

Autodesk® Vault: Installation, Configuration, and Data Loading

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PL1943 Class Description: In this class, we will cover the steps that are required to successfully install, configure, and populate Autodesk® Vault software to manage your data. We will introduce concepts, workflows, tools, and best practices. We will also discuss common mistakes that businesses make when planning and executing a Vault implementation.

Learning Objectives

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

- Learning objective 1 Plan a Vault installation
- Learning objective 2 Install Vault
- Learning objective 3 Configure Vault
- Learning objective 4 Populate and load Vault

About the Speaker

Add edited Speaker BIO as per AU website [Arial 10]

Add eMail address (optional)

1). Plan a Vault installation

Acquire Engineering-Related Data Flow (Departmental)

- **Purchasing**
- **Mfg Production**
- **Sales/Mktg**
- **Engineering**
- **Mfg Engineering**
- **Document Control**

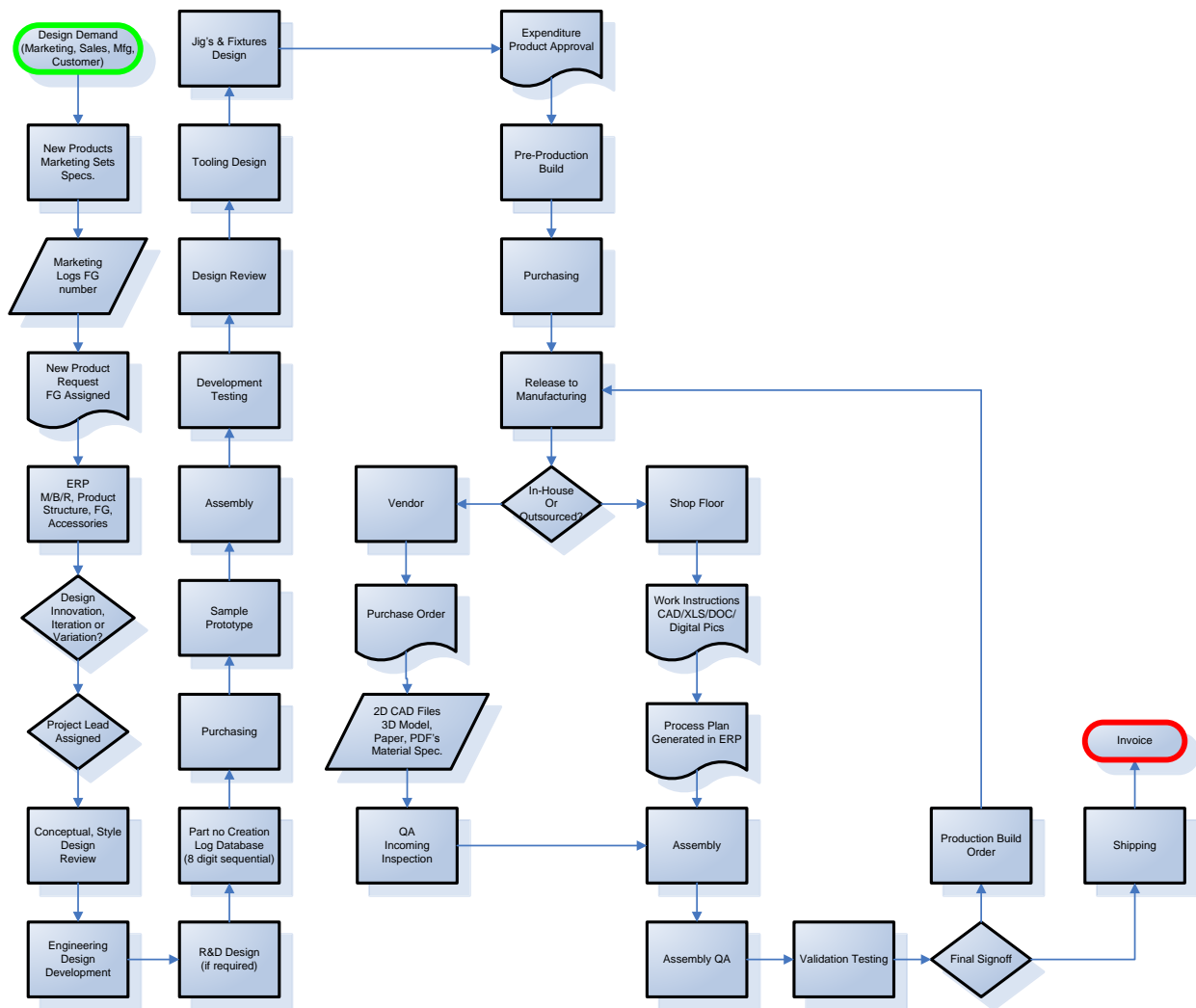


Figure 1

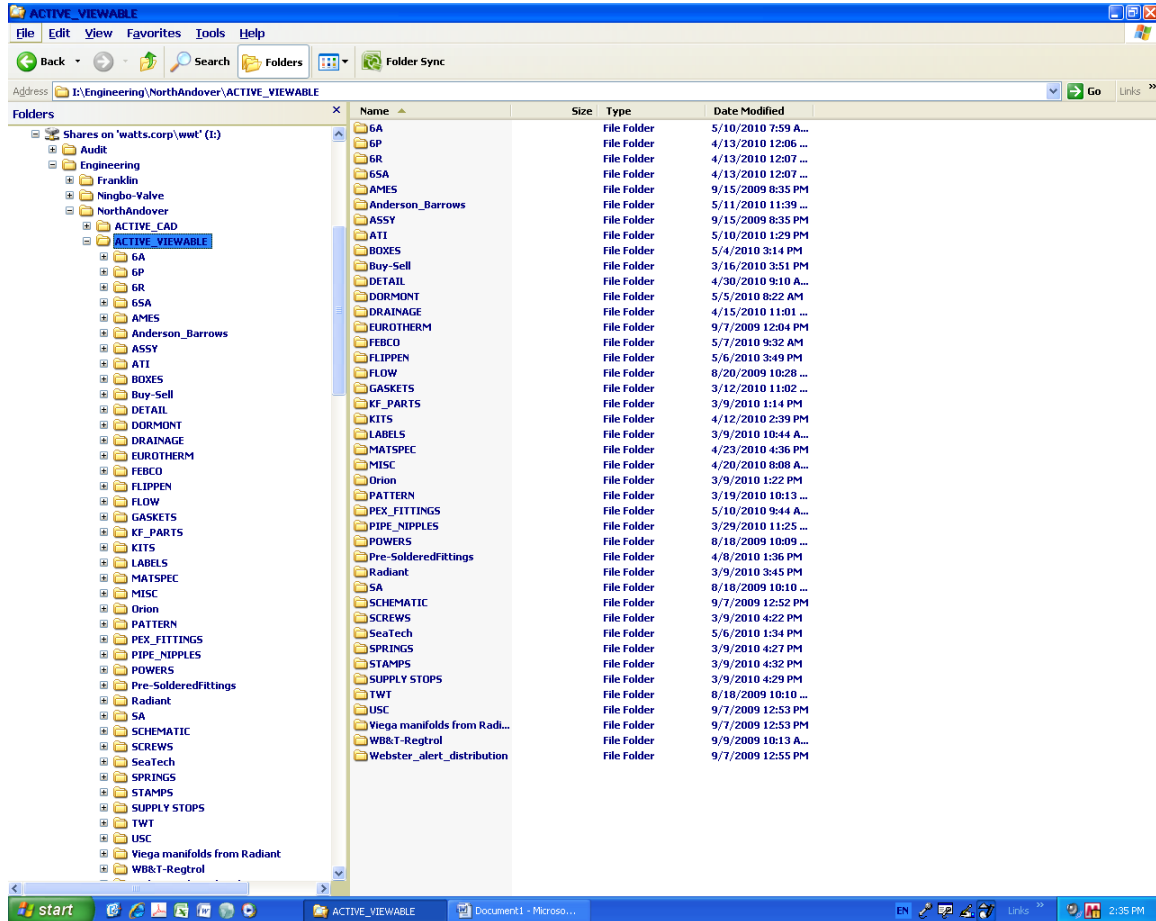
Vault User List/Roles

Name	Department	Email	Role(s)
	Engineers ¹		
	Designers ¹		
	Drafters ¹		
	Mfg engineers ¹		
	Marketing ^{2,3}		
	Purchasing ^{2,3}		
	QA ²		
	Production control ¹		
	Inventory ³		
	MIS ¹		
	Assembly ³		
	Testing ²		
	Sales ³		
	Tech pubs & documentation ²		
	Shipping/Receiving ³		

Figure 2

Existing Design/Engineering Data & Workflow

- **Data Storage Folder Structure**



- **Data/Document Types (XLSX, DOCX, PDF, GIF, TIFF)**
- **Data Footprint (in Mb/Tb)**
- **Data Folder Permissions and groups**

• **Document Creation Process/Procedure**

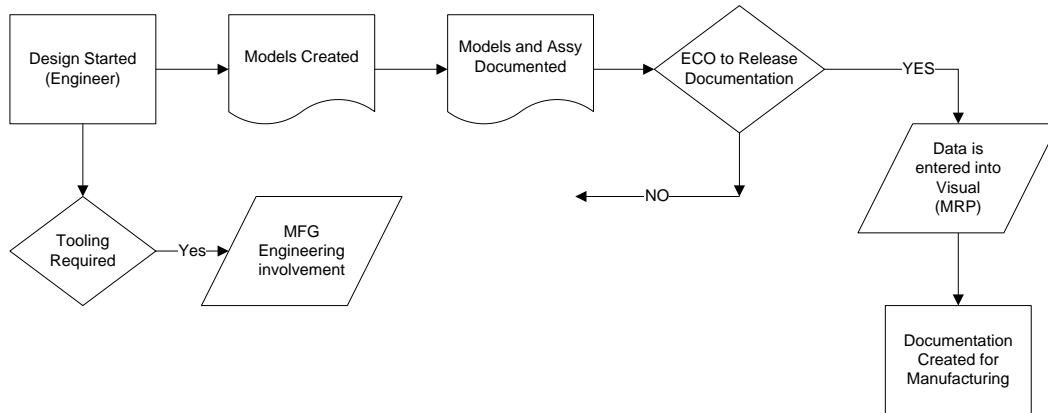


Figure 3

• **Document Key Property Data**

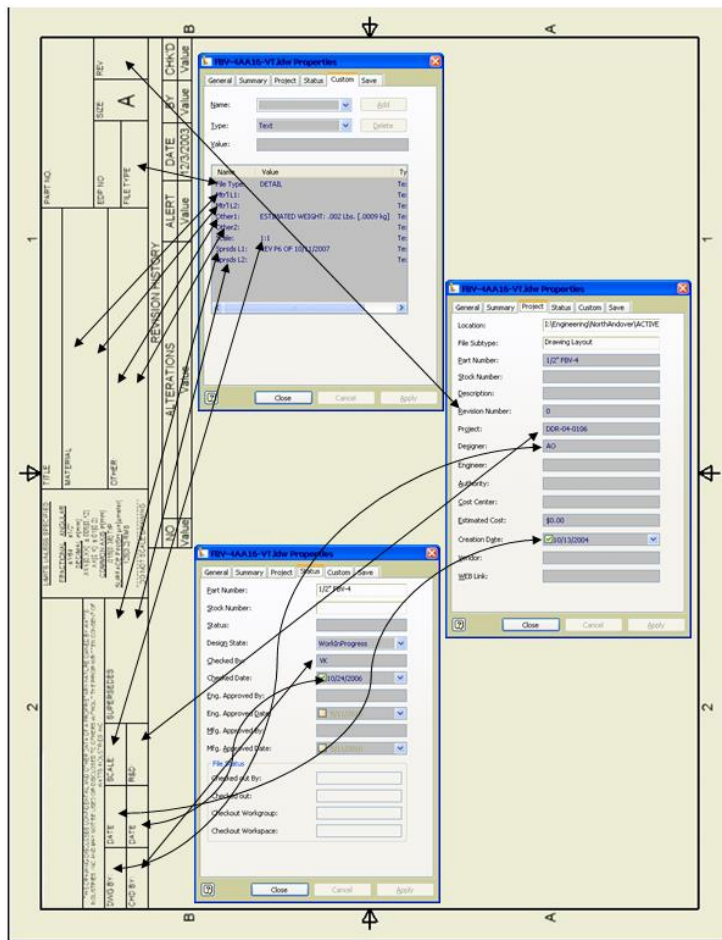


Figure 4

- **Document Release Process/Procedure**
- **Document Revision & Editing Process/Procedure**

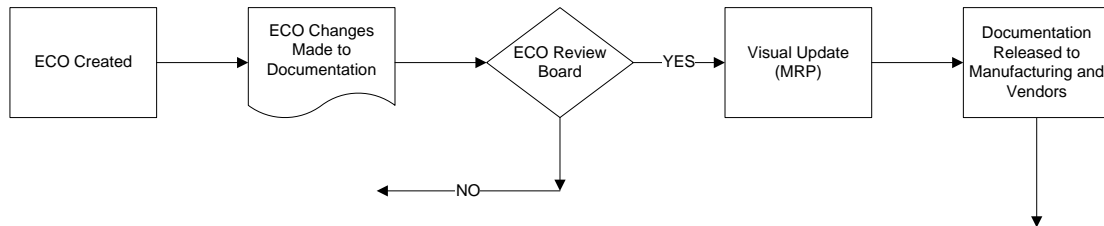


Figure 5

- **Document Revision Schemes (A, B, C... X1, X2, X3)**
- **Document Numbering Schemes (Document Numbers, Part Numbers & Sequences/Logic)**

Schedule Implementation & Education

- **Identify vault users: see "Vault User List/Roles" Matrix (Figure 2)**
- **Schedule Vault User Training Dates by role (Administrator, Author, editor, reviewer, consumer)**

Review Vault Server Readiness

- **Filestore, database and backup locations**
- **Acquire & Review server specifications**
 - OS
 - SPs
 - Hotfixes
- **Acquire System information "systeminfo.exe" and/or msinfo32 > File > Save (or use a PC Audit/reporting tool like Belarc: <http://www.belarc.com>)**
- **Compare server specifications to Vault Server Requirements:**
<http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=18781512&linkID=9261340>
- **Size a new Vault Server using provided Guide:**
http://wikihelp.autodesk.com/Vault/enu/Help/Help/0206-Autodesk206/0207-Deployme207/IBM_Vault_Sizing_Guide
- **Review list of Programs installed & Services (conflict/performance issues)**
- **Review and archive Server OS Event Logs for errors (Application, Security & System)**
- **Review and document Server NIC Specs, MAC ID's, Settings & configurations (all NIC's)**
- **Review & Document Inter-Server & Client-Server Performance**
 -TRACERT from Vault Client system(s) to Vault Server(s) (ADMS/IIS & SQL)
- **Review Vault Server & Client Firewall configurations**
- **Document above**

- *Confirm MS SQL Server Installation media availability*
- *Review SQL SP Level (if existing SQL)*
- *Review/define Vault (ADMS) Application Installation location (Server Name & System Volume)*
- *Review/define Vault MS SQL Database Location (Server name & System Volume)*
- *Review/define Vault Filestore Location (Server Name & System Volume)*
- *Create/Provide admin account access (Domain Admin if required by Multi-server Configuration) for:*
 - *Application Installation(s)*
 - *Windows OS Configuration (IIS, Anti-Virus, etc...)*
 - *Service account for scheduled backups & SQL Maintenance*
 - *Anti-Virus Configuration*
- *Review/Confirm/Notify "Multiple Server Reboots" requirement*
- *Review and define "Shared resources" folders and permissions*
- *Review and define Vault Backup Location and folder permissions*

Review Client Workstation Readiness

- *Review Access to Administrator account*
- *Review & Document Vault Client:*
 - *NIC and related notification settings*
 - *OS Version*
 - *OS Service Pack level*
 - *Microsoft Update status (pending updates)*
 - *Web Browser & Version*
 - *Firewall settings (configure/disable)*
 - *Anti-Virus settings (configure/disable)*
- *Compare Vault Client specifications to Vault Client Requirements:*
<http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=18781512&linkID=9261340>

Review CAD Resources/CAD Management

- *Determine/Define Centralized (shared) CAD Resources*
- *Identify/Define "Gold" copy of CAD Templates (Inventor, Revit, AutoCAD/M/E, Etc.)*
- *Identify/Define Centralized Inventor CCL & Styles Share (location)*
- *Review and define shared folder Groups/Permissions*
- *Copy/Move Gold Templates, styles & CCL's to centralized share*
- *Define Preset IV Application Options (.XML)*
- *Create & Configure Vault-Specific Inventor Project (.IPJ)*

2). Install Vault

- **License & Software Installation Preparation:**

http://wikihelp.autodesk.com/Vault/enu/Help/Help/0206-Autodesk206/0210-About_Yo210/0238-Installi238/0239-Autodesk239

- **Download Installation Package from your Autodesk Subscription Site:**
<http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=17293000&linkID=16831209>

- **Place Installation Package on the server HDD where the deployment will be created/Hosted**

- **Extract the installation media to the local HDD**

- **Acquire software license for type of Software license (i.e. Network or stand-alone) <http://www.autodesk.com/register>**

- **Vault Basic License: None**

- **Vault Workgroup (VW), Vault Collaboration (VC) & Vault Professional (VP) are Network Only (ASP)**

- **License Manager Installation and Configuration:**

- **Adjust Windows Firewall**

- **Install FlexLM License Utility**

- **Acquire NIC MAC Address**

- **Acquire Vault Network license file (See above)**

- **Configure FlexLM using Services**

- **Test License Server Status**

<http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=13503006&linkID=9240617>

- **Merge multiple License files (if required)**

<http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=8057761&linkID=9240617>

- **Purpose and format of the contents in the LICPATH.LIC file**

<http://usa.autodesk.com/adsk/servlet/ps/dl/item?siteID=123112&id=2887766&linkID=9240617>

- **Vault Client Deployment Creation:**

- **Identify Vault Clients/Users to deploy**

- **Create Vault Client Deployment**

http://wikihelp.autodesk.com/Vault/enu/Help/Help/0206-Autodesk206/0300-Autodesk264/0265-Network_265/0274-Creating274/0275-Create_a275

- **Include desired CAD & Office Application Add-ins**

- **Append available Vault service packs and/or hotfixes**

<http://usa.autodesk.com/adsk/servlet/ps/dl/index?siteID=123112&id=2334435&linkID=9261341>

- **Test Vault Client Deployment Installation**

For Alternate Methods of Deploying Software, reference:

<http://wikihelp.autodesk.com/Vault/enu/Help/Help/0206-Autodesk206/0300-Autodesk264/0278-Alternat278>

3). Configure Vault

- **Vault Backup Creation/Testing/Training**
 - *Create backup script(s)*
 - *Define backup location*
 - *Test backup script(s)*
 - *Review/train IT on backup requirements, script & Locations*

http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0098-Autodesk98/0099-Manage_V99/0100-Backup_a100
- **Configure Job Server for visualization Files (VW, VC & VP only)**
 - *Enable Job Server (Dedicated/Underutilized CAD Workstation)*

http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0188-Job_Serv188

 - *Enable Job Processor on all CAD clients as temporary "farm" for Initial large data load*

http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0001-Using_Va1/0031-Manage_t31

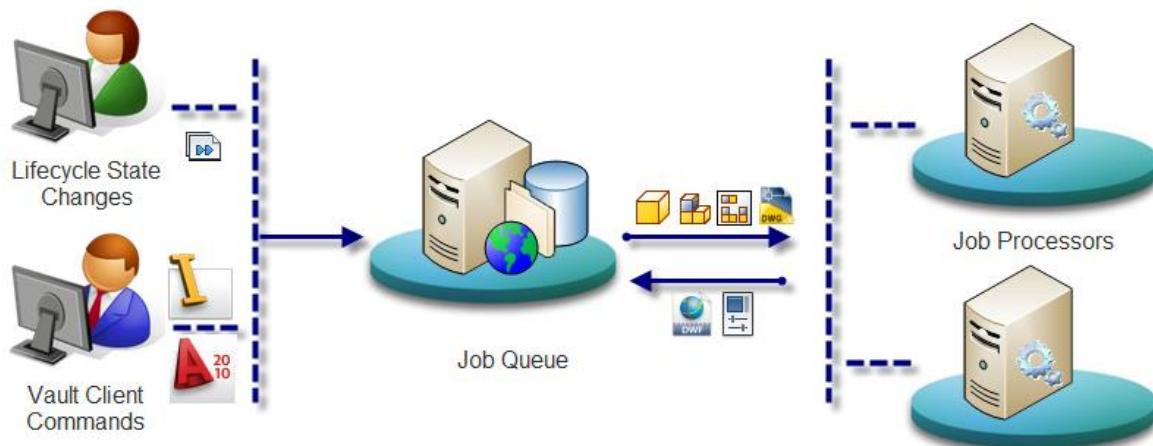


Figure 6

- **Install or Extract & Attach Content Center libraries (Inventor)**
 - *Vault-Hosted vs Desktop Content*

http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0206-Autodesk206/0210-About_Yo210/0256-Install_256/0257-Install_257

 - *Extract & Attach (Content Center Administrator role required)*

http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0098-Autodesk98/0109-Manage_C109
- **Create MS SQL Server Maintenance plan**
 - *For Full SQL Server using SQL Server Management Studio:*

- http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0098-Autodesk98/0020-Perform_0
- **For SQL Server Express (go to "Create a Maintenance Script for Microsoft SQL Express"):**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0098-Autodesk98/0020-Perform_0
 - **Configure vault Environment**
 - **Create Indexed Block Attributes**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0001-Using_Va1/0054-Understa54/0056-Add-in_-56/0063-Extracti63
 - **Create Users & Groups**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0098-Autodesk98/0118-Manage_U118
 - **Create Folder Structure**
 - **Designs**
 - **Libraries**
 - **Content Center Files (Inventor)**
 - **CAD Resources**http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0001-Using_Va1/0003-Essentia3/0010-Create_a10
 - **Create Categories (VW, VC & VP)**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0127-Client_A127/0149-Category149
 - **Create Rules (VW, VC & VP)**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0127-Client_A127/0149-Category149/0150-Category150
 - **Create Lifecycle Definition (VW, VC & VP)**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0127-Client_A127/0151-Lifecycl151
 - **Create Revision Schemes (VW, VC & VP)**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0127-Client_A127/0147-Revision147
 - **Create Numbering Schemes (VW, VC & VP)**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0127-Client_A127/0143-Numberin143
 - **Map Properties**
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0127-Client_A127/0160-Properti160
 - **Deploy Vault Clients**
 - **Deploy Vault Explorer Clients to defined User list**
 - **Distribute wiki videos to users**
<http://wikiphelp.autodesk.com/Vault/enu/Help/Videos>

- *Distribute Vault Web Client URL to defined Consumer list (VC & VP)*
<http://<servername or IP Address>/AutodeskDM/WebClient>
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0001-Using_Va1/0048-Autodesk48
- **Load/Vault CAD Resources:**
 - *Map to shared folder (see "Map a Vault Folder to a Different Working Folder")*
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0001-Using_Va1/0021-Manage_F21
 - *Copy, Migrate & check-in library files*
 - *Copy, Migrate & check-in templates files*
 - *Copy, Migrate & check-in styles*
 - *Get latest version to Share*
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0001-Using_Va1/0003-Essentia3/0012-Get_Chec12
- **Workflow & Data Load Testing**
 - *Set Default Inventor Project file (Inventor)*
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0127-Client_A127/0129-Administ129/0131-Autodesk131
 - *Create a new "Testing" vault*
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0098-Autodesk98/0099-Manage_V99/0102-Create_a102
 - *Export "Vault" Configuration CFG file*
http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0098-Autodesk98/0117-Manage_W117/1089ImportandExportConf
 - *Import configuration CFG file into "Testing" Vault*
 - *Load sample data using Autoloader*
<http://wikiphelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0193-Autoload193#GUID-EA9B2552-30B9-4789-9A5E-6580B8648981>
 - *Review for Indexed Block Attributes*
 - *Review for Categories (VW, VC & VP)*
 - *Review for Rules (VW, VC & VP)*
 - *Review for Lifecycle states (VW, VC & VP)*
 - *Review for Revision Schemes (VW, VC & VP)*
 - *Review for Numbering Schemes (VW, VC & VP)*
 - *Review for Job Server Published Visualization Files (VW, VC & VP)*
- **Education Delivery**
 - *Deliver Role-Based Vault Explorer training: VE (Administrator, Author, editor, reviewer, consumer)*
 - *Deliver Vault Web Client training: (VC & VP)*

4). Populate and Load Vault

- **Load Data using Autoloader:**
<http://wikihelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0193-Autoload193>
- **Notes:**
 - *Autoloader requires Vault Administrator Role.*
 - *Autoloader uses an existing project file if one is found in the folder being loaded*
 - *Autoloader does not work with "Vault" Project file types.*
- **Tips:**
 - *Set Vault Categories for files using Rules prior to data load (see configuration)*
 - *Set default lifecycle state for a category to "Released" for Autoloader... then change it to Work in Progress for production.*
 - *Use Autoloader as a diagnostic tool to check data integrity*
 - *Use Autoloader on multiple systems as a "Farm" for large data uploads. See "Multiple Instances of Autoloader" topic here:*
<http://wikihelp.autodesk.com/Vault/enu/Help/Help/0097-Administ97/0193-Autoload193>
 - *Break data load tasks into pieces.*
 - *Consider following a "Project" or "Product-Line" strategy when Autoloading data*
 - *Consider using a "quarantine" folder or category for data that needs further review.*
 - *Consider granting temporary "Administrator" role to Engineer/Design staff to load the active products/projects they are familiar with.*

Additional Resources

Vault Blogs:

- <http://crackingthevault.typepad.com/>
- <http://underthehood-autodesk.typepad.com/>

Vault-Specific White Papers:

The following documents can be very helpful and can be found at the link below:

- ***-Best Practices for Implementing Autodesk Vault***
- ***-Best Practices for Loading Autodesk Inventor Data into Autodesk Vault***
- ***-Migrating Autodesk Inventor Data into Autodesk Vault***
- ***-DWF Settings in Autodesk Vault***
<http://usa.autodesk.com/adsk/servlet/index?siteID=123112&id=9720013&linkID=9261340>

CAD Manager Resources:

- ***Inventor CAD Manager and IT Manager Resource***
http://wkihhelp.autodesk.com/Inventor/enu/2013/Help/0000-Installat0/0177-CAD_Mana177
- ***Inventor CAD Manager Fundamentals (best practices)***
http://wkihhelp.autodesk.com/Inventor/enu/2013/Help/3877-CAD_Mana3877
 - Keep data current... Migrate your data following each upgrade*
 - Configure the company standards/styles using the Styles Editor on a shared server*
 - Define user Application Options and export to your shared server*
 - Create templates and place on a shared server (and add to Vault)*
 - Set up Vault project to create "Content Center Files" in a shared server folder.*
- ***Vault Advanced Configuration guide:***
http://wkihhelp.autodesk.com/Vault/enu/Help/Help/0206-Autodesk206/0264Advanced_Configuration
- ***To Upgrade an existing Autodesk Vault:***
<http://wkihhelp.autodesk.com/Vault/enu/Help/Help/0206-Autodesk206/0261-Upgradin261>