



**PL10972**

# **Becoming a Master at Vault Administration**

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# Class summary

Whether you're planning your first installation or maintaining a global replicated network, this class will walk you through the implementation, configuration, maintenance, and migration of your Vault software implementation. Learn how to properly plan for the growth of your deployment and how to maintain your Vault software to match the evolving needs of your business. As your system grows over time, you will need to migrate from version to version of the product as well as of the SQL and the operating system. Class topics will include capacity planning, disaster recovery, system monitoring, and SQL optimization. Learn from the experts to ensure your Vault software success.

# Key learning objectives

At the end of this class, you will be able to:

- Learn how to successfully implement Vault the first time
- Learn tips and tricks from the experts, from basic to advanced configurations
- Learn how to properly maintain your Vault infrastructure to ensure stability and optimize performance
- Learn how to plan and execute a successful migration

# Vault Overview



# Vault Product Line

- Vault Basic
- Vault Workgroup
- Vault Professional
- Vault Office



# Vault Feature Comparison

Feature	Autodesk® Vault Basic	Autodesk® Vault Workgroup	Autodesk® Vault Professional
Autodesk CAD Integration	✓	✓	✓
File Management Tools	✓	✓	✓
Single Workgroup	✓	✓	✓
Fast Searching	✓	✓	✓
Data Reuse Tools	✓	✓	✓
File Revision Control and Lifecycles		✓	✓
Automatic File Naming		✓	✓
Access for Non-CAD Users		✓	✓
File and Folder Security		✓	✓
Reporting		✓	✓
Server Based DWF Publishing		✓	✓
Multi-Site Replication			✓
'Query, View, and Print' Web Client			✓
Custom Objects			✓
Bill of Material Management			✓
Engineering Change Management			✓
Coexist with Enterprise Business Systems			✓
3 <sup>rd</sup> Party CAD Integrations			✓
Vault Office Compatible		✓	✓

# Vault 2016 Application Integrations



## AutoCAD Products

- AutoCAD
- AutoCAD LT\*
- AutoCAD Mechanical
- AutoCAD Electrical
- AutoCAD Architecture
- AutoCAD P&ID

- AutoCAD MEP
- AutoCAD Map 3D
- AutoCAD Plant 3D
- AutoCAD AUD

## Digital Prototyping Products

- Alias Automotive, Design, Surface
- Autodesk Inventor, Professional, Publisher
- Inventor LT\*
- Autodesk Simulation Mechanical, Mechanical WS, Multiphysics

- Autodesk Moldflow (Advisor, Synergy)

## Media & Entertainment Products

- Autodesk 3DS Max
- Autodesk 3DS Max Design

## BIM Products

- AutoCAD Civil 3D
- Autodesk Navisworks Simulate, Manage
- Revit Architecture\*\*
- Revit MEP\*\*
- Revit Structure\*\*

## 3rd Party Products

- SolidWorks\*\*
- Pro Engineer\*\*
- Microsoft Office
- Microsoft Outlook\*
- Microsoft SharePoint\*\*
- MicroStation\*\*

\* - Vault Workgroup and Professional

\*\* - Vault Professional only

# Vault 2016 System Requirements

## Server

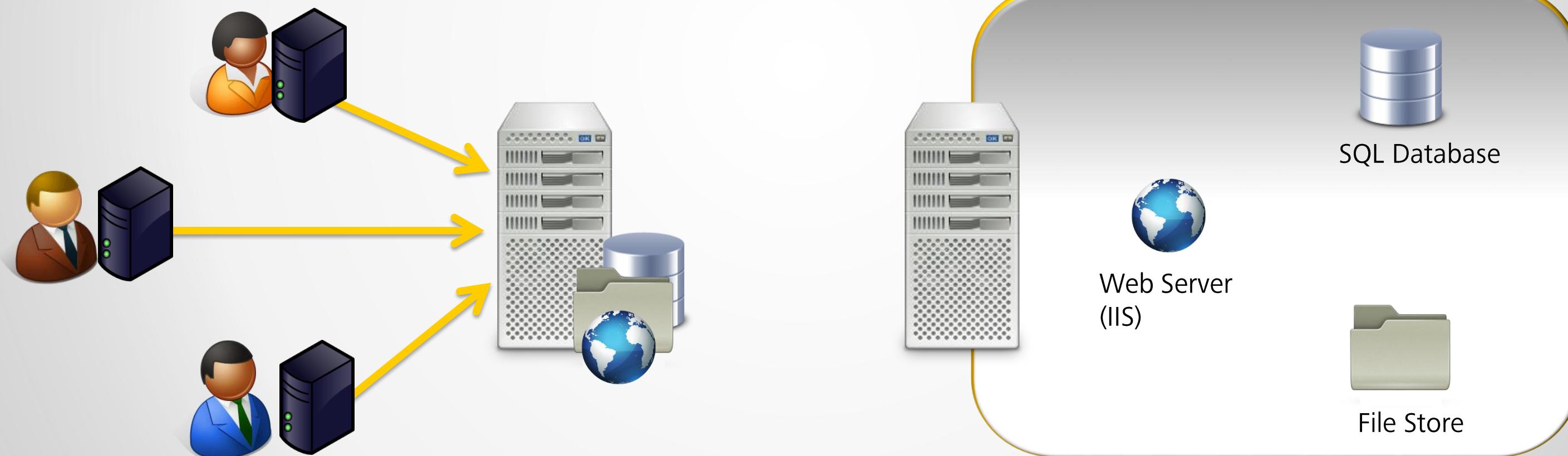
- Windows Server 2012 & 2012 R2
- Microsoft SQL Server 2012 & 2014
- Window 7 & 8.1 (Vault Basic Only)

## Not supported:

- Retired - Server 2008 or 2008 R2
- Retired - SQL 2008 R2

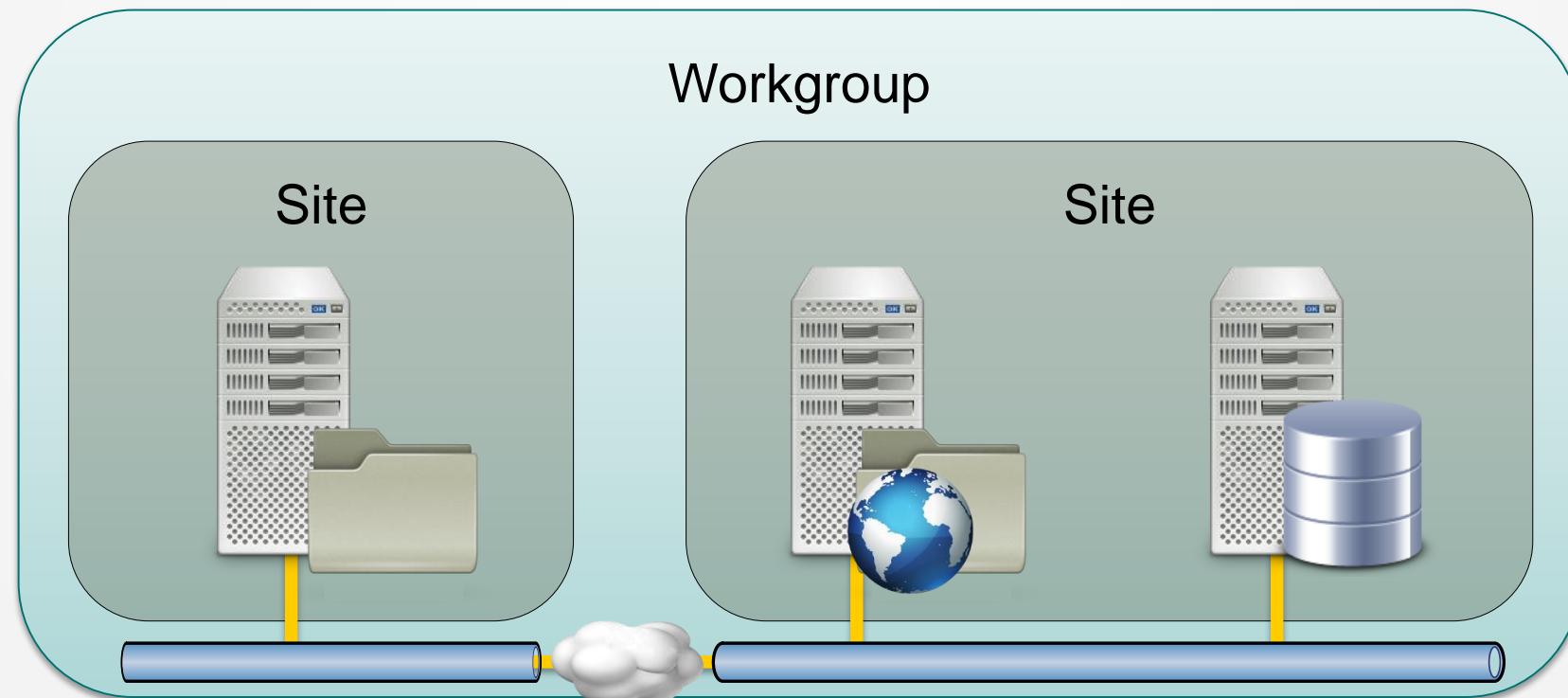
# Basic Vault Configuration

- One physical server with all Vault components
- Multiple clients connected to share and store files



# Vault server topologies

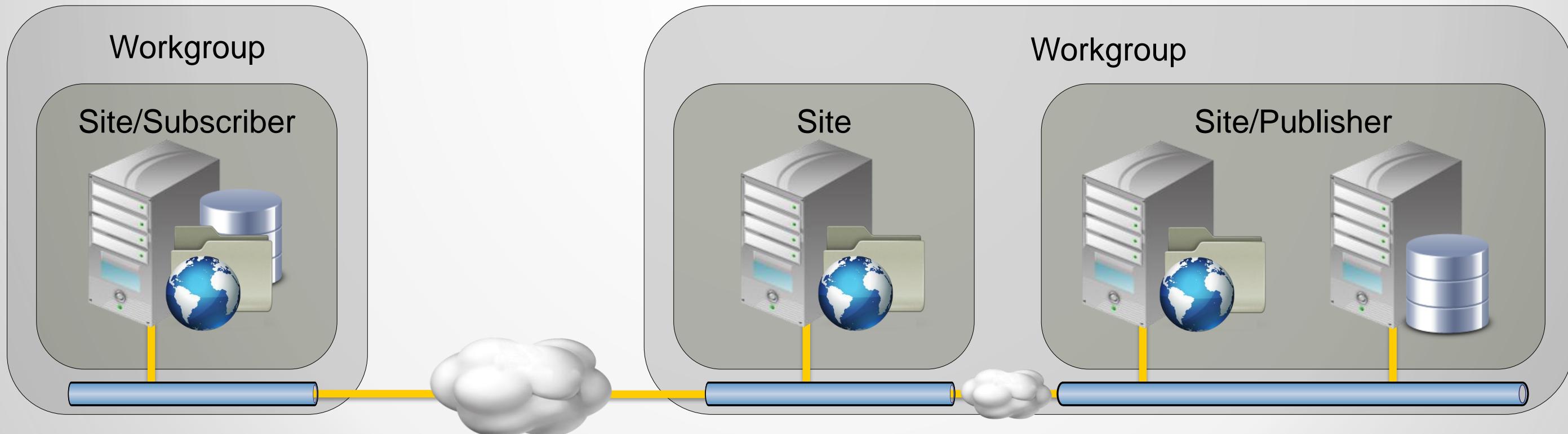
- Single Site – A location where the Vault server software is installed
- Workgroup – Sites connecting to the same SQL database



# Vault server topologies

## Connected Workgroups (Replication)

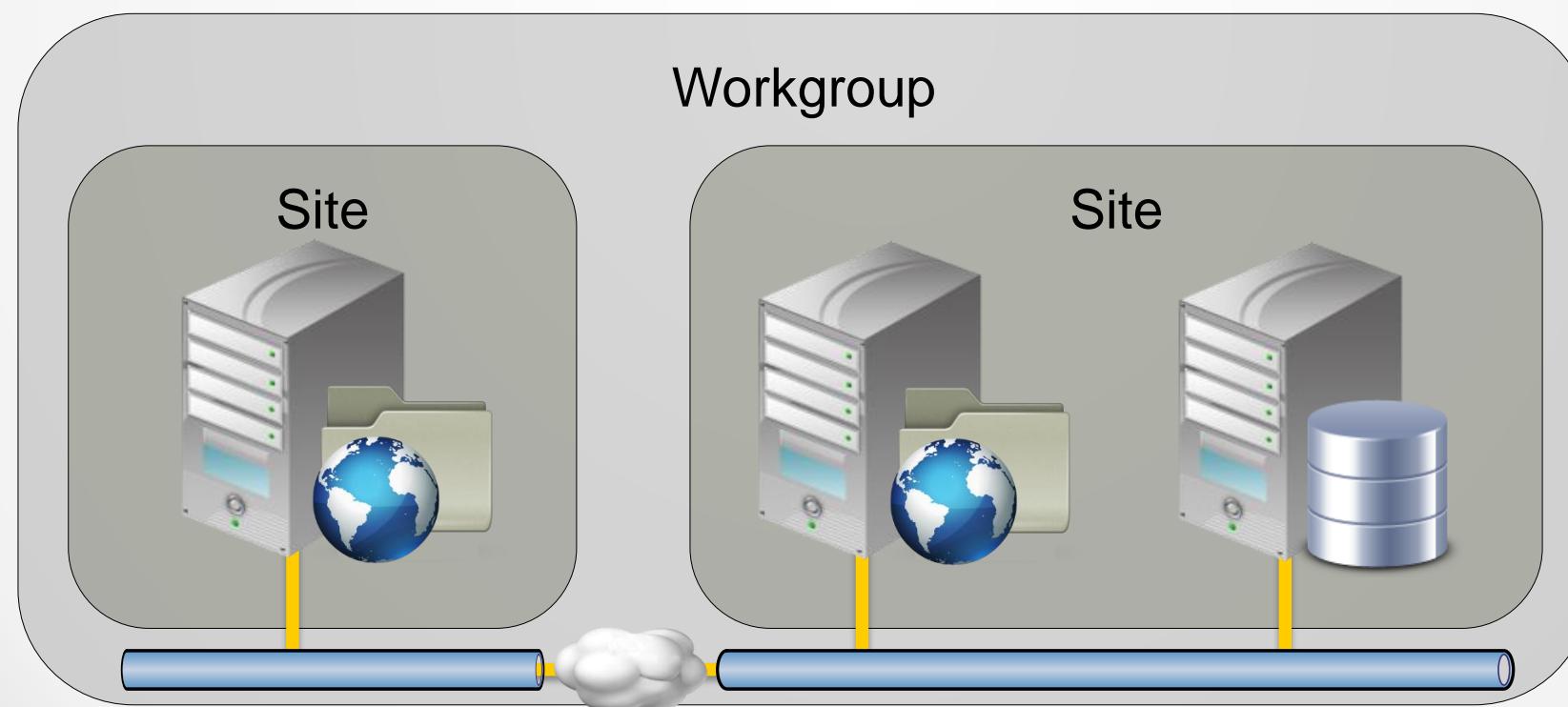
- Multiple SQL databases – 1 Publisher, 1 to many subscribers
- Publisher – the first SQL server configured
- Subscriber – SQL servers replicating to the Publisher



# Vault server topologies

## Autodesk Vault Filestore Server (AVFS)

- One main site with the Vault Server, SQL & File Store
- Remote locations with File Server



# Implementation



# Planning your Server Configuration

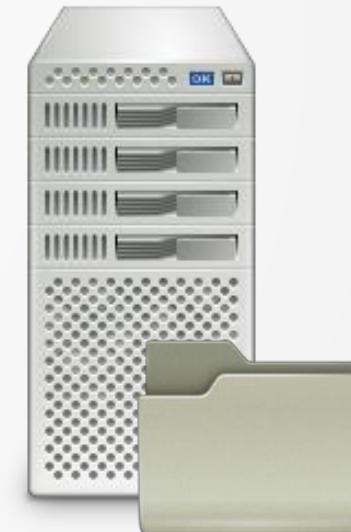
- Plan ahead for growth
  - IBM sizing guide available for guidance
  - Can be virtual, physical or cloud.



Database Server  
(SQL Server)



Application Server  
(ADMS and IIS)



File Server  
(Raid, NAS, SAN)

# Where is the Metadata?

## Microsoft SQL Server – Single Site

- KnowledgeVaultMaster
  - Users
  - Directory
  - Configurations
- Vault databases
  - Metadata/Properties
  - File references
  - Items/BOMS
- Content libraries



# Where is the Metadata?

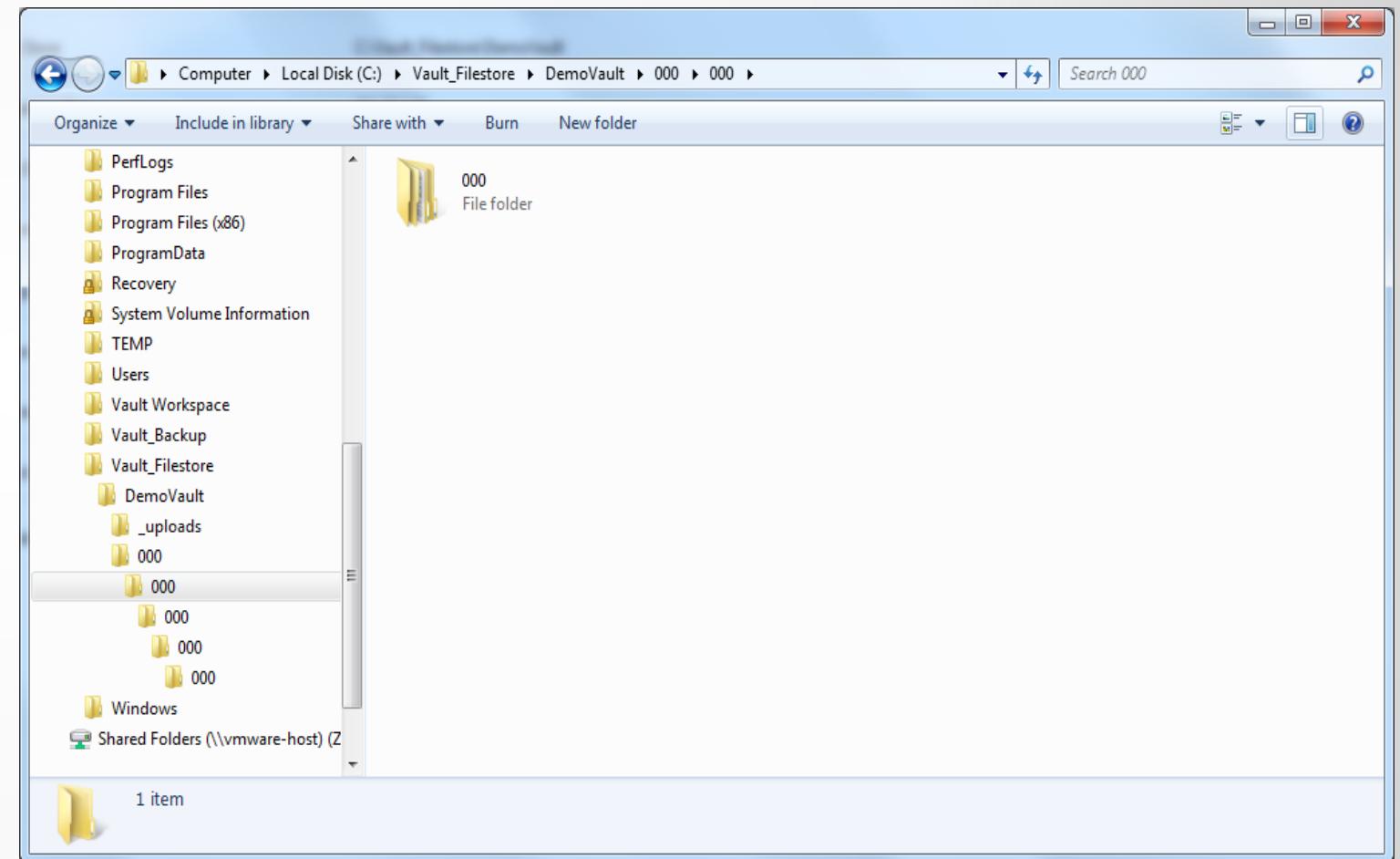
## Microsoft SQL Server – Connected Workgroup

- KnowledgeVaultMaster
- Vault database
- Distributor
  - Ms\_merge tables
- Master database
- Msdb database



# Where are the files?

- Vault Filestore
  - Contains all files
  - All versions
  - 1 for each Vault
  - Files in native format
  - Renamed for organization



# Pre-Install SQL

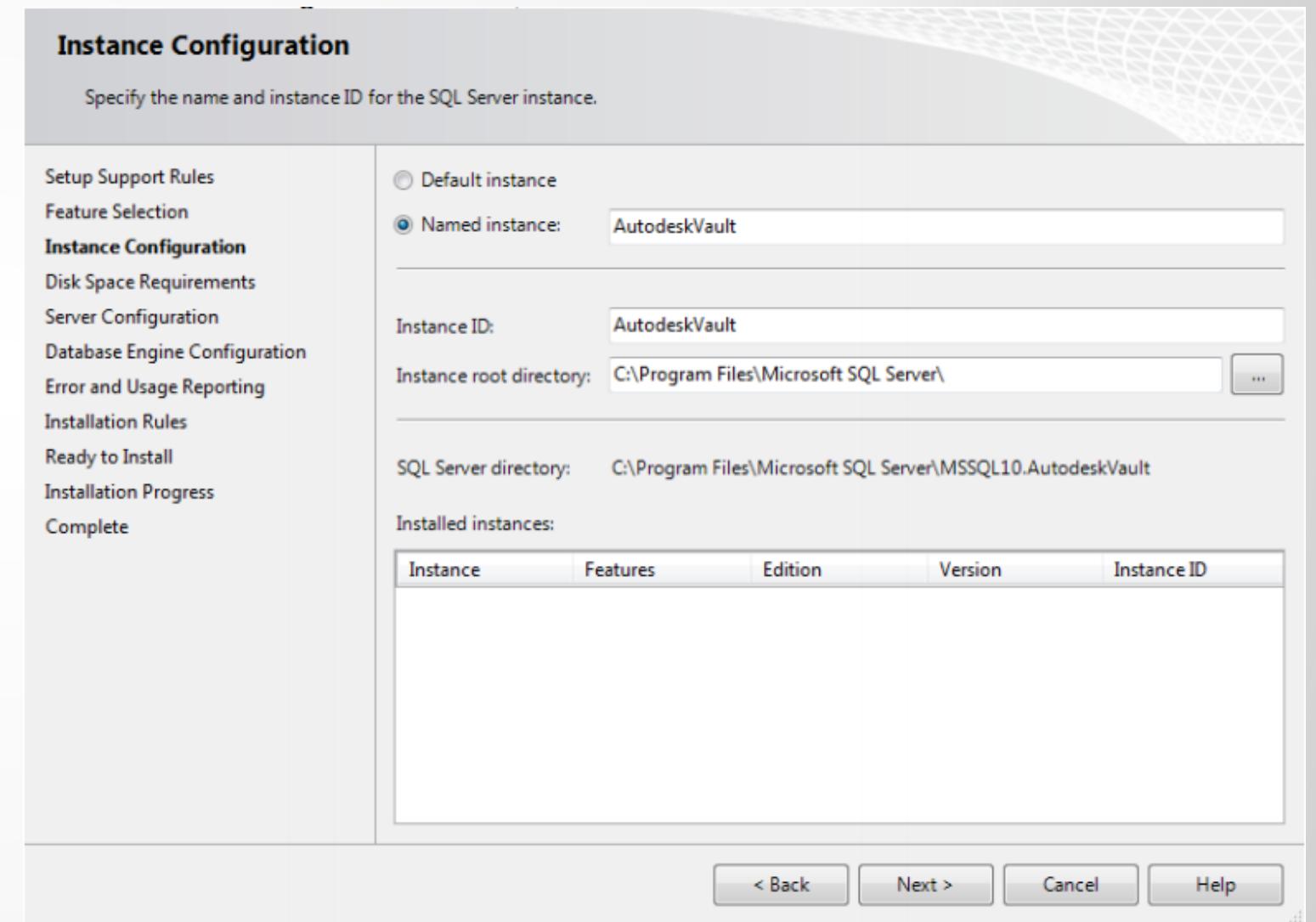
# Pre Install SQL Server

## Best Practice

- Always use an instance named AUTODESKVAULT
- Do not install other database applications into the AutodeskVault instance Contact a Microsoft Licensing Specialist regarding SQL licensing questions
- Do not connect directly to the database with other programs
- Do not modify settings unless directed by the Advanced Configuration Guide or Autodesk Product Support

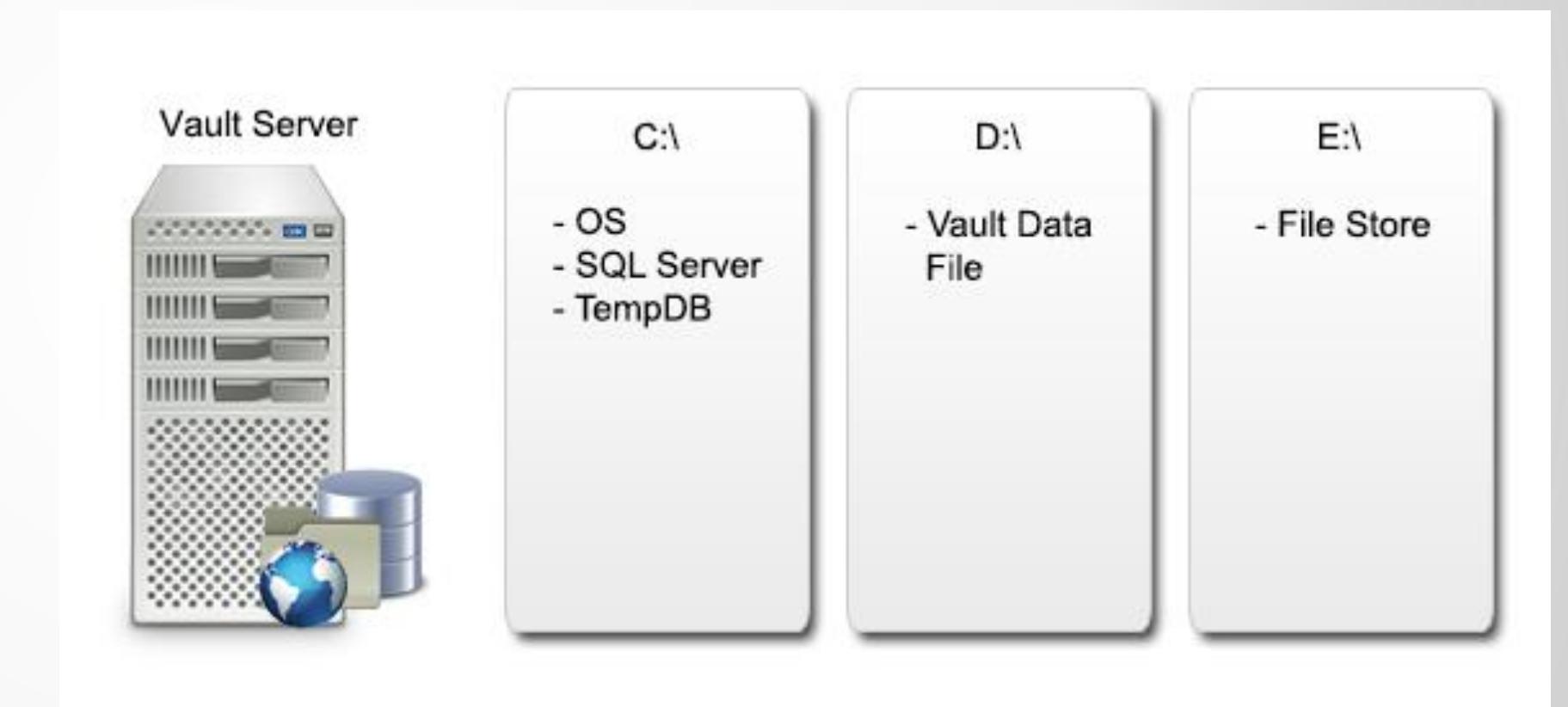
# Advanced Configuration Guide

- 2014 Guide is the latest
  - Use for new installations and upgrades
  - Use for pre-install and migrations



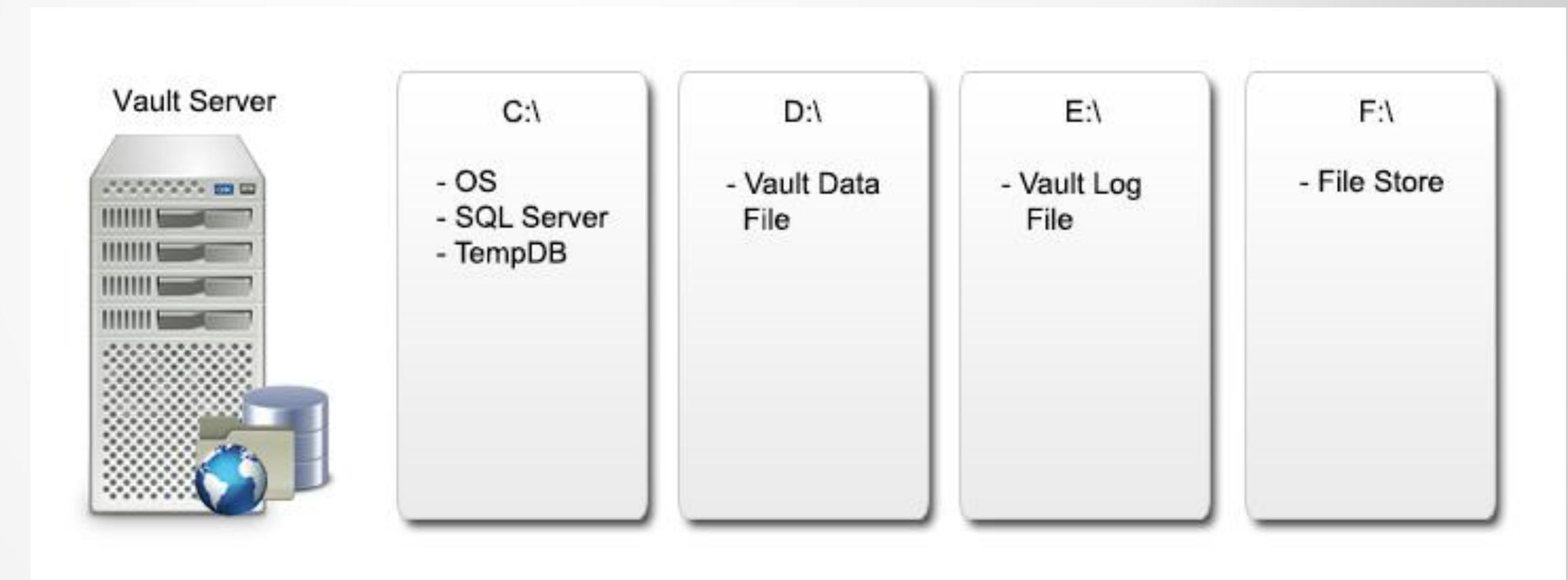
# Multiple Drives

- Increase performance by splitting up I/O request



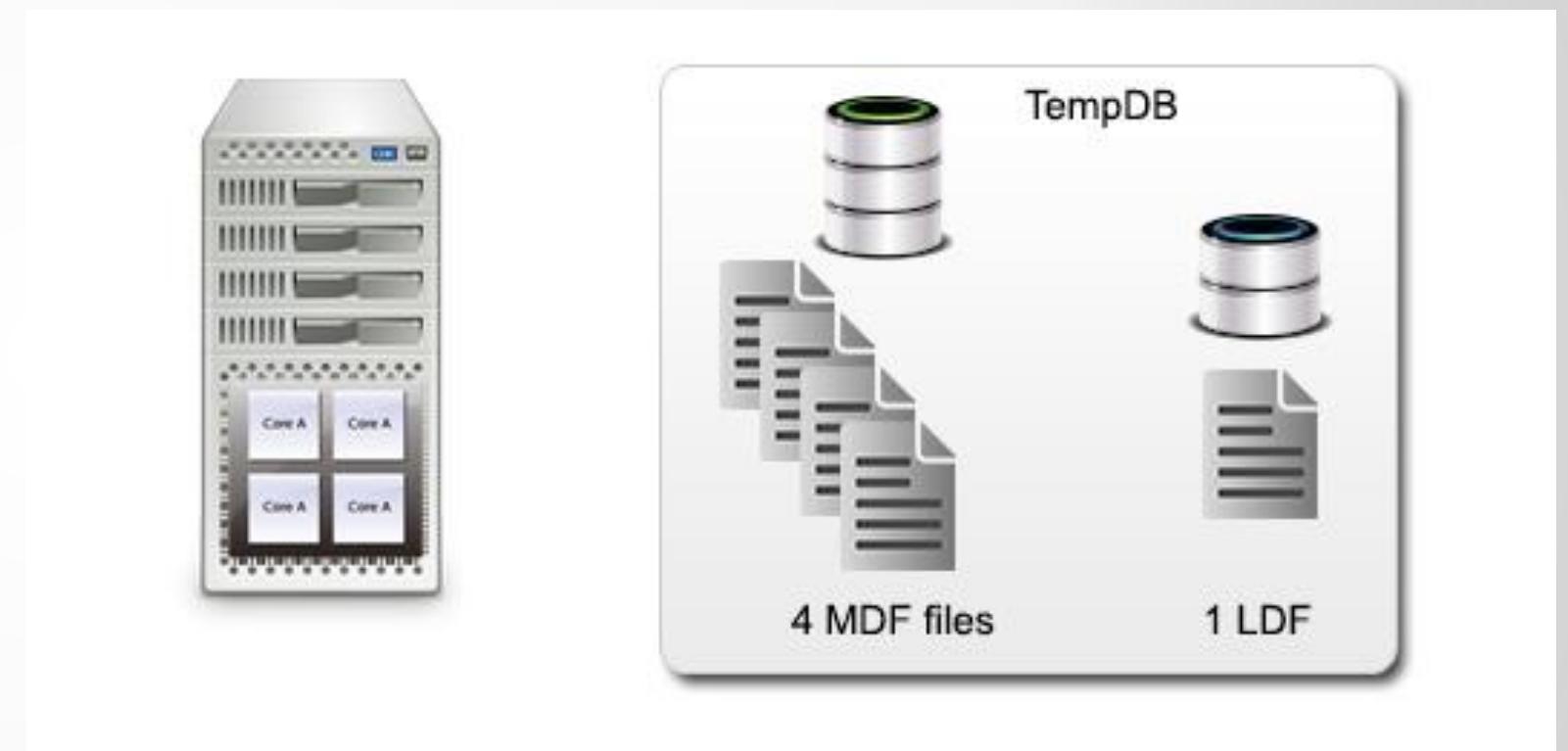
# Splitting Database Files

- Split MDF & LDF files
- Performance for I/O request



# Multiple TempDB Data Files

- Used for temporary transactions
- One file by default
- One file per CPU core

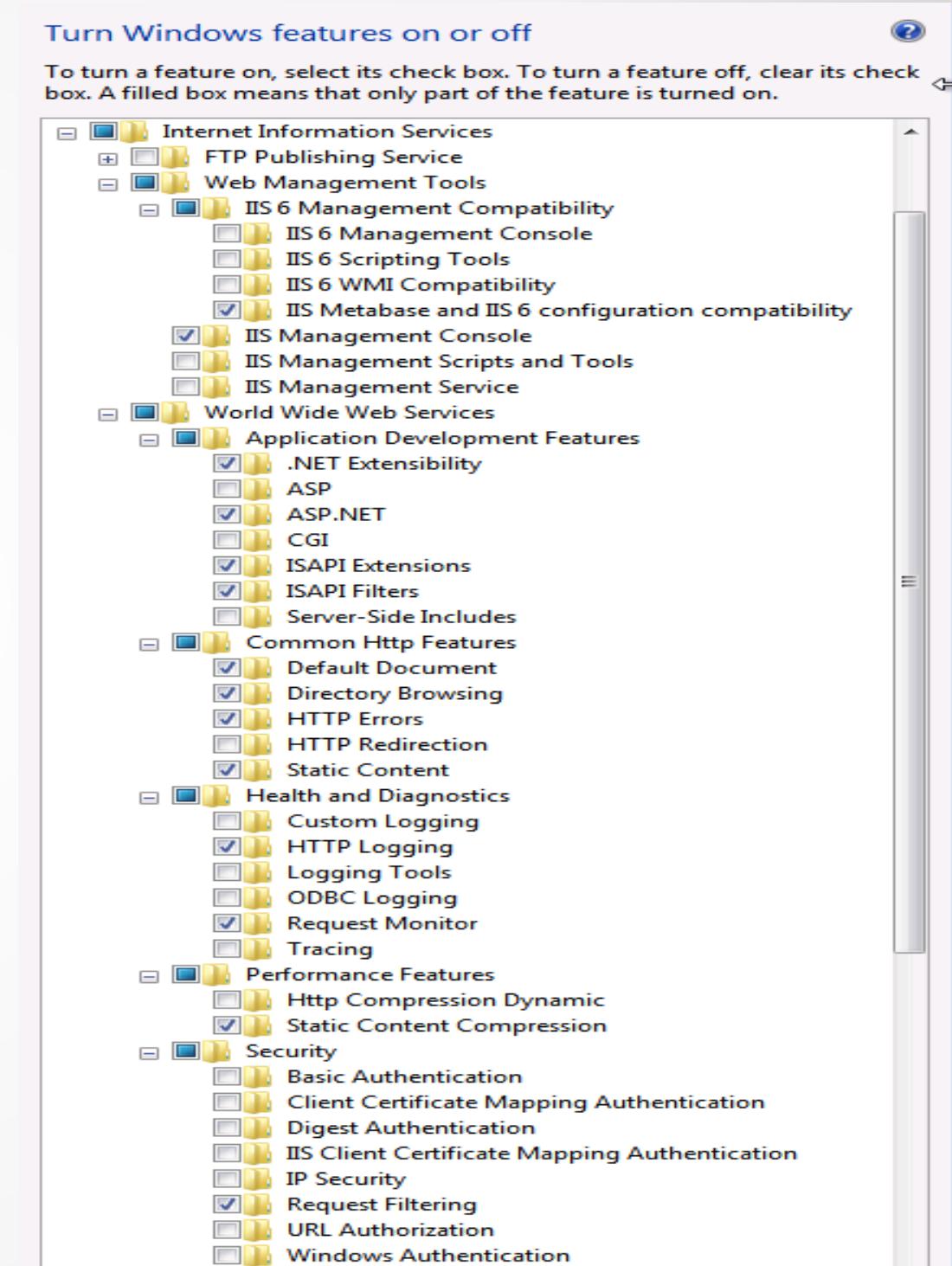


# Pre-Install IIS

# IIS configuration

- Manually add IIS
  - Use the documented configuration
  - Can also be used to verify post installation

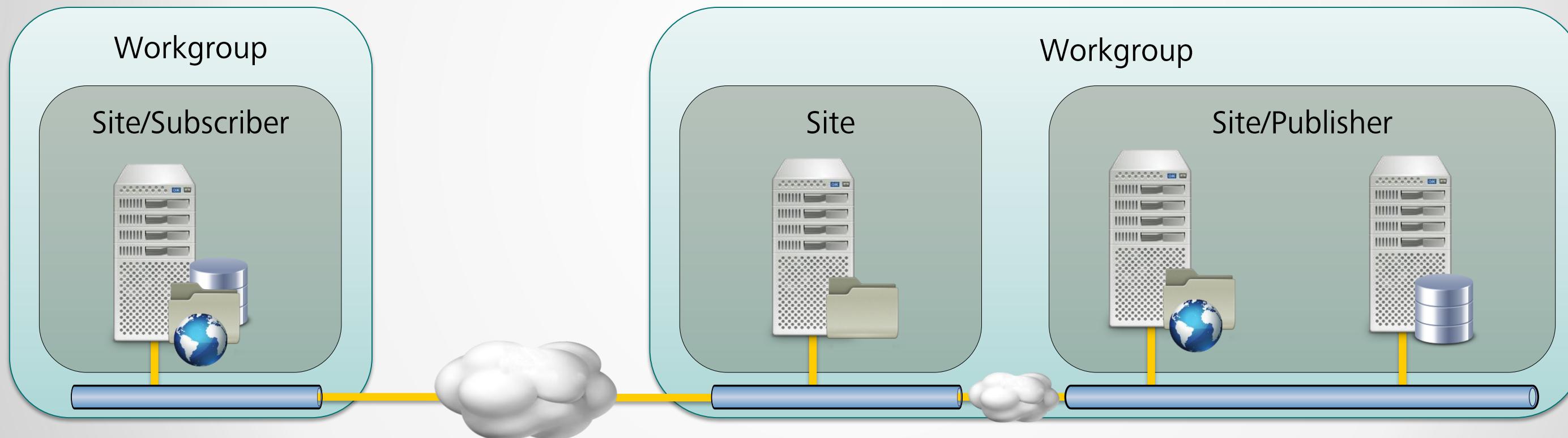
\*script in the handout



# Replication

# Terminology

- Publisher – the first SQL server configured
- Subscriber – SQL servers replicating to the Publisher



# Recommendations

- Servers should be in the same domain or two-way trusted domains.
- Servers should be assigned static IP address.
- Use 1 domain user account for replication and snapshot access.

# Replication Requirements

- A shared folder on the Publisher where replication snapshots are stored and shared for remote SQL servers.
- A Windows account on the Publisher that has Read/Write permissions to the snapshot share.

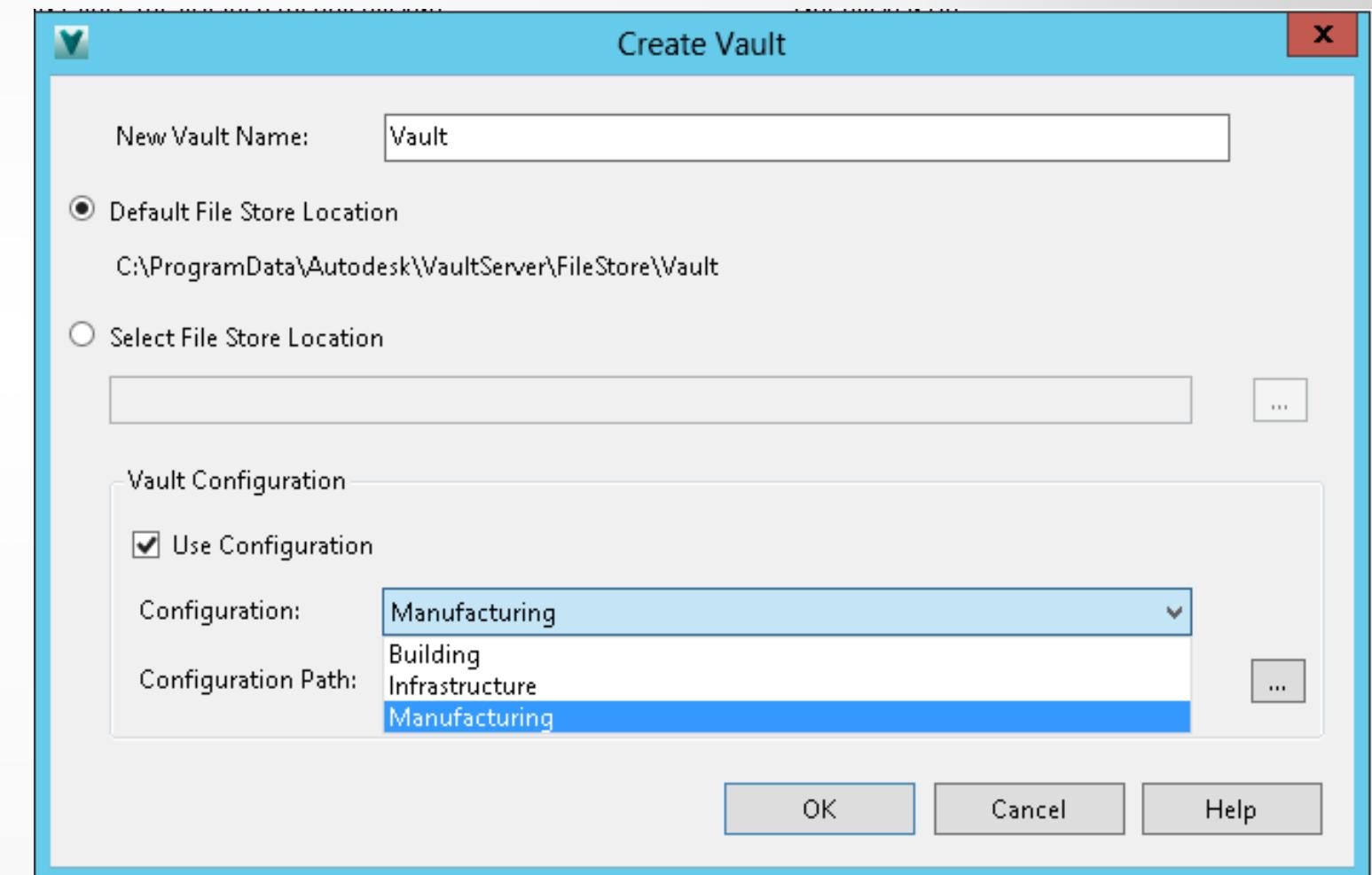
# Replication Requirements

- Server participating in the replication environment must be able to resolve remote servers by NetBIOS name.
- SQL and http ports need to be open in firewalls for communication between servers.
  - HTTP protocol – TCP port 80 by default.
  - SQL Browser Service – UDP port 1434.
  - SQL Server – TCP (dynamic port).

# Configuration XML

# Vault Configuration Files

- Create a Vault with configuration File
  - Pre-defined Properties, lifecycles & categories



# Vault Configuration

- **Building** – Creates a vault with inherent properties for Architectural, Engineering, and Construction (AEC) design workflows.
- **Infrastructure** – Creates a vault with inherent properties for Engineering, Natural Resources, and Infrastructure (ENI) design workflows.
- **Manufacturing** – Creates a vault with inherent properties for Manufacturing (MFG) design workflows.
- **Custom** – Use a custom configuration file. Imported from a different Vault

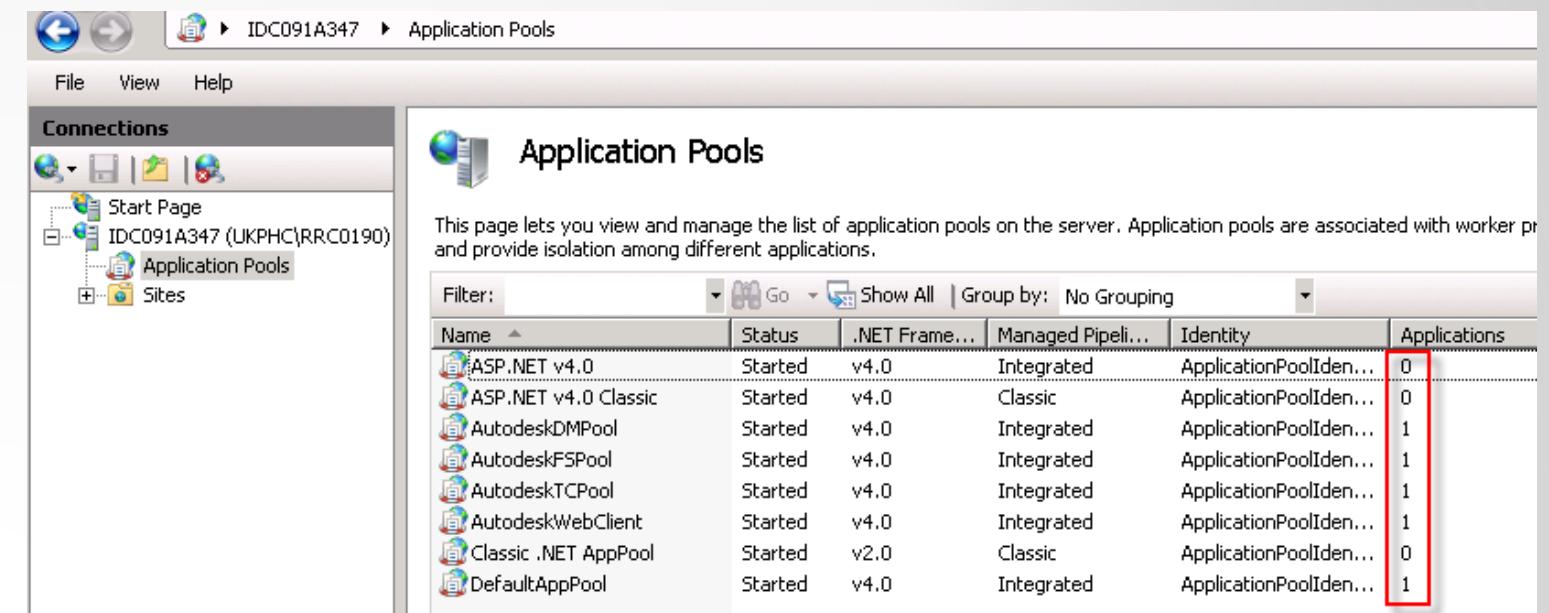
# Advanced Configuration



# IIS App Pool

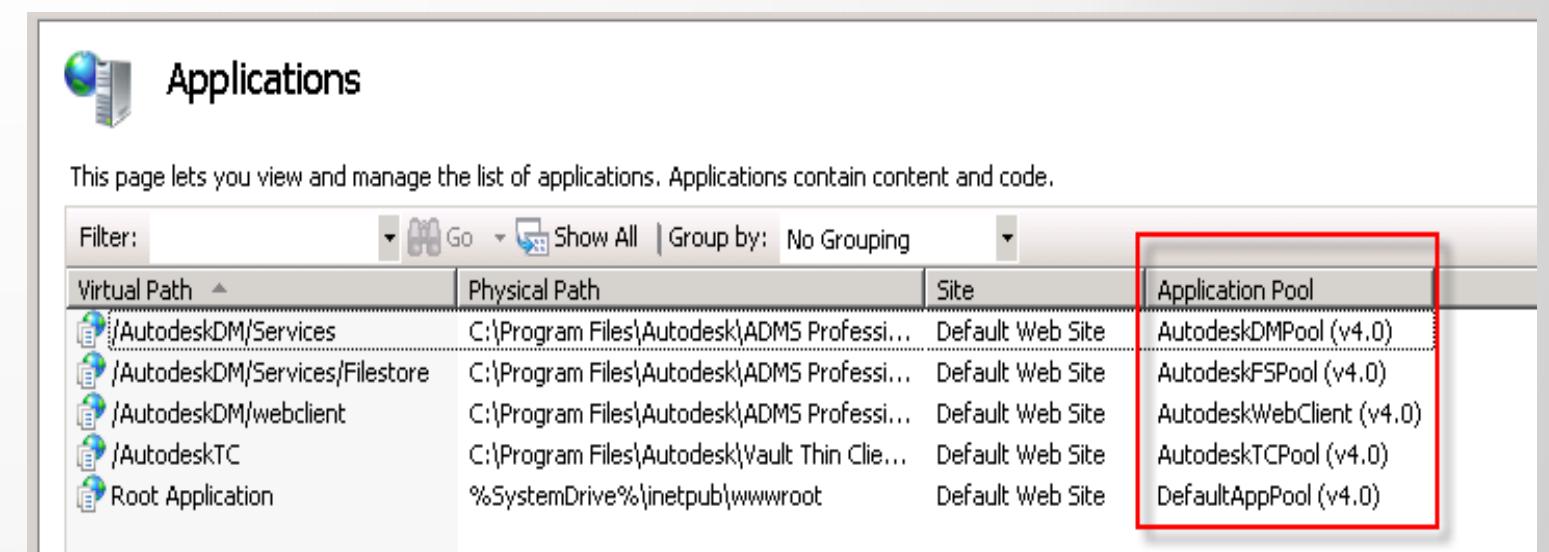
# Configuring IIS App Pools

- Limit 1x Application to 1x App Pool
- Create and re-assign as needed



This screenshot shows the 'Application Pools' section of the IIS Manager. The left pane displays a tree view with 'Start Page', 'IDC091A347 (UKPHC\RRC0190)', 'Application Pools', and 'Sites'. The right pane is titled 'Application Pools' and contains a table with the following data:

Name	Status	.NET Frame...	Managed Pipeli...	Identity	Applications
ASP.NET v4.0	Started	v4.0	Integrated	ApplicationPoolIden...	0
ASP.NET v4.0 Classic	Started	v4.0	Classic	ApplicationPoolIden...	0
AutodeskDMPool	Started	v4.0	Integrated	ApplicationPoolIden...	1
AutodeskFSPool	Started	v4.0	Integrated	ApplicationPoolIden...	1
AutodeskTCPool	Started	v4.0	Integrated	ApplicationPoolIden...	1
AutodeskWebClient	Started	v4.0	Integrated	ApplicationPoolIden...	1
Classic .NET AppPool	Started	v2.0	Classic	ApplicationPoolIden...	0
DefaultAppPool	Started	v4.0	Integrated	ApplicationPoolIden...	1

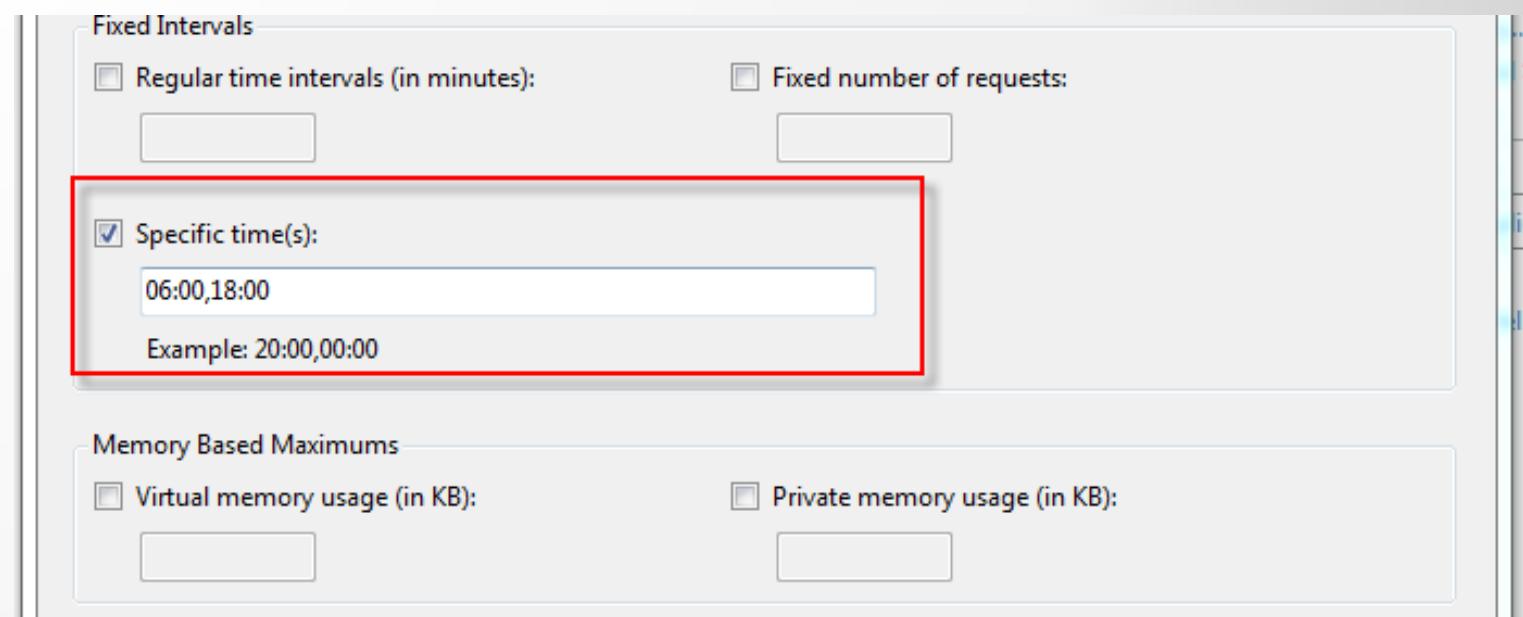
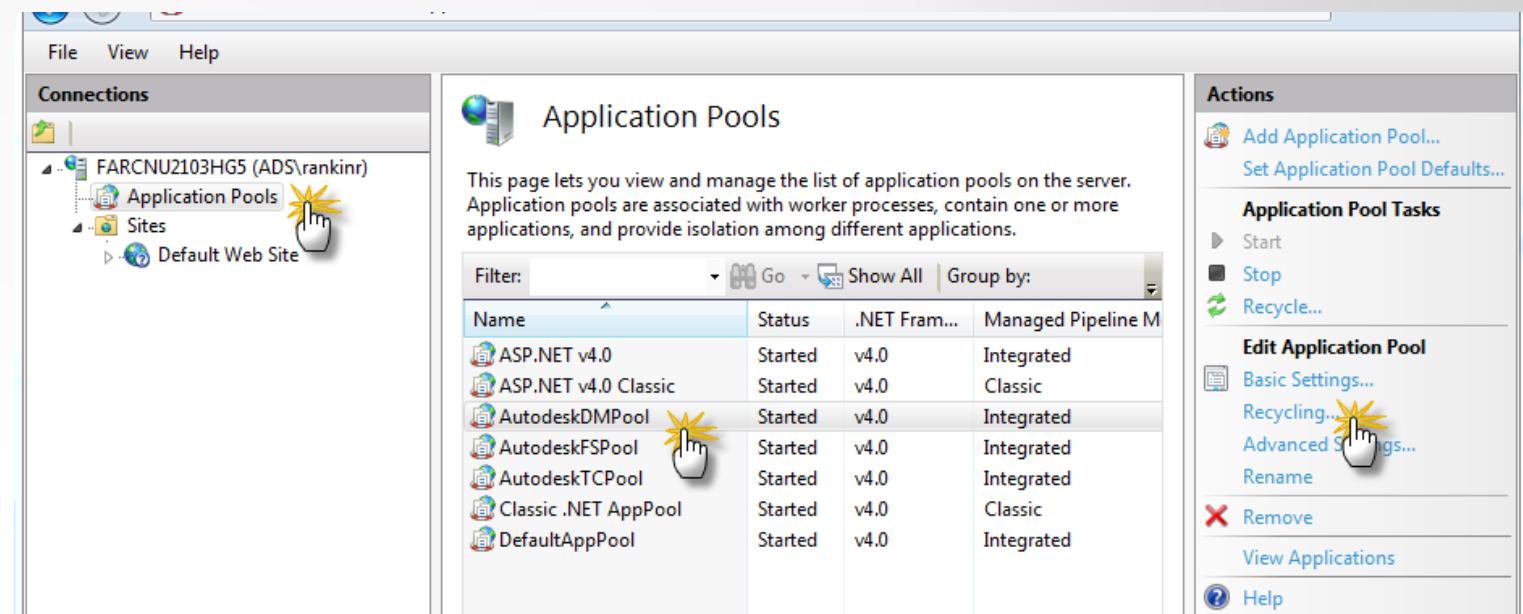


This screenshot shows the 'Applications' section of the IIS Manager. The left pane displays a tree view with 'Start Page', 'IDC091A347 (UKPHC\RRC0190)', 'Application Pools', and 'Sites'. The right pane is titled 'Applications' and contains a table with the following data:

Virtual Path	Physical Path	Site	Application Pool
/AutodeskDM/Services	C:\Program Files\Autodesk\ADMS Professional\Autodesk...	Default Web Site	AutodeskDMPool (v4.0)
/AutodeskDM/Services/Filestore	C:\Program Files\Autodesk\ADMS Professional\Autodesk...	Default Web Site	AutodeskFSPool (v4.0)
/AutodeskDM/webclient	C:\Program Files\Autodesk\ADMS Professional\Autodesk...	Default Web Site	AutodeskWebClient (v4.0)
/AutodeskTC	C:\Program Files\Autodesk\Vault Thin Client\Autodes...	Default Web Site	AutodeskTCPool (v4.0)
Root Application	%SystemDrive%\inetpub\wwwroot	Default Web Site	DefaultAppPool (v4.0)

# App Pool Recycling

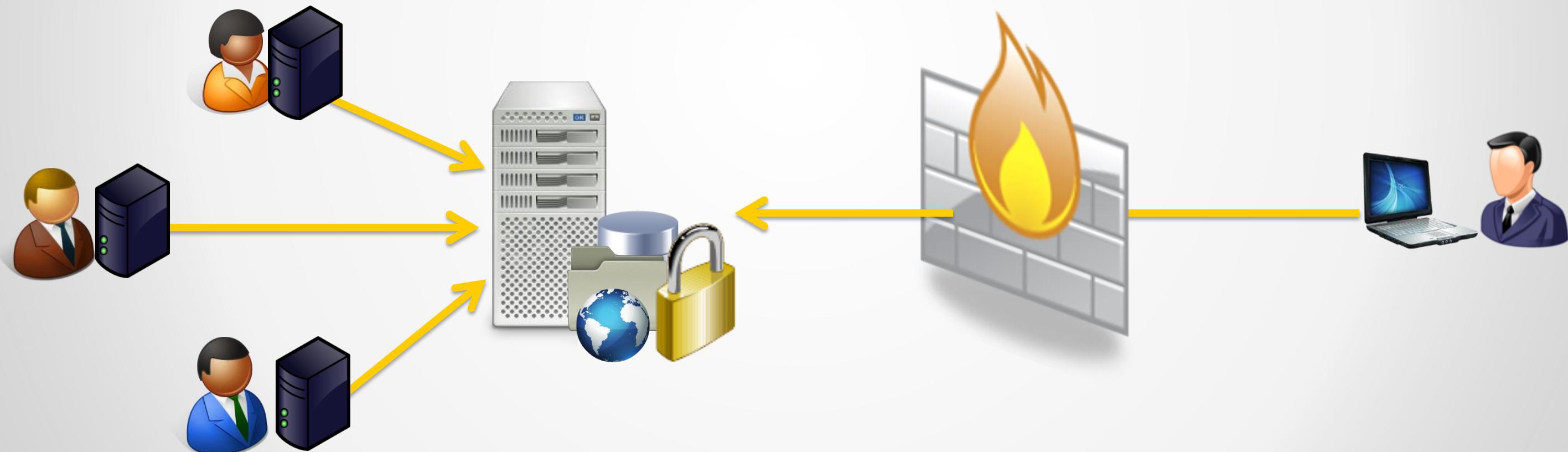
- Set the App Pool to recycle at regular intervals
  - Happens automatically so only adjust if needed
- Frees memory



# SSL Configuration

# SSL Configuration

- Secure Socket Layer (SSL) Certificate can be used to secure the connection

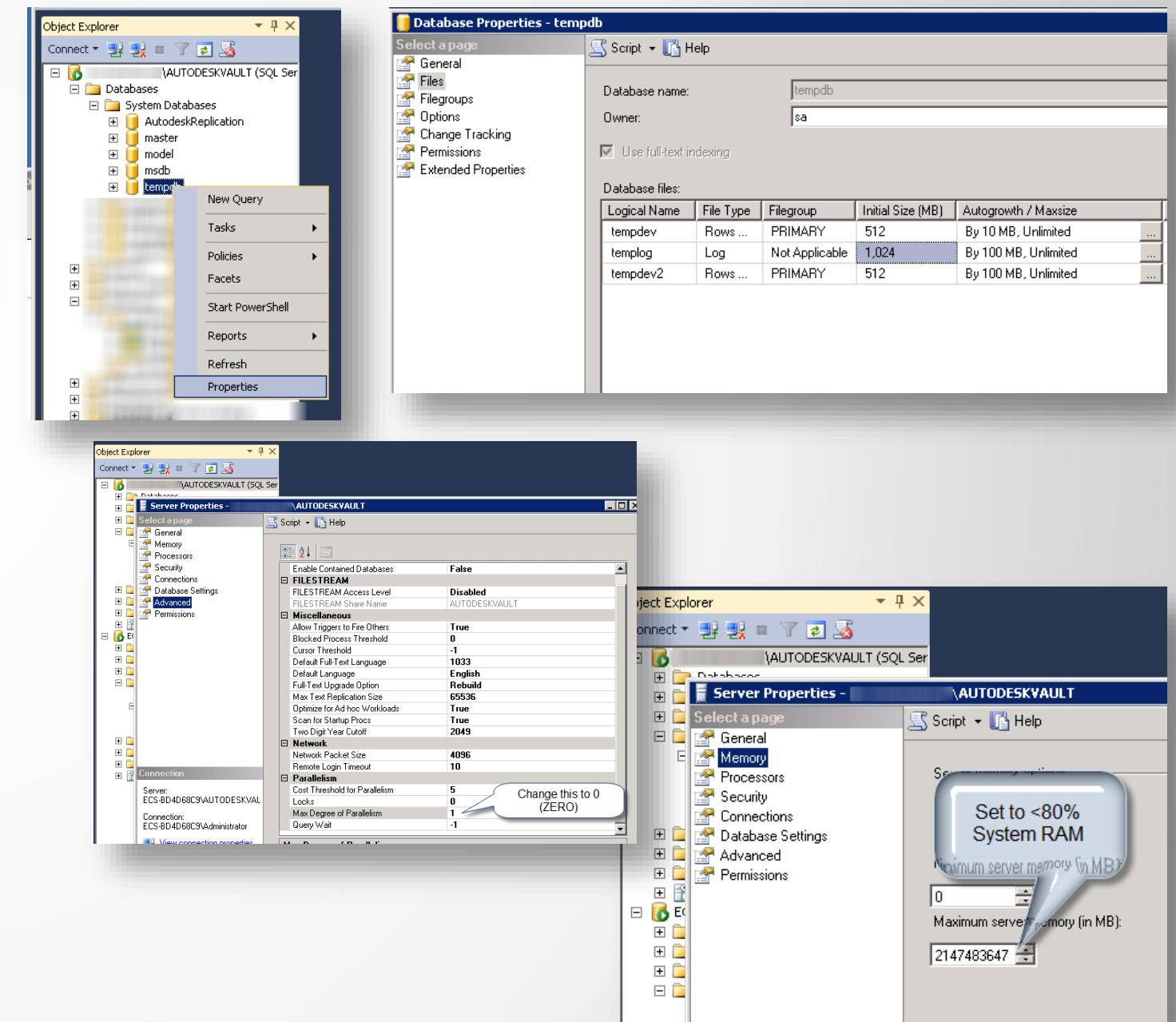


# SQL Performance

# SQL Configuration

## SQL Performance

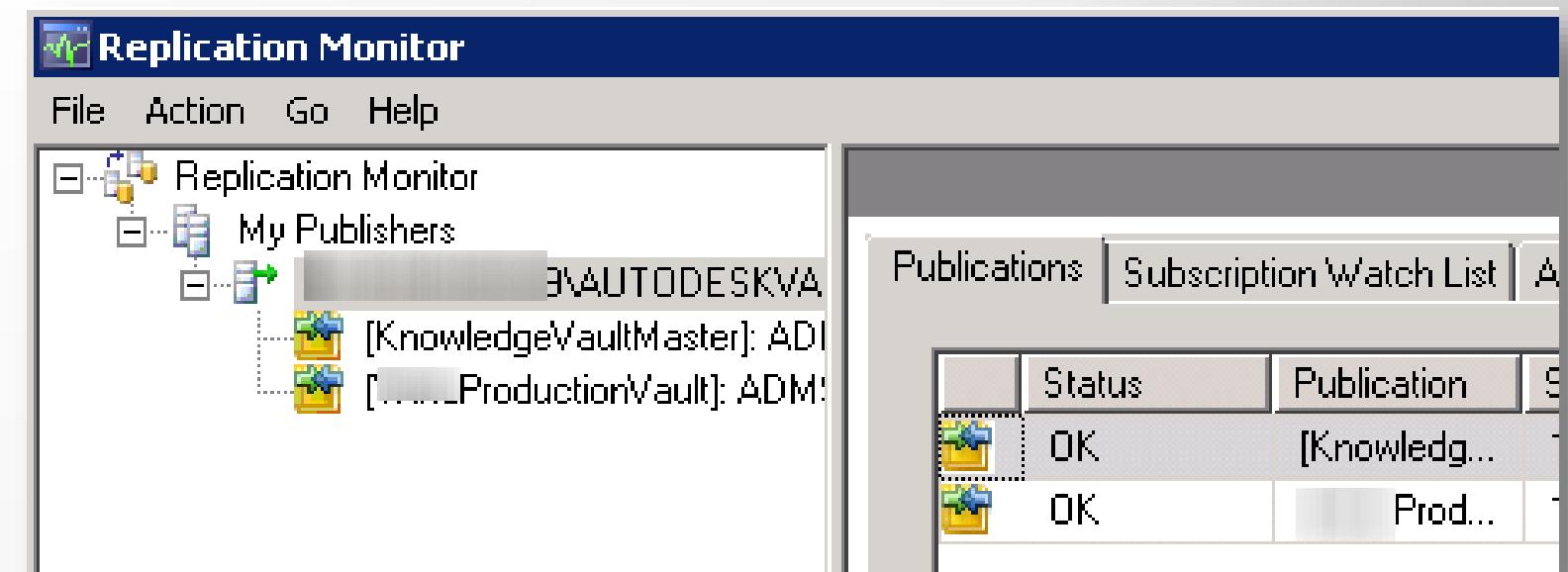
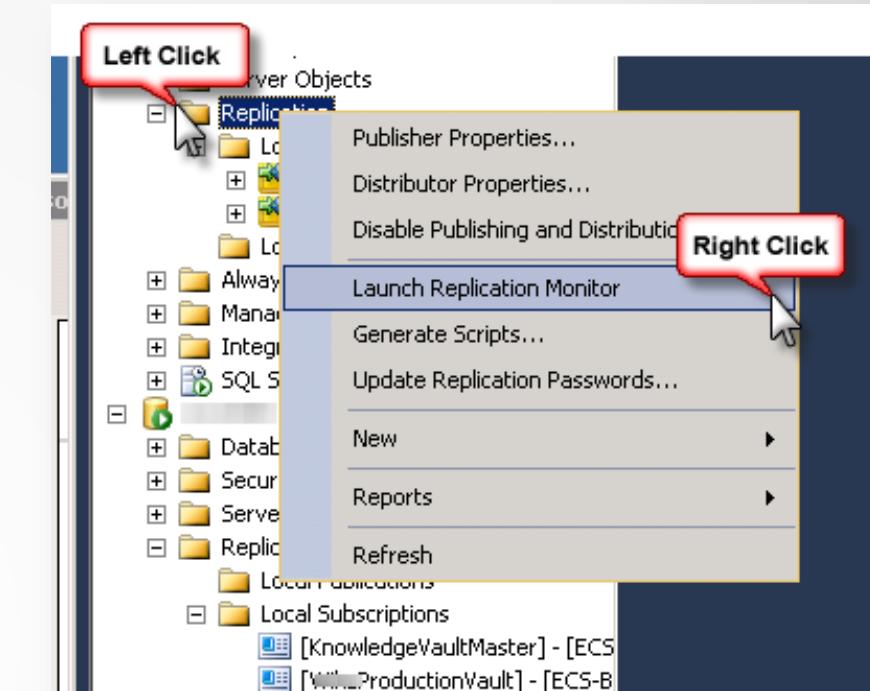
- Tempdb files
  - Tempdb files to equal half of the total processors on the server not to exceed 8 (eight)
  - Tempdb 512 or 1024 mb each
  - Templog needs to be the sum value of all tempdb files
  - Autogrowth 100mb (min)
- Other Settings
  - Max Degree of Parallelism
    - Set to 0
  - SQL Max Server Memory
    - Set to 50-80% the total available RAM of the server



# SQL Configuration

## SQL Replication

- Replication Monitor
  - Monitor will typically look like this.
  - Exceptions in a healthy state are when SQL transactions are occurring in a high latency environment, you may see an error.
  - Allow it time to clear
  - Check again
- If error, you have 14 days from initial error before data is no longer able to replicate
  - This means item, change order data and files may be lost from affected subscribers
  - Increase retention period
  - From publisher, subscribers and failed subscriber, 3<sup>rd</sup> party backup ADMS
  - Get all new data to local user workspace checked in by local users since replication failure



# Database Optimization

Logical Name	Initial Size (MB)	Autogrowth
KnowledgeVaultMaster		By 10MB, unrestricted growth
KnowledgeVaultMaster_log		By 10 percent, unrestricted growth
<Vault>		By 100MB, unrestricted growth
<Vault>_log	500	By 10 percent, unrestricted growth
<Custom_Library>		By 25 MB, unrestricted growth
<Custom_Library>_log		By 10 percent, unrestricted growth
<Standard_Library>		By 25 MB, unrestricted growth
<Standard_Library>_log		By 10 percent, unrestricted growth

**Note:** A blank cell in the above table indicates that the default setting should not be changed. Grey cells, indicate default values and should be set to the above if they are different

# Administration

# Server Tasks

Task	Description
<b>File Store Validation</b>	Compares database metadata against the file store to determine if all of the files in the database exist in the file store.
<b>File Store Replication</b> <small>Note: Vault Professional Only</small>	Copies files that exist on one site's file store to another site's file store where the specific files do not exist. This process is scheduled by the user.
<b>File Store Cleanup</b> <small>Note: Vault Professional Only</small>	The file store cleanup process compares each file store against the SQL database and removes files which have been deleted from the data management environment.
<b>Update Statistics</b>	Runs Update Statistics on the SQL database. This process improves query performance, which in turn improves vault performance.
<b>ECO Email Notification</b> <small>Note: Vault Professional Only</small>	Sends email notifications that have been saved in a queue. Automatic Email notifications must be enabled.
<b>ERP Packaging</b> <small>Note: Vault Professional Only</small>	Communicates with an existing ERP system. ERP Integration must be enabled.
<b>Property Re-indexing</b>	Extracts properties from a bulk of files and updates the database with the new information. This operation can be started and stopped by the user. If the operation is stopped and restarted later, it will start with the last file processed.
<b>Search Indexing</b>	Takes properties from the database into the indexer for the first time. This indexing yields faster results when the user searches the database on specific properties.

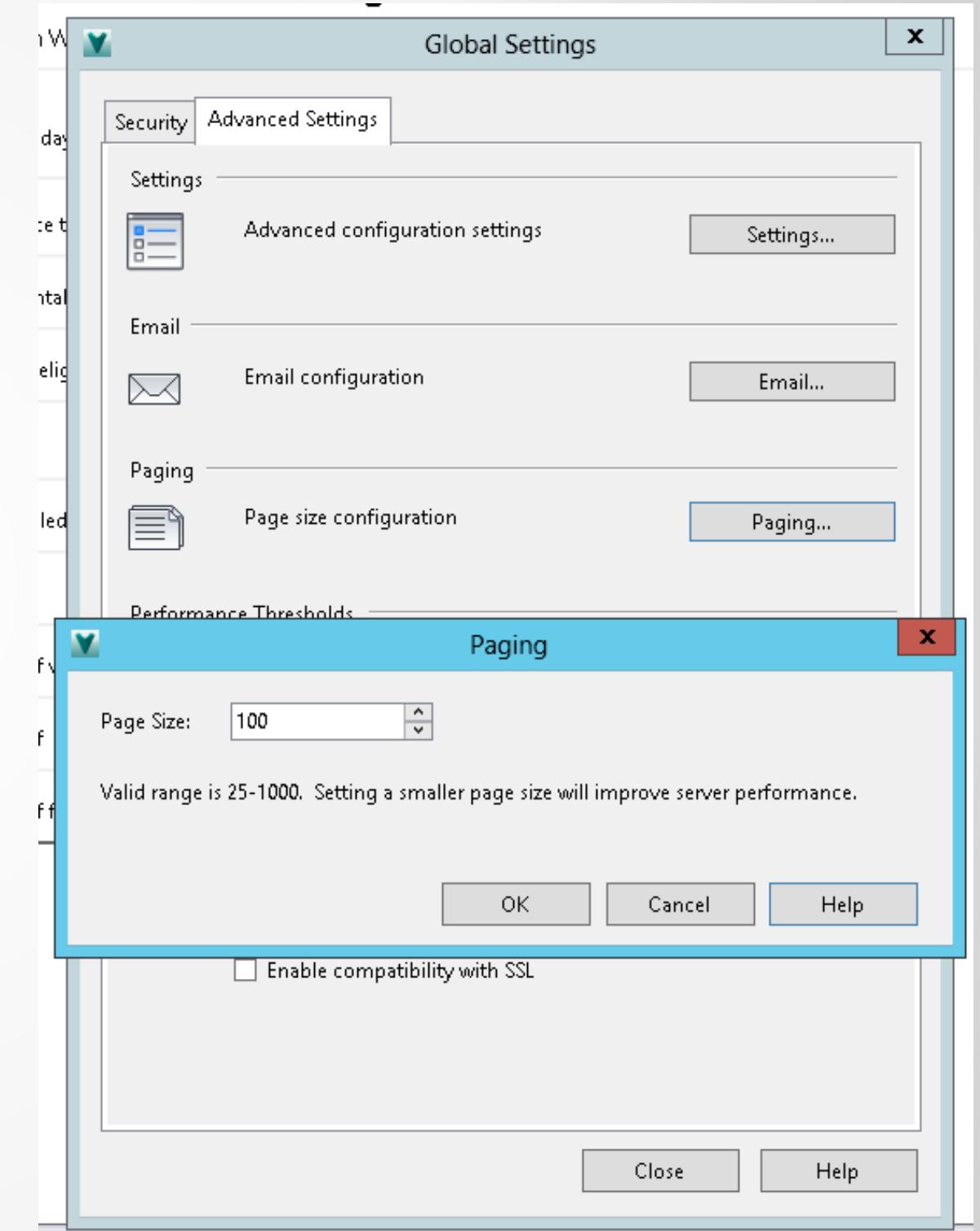
# Server Tasks

Task	Description
<b>Content Indexing Service</b>	Extracts the full text contents from existing files in the vault, allowing full content searching. This process only runs if full-content searching is enabled.
<b>Search Index Optimization</b>	Updates the indexing engine which helps return search results quickly. When the process is running, the indexer is locked. This process runs during off hours to prevent user down time.
<b>Content Indexing Service Update</b>	Adds newly created and updated content to the vault server's search index. This process runs every twenty minutes once full content searching is enabled.
<b>Item Lock Cleanup</b> <small>Note: Vault Professional Only</small>	When the vault server and the SQL server perform different actions on the database, it will apply locks to prevent data collision.

ADMS Console, select Tools > View Server Tasks

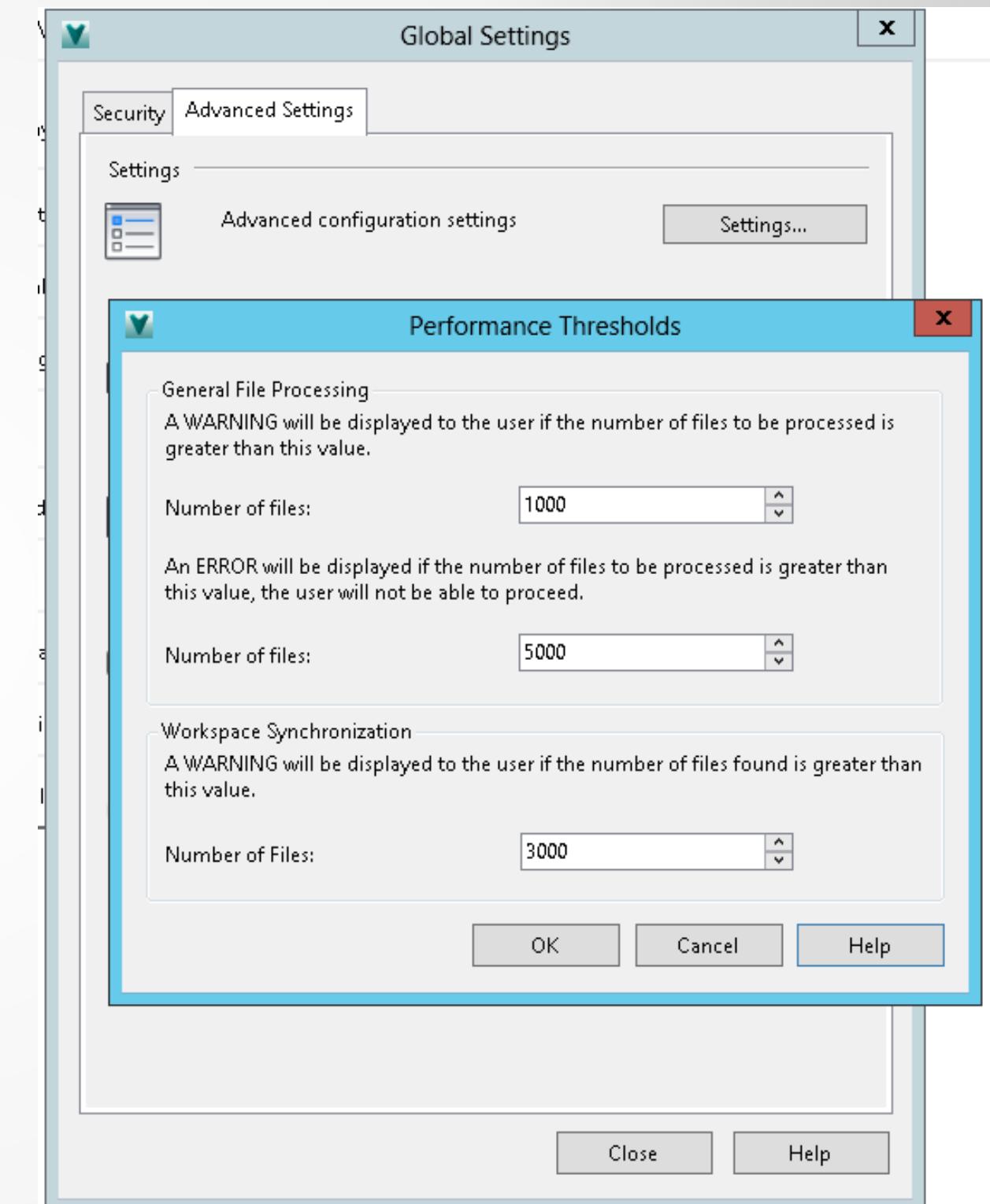
# Paging Size

- Controls the number of rows of data displayed per page.
- Improve server and client performance



# Performance Thresholds

- Warns user when working on large quantity of files
- Smaller number increases server performance



# Properties And Indexing

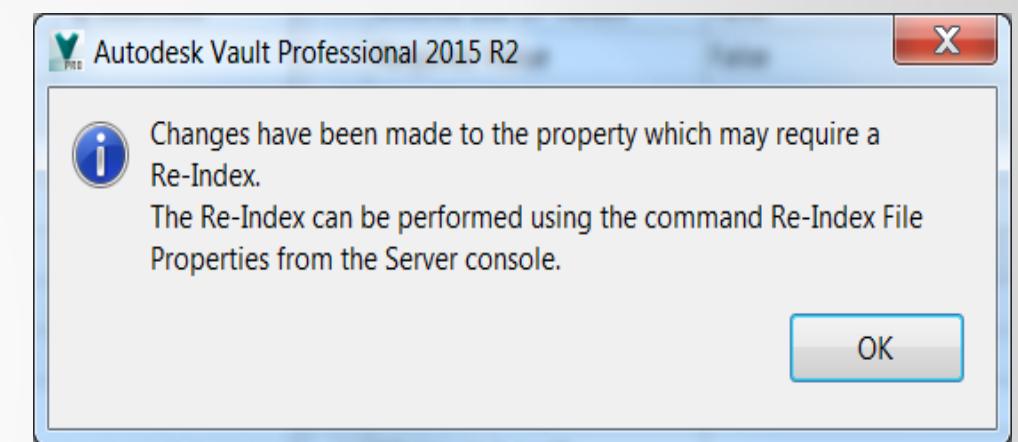
# Types of Indexing

- Property File Re-Indexing
- Search Indexes
- Full Content Indexing

# Property File Re-Index

When

- A Read Mapping has been added/modified to an existing UDP
- A property with Read Mappings has been re-enabled



These property changes queue a property Compliance check

- number of files can become non-compliant

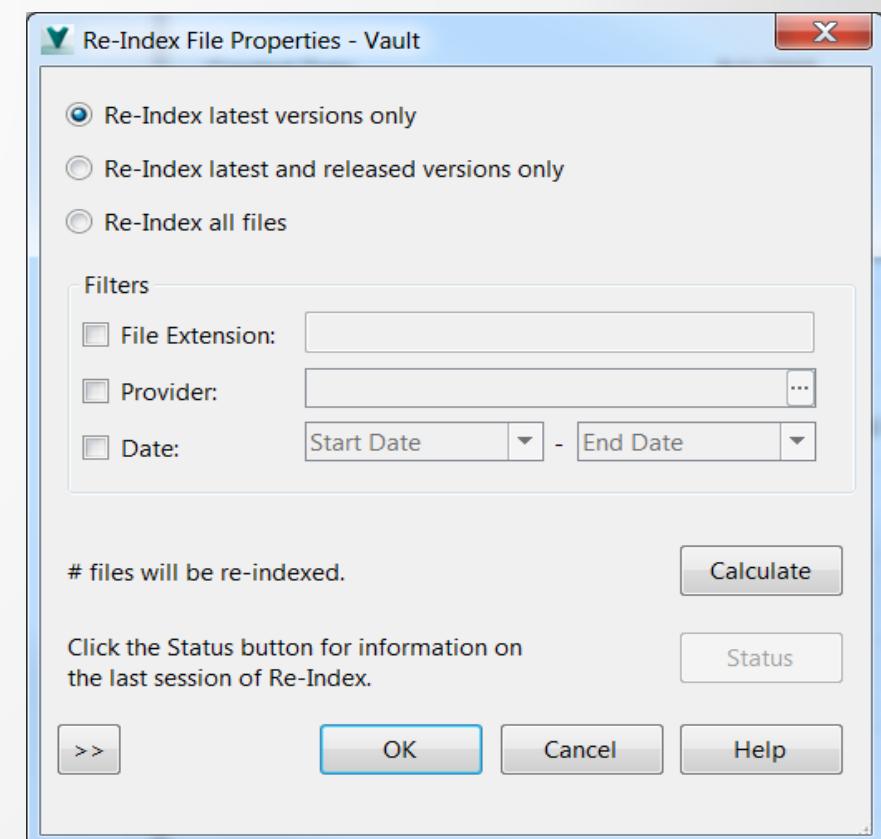
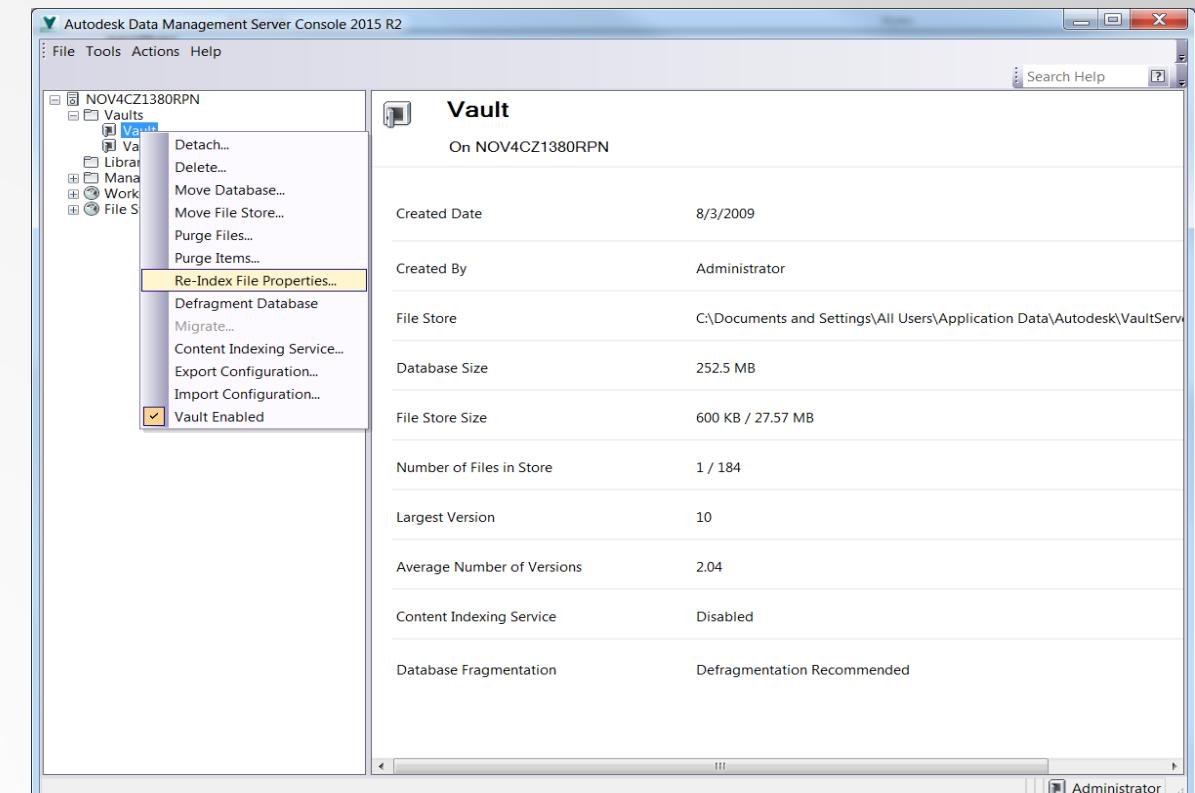
# Property File Re-Index

Executed from within ADMS Console

## What it Does

- Re-applies the Read Mappings and updates the UDP values for each file
- Updates existing versions of the files
- UDPs will become property compliant
- Search indexes built for the property values

A Property File Re-Index does not add newly created UDPs



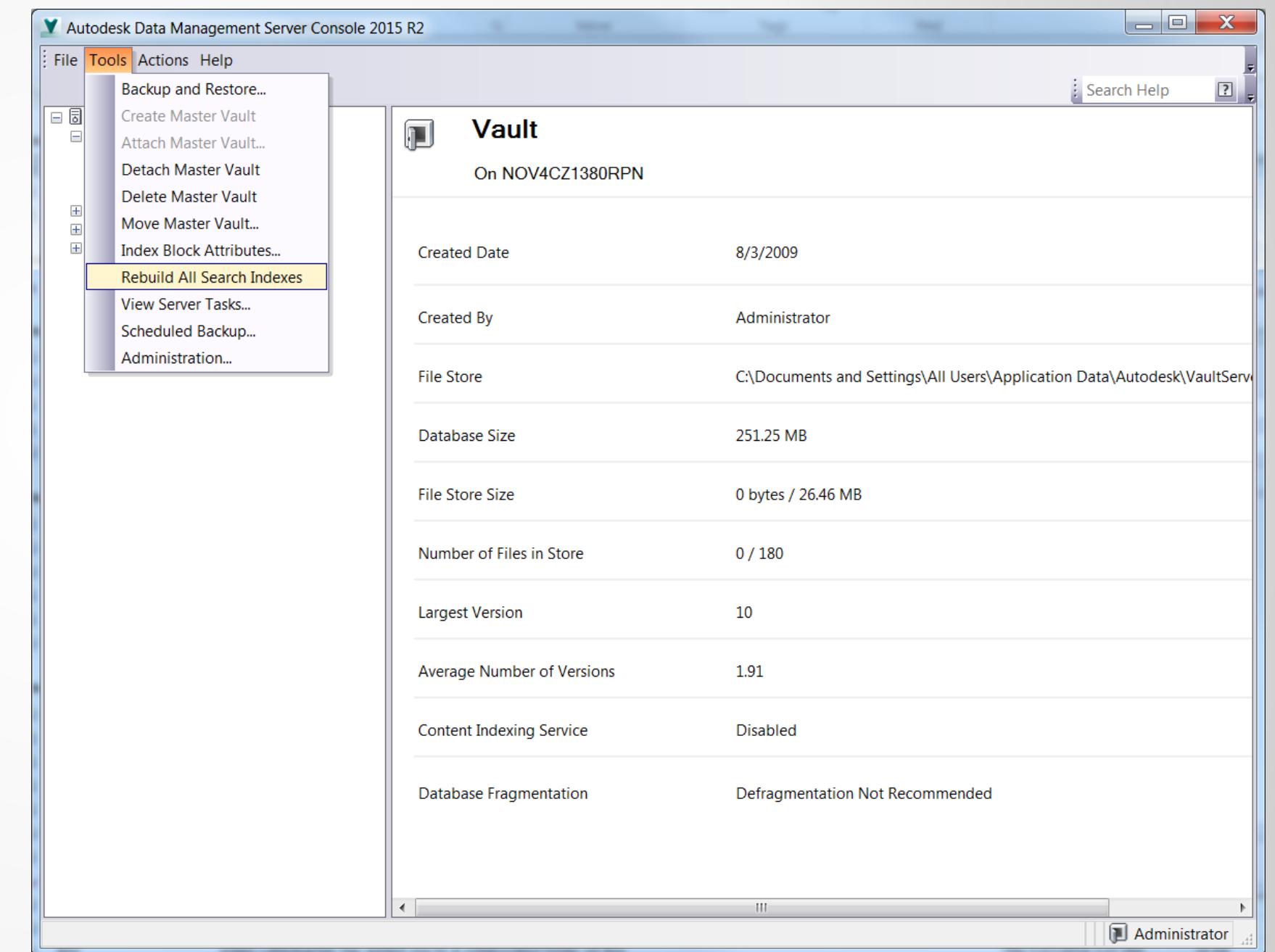
# Search Indexes

- Properties extracted from the database
- Faster searching in Vault
- Token searches



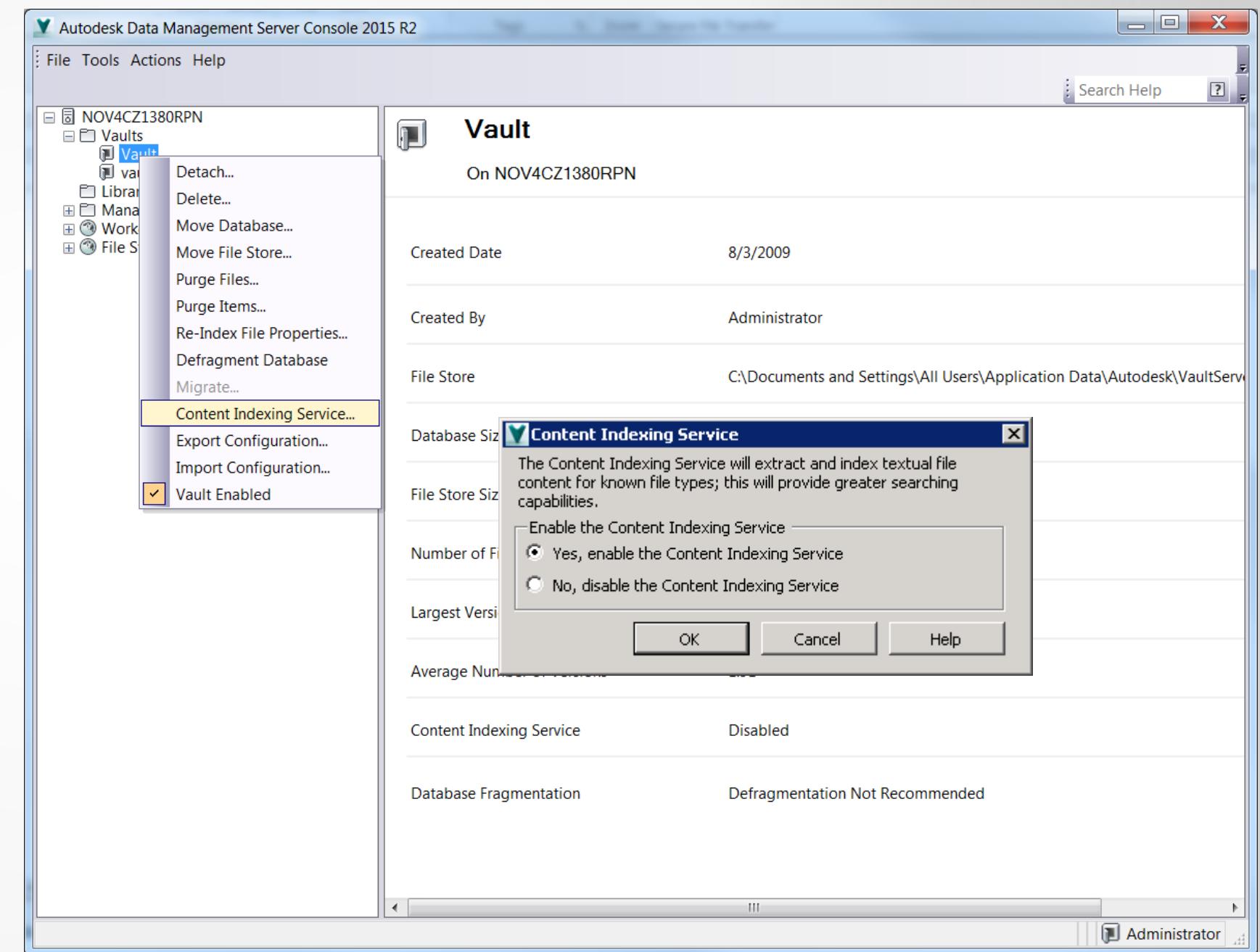
# Rebuild Search Indexes

- Not the same as Rebuild Property Indexes
- Maintenance ran automatically
- Run per site basis



# Content Indexing

- Extracts the full text contents from existing files
- Added to Lucene
- Enabled per Vault



# Maintenance

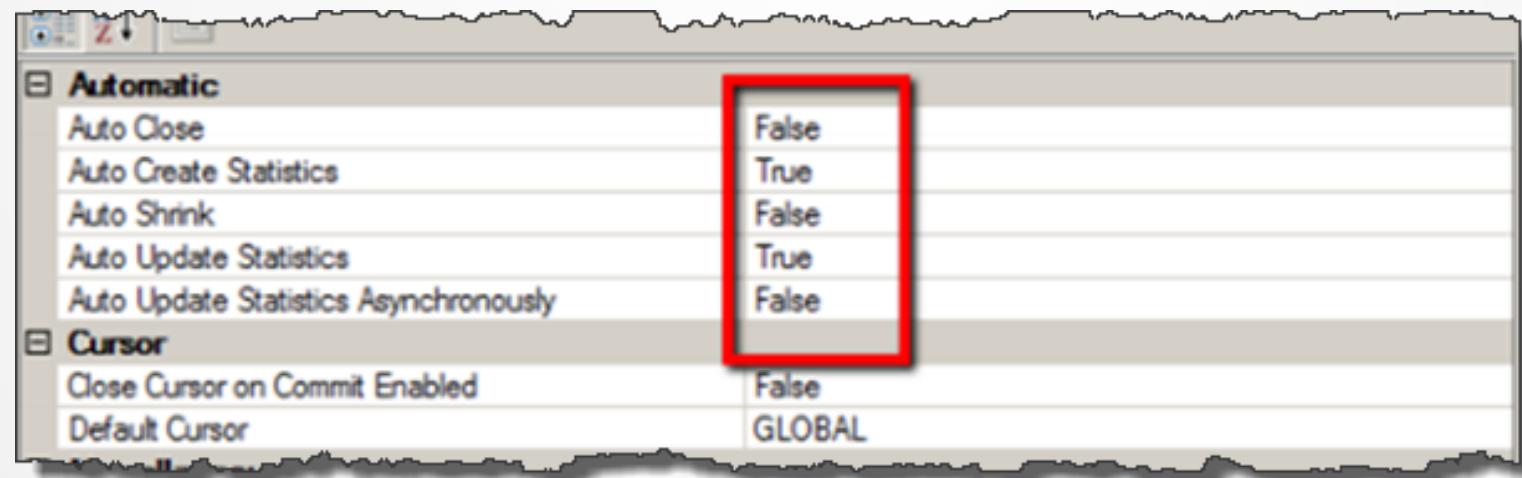


# SQL Maintenance Plan

- Create a SQL Maintenance Plan (Advanced Configuration Guide)
  - Keeps the database healthy
  - Shrinks the database
  - Reorganizes and rebuilds indexes

# SQL Maintenance Plan

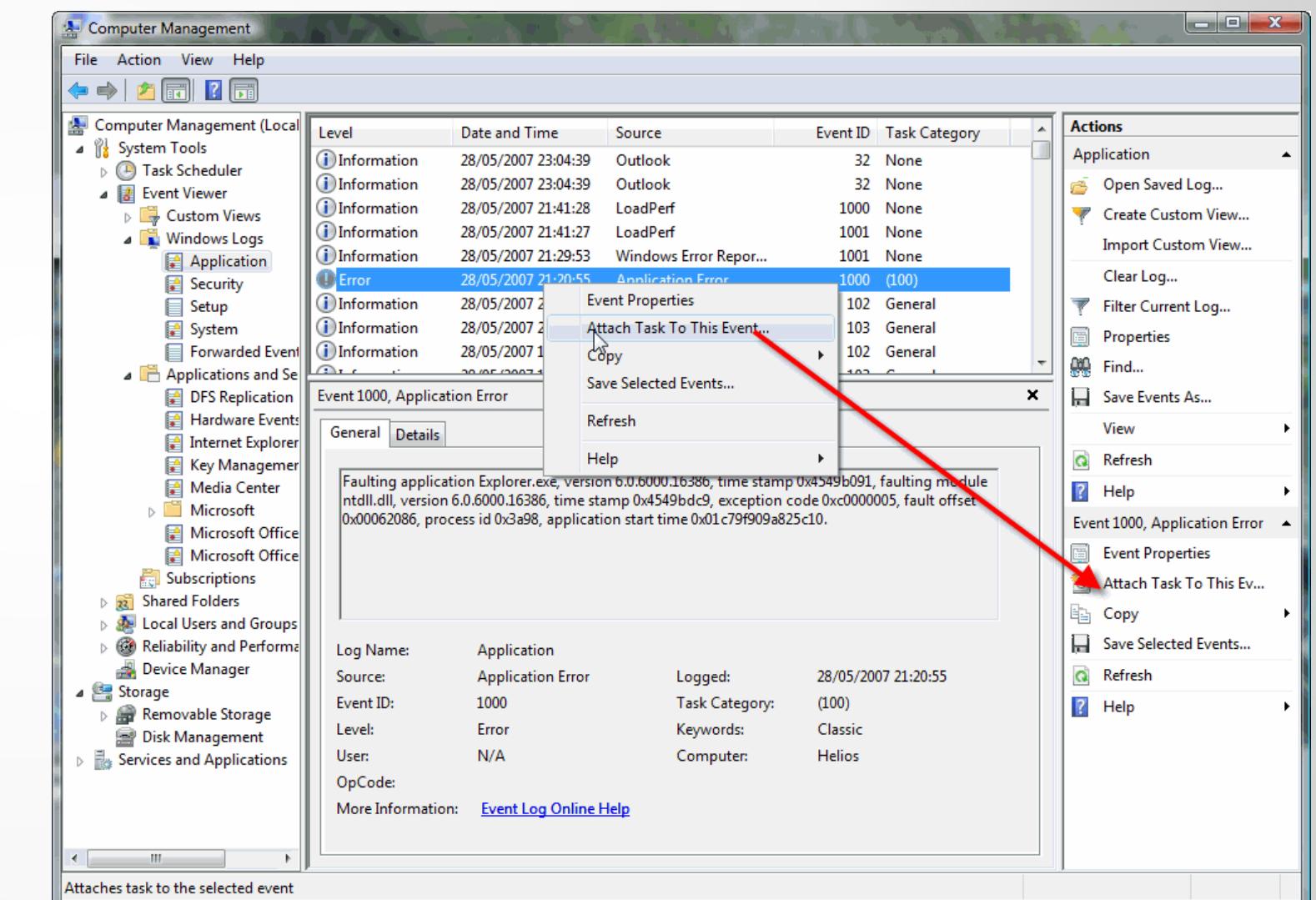
- Performed inside of SQL Management Studio
  - Recovery Model set to Simple
  - Compatibility Level set to SQL 2012 for Vault 2016
    - Also with SQL 2014



# Monitoring

# Built-in windows apps

- Event viewer
  - Configure to send email alerts on errors
- Performance monitor
  - Monitor system performance
    - CPU usage
    - Mem usage
    - Disk capacity
    - View trends over time



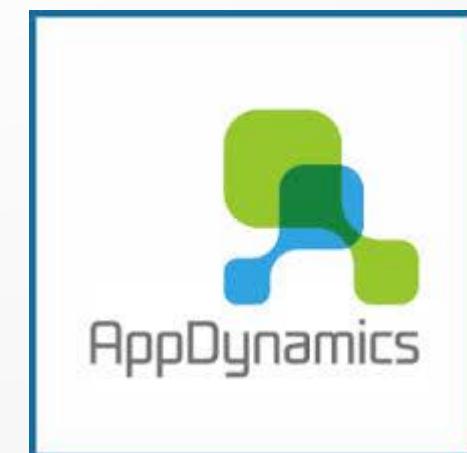
# Built-in windows notifications

- Event Based notifications
  - Job Processor
  - Modify config file
  - Attach task to Event

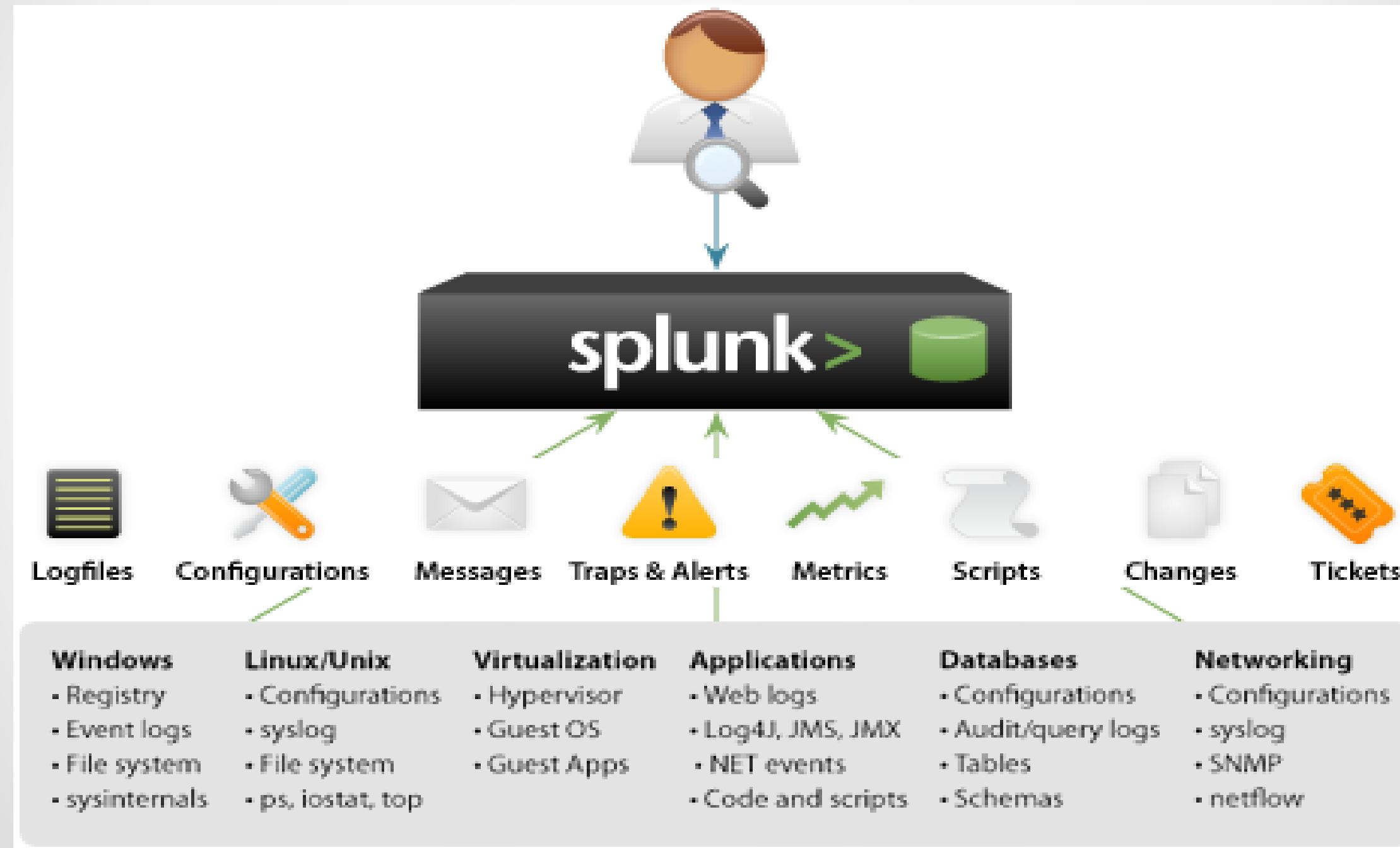


# 3<sup>rd</sup> Party tools

- Nagios
- PRTG
- HP SIM
- SCOM/MOM
- App Dynamics
- Splunk



# Splunk for monitoring Vault



# Dashboard View

**Autodesk Vault**

Administrator Messages Settings Activity Help

Search Pivot Reports Alerts Dashboards

Systems Dashboard

CPU Metrics (last 24 hours) <1m ago

host	sparkline	Average % Processor Time	Peak
SPLUNKAVFS1		2.214070	87.8787479153870660000
SPLUNKSQL1		2.951642	57.899790574223410000
SPLUNKSQL2		2.103140	61.095514458475449000
SPLUNKVAULT1		2.834930	95.4545525068761120000
SPLUNKVAULT2		2.382870	100.000000000000000000000000000000

Memory Metrics (last 24 hours) <1m ago

host	sparkline	Average % Committed Bytes In Use	Peak
SPLUNKAVFS1		25.778741	32.178927325489056
SPLUNKSQL1		24.462724	24.889625566203833
SPLUNKSQL2		25.904124	26.388655755905571
SPLUNKVAULT1		38.411794	38.961266215717984
SPLUNKVAULT2		51.945008	52.472716411010609

Free Disk Space Metrics (last 24 hours) <1m ago

host	sparkline	Average % Free Space	Peak
SPLUNKAVFS1		94.163767	94.167510327383766
SPLUNKSQL1		90.452745	90.456488266334190
SPLUNKSQL2		93.634756	93.637875863056777
SPLUNKVAULT1		93.354192	93.357921567223215
SPLUNKVAULT2		93.507190	93.510919845178762

Network Interface Metrics (last 24 hours) <1m ago

host	sparkline	Bytes Total/Sec	Peak
SPLUNKAVFS1		5355.495778	114317.10424361681000
SPLUNKSQL1		12526.561577	323641.34590316989000
SPLUNKSQL2		18245.427995	260538.34147122232000
SPLUNKVAULT1		1659.316195	308211.228738795910000
SPLUNKVAULT2		3140.280724	120986.98559761337000

**Autodesk Vault**

Administrator Messages Settings Activity Help

Search Pivot Reports Alerts Dashboards

IIS Dashboard

IIS service status <1m ago

host	DisplayName	Started	StartMode	State	Status
SPLUNKVAULT1	World Wide Web Publishing Service	true	Auto	Running	OK
SPLUNKVAULT2	World Wide Web Publishing Service	true	Auto	Running	OK
SPLUNKAVFS1	World Wide Web Publishing Service	true	Auto	Running	OK

Client IP count by host (last 24 hours) <1m ago

HTTP return code count by host (last 24 hours) <1m ago

**Autodesk Vault**

Administrator Messages Settings Activity Help

Search Pivot Reports Alerts Dashboards

SQL Dashboard

SQL Server (AUTODESKVAULT) service status

host	DisplayName	Started	StartMode	State	Status
SPLUNKSQL2	SQL Server (AUTODESKVAULT)	true	Auto	Running	OK
SPLUNKSQL1	SQL Server (AUTODESKVAULT)	true	Auto	Running	OK

SQL Server Agent (AUTODESKVAULT) service status

host	DisplayName	Started	StartMode	State	Status
SPLUNKSQL2	SQL Server Agent (AUTODESKVAULT)	true	Auto	Running	OK
SPLUNKSQL1	SQL Server Agent (AUTODESKVAULT)	true	Auto	Running	OK

**Autodesk Vault**

Administrator Messages Settings Activity Help

Search Pivot Reports Alerts Dashboards

Vault Dashboard

Vault Logs Top 20 Exception 3h ago

Exception Count Time Chart 3h ago

**Autodesk Vault**

App: Autodesk Vault

Search Pivot Reports Alerts Dashboards

Alert IIS service stopped

Enabled: Yes. Disable

Alert Type: Real-time. Edit

Trigger Condition: Custom. "search State=Stopped" in 1 minute. Edit

Actions: Send Email. Edit

App: adskvault

Permissions: Private. Owned by admin. Edit



AUTODESK UNIVERSITY 2015



# IP Auditing

# IP Auditing in ADMS

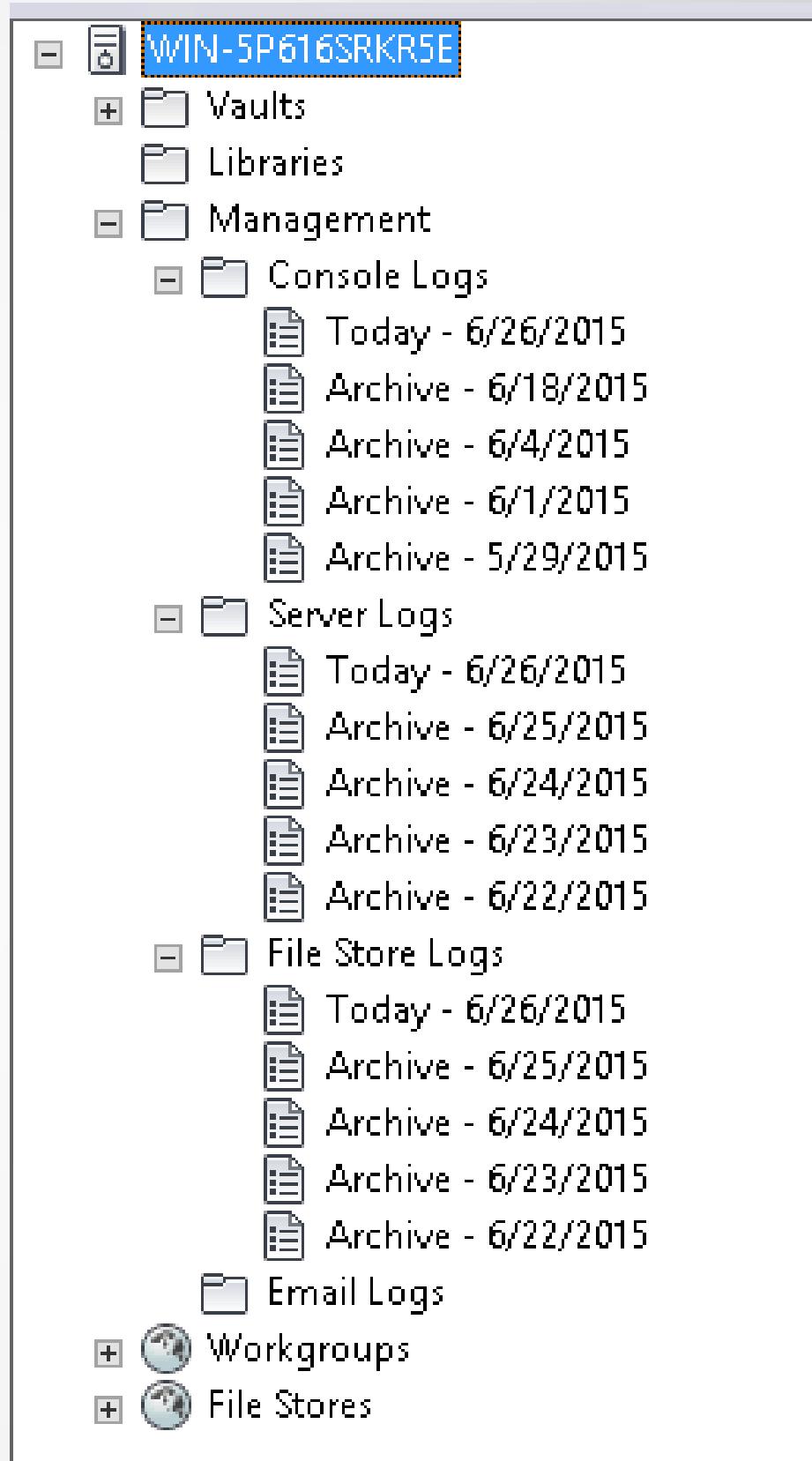
- Modification to web.config
  - Logs what files are deleted
  - Logs what files are downloaded = “Get”



```
237     </listeners>
238   </trace>
239   <!-- To receive general trace messages change the value to the
240       appropriate level. "1" gives error messages, "2" gives errors
241       and warnings, "3" gives more detailed error information, and
242       "4" gives verbose trace information -->
243   <switches>
244     <add name="ProcessingSwitch" value="1" />
245     <add name="ClientStackSwitch" value="1" />
246     <add name="ErrorCodeSwitch" value="3" />
247     <add name="WarningCodeSwitch" value="2" />
248     <add name="LibraryServiceSwitch" value="2" />
249     <add name="IndexerTraceSwitch" value="2" />
250     <add name="ReplicationResourceTraceSwitch" value="4" />
251     <add name="EventTraceSwitch" value="3" />
252     <add name="VacuumCleanerTraceSwitch" value="4" />
253     <add name="PurgeTraceSwitch" value="3" />
254     <add name="LicensingTraceSwitch" value="3" />
255     <add name="WorkgroupReplicationTraceSwitch" value="3" />
256     <add name="LogFileDeletesBooleanSwitch" value="1"/>
257     <add name="LogFileDownloadsBooleanSwitch" value="1"/>
258   </switches>
259 </system.diagnostics>
```

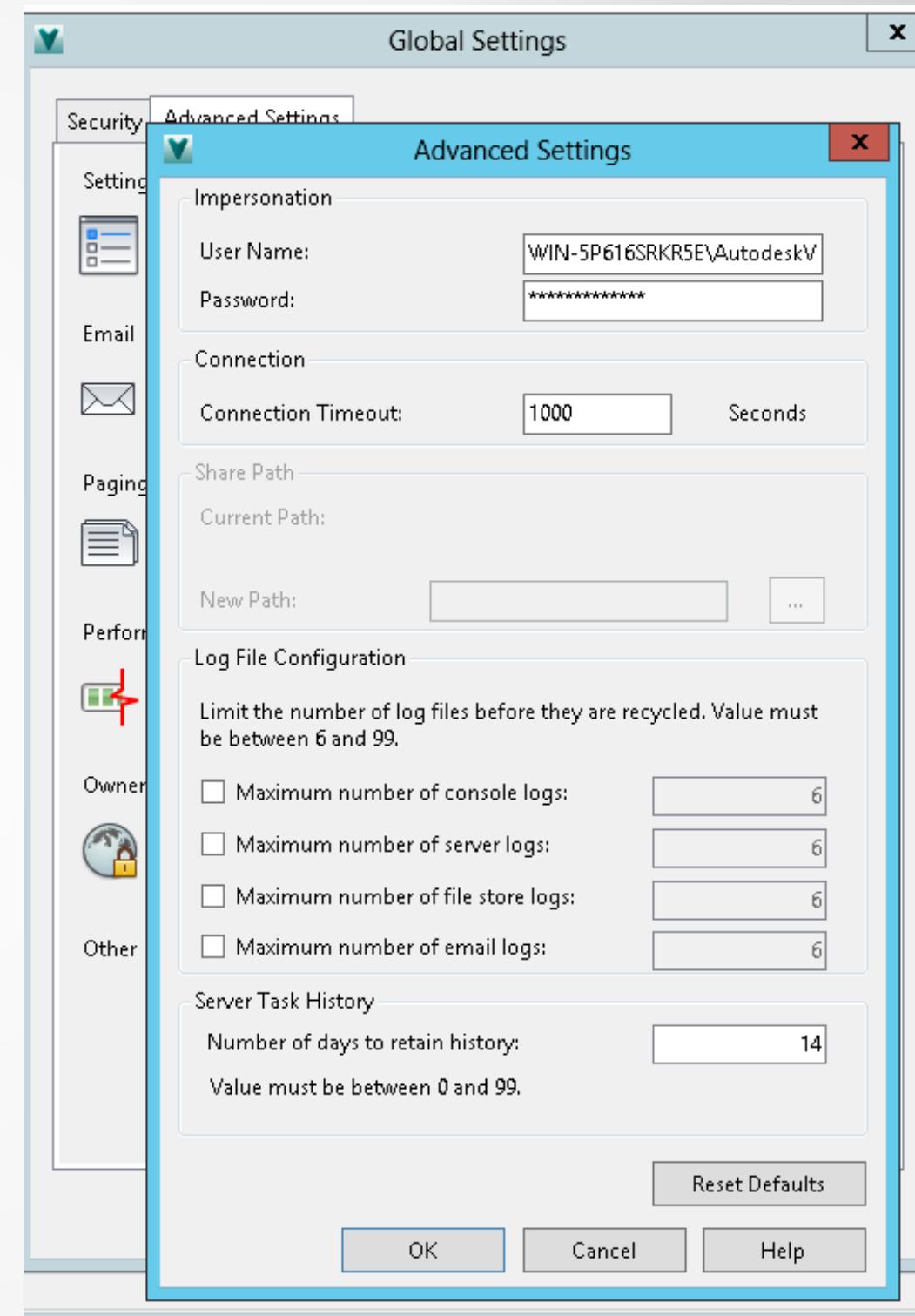
# Log File Management

- In the ADMS Console
- New log every day
  - C:\ProgramData\Autodesk\Vault Server\FileStore
- Moved by editing the web.config file



# Log File Management

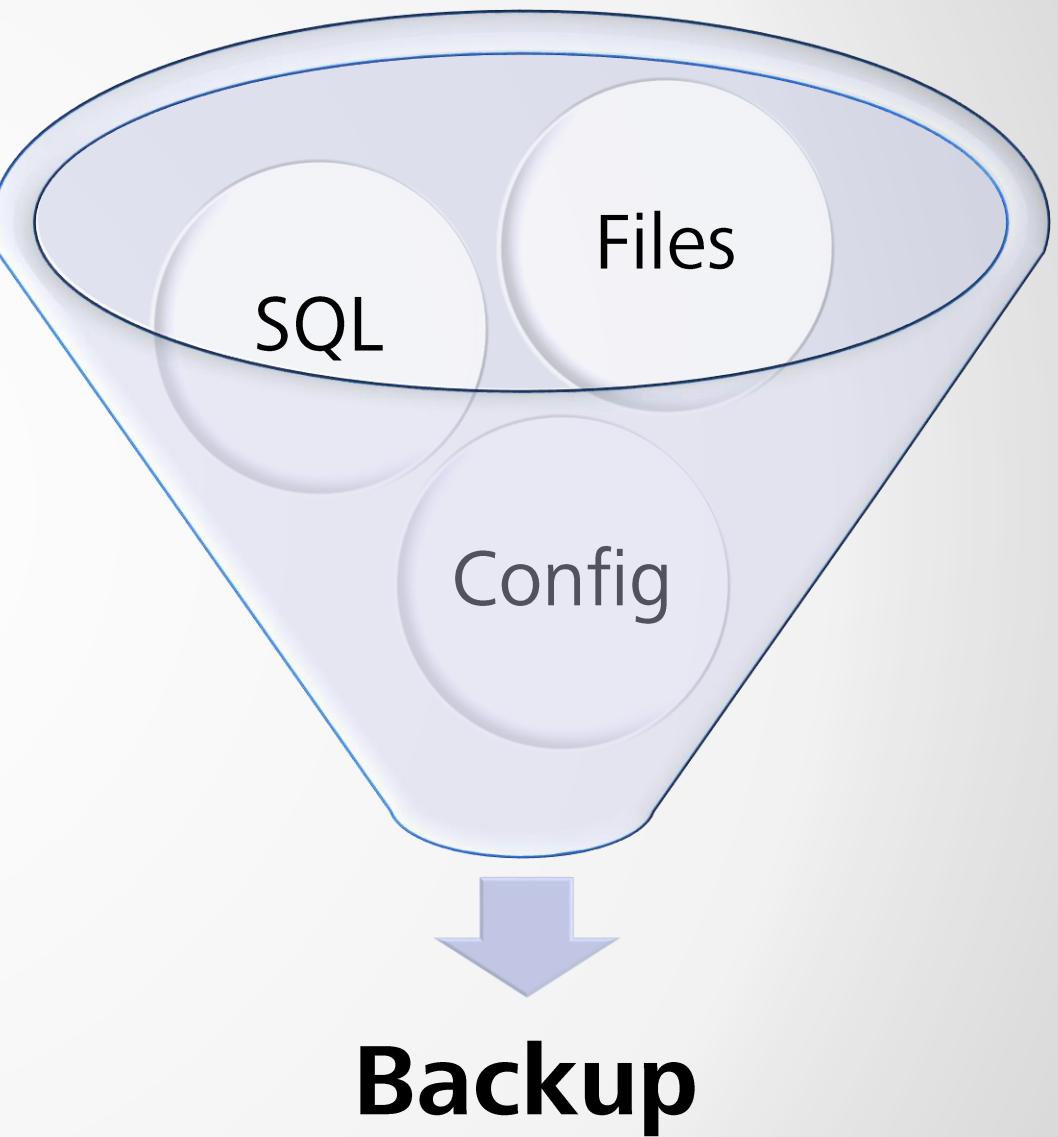
- No maximum number by default.
- Set maximum to save disc space



# Backups

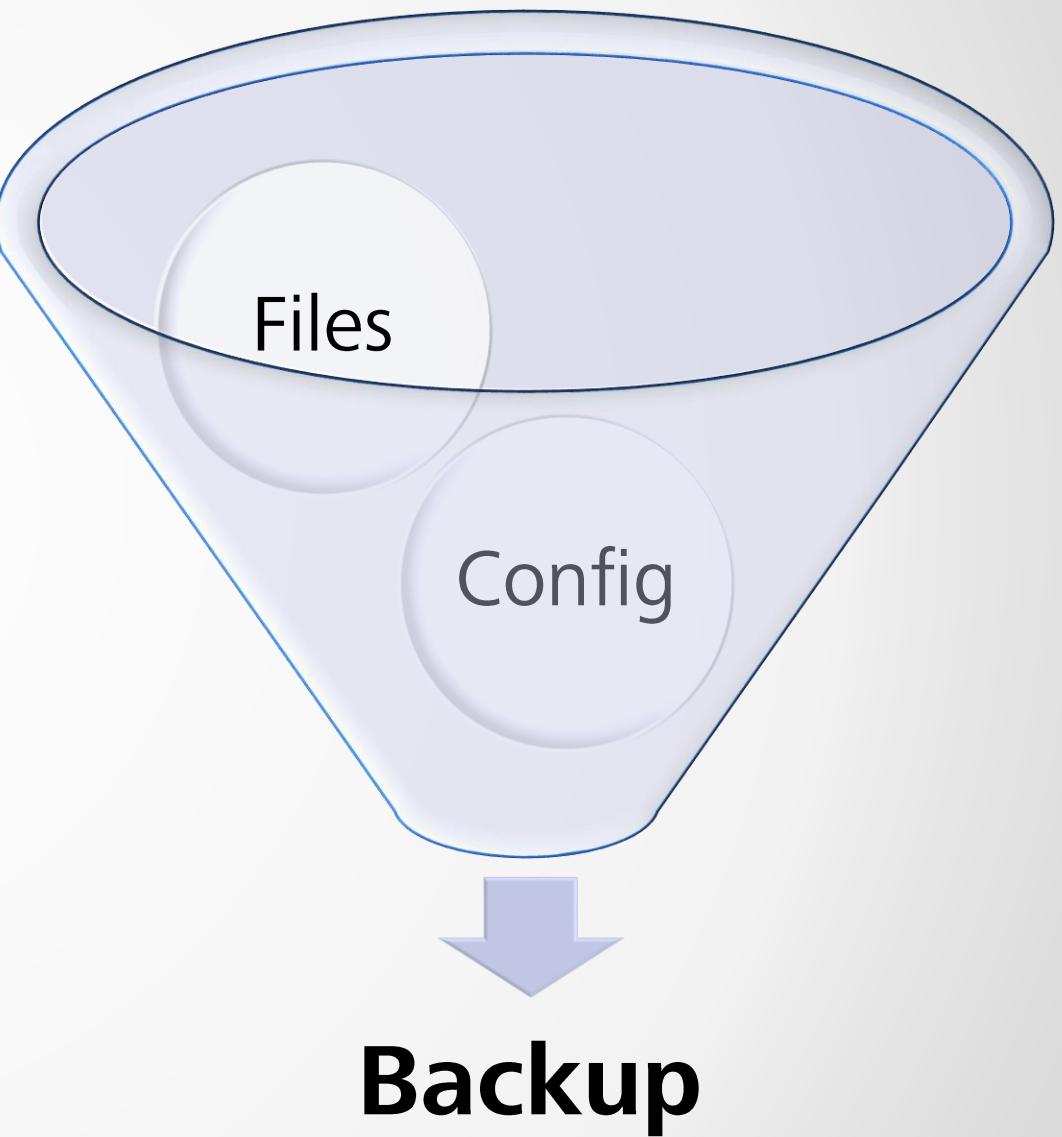
# What to Backup – Single Site

- All Vault databases
  - KnowledgeVaultMaster
  - Vaults
  - Libraries
- FileStore
- **Optional:**
  - connectivity.ADMSConsole.exe.config
  - web.config



# What to Backup – Multisite AVFS

- All Vault File Stores
  - Full backup of the entire filestore
- **Optional:**
  - Program Files
  - Config files



# What to Backup - Connected Workgroup

## Publisher

- All Vault databases (KnowledgeVaultMaster, Vaults and Libraries)
- The distribution database (AutodeskReplication)
- SQL Master and MSDB databases
- SQL Master Key
- Folder where the SQL Replication Snapshot is located

## Optional:

- ADMS program files
- Vault filestore
- connectivity.ADMSConsole.exe.config and web.config

# What to Backup - Connected Workgroup

## Subscriber

- All Vault databases (KnowledgeVaultMaster, Vaults and Libraries)
- SQL Master and MSDB databases
- Folder where the SQL Replication Snapshot is located

## Optional:

- ADMS program files
- Vault filestore
- connectivity.ADMSConsole.exe.config and web.config

# 3<sup>rd</sup> Party Backup

The software used for backup should have the following capabilities:

- A SQL server backup agent for backing up and restoring the databases.
- Restore the SQL Master and MSDB databases.
- Verify the backed up database or file.
- Work within a replicated SQL server environment.
- Send e-mail alerts to administrators. (Recommended, not required).
- Back up and restore the databases and file store with security settings.

For more information, see Using 3rd Party Tools to Backup/Restore Autodesk Vault.

# Restore

# Single Vault Site Backup\Restore

- Restore sequence
  - Install the Autodesk Vault server software
  - Install of the hot fixes and/or services packs that were installed on the original server
  - Restore the databases
  - Restore the file stores in there original file store location

# Single Vault Site Backup\Restore

- Post restore steps
  - Open ADMS Console to verify all databases can be seen
    - Migrate databases if necessary
  - Open the command prompt to <installdir>\Autodesk\ADMS [Edition] 20XX\ADMS Console directory.
  - type: Connectivity.ADMSConsole.exe -VUusername - VPpassword –Ovalidatefilestore
    - Check console log file for results
    - Replace missing files from other backups

# Restoring a Publisher

- Publisher Restore
  - Restore a server with the same name and SQL version as the original.
  - Install Vault Server and apply all service packs and hot fixes as the original server.
  - Create the SQL snapshot share and apply user permissions to the share.
  - Restore the Master and MSDB system databases.
  - Restore the vault and library databases.
  - Restore the distribution database and snap shot share location.
- The backup used for the restore should be no older than 14 days. If older than 14 days, all subscribers will need to be reinitialized and data will be lost.

# Restoring a Subscriber

- **Subscriber Restore**
  - Restore a server with the same name and SQL version as the original.
  - Install Vault Server and apply all service packs and hot fixes as the original server.
  - Restore the Master and MSDB system databases.
  - Restore the vault databases and file store
  - Run a file store validation command. Restore any missing files from a previous backup.
- The backup used for the restore should be no older than 14 days. If older than 14 days, the subscriber will need to be reinitialized.

# Migration



# Planning

# Vault Upgrade Guide



## AUTODESK® VAULT®

OVERVIEW    GETTING STARTED    LEARN & EXPLORE    DOWNLOADS    TROUBLESHOOTING

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### INTRODUCTION TO UPGRADING VAULT

Oct 08 2015 | [In-Product View](#)

Like (0)  Share 

Applies to Factory Design Suite 2016, Product Design Suite 2016, and Vault 2016

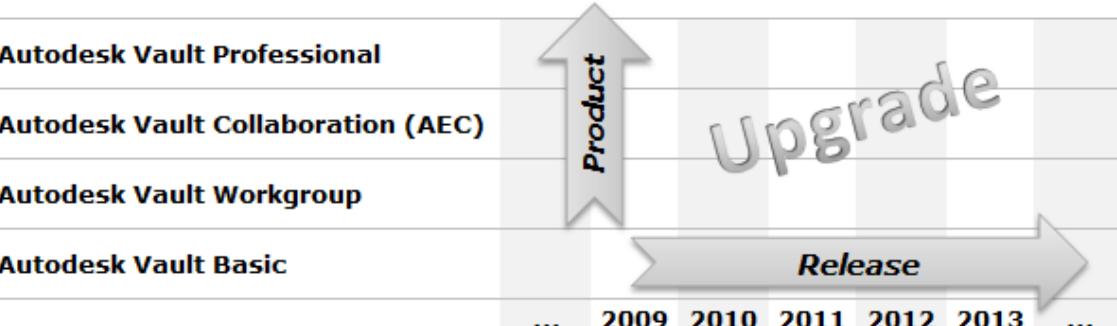
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This upgrade process applies to all Autodesk Vault product editions. Details are provided for releases 2009 and higher, however the general process can be applied to all releases.

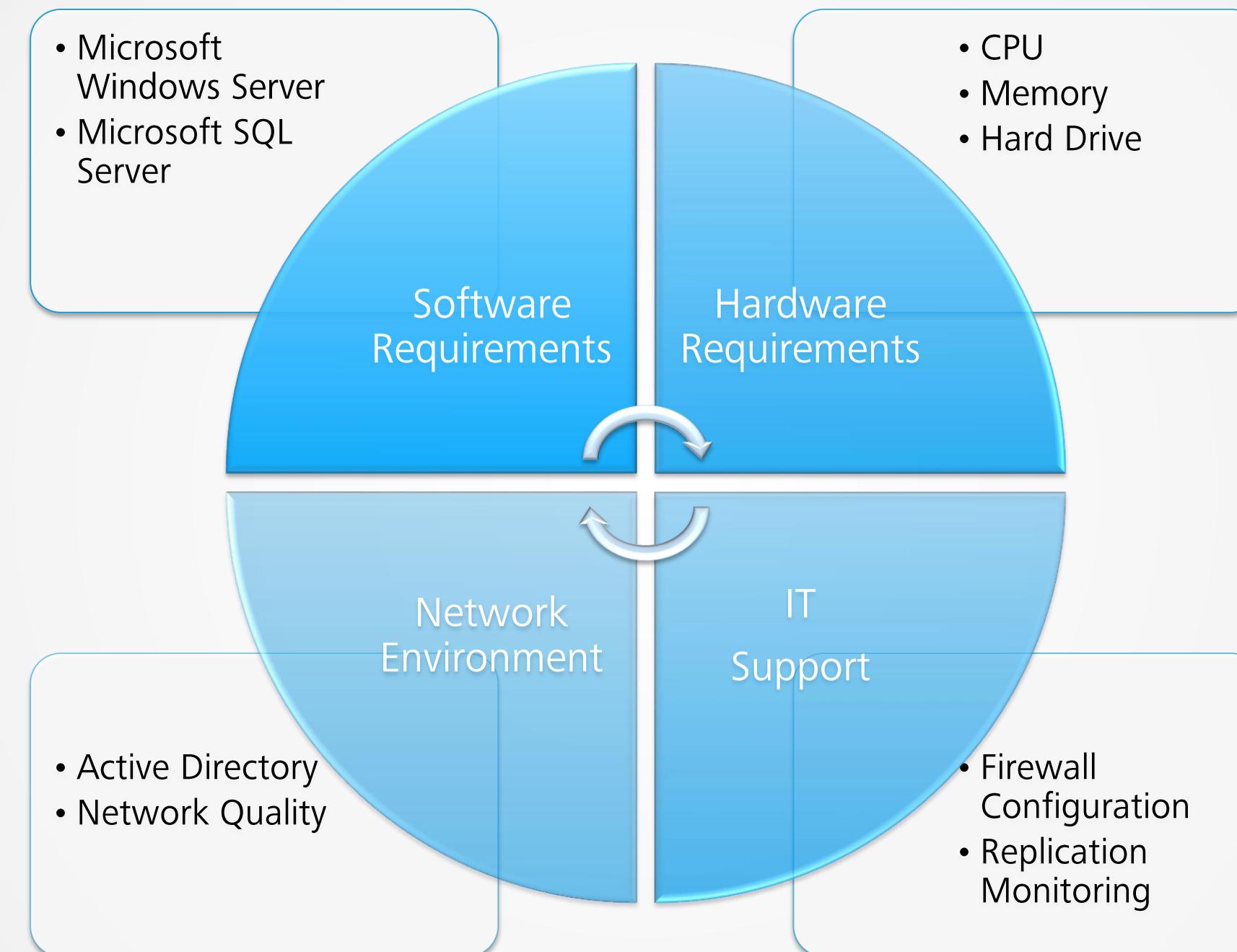


An upgrade may mean a newer release, a higher product edition, or both. When upgrading, upgrade to the highest release first and then upgrade the product edition.

For example, if moving from Vault Workgroup 2014 to Vault Professional 2016, first upgrade the release to Vault Workgroup 2016 and then upgrade the edition to Vault Professional 2016.



# Deployment Planning

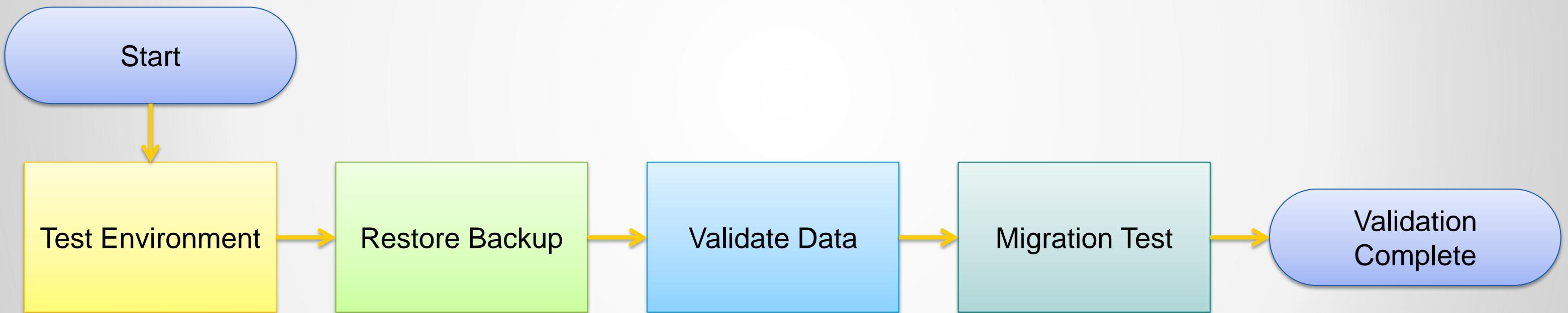


# Process for Upgrading



# Validate your process

- Very Important Stage
- Resolve problem before continuing



# Test Environment

# Test Environment

- Used to practice upgrade\migration
  - Upgrade timing
  - Migration timing
- Quality testing
  - Validate migration
  - Test new features
  - Test existing workflows

# Test Environment

- Similar CPU, memory and disk space
- Operating system, service packs/updates & settings
- Same SQL Server edition & updates
- Other application

# Migration and Upgrading

# Upgrading SQL Server

- Migrate the AutodeskVault SQL instance
  - Follow process in the Advanced Configuration Guide
  - Update with latest supported hotfixes and service packs

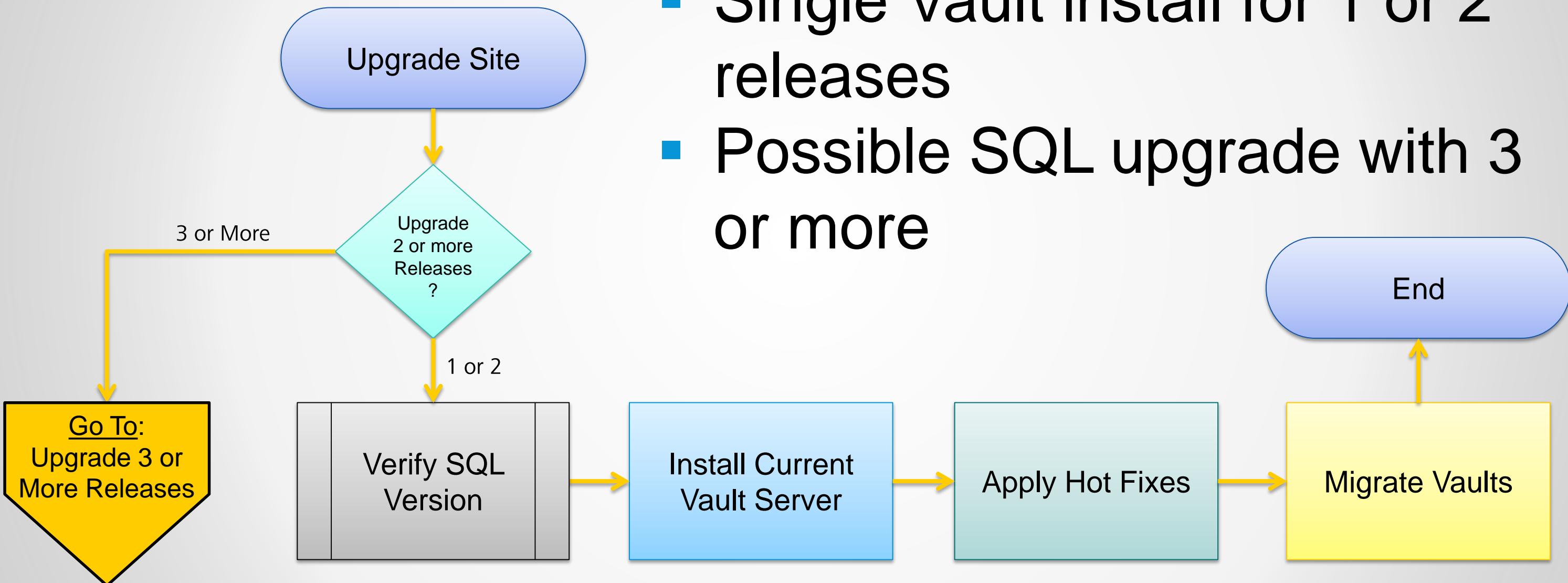
Select the instance of SQL Server to upgrade. To upgrade only Management Tools and shared features, select "Upgrade shared features" and then click next.

Instance to upgrade: **AUTODESKVAULT**

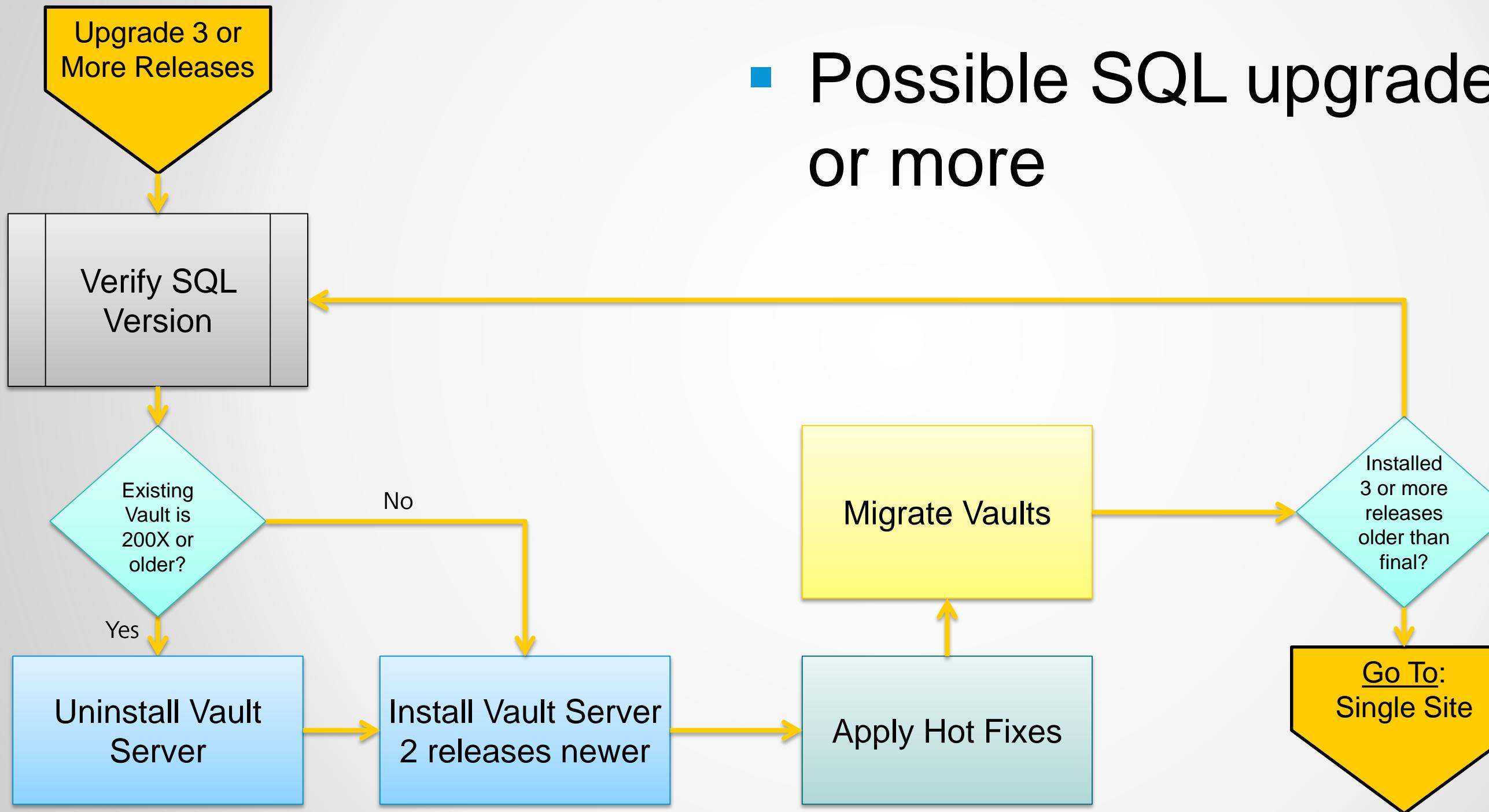
Installed instances:

Instance Name	Instance ID	Features	Edition	Version
AUTODESKVAULT	MSSQL10.AUTODES...	SQLEngine	Express	10.2.4000.0

# Vault Server



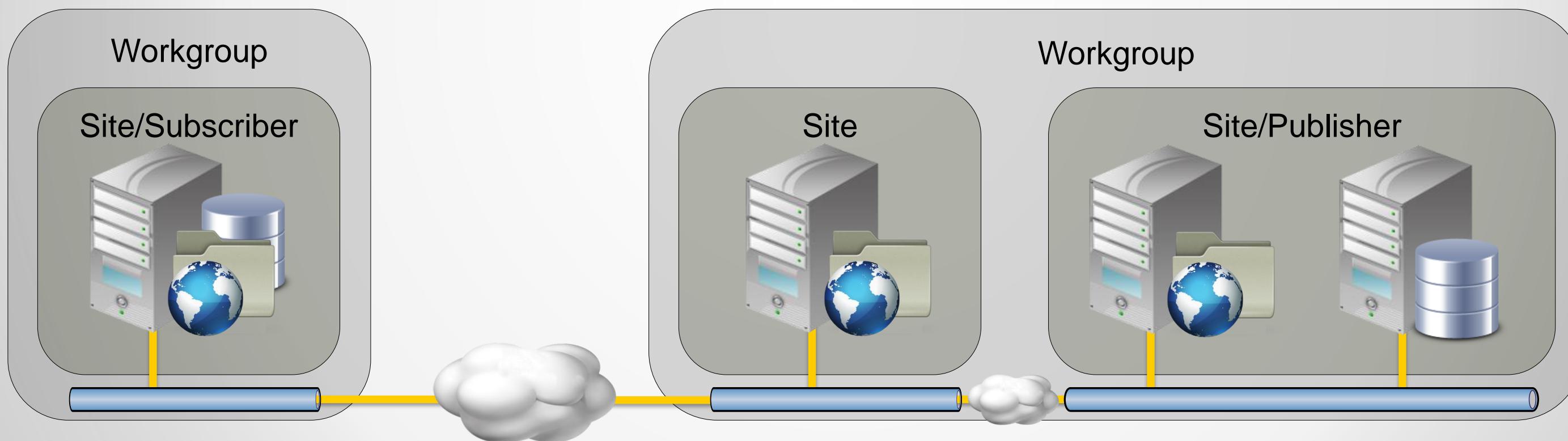
# Vault Server



- Possible SQL upgrade with 3 or more

# Upgrading Connected Workgroups

- All Subscribers must be online
- Publisher first
  - Site closest to SQL Server
- Other sites in any order



# Migration Best Practice

## Post Migration

- After the migration:
  - Run a SQL Maintenance Plan (Advanced Configuration Guide)
  - Run a backup
- Implement a weekly SQL Maintenance Plan
  - Reorganizes indexes, shrinks the database, etc.
- Implement a scripted backup (Advanced Configuration Guide, Implementation Guide)
  - Educate the customer on the importance of backing up using the ADMS Console vs. SQL Backup tools, copying directly, etc.

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- PL5843-P: Vault GPS: Make All the Right Turns During Your Vault Upgrade
- PL5839-P: Don't Flirt with Disaster: Create a Vault Recovery Plan
- PL4700-V: The Nuts and Bolts of Autodesk® Vault Replication Setup

