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Get the Most from the Autodesk Inventor® Content Center

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MA22-4 Learn how to implement the Inventor Content Center as both a stand-alone and server-based configuration with a focus on Autodesk Vault and Productstream. Learn how to prepare parts for the publishing process and how to make them available to your design team via the Content Center. Learn searching strategies and how to use favorites to make it easier than ever to use standard and custom content.

About the Speaker:

Brian manages the data management solutions at MasterGraphics. He has worked with large corporations to implement Autodesk data management solutions, specializing in Autodesk Inventor, Autodesk Vault, and Autodesk Productstream. Brian has taught numerous classes in Autodesk mechanical applications and is a recognized expert, instructor, and consultant in mechanical CAD and data management. He is both an Autodesk Inventor Certified Expert and Autodesk Manufacturing Solutions Implementation Certified Expert.

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Definition of Content Center

Benefits

Inventor's Content Center provides both individual and workgroup users with consistent content management. This allows standards to be established throughout the design group. In addition, CAD managers can publish company specific components and customize existing parts and interfaces.

Inventor Content Center Installation

Local instance

INVENTORCONTENT

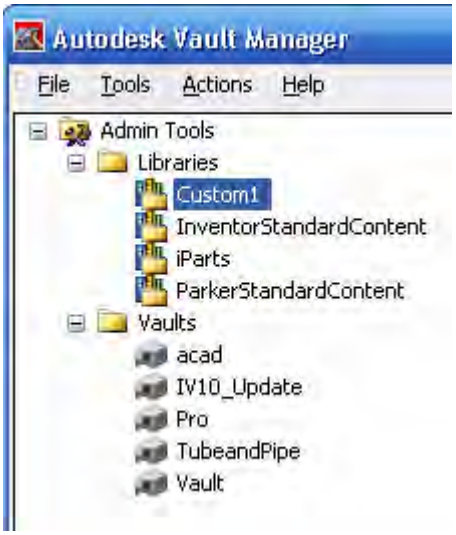
Autodesk Inventor's Content Center installs by accepting the defaults during the Inventor installation. This scenario is ideal for a remote, mobile, or otherwise non-collaborative Inventor user. The permissions for editing and publishing in the Content Center library are specified during installation in the Content Center Library User Permissions window. If you must change the permissions, or decide not to use Content Center on the local machine, change the setting using Add/Remove Programs in Control Panel. Start Autodesk Inventor Setup, and modify the installation of Autodesk Inventor.

Shared Server install

AUTODESKVAULT

When working in a design group, it is recommended that you use a shared Library source. Apart from this, each design member must have Content Center loaded on their individual machine. To avoid the need for each member of a design workgroup to manually configure their Content Center Libraries, install the Content Center libraries on a shared Autodesk Data Management Server along with Vault.

The Autodesk Data Management Server manages shared Content Center libraries for Autodesk Inventor and Vault databases for Autodesk Vault. When you install Content Center libraries on the Autodesk Data Management Server, you have a central server that local machines can access and share. From the Vault Manager you can see all databases, both Vault and Content Center.

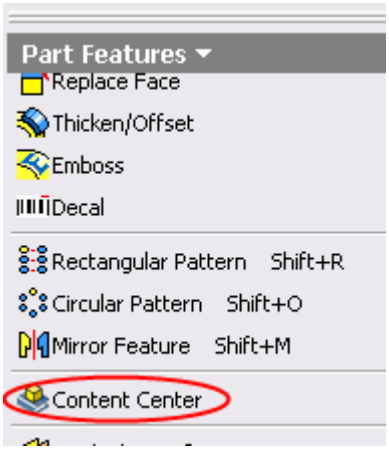


Note: Before installing ADMS (Autodesk Data Management Server), Internet Information Services (IIS) must be installed on the server. See the Managing Your Data.pdf for specific instruction.

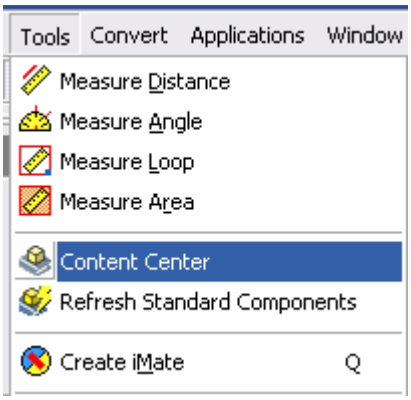
User Interface

Accessing the Content Center

The Content Center can be accessed within a Part or Assembly window. Both the Part and Assembly panel and the Tools pull down have access to Content Center.



Content Center in Part Panel



Content Center in Tools pull down

Libraries

"Out-of-the-Box"

Autodesk Inventor installs with several default libraries: InventorStandardContent and Parker. These are broken down further into two types of Library components.

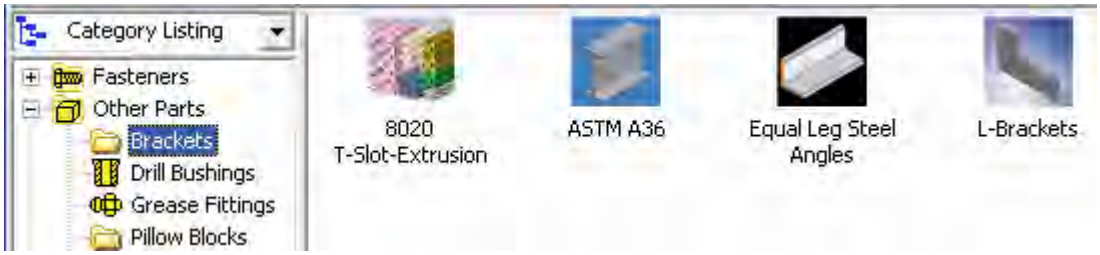
Standard parts (fasteners, shaft parts) have all part parameters defined as exact values in the table of parameters. You can choose the size (dimensions) of the standard part by selecting the values for each part parameter in a drop-down list. Similar to iParts, these part files generated are automatically saved at the specified storage location for Content Center library parts.

Custom parts (steel shapes, rivets) have one variable parameter set by the user in the defined range of values. The other values for part parameters are selected in drop-down lists the same way as the parameters for standard parts. Similar to custom iParts, the location of the part file for every custom part is specified by the user before the part is placed in an assembly. You can then save custom parts in specific folders.

- InventorStandardContent
  - Fasteners, Shaft Parts, Steel Shapes
  - Read-Only
- Parker
  - Tube and Pipe fittings
  - Read-Only
- MyLibrary (local machine, optional)
  - Availalble to Copy or Publish parts to
  - Read/Write access

Publishing Custom Components to Content center

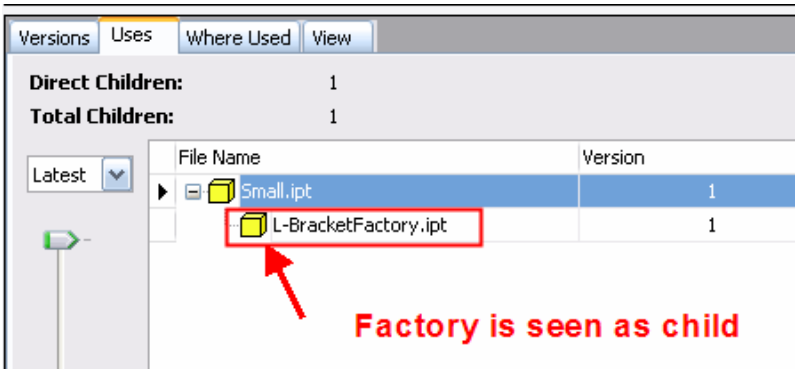
A strong consideration should be made to publishing iParts and iFeatures to the Content Center as opposed to using iParts in the traditional sense, especially when using Vault. This section will outline the options of library parts with Vault and Productstream.



iParts

Inventor's iParts provide a useful way to insert pre-configured parts into an assembly. These traditionally are considered Library components and are not intended to change. Often times, an update is needed to adjust the parameters of the iPart or add additional configurations. To achieve this, a separate project file is needed to update the iPart factories as they are treated as read-only. However, when iParts in Library folders are modified, the assemblies "dirty" on open and prompt for a save, though nothing seems to have been done to the assembly.

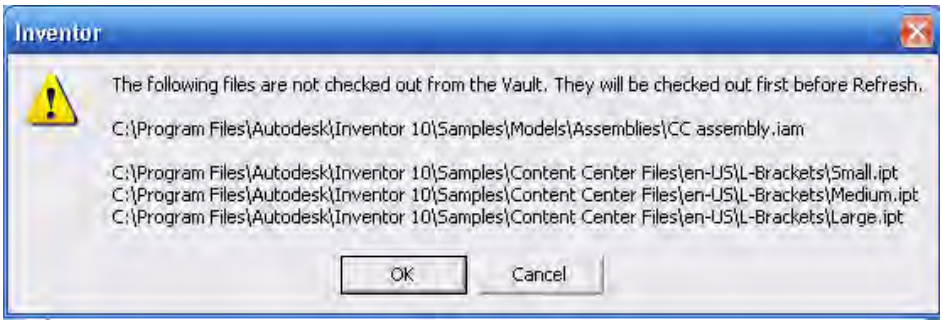
When using iParts in your designs, Autodesk Vault honors the relationships between iPart factories and generated children. Under the Uses tab however, the parent files is actually seen as a child file.



Inventor's Content Center provides tools to Publish iParts, parts, and features into libraries. You can also insert new categories in a library, and redefine parameters for library parts. The Publish tool from the Tools pull down is used to publish parts and iParts into a Read/Write library. The published part is saved as a part family to a selected category. Before you publish a part, it is suggested that you map the part parameters to the category parameters.

When iParts are published to Content Center and placed in an assembly, a single Member of the Family is copied to the mapped location for Content Center components. Autodesk Vault maintains this relationship between the Library part and the assemblies that reference it.

Content Center also addresses the challenges of modified Library components by alerting the user when the definition of Published iParts has changed. The user is prompted to Refresh Standard Components and steps the user through the update process. This eliminates the need for a separate dedicated Inventor project file for Library part editing.



Terminology

Categories are a logical grouping of part types, and includes subcategories, part families, or both subcategories and part families. For instance, Fasteners is a category. This can be broken down further to Bolts, and further to Countersunk, Hex Head, and Socket Head.

Family is a group of parts (or features) that uses *one* geometric model, but each part (feature) has different parameters that can control size, Material, and other variations. A family is the target part itself. A Family is similar to an iPart Factory.

Member is the generated copy or one size member within the family.

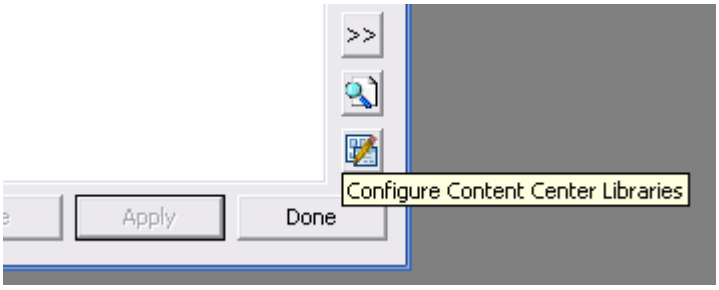
Administrative Tasks with Content Center

Configuring Libraries

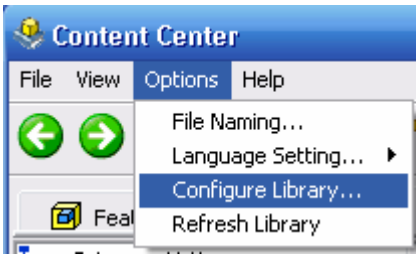
You can install Content Center libraries on the Autodesk Data Management Server and configure a shared project file to point to the libraries shared by the server from within Autodesk Inventor in the Configure Libraries dialog box. If you are connecting to a vault database and the Content Center libraries database, the administrator creates the vault project file first and makes it the active project. Then the administrator configures the Content Center libraries in the Configure Libraries dialog box.

The following steps apply to design groups with multiple users. The same concept can be applied to a single seat installation running a local instance of Content Center with Autodesk Inventor.

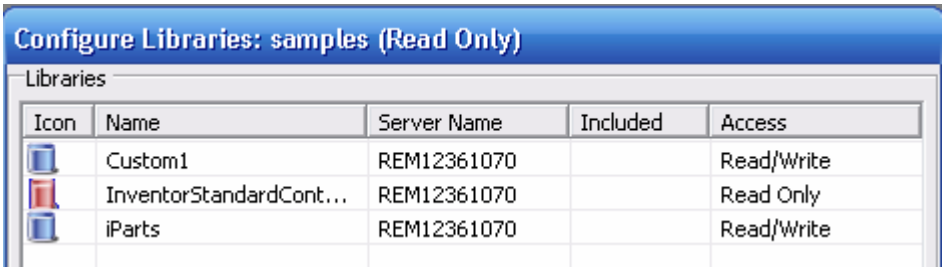
Initial access to Configure Libraries is through Inventor's Project Editor. In the lower right hand corner, click Configure Content Center Libraries.



You can also access and configure Libraries through the Content Center dialog box, from the Options pull down menu.



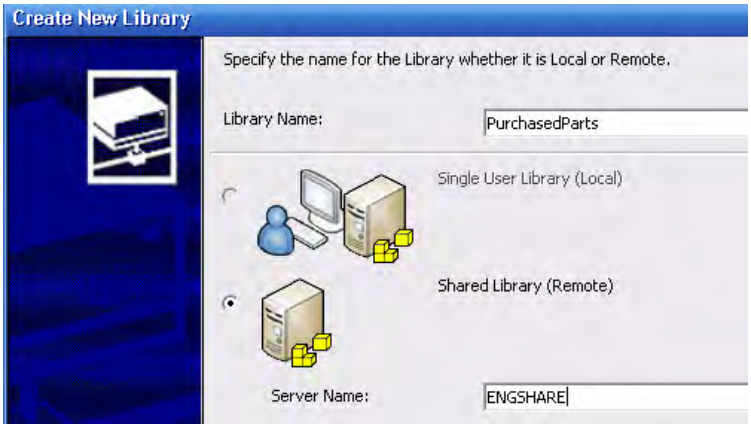
The dialog box lists the Libraries associated to the project file (.ipj). Note the Access column indicating whether or not the library is modifiable. The two libraries installed by default, InventorStandardContent and Partker, are Read-Only.



Creating Libraries

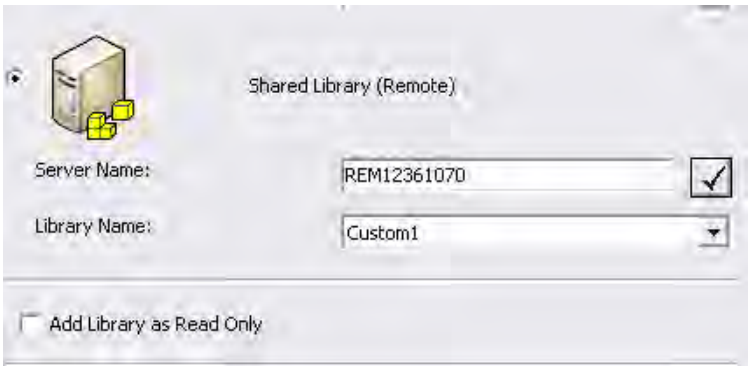
To create additional libraries, click the New Library button in the Configure Library dialog box.

Specify the name for the new Library. Verify Shared Library (Remote) is selected. Enter the name of the server. When using Vault and Productstream, this will create the database under the AUTODESKVAULT instance on Autodesk Data Management server.



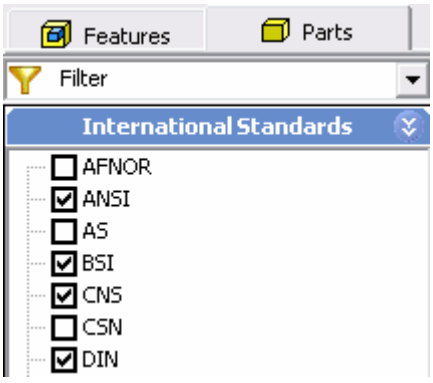
Adding Libraries

To add pre-existing Libraries to the Content Center, click Add Library in the Configure Libraries dialog box. Enter the Server name and click the check box. Available Libraries will be listed in the drop down list. These may be libraries that an administrator has set up locally on a machine dedicated to generating Libraries form iParts.

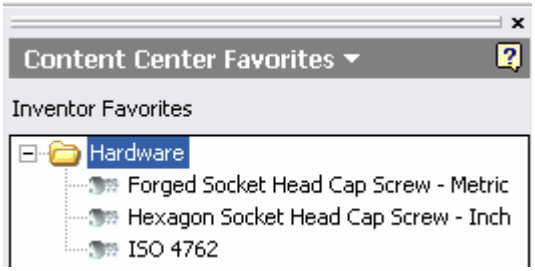


Once the Libraries are selected and added to the list of available databases, the Inventor project file stores the following additional Content Center data:

1. Filters allow you to select which content displays in the Content Center browser. Filters will exclude International Standards, Manufacturers, or Category that you do not use.

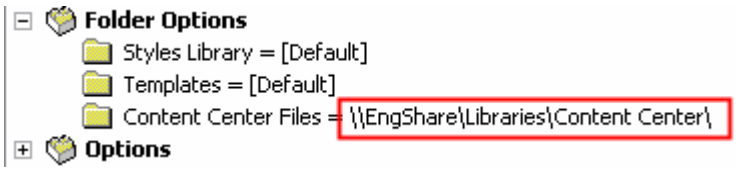


2. The Content Center Favorites is storage, where you insert your favorite parts and part families. You can create a folder structure in Favorites and order favorite items as you need. You can create additional Favorites groups. You maintain its content and it does not change when you refresh the library structure. Adding Favorites will modify the Inventor project file. Therefore, it is suggested that you create favorites for your design team before adding the .ipj to the Vault.



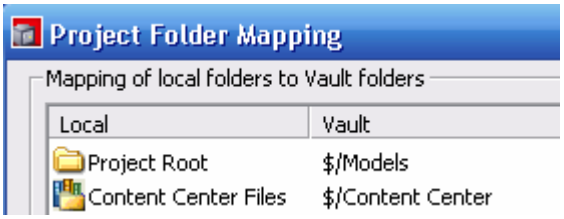
Project file setup

The next step is to declare the path to the root folder for the generated Content Center files. This is located in Folder Options in the edit pane in the Project dialog box. In a design group, this should be a location accessible to all members.



In Vault Explorer, right click the root ($) and select New Library Folder. Enter the name exactly as it appears in the project editor and the shared network location.

The final step is to establish the mapping of the Content Center folder to the Vault Library folder. Go to File>Vault>Map Folders. Set the Content Center Files location to the Vault Explorer folder.



In Vault Explorer, have each member of your design group perform a Get Latest on the vaulted Inventor Project file. Activate this project and close the project dialog box.