in Out-of-place Restore	Notes
Admin Content Database	√	×	
Web Application	√	√	
Content Data-base	√	√	
SSP	√	√	SSP Properties and SharedService_DB
SSP Osearch Index	√	√	We recommend backing up and restor-ing it with SSP together.
SSP Project Server Applica-tion	√	√	PWA Site should be backed up and restored together with the web applica-tion to which it belongs.
Global Search Settings	√	√	Farm-level search settings and Crawler impact rules
SharePoint Help Search	√	×	
InfoPath Form Services	√	√	InfoPath Forms Services Settings and InfoPath Forms Services From tem-plates
SSO	√	√	SSO Database and some configuration in Manage Settings for Single Sign-On
FBA Databases	√	×	The FBA Database and some configura-tion in the Web.config under WebApp IIS Setting (eg: Connection Strings, MemberShip-Provider, RoleManagerProvider)
SLK	√	×	SLK Database
Windows SharePoint Solutions	√	√	The uploaded Solution and its configu-ration in the Solution Management

Features	Supported in In-place Restore	Supported in Out-of-place Restore	Notes
Front-end Web Server	√	√	IIS Settings, which can be set individually in the WFE server and not saved in SharePoint such as Form Authentication, SSL certification and so on. SharePoint Template directory, it is the most important directory to record the IIS extension. Most useful files like feature files and site definition files in the WFE all can be saved in this directory. In addition, PR can also backup and restore the file system in the WFE server.
Farm Level Backup and Item Level Restore	√	√	This feature has been implemented in 4.5.2 or above. If you want to do item level restore, you should generate index when you do a backup. However, this will affect the backup performance. This is optional.

5.3.2.6 Currently Supported and Unsupported Service Applications for SharePoint 2010 Environment

Please refer to the following table for the detailed information of the currently supported and unsupported Service Applications for SharePoint 2010 environment.

(5-27) Currently Supported and Unsupported Service Applications for SharePoint 2010 Environment

Service Application	Database(s) of the Service Application	Supported in In-place Restore	Supported in Out-of-place Restore
Access Services	This Service Application does not have a database	√	√
Application Registry Service	application registry service database	√	×
Business Data Connectivity Service	Bdc_Service_DB(Business Data Connectivity Database)	√	√

Service Application	Database(s) of the Service Application	Supported in In-place Restore	Supported in Out-of-place Restore
Excel Services Application	This Service Application does not have a database	√	√
Managed Metadata Service	Managed Metadata Service_Database(Service Application Database)	√	√
Performance-Point Service Application	PerformancePoint Service Application_Database(Microsoft.PerformancePoint.Scorecards.BIMonitoringServiceDatabase)	√	√
Search Service Application	Search_Service_Application_DB(Administration Database) Search_Service_Application_CrawlStoreDB(Crawl Database) Search_Service_Application_PropertyStoreDB(Property Database)	√	Search Service Application(Native) is supported and Search Service Application(Fast) is not supported.
Secure Store Service	Secure_Store_Service_DB(Secure Store Service Database)	√	√
Security Token Service Application	This Service Application does not have a database	√	×
State Service	StateService_Database(State Service Database Settings)	√	×
User Profile Service Application	User Profile Service Application_ProfileDB (Microsoft.Office.Server.Administration.ProfileDatabase) User Profile Service Application_SyncDB(Microsoft.Office.Server.Administration.SynchronizationDatabase) User Profile Service Application_SocialDB (Microsoft.Office.Server.Administration.SocialDatabase)	√	√
Visio Graphics Service	This Service Application does not have a database	√	√

Service Application	Database(s) of the Service Application	Supported in In-place Restore	Supported in Out-of-place Restore
Web Analytics Service Application	WebAnalyticsServiceApplication_StagingDB(Web Analytics Staging Database) WebAnalyticsServiceApplication_ReportingDB(Web Analytics Warehouse Database)	√	√
Word Automation Services(Word Conversion Service)	WordAutomationServices_Database(Microsoft.Office.Word.Server.Service.QueueDatabase)	√	√
Lotus Notes Connector	–	×	×
Usage and Health data collection	–	×	×
Word Viewing Service	–	×	×
PowerPoint Service Application	–	×	×
Project Service Application	–	×	×
SQL Server PowerPivot Service Application	–	×	×
Subscription Settings Service Application	Subscription Settings Database	×	×

*Note: DocAve v5 supports SSP and Project Server backup and restore. In order to run a Project Web Access (PWA) backup and restore, the PWA, the web application to which the PWA belongs, and the databases located beneath the PWA must be selected (see the picture below):
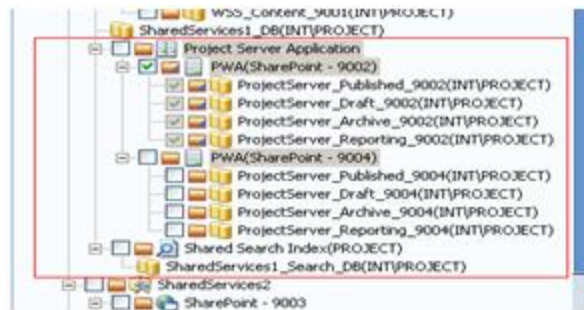
If the items mentioned are not all selected, the PWA site cannot be used after the restore. For more details about Project Server support, please see the section of the Appendix DocAve Solution for Microsoft Office Project Server 2007.

*Note: The Project Server 2010 backup and restore is not supported by DocAve 5.5.3.

*Note: DocAve supports Transparent Data Encryption(TDE) of SQL Server 2008.

5.3.3 Custom Backup CLI

DocAve Custom Backup supports the administrator to run the backup plan by using CLI (Command line Interface)

You need to configure DocAveBackup.bat under the directory ...\Program Files\Tivoli\TSM\Share-Point\DocAve5\Manager\ZeusCLI\bin\DocAveBackup.bat

To run a granular backup job, execute the following command:

backup -t backupType -n planName

To run a platform backup job, execute the following command:

backup -t backupType -n planName -r restoreLevel

There are several settings you need to configure.

Basic Settings

- *backupType* : The type of the backup job.
        backupType = "F" represents Full Backup Job
        backupType = "I" represents Incremental Backup Job
        backupType = "D" represents Differential Backup Job

- *planName* : The name of the running plan.

if you want to run a platform backup job, you also need to specify the restore index level for the backup job.

- *restoreLevel* : The restore Granularity level of the job.
  - restoreLevel = "1001" represents No Index
  - restoreLevel = "1002" represents Site Collection
  - restoreLevel = "1003" represents Site
  - restoreLevel = "1004" represents Folder
  - restoreLevel = "1005" represents Item
  - restoreLevel = "1006" represents Item Version

After executing the command line, you can use the DocAveBackupJobReportCollector.bat to view the job report.

5.4 Restore Controller

After a backup plan has completed successfully, the backup data is ready for browsing. To perform a restore, enter the Restore Controller to begin browsing the backup data. In this section, there are three kinds of the restore mode: Granular Restore, Platform Restore and Restore From SQL Backup.

Some operations require additional settings that must be configured prior to restoring contents to SharePoint and these are described below in the Settings section.

*Note: Currently DocAve does not support restoring SharePoint 2007 backup data to SharePoint 2010 environment directly, this includes the backup data from Granular Backup, Platform Backup and SQL Backups.

5.4.1 Settings

Before running a restore job, you must make sure the basic settings for it have been configured.

5.4.1.1 Staging SQL Server Info

The options below will let you specify a SQL location to perform a restore of contents on a more granular level than the content database. By default, the local instance is used.

(5-28) Staging SQL Server for Platform Restore

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Settings > Staging SQL Server Info*.
2	Click **New** and enter a name for the profile.
3	Under the connection Info, you must enter the information to connect to the SQL server.
4	Select an Agent name from the drop-down box, it will list all the SQL instances of this agent in the SQL Instance Name drop-down list.
5	Select an instance from the drop-down box.
6	Select an Authentication from the drop-down box. If you select the SQL Server Authentication option, you need to enter the necessary information in the SQL Username and Password fields.
7	Under Temporary Database Configuration, you can setup the following two options: • *Minimum amount of free space to leave* : Enter a positive number into the text box to specify the minimum free space to leave on the disk. You can also select the unit used for measurement in the following drop-down box. • *Temp Database fIle Location* : This option is used to specify a location for the temporary database. Enter the path and click **Test**.
8	Click **Save** to save the configuration, it will be listed under the SQL Server Profiles column on the right-hand side.

5.4.1.2 Restore to File System

Restore to file system is used for out-of-place restore of contents directly to the file system. To setup a location, please follow the steps below:

(5-29) Location Setup

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Settings > Restore to File System*.
2	Click **New** and enter a name for the location profile.
3	Input the username as domain\username format and then type in the password to set up access to the path that data will be written to and stored.
4	Click **Test** to test the specific path.
5	Click **Save** to save the profile aftera successful test, the profile will be listed in the Restore to File System column on the right side of the screen.

5.4.2 Granular Restore

After running a granular backup, you can restore the backup data in Granular Restore.

5.4.2.1 Finding a date range

In order to view all backup data available, you must specify the Farm and the Time Period. This will allow you to see a timeline of all backup data available for the range you defined.

(5-30) Finding A Data Range

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Granular Restore*.
2	Select a farm from the drop-down box.

Step	Action
3	You can choose a time range in the Time Window field. By default, it is one week before the current time.
4	You can click on the calendar icons to the right of the *From* field and the *To* field to change the time range. Select a date and time in the calendar pop-up window and click **OK**.
5	Check the *Include Job(s) with partial backup data* option to show data you backed up successfully in the failed job(s).
6	You can filter the plans by clicking *Additional Filters* to filter the results displayed on the timeline.

In the *Additional Filters* window, you can filter the plans by the Plan Name, Backup Mode, Backup Type and Restore Granularity Level by selecting the corresponding check-box(es).

- *Plan Name* : Select the plan you want to display from the drop-down box. You can select *Select All* box to select all plans.

- *Backup Method* : There are two options you can select: Automated Backup, and Granular Backup. To select the Automated Backup option, it will display the backup jobs performed by *Automation Center*. To select the *Granular Backup*, the backup jobs performed by Granular Backup will be displayed.

- *Backup Type* : There are three options you can select: Full, Incremental, and Differential. Select the backup type by clicking the correponding check-box, then the appropriate backup jobs will be displayed.

- *Restore Granularity Level* : There are three options: Site Collection,Site and Item. The corresponding backup job whose Restore Granularity Level is the specified level will be displayed.

Click **OK** to save the selection. |
| 7 | Click **Load Timeline**. The time points at which you ran the backup jobs will be displayed on the time-line. |

Step	Action
8	By clicking on the time point, detailed data and time information for the job will be shown in the pop-up bubble.
9	By clicking on the time point, you can review the content of the job in the tree mode on the left of the screen. ***Note**: If the backup job you want to load is encrypted, it will ask you to enter the corresponding password to access the data.

5.4.2.2 Historic View vs. Single Point View

The data tree mode allows administrators to view the entire topology of their SharePoint environment while navigating. The name of the farm you have selected will be displayed in the area directly underneath, ready for browsing.

There are two viewing methods: Historic View and Single Point View.

- *Historic View* : The Historic View lists all of the backup data before the time point you have selected on the time line.

- *Single Point View* : Single-Point View lists only the backup data of the specified time point.

For example, If you want to log in to find the latest copy of somethingand you would like to see the whole farm, you do not have to navigate to that individual backup job by using Historic View. However, you must also point out the time-stamps in this view to ensure that you can view when each node was backed up. If you only want to know what was in a single backup plan, you can use Single Point View.

5.4.2.3 The tree browser / search results

Browsing for the backup data to be restored

(5-31) Browsing For The Backup Data

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Granular Restore*.

Step	Action
2	Select one view method in the drop-down box at the top right corner of the tree mode area. By default, the Single Point View is selected.
3	Click on the time point to display the available backup data.
4	Browse through the backup data by clicking on the SharePoint instance to expand the Site Collection located beneath the instance.
5	Click on the name of a specific Site Collection to expand the data tree.
6	Clicking on the "." expands the tree to display Folders/Lists and content located directly on the top Site of the Site Collection. Clicking on individual Site names expands the tree to display Folders/Lists and content located on those individual Sites.

Step	Action
7	Select the data to be restored. There is a check-box corresponding to each level on the backup tree which is unchecked by default. You can check the *Select All* box to select all backup data to restore.

If...	Then...
Restoring a File/ File Version	1. Navigate to the Library/List which contains the File/ File Version. 2. Click the ⓘ icon to the right of the Library/List. 3. Check the corresponding check-box next to the File/File Version located in the pop-up window.
Restoring only a Site Collection	1. Navigate to the Site Collection and expand its data tree. 2. Check the box next to the "." Beneath the site collection and the entire site collection contents will be selected. 3. If you want to restore only a Site Collection content, check the box next to the Site twice and the check mark becomes a triangle (▶) in the check-box.
Restoring a Site	1. Navigate to the Site. 2. Check the box next to the Site to select the Site and its content.

Step	Action
8	You can search for a Site/List/Folder/File/File Attribute/Full Text by clicking on the search icon next to the Site URL.

Searching for the backup data to be restored

For larger backups that contain a significant amount of content, browsing through the data for the restore can be inefficient and tedious. For these cases the search mode is recommended.

(5-32) Searching For The Backup Data

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Granular Restore*.
2	Directly to the right of each site URL there is a search icon 🔍. Clicking on the icon will open a pop-up window which allows an advanced search for the desired content to be restored.
3	In the search pop-up, select a type of content and add a search criterion in the criteria field. After clicking **Add**, the criteria will be listed underneath. ***Note:** 1. You can only search the content under the job that you select on the timeline. 2. The search can be restricted to be case sensitive by selecting the check-box provided.
4	Click **OK** and you will see a list of all results in the *List Mode*.

5.4.2.4 How to view individual documents

To view the individule documents, see the following steps.

(5-33) View Individual Documents

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Granular Restore*.
2	You can view an individual document by clicking the icon ℹ️ at the end of the URL. A pop-up window will appear listing all individual documents.

Step	Action
3	To ensure that all metadata and version histories will be restored, it is very important to check both the Securities and the Properties boxes when selecting the content.

5.4.2.5 Restore Options

You can specify one of the restore options from the drop-down list: Not Overwrite, Overwrite, Overwrite by Modified Time, Append and Replace.

- *Not Overwrite* : DocAve will not restore the content if it already exists on the destination. For example, if an entire folder's content is selected for restore, but only one document was removed from the destination folder, only the removed document will be restored. Selected this option, a check-box *Include Recycle Bin Data* appears. If you select the *Include Recycle Bin Data* check-box and there are the items with the same name in the Recycle Bin, DocAve will not restore the data. If not, DocAve will not check the data in the recycle bin. By default, this check-box is selected.

- *Overwrite* : DocAve will restore the content over duplicate content on the destination. This will delete the content on the destination and replace it with the content selected to be restored.

- *Overwrite by Modified Time* : DocAve will restore the content over duplicate content on the destination only when the modified time of the backup data is later than the modified time of the destination. You can use this if you have restored content to SharePoint through another method (i.e., farm-level or database-level restore) and want to ensure that the destination has the latest data intact on a granular level.

- *Append* : It will create a new item and restore the data to it whatever the item exists in the destination.

  ***Note**: This option is only used for SharePoint 2007 item level.

- *Replace* : This option will delete all content in the container of the destination before performing the restore. This can be used to remove unwanted content that will not be deleted by the *Overwrite* option. (This can be looked at as a *Reset* function, to restore a list or library to its original state, removing any contents added since the time of the backup point selected for restore.)

***Note**: By default Overwrite Option looks at items based on the *ID* metadata column. This can be adjusted in the out-of-place restore controller to base on other columns, such as author, modified time, version numbers, or any custom columns defined in the destination list. In order to access this, open the destination SharePoint tree, browse to a list, and use the 🗒 icon to open a new pop-up. This will let you choose which columns are used for the Overwrite comparison.

*Note: If the column you selected does not exist in the source, DocAve will add this item in the destination; if there is a different type but with the same name column in the source, it will add this item in the destination; if you perform a restore from list to list without selecting any column as the conflict rule, it will add this item in the destination.

5.4.2.6 How to perform a restore

At the bottom-right section of the Restore Controller, the type of restore (either In Place or Out-of-Place) can be selected. An In Place restore allows the restore of backup data to its original location. An Out-of-Place restore allows the user to specify an alternate location for the backup data to be restored to.

(5-34) Perform Restore

Step	Action	
1	Select either an In Place restore or Out of Place restore by selecting the corresponding radio box within the Restore Setting window on the right of the screen.	
	If…	**Then…**
	In Place	Click the *In Place* radio button.

Step	Action
Out of Place	1. Click the *Out of Place* radio button. You can select restoring the data to file system or a farm from the drop-down list. 2. If you select the File System, the *Restore Location* drop-down box will appear. Select the location from the list. For more information about the location setup, please refer to Section Restore to File System of this Manual. 3. Click the ... button next to the destinaiton. A pop-up window will appear, select the destination by clicking the radio button in the tree, then click **OK**, the location you select will be listed next to the Destination box. 4. If you select a farm to restore, the *Agent Group* drop-down box will appear. Select an agent from the drop-down box. 5. Click the ... button next to the destinaiton. A pop-up window will appear, select the destination by clicking the radio button in the tree, and select a language from drop-down box for the specific location, then click **OK**, the location you select will be listed next to the Destination box.

Step	Action
	6. There is a blank field corresponding to each level in the URL tree. DocAve can create a new Site Collection, Site, or Folder/List by providing a name in the blank field. Make sureEnsure that the box has been checked before typing. For a new Site Collection, the full URL must be used. At the Site or Folder/List level, just the name of the location is sufficient. If you want to create a new site collection, you need to click **Configure** to select a Language and Content Database for the site collection. If the destination site is created with form based authentication, enter a form based authentication user in *SiteCollection Administrator* field, otherwise, the Site Collection will not be created. 7. You can select a language mapping from the drop-down list. For more information for the language mapping, please refer to Section Language Mapping of this mapping.

Step	Action
2	Within the *Advanced Options* tab, there are several options you can select for the restore job, if the content you select is backed up on item level. • *Workflow Definition* : You can select this option to restore all workflow data with the file. For more information, please refer to the section Workflow Definition. ***Note**: DocAve only supports to restore the workflow which is created in the third party tool *SharePoint Designer*. • *Create a new version for duplicate items/documents* : If you restore an entire site with overwrite, but there are items / documents in a versioning enabled list on this site, it overwrites all other content, but just add a new version to the contents in those versioning enabled lists. ***Note**: Please make sure the lists/libraries you want to restore using this option have enabled the Versioning feature. This option supports both SharePoint 2007 environment and SharePoint 2010 environment. • *Restore contents to a subfolder/subsite* : It will restore the content to the folder/site under the selected destination. ***Note**: This option is only available when using the out-of-place restore, and the source and destination are both on site level or folder level. This option supports both SharePoint 2007 environment and SharePoint 2010 environment. • *Include detailed job report for all items in this plan* : If you select this option, it will list the detailed information for all restore items in job report. You can view the detailed report in Job Monitor. • *Restore the latest... versions* : It will restore only the specified versions of the items. You can select to restore the major versions only or both the major and minor versions. • *Restore large site collection by DocAve Restore Method* : Since the site collections larger than 15 GB cannot be restored by SharePoint, you can select this option to restore large site collection by DocAve Restore. Specify the size in **Size greater than** field. The site collections larger than the size specifed will be restored by DocAve Restore Method. ***Note**: This option is only available for SharePoint 2007 Site Collection level restore. Reset IIS to clear the cache after the restore job.

Step	Action
3	Within the *Default Options* tab, select a *Restore Option* from the drop-down list. For more information, please refer to Section Restore Options of this Manual.
4	Select a time for the restore to run. By default, Now is selected and DocAve will run the process as soon as Go is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and then select a date and time in the pop-up calendar window and click **OK**.
5	You may enter a **Description** in the field provided to help distinguish this job from the others in the Job Monitor.
6	Click **Data Size** to display the data size of the selected backup data in a pop-up.
7	Click **Go**. If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. If you click **Go**, you can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

*Note:** In SharePoint 2010 environment, the Archive stub which is created by using Attachment Rule in Archive job will be changed to real data in the destination after the Granular restore.

5.4.3 Platform Restore

Navigate to Platform Restore under Restore Controller in Data Protection. You can restore the backup data in this section for your SharePoint Content Database (including on the granular level when indexed), Front-End Web Servers' Settings and files, and other SharePoint databases and configuraitons.

In order to restore data, you will need to select a farm, the time range in which your backup took place, and find the contents beneath. See the sections below for more details.

5.4.3.1 Finding a date range

In order to browse the timeline, you must first select a date and time range to search for content.

(5-35) Finding A Data Range

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Platform Restore*.
2	Select an agent from the drop-down box.
3	You can hide the jobs that have not been completely indexed by checking the corresponding box. It supports both SharePoint 2007 environment and SharePoint 2010 environment.
4	You can choose a time range in the Time Window fields for *From* and *To*. By default, it is one week before the current time.
5	You can click on the calendar icon to the right of the *From* and *To* field to change the time range. Select a date and time in the calendar pop-up window and click **OK**.
6	Click **Load Timeline**. It will display the time points at which you run the backup jobs on the time line.
7	Moving the mouse on the time point, it will list the detailed information of the job in the pop-up window.
8	Clicking on the time point, you can review the content of the job in the tree mode area. ***Note**: If the backup job you want to load is encrypted, it will ask you to enter the corresponding password to access the data.

5.4.3.2 The tree browser / search results

To browse the backup data to be restored, please follow the steps below:

(5-36) *Browsing For The Backup Data*

Step	Action
1	Continue from the *Platform Restore* module, after you have set the data range.
2	Click on the time point to display the available backup data.
3	Click the Agent Host's Name to expand the data tree.
4	You can click **Find Site Collections** to search for a site collection by typing its URL in the corresponding text boxand then click **Search**, it will list the database which the site collection is in under the *DB Browser* tab.
5	You can click **Detail** button following the Content Database URL to view the content of the database under the *Detail* tab.
6	Under the *Detail* tab, it lists the content of the database. Check *Restore Granular Content* box, and then you can click the corresponding URL to expand the tree. Click the ⓘ icon to view the content inside, and check the corresponding box to select the content to restore. By default, once you check the content, all items in it will also be checked. If you uncheck some items inside, the check-box will become a triangle sign(▶). For large environments, you may limit the results displayed in the window by clicking the 🔍 icon. For case-sensitive searches, check the *Case Sensitive* box located in the lower-left corner of the window. You can view the search result under the *Search Result* tab.
7	Select the data to be restored. There is a check-box corresponding to each level on the data tree which is by default unchecked.

Historic Content View

This view allows you to browse through a master index of site collections available across all backup jobs, you can select the backup points for each site collection.

*Note: It supports both SharePoint 2007 environment and SharePoint 2010 environment.

(5-37) Historic Content View

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Platform Restore*.
2	Click **Historic Content View** on the top-right of the screen.
3	Select the agent from the drop-down box, and the Agent Host will be listed underneath the Farm Browser.
4	Click the Agent Host's name to expand the data tree. All the Site Collections that have been backed up under the farm will be listed.
5	Select the Site Collection you want to view by clicking the corresponding radio box.
6	Click **Show Backups**, the Backup Finder page will appear.
7	You can choose a time range in the Time Window fields for *From* and *To*. By default, it is one week before the current time.
8	Click **Load Timeline**. It will display the time points at which you run the backup jobs on the time line.
9	Clicking on the time point, you can review the content of the job in the Detail area. *Note: If the backup job you want to load is encrypted, it will ask you to enter the corresponding password to access the data.
10	Select the data you want to restore by checking the corresponding check-box. To restore more granular content, you can select the *Restore Granular Content* option, and the data tree can be loaded to the level according to the generated index level.

5.4.3.3 Restore Options

Restore options include four options: Overwrite, Not Overwrite, Append and Replace. You can select each option list in the restore option drop-down box.

- *Overwrite* : DocAve will restore the content over whatever exists on the destination. This will delete the content on the destination and replace it with the content selected to be restored.

- *Not Overwrite* : DocAve will not restore the content if it already exists on the destination. For example, if an entire folder's content is selected for restore, but only one document was removed from the destination folder, only the removed document will be restored.

- *Append* : It will create a new item and restore the data to it if the item exists in the destination.

  *Note: This option is only used for item level.

- *Replace* : This option will delete all content in the container of the destination before performing the restore. This can be used to remove the content that will not be deleted by the *Overwrite* option. (This can be seem as a *Reset* function, to restore a list or library to it's original state, removing any contents added since the time of the backup point selected for restore.)

  *Note: This option is only used for Restore Granular Content.

5.4.3.4 Advanced Options

Within Advanced Options, there are several options you can select for the restore job.

- *Restore Database To Most Recent State* : The High Availability module provides disaster recovery on the content database level.The Platform Level Backup solution will restore the databases to the most recent state if the SQL transaction logs are still available on server.
  For example, if a backup job completed at 1:00 PM and the database server crashes at 2:00 PM. Platform Level Backup will try to restore the databases to the most recent functioning state (at 1:59 PM) even though the last backup data is from 1:00 PM.

  *Note: If you select the *Copy Only* option for the backup content, it cannot be restored by using *Restore Database To Most Recent State* option.

  *Note: In order to preserve database integrity, the only way to restore the database to its most current state after a point-in-time restore is to complete a new full backup that has only one recovery path. For more information, please refer to section Point-in-time Restore for more information.

- *Restore Whole Farm* : This option is enabled when all farm is selected. For more information about restoring whole farm, please refer to Farm-level Backup & Restore

- *Restore Database Only* : Platform Level Backup will restore the databases to the database server, but will not make the connections with the database to the Share-Point environment.
  This is useful for when the SharePoint environment is not setup yet (i.e. during a whole farm restore), or for cases where user wants to perform manual steps of bringing up or bringing down specific environments after the database restore.

  *Note: Configuration databases and Central Administration databases can only be restored by selecting this option.

- *Restore Database To Specified SQL Server* : This option is used for only restoring the configConfiguration Database to another farm. Please refer to Restore Config Database to specified SQL server for more information. This option can be used only for the backup data used the VDI backup method.

- *Safe Restore* : After backing up the database using the VDI method and choosing the Overwrite restore option, this option can be used. In "Safe Restore", the Platform Level Backup module will restore to a temporary database first to ensure the success of the restore.

- *Restore front-end file security* : This option is used for backing uprestoring Front-End Files, it will restore the content with the security by selecting this option.

5.4.3.5 Point-in-time Restore

In a point-in-time restore, databases are restored to a time point selected from the timeline.

A point-in-time restore occurs in two restore scenarios:

- The database is restored to a given time from a backed up transaction log.
- The database is restored but only a subset of backed up transaction logs are applied to it.

Performing a point-in-time database recovery results in a new recovery path.The following image illustrates the potential problems when a point-in-time restore is performed.
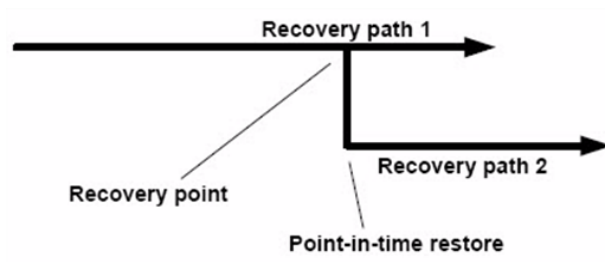
In this image, Recovery path 1 consists of a full backup followed by a number of transaction log backups (a point-in-time backup). New transaction log backups are created after the point-in-time restore takes place, which results in Recovery path 2. It is not possible to tie the transaction logs created in Recovery path 2 to the full backup belonging to Recovery path 1.

Therefore, to preserve database integrity, the only way to restore the database to its most cur-rent state after a point-in-time restore is to complete a new full backup that has only one recov-ery path.

*Note: To avoid the problems listed previously, ensure that you always create a full backup after restoring a database to a point-in-time.

5.4.3.6 How to perform restore

Platform Restore supports restore content database or restore indexed content.

At the right bottom section of the Restore Controller, the type of restore (either In Place or Out of Place) can be selected. An In Place restore allows the restore of backup data to its original loca-tion. An out-of-place restore allows the user to specify an alternate location for the backup data to be restored to. For more information about the out-of-place restore please refer to section of this Manual.

Index Database Restore

(5-38) Index Database Restore

Step	Action
1	Continue from the *Platform Restore* module, after you have selected the backup data which you want to restore.

Step	Action	
2	Select either an *In Place* restore or *Out of Place* restore by selecting the corresponding options in the window.	
	If…	**Then…**
	In Place	Select the *In Place* radio button.
	Out of Place	To restore to an alternate farm or location: 1. Select the *Out of Place* radio button. 2. Select an agent from the drop-down list. 3. Click … button to the right of the destination field. This will open the *Restore Destination* window. 4. Navigate to the location for the restore. 5. Click the radio box next to the location to select it as the destination. 6. Click **OK**. 7. You can select a language mapping from the drop-down list. For more information for the language mapping, please refer to Section Language Mapping of this manual. ***Note**: There is a blank field corresponding to each level in the URL tree. DocAve can create a new Site Collection, Site, or Folder/List by providing a name in the blank field. Make sure that the box has been checked before typing. For a new site collection, the full URL must be used. At the Site or Folder/List level, just the name of the location is sufficient.
3	Check Staging SQL Server check box and select oneStaging SQL Server from the drop-down box, it will save the temporary data in this staging location.	

Step	Action
4	You can select the *Workflow Definition* option to restore all workflow data with the file. For more information, please refer to the section Workflow Definition.
5	If you select the *Include detailed job report for all items in this plan* option, it will list the detailed information for all items restored in job report. You can view the detailed report in Job Monitor.
6	Select a *Restore Option* from the drop-down list. For more information, please refer to section Restore Options of this Manual.
7	Select a time for the restore to run. By default, Now is selected and DocAve will run the process as soon as Go is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
8	Select an *Email Notification* profile from the drop-down box, it will send the email to the recipient once the job result matched the Report Notification level.
9	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
10	Click **Go**. If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

Content Database Restore

(5-39) Content Database Restore

Step	Action
1	Continue from the *Platform Restore* module, after you have selected the backup data which you want to restore.

Step	Action
2	Select either an *In Place* restore or *Out of Place* restore by selecting the corresponding options in the window. <table><tr><td>**If…**</td><td>**Then…**</td></tr><tr><td>In Place</td><td>Select the In Place Restore radio button.</td></tr><tr><td>Out of Place</td><td>Please refer to the section on Out of Place Restore below.</td></tr></table>
3	Select a *Restore Option* from the drop-down list. For more information, please refer to section Restore Options of this Manual.
4	Select a time for the restore to run. By default, Now is selected and DocAve will run the process as soon as the Go is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
5	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
6	Go to *Advanced Options* tab, select the advanced options if necessary. Please refer to Advanced Options of this Manual for instructions on this process.
7	Click **Go**. If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

KnowledgeLake Imaging In Place Restore (for SharePoint 2007 environment only)

(5-40) KnowledgeLake Imaging In Place Restore

Step	Action
1	Continue from the *Platform Restore* module, after you have selected the backup data which you want to restore.
2	In *Restore Settings*, only *In Place Restore* option is available.
3	Select a time for the restore to run. By default, Now is selected and DocAve will run the process as soon as the Go is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
4	Enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
5	Go to *Advanced Options* tab, select the advanced options if necessary. Please refer to Advanced Options of this Manual for instructions on this process.
6	Click **Go.** If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

Granular restore data in SSP

From DocAve 5.4, you can restore the data in SSP, like Shared Service Settings, by using DocAve **Platfrom Restore**.

To restore the settings for SSP, see the following steps.

(5-41) Granular Restore SSP Settings

Step	Action
1	Continue from the *Platform Restore* module, after you have set the data range.

Step	Action
2	Click on the corresponding time point to display the SSP settings backup data available.
3	Click the Agent Host to expand the data tree.
4	Click **Detail** after the Shared Search Settings to view the content of the Search settings under the Detail tab.
5	Select the setting you want to restore by checking the corresponding check-box. You can restore the following settings: • Content Sources • Crawl Rules • File Types • Crawler Impact Rules • Authoritative Pages • Federated Locations • Metadata Properties • Scopes • Search-based Alerts

Step	Action	
6	Select either an *In Place* restore or *Out of Place* restore by selecting the corresponding options in the window.	
	If…	**Then…**
	In Place	Select the In Place radio button.
	Out of Place	To restore to an alternate farm: 1. Select the Out of Place radio button. 2. Select the agent where you want to restore the settings from the drop-down box. 3. Click … button to the right of the destination field. All the SSPs under the specified agent will be listed in the pop-up window. 4. Select the SSP which you want to restore the Shared Service Settings to by clicking the corresponding radio box. 5. Select **OK**. 6. You can select a language mapping from the drop-down list. For more information for the language mapping, please refer to Section Language Mapping of this mapping.
7	If you select the *Restore the exported Federated Locations* option, it will use the restore method which is provided by Microsoft to restore the Federated Location, but the user authentication information for the federtated location which already exists in the destination will be deleted if the restore option is set as Overwrite. If not select this option, it will use the method provided by DocAve.	
8	Select a *Restore Option* from the drop-down list. For more information, please refer to section Restore Options of this Manual.	

Step	Action
9	Select a time for the restore to run. By default, Now is selected and DocAve will run the process as soon as Go is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
10	Select an *Email Notification* profile from the drop-down box, it will send the email to the recipient once the job result matched the Report Notification level.
11	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
12	Click **Go**. If you set the start time as now, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

Restore Config Database to specified SQL server

DocAve 5.5 supports you only restore the Configuration Database to a specified SQL Server, and this restored database cannot affect the operation of the original database. For example, some data in the current active config DB is corrupted, and you want to restore the backup of the database to the farm and fix the corrupted data according to the restored database manually, but not overwrite the original database. In this case, you can perform the following steps to implement this operation.

(5-42) Restore Config Database to Specified SQL Server

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Platform Restore*.
2	Select an agent from the drop-down box.
3	Choose the time range during which you run the backup job in the Time Window fields for *From* and *To*.

Step	Action
4	Click **Load Timeline**. It will display the time points at which you run the backup jobs on the time line.
5	Clicking on the time point of the appropriate backup job, you can review the content of the job in the tree mode area.
6	Click the agent name to expand the tree, only select the database by checking the correponding check-box.
7	Select the In Place Restore option.
8	Select *Overwrite* from the Restore Option drop-down box. If you select *Not Overwrite*, it will not restore the database to the specifed SQL server.
9	Select a time for the restore job. By default, Now is selected and will run the process as soon as Go is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
10	Select an *Email Notification* profile from the drop-down box, it will send the email to the recipient once the job result matched the Report Notification level.
11	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
12	Within *Advanced Options* tab, select the **Restore Database to Specified SQL Server** option, and then specify a Staging SQL Server from the drop-down list. You can click the **Check Space** button to check whether the space of the staging SQL server is enough for the temporary database.
13	Click **Go**. If you set the start time as now, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

Restore SharePoint Service Applications(for SharePoint 2010 environment only)

From the version 5.5, DocAve supports the in place restore of all the Service Applications of SharePoint 2010 and below is a list of the Service Applications supported by the out of place restore feature.

- Access Service Application
- Secure Store Service Application
- PerformancePoint Service Application
- Visio Graphics Service Application
- Managed Metadata Service Application
- Web Analytics Service Application
- Excel Services Application
- User Profile Service Application
- Word Automation Services Application
- Business Data Connectivity Service Application
- Search Service Application

To do an in place restore of the Service Applications of SharePoint 2010 environment, see the following steps.

(5-43) In Place Restore SharePoint Service Applications(for SharePoint 2010 environment only)

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Platform Restore*.
2	Select an agent from the drop-down box.
3	Choose the time range when running the backup job in the Time Window fields for *From* and *To*.
4	Click **Load Timeline**. It will display the time points at which you run the backup jobs on the time line.
5	Clicking on the time point of the appropriate backup job, you can review the content of the job in the tree mode area.

Step	Action
6	Click the agent name to expand the tree, select the Service Application by checking the corresponding check-box. If you only want to restore the Service Application's database, select the node of the database only.
7	Select the In Place Restore option.
8	Select a *Restore Option* from the drop-down list. For more information, please refer to section Restore Options of this Manual.
9	Select a time for the restore job. By default, Now is selected and DocAve will run the process as soon as Go is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
10	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
11	Go to *Advanced Options* tab, select the advanced options if necessary. Please refer to Advanced Options of this Manual for instructions on this process.
12	Click **Go**. If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

To do an out of place restore of the Server Applications of SharePoint 2010, please refer to section Out of Place Restore of this Manual.

Restore FAST Search Server Farm (for SharePoint 2010 environment only)

From the version 5.6, DocAve supports the in place restore of FAST search server farm and below are the steps.

(5-44) In Place Restore FAST Search Server Farm (for SharePoint 2010 environment)

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Platform Restore*.
2	Select an agent from the drop-down box.
3	Choose the time range when running the backup job in the Time Window fields for *From* and *To*.
4	Click **Load Timeline**. It will display the time points at which you run the backup jobs on the time line.
5	Clicking on the time point of the appropriate backup job, you can review the content of the job in the tree mode area.
6	Click the agent name to expand the tree, select the FAST Search Server Farm by checking the corresponding check-box of Admin server. Click **OK** to select the farm and click **Cancel** to unselect it.
7	Click the **Restore Settings** button beside the Admin server name to configure the settings in the pop-up window.
8	To restore associated SharePoint Content SSAs, check the corresponding check-box.
9	If any FAST search server is reinstalled after the backup and has not been configured, you can check the *Configure FAST Search Servers* check-box to configure it. Enter FAST admin password and select the restore FAST certificate. ***Note**: It is not recommended to select this option if not necessary.
10	If you want to restore FAST certificate, check the corresponding check-box. Select *Generate new FAST certificate* or *Use the certificate from backup* and enter the password. ***Note**: It is not recommended to select this option if not necessary.

Step	Action
11	Click **OK** to save the configuration.
12	Select the In Place Restore option.
13	Select a *Restore Option* from the drop-down list. For more information, please refer to section Restore Options of this Manual.
14	Select a time for the restore job. By default, Now is selected and DocAve will run the process as soon as **Go** is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
15	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
16	Go to *Advanced Options* tab, select the advanced options if necessary. Please refer to Advanced Options of this Manual for instructions on this process.
17	Click **Go.** If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

*Note: The regular SharePoint index is located in Saerch Service Application while FAST index is allocated to different servers according to the topology of FAST farm. DocAve backs up and restores the config files and the index file of FAST search server.

Supported and unsupported list for FAST search server farm backup and restore

(5-45) Supported and unsupported list for FAST search server farm backup and restore

Content	Supported	Unsupported
Back up and restore the SharePoint Content SSA associated with FAST farm	√	

Content	Supported	Unsupported
Full backup of FAST search server farm	√	
Back up and restore the certificate	√	
Generate a new FAST self-signed certificate	√	
Automatically configure the FAST search server which is reinstalled in the farm	√	
In place restore FAST search server farm	√	
Out of place restore FAST search server farm		√
Configuration backup and restore		√

*Note: You can refer to the link for more information about the limitations of a configuration backup and restore: http://technet.microsoft.com/en-us/library/ff460220.aspx

5.4.3.7 Out of Place Restore

The out of place restore feature allows the user to copy the data from one SharePoint farm over to another farm.

*Note: The SharePoint Learning Kit (SLK) is not compatible with the out-of-place restore function.

*Note: If the source's domain and the users are different from the destination, and you restore the Web Application by using the out-of-place, then restore the IIS, in this condition, the web application restored to the destination cannot be used. You need to change the user to a user of the destination in Application Pool Identity Window to make sure the web application can be used.

(5-46) Out of Place Restore

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Platform Restore*.
2	Select the "Out of Place" option for the restore, and then select the data you want to restore.

Step	Action	
	After selecting the agent host from the Destination Agent Host drop-down list, the Destination Component Options will appear. Depending on theselection of the source, the user will have a different set of component.	
	If...	**Then...**
3	Selected the source to be just a Database.	The user must provide the following information: • *Database Server* : the name of the database server where the database will be moved to. • *Database Name* : the new database name you will give on the destination server. • *Database and Log File Mapping* : specify the file location and file name of the database and log file. Click **Configure** and you will see the default information in the pop-up window. You can change the path and file name in Destination File Path of Database File and Log File. • *Parent WebApp URL* : the web application on SharePoint where you will attach the database. • *Windows Authentication* : this is a TRUE and FALSE drop down box for the Windows Authentication. • *Database User* : specify the database user if the DocAve Agent does not have an account with administrative rights to the SQL server. • *Database Password* : specify the database user password if the DocAve Agent does not have an account with administrative rights to SQL. • *Failover Database Server(for SharePoint 2010 environment only)* : Associate the database with a specific failover server that is used in conjuction with SQL Server database mirroring.

Step		Action
	Selected the source to be just a Web Application	Before you type the information, select the *Pre-defined* or *Configuration* to ensure whether you need to configure the *App Pool User* and *App Pool Password*. • *App Pool User* : The Application pool user for the new web application • *App Pool Password* : This will be the Application pool user's password • *Zone* : The backup zone of the web application • *Description* : The new name of the web application • *Port* : The new port of the web application • *Host Header* : The new host header of the web application • *Path* : The IIS path of the web application • *Load Balance URL* : The new URL for the web application • *Service Application Connections (for SharePoint 2010 environment only)* : You can specify the Service Applications and connections used by the web application after clicking **Edit** and changing the drop-down box named *Edit the following group of connections* to [custom]

Step		Action
	Selected the source to be just a SSP	The user must provide the following information: **SSP information:** • *Name* : The name of the SSP you selected. • *AdminAPP URL* : The URL of the Web Application as the host on the SSP admin site. • *MySite App URL* : The URL of MySite Application you selected. • *MySite Web Path* : The path of MySite Web. • *User and Password* : The account which has the permission to administrate the SSP and the corresponding password. For the information about the Web App and Content DB, please refer to the configuration on selecting the Web App and the Content DB. The configuration of the Search DB is the same as the Content DB's **SSP Index:** • *SSP Name* : The name of the specified SSP, you cannot edit it. • *Index Server* : Select the agent to host the index service from the drop-down box. • *Index file location* : Specify a location for the index file.

Step	Action
Selected the source to be just a Service Application(for SharePoint 2010 environment only)	The user should provide the following information for the Service Application: • *Service Name* : The name of the Service Application. • *Application Pool* : The application pool for the Service Application. You can select *Use existing application pool* to specify an existing application pools. To select *Create new application pool*, you can create a new application pool. • *Select a security account for this application pool* : The security account for the application pool. By selecting *Configurable*, you can choose from the existing security accounts in the drop-down list. If you want to add an account, click *Register new managed account* and type in the *Username* and the *Password*. ***Note**: The specific settings of the Service Application will also be displayed (for example, the option *Audit log enabled* of the Service Application *Secure Store Service*), you can configure them according to your SharePoint settings. The user should provide the following information if there is a corresponding database of the specified Service Application: • *Database Server* : the name of the database server where the database will be moved to. • *Database Name* : the new database name you will give on the destination server.

Step	Action
	Database and Log File Mapping : specify the file location and file name of the database and log file. Click **Configure** and you will see the default information in the pop-up window. You can change the path and file name in Destination File Path of Database File and Log File. *Service Application* : Specify a Service Application to restore the database to ***Note**: If all the componets of the Service Application are selected, they can only be restored to the default Service Application ***Note**: Some Service Applications' Databases can be selected separately and then be attached to the Service Applications in the destination. The Service Applications which support attaching databases are: Secure Store Service Application, Managed Metadata Service Application, Word Automation Services Application and Business Data Connectivity Service Application *Windows Authentication* : this is a TRUE and FALSE drop down box for the Windows Authentication *Database User* : specify the database user if the DocAve Agent does not have an account with administrative rights to the SQL server *Database Password* : specify the database user password if the DocAve Agent does not have an account with administrative rights to SQL *Failover Database Server* : You can choose to associate the database with a specific failover server that is used in conjuction with SQL Server database mirroring

Step	Action
Selected the source to be just a Service Application Proxy(for SharePoint 2010 environment only)	The user should provide the following information: • *Proxy Name* : the name of the Service Application Proxy. Before you type the information below, select *Connect to the specific application* or *Farm or Service Application address* to ensure whether need to configure either the address of the farm's discovery service or the address of the Service Application. • *Connect to the specific application* : Specify a Service Application to connect to. • *Farm or Service Application address* : Configure either the address of the farm's discovery service or the address of the Service Application to connect to. • *Add this service application's proxy to the farm's default proxy list* : Specify whether to restore the proxy to the farm's default proxy list.
selected the source to be both a Web Application the Web Application's Content Database.	The user must then provide the information from both the Web Application and Database sections.

Step	Action
4	There are some options within the Advanced Options tab you can select for the database restore.

If…	Then…
Restore Database To Most Recent State	The High availability module provides disaster recovery on the content database level.The Platform Level Backup solution will restore the databases to the most recent state if the SQL transaction logs are still available on server.
	For example, if a backup job completed at 1:00 PM and the database server crashes at 2:00 PM. Platform Level Backup will try to restore the databases to the most recent functioning state (at 1:59 PM) even though the last backup data is from 1:00 PM.
Restore Database Only	Platform Level Backup will restore the databases to the database server, but will not make the connections with the database to the SharePoint environment.
	This is useful when the SharePoint environment is not setup yet (i.e. during a whole farm restore), or for cases where user wants to perform manual steps of bringing up or brnging down specific environments after the database restore.
	*Note: Configuration databases and Central Administration databases can only be restored by selecting this option.
Safe Restore	After backing up the database using the VDI method and choosing the Overwrite restore option, this option can be used. In *Safe Restore*, the Platform Level Backup module will restore to a temporary database first to ensure the success of the restore.

Step	Action
5	Select a *Restore Option* from the drop-down list. For more information, please refer to section Restore Options of this Manual.

Step	Action
6	Select a time for the restore to run. By default, Now is selected and will run the process as soon as the **Go** is clicked. You can set a scheduled date and time for this restore by pressing the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
7	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
8	Click **Go**. If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

Front-End Web Out of Place Restore

DocAve v5 Platform Level Backup supports backup and restore of Front-End Web Servers.

There are two icons following the Front-End Web Server node, you can use the [i] icon to view the installed programs at the backup time and the current time, and the [d] icon to download a backup list and the current list which list the three attributes(Backup node name, Data size and the Modified time) for the backup data, you can compare these two files to view the modification which cannot be restored.

Different from other restores, when *Front-End Web Feature* is specified in the backup plan to restore, the *Out of place* cannot be selected.

To perform a Front-End Web Out-of-Place Restore, please proceed as follows:

(5-47) Front-End Web Out-of-Place Restore

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Platform Restore*.
2	Select the Front-End Web content you want to restore, and then **Browser** next to the *Out of place restore front-end files to alternate location* will be enabled.
3	Click **Browser**, a pop-up window will appear.

Step	Action
4	Select an agent from the drop-down box to expand the data tree, select the destination location for the Front-End Web content you want to restore. Click **OK**. The path will be listed in the text box.
5	There is also one option within Advanced options tab that you can select for the Front End Web restore. • *Restore front-end file security* : This option is used for restoring Front-End Files, DocAve will restore the content with the security with this option selected. *****Note**: If you want to do an out-of-place restore of hive, you need to stop the SharePoint Service first, then perform a restore with the Restore front-end file security option unchecked.
6	Select a *Restore Option* from the drop-down list. For more information, please refer to section Restore Options of this Manual.
7	Select a time for the restore to run. By default, Now is selected and DocAve will run the process as soon as Go is clicked. You can set a scheduled date and time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
8	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
9	Click **Go**. If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

5.4.3.8 Helpful Notes for Platform Level Backup and Restore

Below are some helpful notes of the Platform level backup and restore jobs:

1. For the out of place restore of one Platform level backup job whose granularity is down to one item, if there are some features that do not exist in the destination farm, the sites

which are based on those features could not be restored to the destination successfully. So before restoring some sites which are based on some features which do not exist in the destination farm, you need to ensure the corresponding features have already been deployed in the destination farm.

2. If you want to use the SharePoint Components (that have been backed up) normally after a Platform level restore job, you need to ensure the corresponding services are started after the restore. To backup the SharePoint components, you also need to ensure those services have already been started. Please refer to the table(5-48) below for more infor-mation:

(5-48) Services that Need to Be Started For Platform Level Backup

Components of SharePoint	Services that need to be started
Web Application	Windows SharePoint Services Web Application
SSP(Shared Services Provider)	Office SharePoint Server Search
HelpSearch	Windows SharePoint Services Help Search
SSO	Microsoft Single Sign-on Service

3. If there is a Time-out error during the Platform level backup or restore job, please check the *hosts* file locates at C:\WINDOWS\system32\drivers\etc and add the corresponding mappings if necessary. Please also ensure each agents can connect with others before running any job. The format of the command is: Ping Agent Host Name.

4. In SharePoint 2010 environment, if you delete any Service Application of SharePoint Web Service in Internet Information Services (IIS) Manager after backing up Web-Front-End server (for example, SecurityTokenServiceApplication and Topology), the backup data cannot be restored.

5. In SharePoint 2010 environment, Platform level backup and restore does not support RBS and it does not support the backup and restore of Archive stub. The Archive stub will be changed to real data in the destination.

5.4.4 Restore from SQL Backups

Restore from SQL Backup is used to restore the SQL database backed up by SQL. Before you do the restore, you must backup the content database in SQLusing the SQL backup feature.

5.4.4.1 Restore From Live Database

To restore the content from a live database, please follow the steps below

(5-49) Restore from Live DB

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore from SQL Backup > Restore From Live Database*.
2	Enter a SQL Server name as server\instance format. *__Note__*: For the default instance, you only need to input the SQL Server's name.
3	Select a authentication from the drop-down box. If you select the SQL Server Authentication option, you need to enter the necessary information in the SQL Username and Password fields.
4	Select the appropriate SharePoint Environment you are using in the SharePoint drop-down box, by default SharePoint 2007 is selected.
5	Select the appropriate agent from the Agent drop-down box. It will load the database of the agent underneath.
6	Click the database name to expand the data tree, and select the content you want to backup by checking the corresponding check-box.
7	Click ... button and a pop-up window will appear.. Select one agent from the Agent Name drop-down list and then load the tree to select a destination for the specific content. After you select it, it will be listed under the Restore Settings area on the right side of the screen. There is a blank field corresponding to each level in the URL tree, you can create a new Site Collection, Site, or Folder/List by providing a name in the blank field. For a new Site Collection, the full URL must be used. For the Site or Folder/List level, the name of the location is sufficient. If you select to create a new Site Collection as the destnation, the content database must be specified by clicking **Configure** and selecting one content database from the drop-down list.

Step	Action
8	Select a restore option: Overwrite or Not Overwrite. • *Overwrite* : DocAve will restore the content over the same one exists on the destination. This will find the same content on the destination and replace it with the corresponding content selected to be restored. • *Not overwrite* : DocAve will not restore the content if it already exists on the destination. For example, if an entire folder's content is selected for restore, but only one document was removed from the destination folder, only the removed document will be restored.
9	Select a start time for the restore job. The default start time is Now, if you want to run the restore job later, you can click the calendar icon to select a time and it will run this restore job at the specific time.
10	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
11	Click **Go**. If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

5.4.4.2 Staging SQL Server for SQL Backup Restore

Before restoring the SQL backup data, you must specify a temporary database for the backup data.

*Note: SQL Express is not supported for the staging SQL server and DocAve will not load the SQL Express server instance when loading the instances of the staging SQL server.

(5-50) Staging SQL Server SQL Backup Restore Info

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Restore From SQL > Analyze SQL Backup > Staging SQL Server Info*.

Step	Action
2	Click **New** and enter a name for the profile.
3	Under the Connection Info to Staging SQL Server, you must enter the information to connect to the SQL Server.
4	There are fivethree kinds of backup data you can restore: SQL Backup Files, TDP Backup Files, and STSADM Backup Files.

If…	Then…

Step	Action
SQL Backup Files	It will restore the backup data from SQL server. 1. Select an agent name from the drop-down box, it will list the all instance of this server in the SQL Instance Name drop-down list. Select a instance from the drop-down box. 2. Select an Authentication from the drop-down box. If you select the SQL Server Authentication option, you need to enter the necessary information in the SQL Username and Password fields. 3. After specifying the connection info, you can setup a device to load the backup of the database in Source Devices area. 4. Click **Add a device**, a pop-up window will appear. There are two kinds of devices: Local and UNC. • *Local* : To specify a path to load the backup of the database from a local location. • *UNC* : To specify a path to load the backup of the database from a network location, you need to input the Username as domain\username format and Password to set up access to the path that data has been written to and stored. 5. Under Temp DB Configuration, you can setup the following three options: • *Maximum number of temp databases* : Enter a positive number to limit the maximum number of the temp DBs. • *Minimum amount of free space to leave* : Enter a positive number to limit the maximum size of the temp DBs. • *Temp DB file location* : This option is used to specify a location for the temp DB. Enter the path and click **Test**.

Step		Action
	TDP Backup Files	It will restore the backup data from SQL server. 1. Select an agent name from the drop-down box, and then select a instance from the drop-down box. Please make sure the instance you selected has installed the TDP. 2. Select a authentication from the drop-down box. If you select the SQL Server Authentication option, you need to enter the necessary information in the SQL Username and Password fields. 3. After specifying the connection info, the TSM Node information will be listed under the TSM Node Info area. Specify the password access setting by checking the corresponding radio button. If you select the Prompt option, you need to enter the password to setup the access to the TSM node. *Note: If you set the connection info the first time, the password access option will be checked by default according to the information provided in the dsm.opt settings. 4. Under Temp DB configuration, you can setup the following three options: • *Maximum number of the temp DBs* : Enter a positive number to limit the maximum number of the temp DBs. • *Minimum amount of free space to leave* : Enter a positive number to limit the maximum size of the temp DBs. • *Temp DB file location* : This option is used to specify a location for the temp DB. Enter the path and click **Test**.

Step	Action	

	STSADM Backup Files	It will restore the backup data from SQL server.
		
		1. Select an agent name from the drop-down box, it will list the all instance of this server in the Instance Name drop-down list. Select a instance from the drop-down box.
		
		2. Select an authentication from the drop-down box. If you select the SQL Server Authentication option, you need to enter the necessary information in the SQL Username and Password fields.
		
		3. After specifying the connection info, you can setup a device to load the backup of the SQL database in Source Devices area.
		
		4. Under Temp DB configuration, you can setup the following three options:
		
		  • *Maximum number of the temp DBs* : Enter a positive number to limit the maximum number of the temp DBs.
		
		  • *Minimum amount of free space to leave* : Enter a positive number to limit the maximum size of the temp DBs.
		
		  • *Temp DB file location* : This option is used to specify a location for the temp DB. Enter the path and click **Test**.

5	Click **Save** to save the configuration, it will be list under the SQL Server Profiles column on the right-hand side.	

5.4.4.3 Analyze SQL Backup

In order to restore granular contents from your SQL backups, you must first analyze and index the backups. This will allow you to explore the SharePoint structure as you would when restoring a live content database.

SQL Backup Files Mode

(5-51) Analyze SQL Backup for SQL Backup Files

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Analyze SQL Backup*.
2	Click **New**.
3	Select the *SQL Backup Files* option from the Mode drop-down box.
4	Select a Staging SQL Server Info from the drop-down box, the Find SQL Backup Files button will be activated.
5	Specify the SharePoint Environment you are using by selecting one from the drop-down list. By default, SharePoint 2007 is selected.
6	Select a Filter from the drop-down box. This option is optional.
7	Select an Index Storage Location from the drop-down box. Please refer to Section Device Manager for instruction on this process.
8	Click **Find SQL Backup Files**, a pop-up window will appear.
9	Click the Agent Host name in the pop-up window to load the path of the source device.
10	Click the path, the SQL backup data will be listed on the right side of the pop-up window.
11	Select the backup data by checking the corresponding box.
12	Click **OK** to close the pop-up window, and the selected backup data will be listed under the Find SQL Backup Files button.

Step	Action
13	Click the URL of the backup data, the details of the database will be listed on the right side. Select the database file by checking the check-box. ***Note**: If a DB is backed up in multiple files, when you select one of the backup files, the other related backup files will be selected auto-matically. If the list under *Find SQL Backup Files* does not include all the backup files of the DB, it will prompt you to check the selected backup data.
14	Click **Go** and run this job immediately or specify a time to run the anal-ysis job later in the pop-up window. You can also enter a description to distinguish this job from the others in Job Monitor. The job will be listed in the Job Viewer column on the right. If you click **Run,** a pop-up window will show up,you can click **Go to Job Report** to navigate to Job Monitor to view the progress of the job or click **Close** to close the pop-up.

TDP Backup Files Mode

(5-52) Analyze SQL Backup For TDP Backup Files

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Set-tings > Analyze SQL Backup*.
2	Click **New**.
3	Select the *TDP Backup Files* option from the Mode drop-down box.
4	Select a staging SQL Server Info from the drop-down box, the **Find TDP Backup Files** will be activated.
5	Select an Index Storage Location from the drop-down box. Please refer to Section Device Manager for instruction on this process.

Step	Action
6	Specify the SharePoint Environment you are using by selecting one from the drop-down list. By default, SharePoint 2007 is selected.
7	Click **Find TDP Backup Files**, all the backup data will be listed under the Find TDP Backup Files button.
8	Select the backup data by checking the corresponding box, the details of the database will be listed on the right side. Select the database file by checking the check-box. ***Note**: We only support the Full backup data now.
9	Click **Go** and run this job immediately or specify a time to run the analysis job later in the pop-up window. You can also enter a description to distinguish this job from the others in Job Monitor. The job will be listed in the Job Viewer column on the right. If you click **Run**, a pop-up window will show up,you can click **Go to Job Report** to navigate to Job Monitor to view the progress of the job or click **Close** to close the pop-up.

STSADM Backup Files Mode

(5-53) Analyze SQL Backup For STSADM Backup Files

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Settings > Analyze SQL Backup*.
2	Click **New**.
3	Select the *STSADM Backup Files* option from the Mode drop-down box.
4	Select a staging SQL Server Info from the drop-down box, the **Find STSADM Backup Files** will be activated.

Step	Action
5	Select the Backup Level for the analyze job. If you select the Site Collection level, you can specify whether generate the index for the site collection. If select to generate the index, you need to specify a index storage location for it, otherwise, it will not generate the index, and you can only load the data to the site collection level. When you run the restore job, you need to specify a database for this site collection.
6	Select an Index Storage Location from the Index Storage Location drop-down box. Please refer to Section Device Manager for instruction on this process.
7	Specify the SharePoint Environment you are using by selecting one from the drop-down list. By default, SharePoint 2007 is selected.
8	Click **Find STSADM Backup Files**, a pop-up window will appear.
9	Click the STSADM server name in the pop-up window to load the backup location.
10	Click the backup location, the database will be listed on the right side of the pop-up window.
11	Select the database by checking the corresponding box.
12	Click **OK** to close the pop-up window, and the selected backup data will be listed under the Find STSADM SQl Backup Files button.
13	Select the backup data by checking the corresponding box, the details of the database will be listed on the right side. Select the database file by checking the check-box.

Step	Action
14	Click **Go** and run this job immediately or specify a time to run the analysis job later in the pop-up window. You can also enter a description to distinguish this job from the others in Job Monitor. The job will be listed in the Job Viewer column on the right.

If you click **Run**, a pop-up window will show up,you can click **Go to Job Report** to navigate to Job Monitor to view the progress of the job or click **Close** to close the pop-up. |

5.4.4.4 Restore from SQL Backup

In this area, it has three kinds of restore methods: SQL Backup Files, TDP Backup Files, and STSADM Backup Files. In order to use these methods to restore the SQL database, you must run an analyzed job first. Please refer to Section Analyze SQL Backup for instruction on this process.

*Note: In this module, you can restore the three kinds of backup files for both SharePoint 2007 environment and SharePoint 2010 environment.

(5-54) Restore from SQL Backup

Step	Action
1	Navigate to *DocAve v5 > Data Protection > Restore Controller > Restore From SQL > Restore From SQL Backup*.
2	Select the backup file you want to restore from the SQL Data Source drop-down box.

If you select the STSADM Backup Files, you must select a backup level for the analyzed job. If you select the Site Collection level, you can specify whether generate the index for the site collection. If select to generate the index, you need to specify a index storage location for it, otherwise, it will not generate the index, and you can only load the data to the site collection level. When you run the restore job, you need to specify a database for this site collection. |
| 3 | Select a Analyzed Job from the drop-down box, the backup of the database selected in this analyzed job will be listed underneath. |
| 4 | Select the database you want to restore by click the corresponding radio button. |

Step	Action
5	Click ... button to select a destination for the specific content. After you select it, it will be listed under the Restore Settings area on the right side of the screen.
6	Select a restore option: Overwrite or Not Overwrite. • *Overwrite* : DocAve will restore the content over the same one exists on the destination. This will find the same content on the destination and replace it with the corresponding content selected to be restored. • *Not overwrite* : DocAve will not restore the content if it already exists on the destination. For example, if an entire folder's content is selected for restore, but only one document was removed from the destination folder, only the removed document will be restored.
7	Select a time for the restore to run. By default, Now is selected and DocAve will run the process as soon as Go is clicked. You can set the Start Time for this restore by clicking the calendar icon and select a date and time in the calendar pop-up window and click **OK**.
8	You may enter a *Description* in the field provided to help distinguish this job in the Job Monitor.
9	Click **Go**. If you set the start time as *now*, it will run the restore job immediately, otherwise, it will run the job at the specified time. You can view the job report by clicking **Go to Job Report** in the pop-up, or click **Close** to close the pop-up.

5.4.4.5 Restoring contents from a third party SQL backup

You can also leverage restore from SQL Backups to perform a full-fidelity item level restore from proprietary backups, such as Microsoft's Data Protection Manager (DPM), Quest's Lightspeed Backup, or any other SQL backup.

To restore the content from a third party SQL backup, you need to stage your database backup to a SQL Server instance first, and then follow the steps for connecting to a Restore From Live Database and browse for the granular items from there. The restore from SQL backups offers a full-fidelity restore of your contents, permissions, and settings.

5.5 Supported and unsupported List for Share-Point 2010

Below is the supported and unsupported list of Data Protection module for SharePoint 2010.

(5-55) Supported and Unsupported for SharePoint 2010

Module	Function	Supported	Unsupported
Automation Center	Criticality Matrix	√	
	Settings	√	
Granular Restore	Compare the backup data and destination content based on the following column(s)	√	
Platform Backup	backup the setting property of Search Service Application		√
Platform Restore		√	
Template Builder		√	

6. Appendix

For additional information about DocAve, please reference the sections below.

6.1 FDCC Compatibility

DocAve recognizes that many of our customers adhere to FDCC standards for security (including the environments "Specialized Security Limited Functionality", "Enterprise", "SOHO", and "Legacy"). However, in order to access DocAve and ensure its full functionality in Windows XP, several steps must be taken. Please see the appropriate section below for details.

For more information on FDCC, please visit the website: http://fdcc.nist.gov

*Note: The following sections only apply to the Windows XP environment.

6.1.1 Configuring the DocAve Manager for FDCC

By default, an FDCC compliant environment will block all standard ports that DocAve uses to communicate. Before applying the solution below, make sure that you are running the latest version of .NET Framework (3.0 or higher).

(6-1) Configuring Port / Firewall Information

Step	Action
1	In Windows, go to *Start > Run* and enter the command gpedit.msc in the popup.
2	In the Group Policy popup, use the tree view on the left-hand side and navigate to *Computer Configuration > Administrative Templates > Network > Network Connections > Windows Firewall*.
3	Using the Domain Profile and Standard Profile entries, perform the next steps on both levels.
4	After selecting a profile, locate the setting "Windows Firewall: Allow local port exceptions". Double click this field to open the properties. ***Note**: This field is typically the last one on the list.

| Step	Action
5	In the pop-up, select **Enabled** from the *Settings* tab.
6	Verify that the state under the settings list has changed to "Enabled" for this field and restart the computer.
7	After the system restart, navigate again to *Start > Control Panel > Windows Firewall*.
8	Navigate to the *Exceptions* tab and select Add Port….
9	In the pop-up, select the "TCP" option. Enter the name of the port and port number from the list below: • *Control Service Port* : 22000 • *Media Service Port* : 22001 • *Web Service Port* : 9080 • *Web Service HTTPS Port* : 9443 (if https is enabled) • *Web Network Port* : 22002 • *Search Service Port* : 22004 • *Report Service Port* : 12005 Please repeat these steps to add all ports listed above. ***Note**: The ports given above are all the default settings. If you have made any changes to this list during the install, please reference the numbers in the DocAve Manager Configuration Tool.

6.1.2 For End-User Access Using HTTPS

If an Agent is running Windows XP, the Group Policy must be changed in order to allow https access to DocAve.

(6-2) Enabling HTTPS Access

Step	Action
1	In Windows, go to *Start* > *Run* and enter the command gpedit.msc in the popup.
2	In the *Group Policy* popup, use the tree view on the left hand side to navigate to *Computer Configuration > Administrative Templates > Windows Components > Internet Explorer > Internet Control Panel*.
3	Under this directory, locate the setting "Prevent ignoring certificate errors" in the left of the display. Double click on this setting to open the properties. ***Note**: This field is typically the last one on the list.
4	In the Popup, select **Enabled** from the *Settings* tab.
5	Verify that the state under the settings list has changed to "Enabled" for this field and restart the computer.

The agent should now be able to follow the steps to enable https access in Internet Explorer, listed in the installation section at the beginning of this document.

*Note: If you plan on accessing the DocAve remote server using the Server Name and not the IP address you must edit the host file manually. Open the following file in notepad, adding a line with the IP address and Server Name: c:\windows \system32\drivers\ETC\hosts
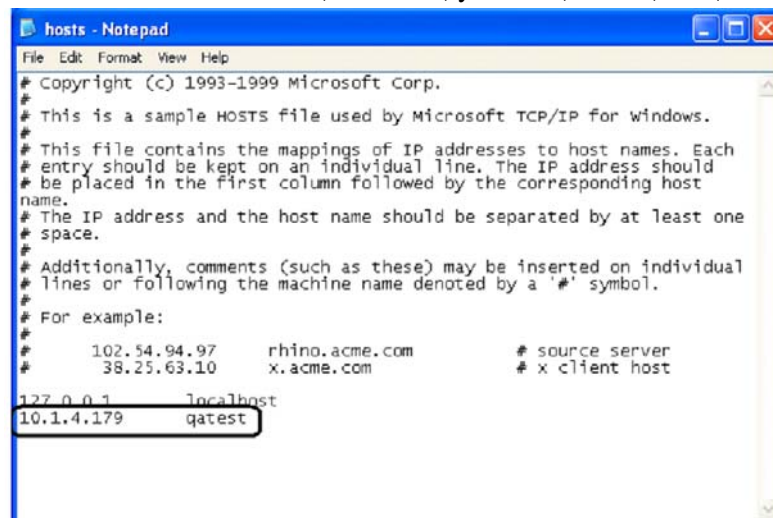
6.2 Farm-level Backup & Restore

DocAve's Platform Level Backup and Restore solution in the Data Protection module allows people to backup their entire SharePoint farm, including all of the contents listed below (with corresponding limitations on "out-of-place restore"):

*Note: You cannot restore the entire farm to SharePoint environment in the different domain.

(6-3) Supported In-Place and Out-of-Place Features for Platform Level Backup

Function	In-Place	Out-of-Place	Notes
Configuration Database	Yes		
SharePoint Web Service	Yes		Windows SharePoint Service Web Application and WSS Administrator
Central Admin Web Application	Yes		
Admin Content Database	Yes		
Web Application	Yes	Yes	
Content Database	Yes	Yes	
Shared Services Provider (SSP)	Yes	Yes	SSP Properties and Shared Service Database
SSP Osearch Index	Yes		This can only be backed-up and restored together with the SSP
SSP Project Server Application	Yes	Yes	PWA Site is backed-up and restored with the web application to which it belongs
Global Search Settings	Yes	Yes	Farm-level search settings and Crawler impact rules
SharePoint Help Search	Yes		
InfoPath Form Services	Yes	Yes	InfoPath Forms Services Settings and InfoPath Forms Services From templates
Single Sign On (SSO)	Yes	Yes	SSO database and some configurations in Manage Settings for Single Sign On

Function	In-Place	Out-of-Place	Notes
FBA Databases	Yes		The FBA database and some configurations in the Web. Configurations under Web Application IIS Setting (i.e., Connection Strings, MemberShipProvider, RoleManagerProvider)
SharePoint Learning Kit (SLK)	Yes		SLK Database
Windows SharePoint Solutions	Yes	Yes	The uploaded Solution and its configuration in the Solution Management
Front End Web	Yes	Yes	1. IIS Settings, which can be set individually in the FEW server and not saved in SharePoint such as Form Authentication, SSL certification and so on. 2. SharePoint Template directory, it is the most important directory to record the IIS extension. Most useful files just like feature files and site definition files in the FEW all can be saved in this directory. 3. In addition, SPDR-PR also help backup and restore the file system in the front-end server.
Item-level Restore (after Platform Level Backup)	Yes		This feature has been implemented in 4.5.2 or above. If you want to do item level restore, you should generate index when you backup it. However, it will affect the backup performance. It is optional.

*Note: Platform Level Backup cannot support other SharePoint applications which have not been included in the chart above. For example, custom web parts and MOSS applications based on ADFS are not supported.

6.2.1 Full Farm Backup& Restore

In order to use Platform Level Backup and Restore to backup data, the following items should be noted:

- A full farm restore should include at least the SharePoint Configuration database and the Central Administration database.
- The full farm backup data should be saved to a location outside of the current farm. You will still have access should your environment go down.
- For SSO, navigate to *DocAve > Control Panel > Control Services > Agent Monitor* and specify a user account to the SSO Service Log-on User.
- Backup and restore the "Front-End Web" (listed below) if the following issues apply to you:
    - *IIS Settings* : An IIS tool was used to update the IIS settings after either using SharePoint to create a basic site or editing the file information under the IIS path. (i.e.: After using web.config to configure Form Authentication). Some solutions and features will change the file information under the IIS Path and therefore the IIS settings in the FEW will need to be backed up as well.

    - *SharePoint Template* : Templates will need to be backed up in the event that custom features and site definitions change files in the path c:\program files\common files\microsoft shared\web server\extensions\12\template.

    - *Features and Site Definitions* : If custom operations were created for features and site definitions, these two nodes should be backed up.

    - *File System* : If necessary, any files can be backed up in the FEW file system.

6.2.1.1 Full Farm Backup

In order to perform a full farm backup, Platform Level Data Protection must be enabled. Please reference the corresponding Section 4.2.2.1 of the Manual for any details regarding this product. Be sure to check the box next to the farm's name from the data tree when creating a plan.

6.2.1.2 Full Farm Restore

Before restoring content to a new farm, please make sure the server name and topology are identical to the ones used before, and all of the pre-requisites listed below are met:

- Windows Server 2003 with Service Packs 1 and 2
- IIS with ASP.net enabled
- SQL 2000 or 2005 (the server disk layouts should be identical to original farm)
- .NET Framework 3.0
- MOSS 2007 installed (no configurations should be present; the version number and patch level should be identical to the original farm)
- DocAve v5 Agent Installed

- The domain account used should be the same as the original farm

*Note: If the "Restore Database Only" option is selected, you will only be able to restore the Configuration database and the Administration Content database. Other content like web applications will not be selected.

(6-4) Full Farm Restore

Step	Action
1	Since this restore using the Platform Level Restore Controller must be performed as an "in place" restore (same farm), evaluate the status of the farm below: <table><tr><td>**If…**</td><td>**Then…**</td></tr><tr><td>Previously Deployed Farm</td><td>If the farm being restored is either currently or recently deployed (including re-installed environments), disconnect all front-end servers using the SharePoint Products and Technologies Configuration Wizard. See your SharePoint user guide for more details.</td></tr><tr><td>Fresh Installation</td><td>Proceed to the next step</td></tr></table>
2	Select the Database under the farm on the data tree, and select the **Restore whole farm** option in the **Advanced Options**. Please note if you select this option, the Restore Database Only option cannot be selected. ***Note:** If you are setting up a Full Farm Restore on a SharePoint 2010 Environment, you must enter the Passphrase for the SharePoint Products farm in the text box which will appear when selecting the **Restore whole farm** option.
3	Using the Platform Level Restore Controller (described in the user guide above), load the backup plan and data for this farm. Using the tree, choose the "Configuration DB" and "Admin Content DB".
4	Next to the restore options, choose the "Restore Databases Only" option. Make sure that "In Place" restore is checked.
5	Click Go to start the restore process.

Step	Action
6	Connect all SharePoint front-end servers to the Config DB restored in the previous step. You can use the SharePoint Products and Technologies Configuration Wizard mentioned above to perform this action. ***Note**: At least one front-end server should be used to host the Central Admin Web Application. When using the wizard above, select the "Use this machine to host the web site" option under Advanced Settings: Host Central Administration Web Application.
7	After connecting all front-end servers to the Config Database using the steps above, complete all additional steps below to finish the restore.
8	If any IIS settings have changed before performing this in place restore, they must be restored to their original values. Please confirm this before continuing. ***Note**: You can perform the restore using Platform Level Restore Controller, under the Front End Web. The section below describes this process in greater detail.
9	In order to ensure that all solutions have been properly deployed, select the "Windows SharePoint Solutions" node in the restore tree and run a restore. ***Note**: The Database Only option should **not** be used in this case.
10	For the features that apply to your environment, check that the following services are running in *Start > Administration Tools > Services*. • *Single Sign-On (SSO)* : Restart the "Microsoft Single Sign-on Service" under the "Services" popup. • *SPHelpSearch* : Restart the "Windows SharePoint Services Search" in the "Services" popup. • *Shared Services Provider (SSP)* : All features except the search index are already available. In order to restore this, make sure the "Office SharePoint Server Search" (OSearch) has been restarted in the "Services: popup. You will also need to restart this service in the *SharePoint Central Administration > Operations > Services* on Server list.

Step	Action
11	To complete the restore of the index data for the SSP, select the corresponding nodes and children in the tree of the Platform Level Restore Controller tree and perform an in-place restore. Make sure you are not using the "Database Only" restore option. If this SSP is the parent of an inter-farm deployment, all children will take 5-10 minutes to establish a connection after the restore is complete. This will happen automatically. *Note: You can also manually re-crawl the SharePoint index. From Central Administration, choose to edit the properties and specify an index server for the SSP. Navigate to SSP admin site and choose *Search Setting > Restart Crawl Index Files*.
12	If any customizations have been installed using a 3rd party install wizard, re-run those installations to complete this.

6.2.1.3 FEW Restore Settings

Restoring customizations to your front-end web server for your farm can be performed using the Platform Level Recovery Controller as well. This can be used to restore:

- IIS Settings
- SharePoint Templates
- Custom Features
- SharePoint Site Definitions
- File system folders
- Miscellaneous other features

(6-5) FEW Restore Settings

Step	Action
1	Perform a backup of these settings using Platform Level Backup, including any of the nodes found under the "Front End Web Servers" level of the tree.

Step	Action
2	Using the restore controller, perform an in-place restore of any of the nodes listed under this level. For instance, if you only wish to restore IIS settings for a single web app (the only one with customizations), you could restore a single item from this tree. You could also take all customizations and return this all to the original settings.

6.2.2 Troubleshooting Tips

A few of the most common problems found when performing a full farm backup and restore are detailed in the sections as follows. For more detailed help, please contact our tech support line.

6.2.2.1 SharePoint Central Admin cannot be accessed after restore

You can recover the Central Admin by using one of the steps below:

- Make sure that the front-end servers were used to host the Admin web (described above). If not, disconnect a front end server, and reconnect it using the "Use to host Admin Web" option.
- Reset the application pool for the central admin.

6.2.2.2 If Index data is not accurate or corrupted

You can use one of the following methods to restore the index data:

- Use the Platform Level Restore Controller (without using the "Database Only" option) to restore the index records from the last available backup.
- Restart the Office SharePoint Server Search Services, set the Index server for the SSP, and Re-crawl the environment.

6.2.2.3 If a Web Application cannot be accessed after restore

If you wish to fix this issue, make sure the following is done first:

- If you customized features or Site-Definitions were used, please verify that all prerequisite steps for the front end web server were taken before performing the restore.
- Make sure that Web Site Status is started in the IIS Manager with the proper settings.
- Reset the password for the application pool and perform an IIS reset.

6.2.2.4 If there are problems with user profiles and properties or search settings in SSP

Perform the following steps if you are having trouble with the SSP:

- Restore the SSP using Platform Level Recovery Controller.
- Restart the Office SharePoint Server Search Services, set the Index server for the SSP, and Re-crawl the environment.

DocAve's Platform Level Backup and Restore solution in the Data Protection module allows people to backup the AvePoint Antivirus and Content Shield database.

6.3 DocAve System High Availability

This feature is a system disaster recovery solution for DocAve. When the Control Service is down, you can change the media service to the other control service, and restore the backup data saved by the media service via the new one.

*Note: For this instruction, you need at least two media services, and must add them to each logical device.

*Note: Please make sure you have run a System Backup job in the primary DocAve Manager.

(6-6) DocAve System High Availability

Step	Action
1	Go to the machine you installed the secondary media service.
2	Navigate to *Control Panel > Add or Remove Programs > DocAve Manager > Change/Remove*.
3	Select DocAve Control Service and other services to install them, and then restart all the service of the secondary DocAve environment. ***Note**: You can also add the secondary media service to an existing DocAve Control Service.
4	Navigate to *DocAve v5 > Control Panel > DocAve System > System Recovery > System Restore on the secondary DocAve Manager*.

Step	Action
5	Click the "Backup File" radio button and click **Browse** to select the primary DocAve system backup data, and then click **Restore** to restore it. ***Note**: Before you restore the primary DocAve system backup data, it is recommended you to run a system backup job on the secondary DocAve Manager. This operation will make you to find the primary DocAve system backup data successfully.
6	Go to *DocAve v5 > Control Panel > Manager Services > Manager Monitor* to delete the Media Service, Auditor Service and the Search Service used by the primary DocAve Manager.
7	Go to the machine where DocAve Agent installed on to open the Agent Configuration Tool and enter the IP/hostname of the secondary DocAve Manager in the DocAve Control Service Name field.
8	After testing the DocAve Control Service Port successfully, restart all the services.
9	You can use the backup date backed up by the primary on the secondary now.