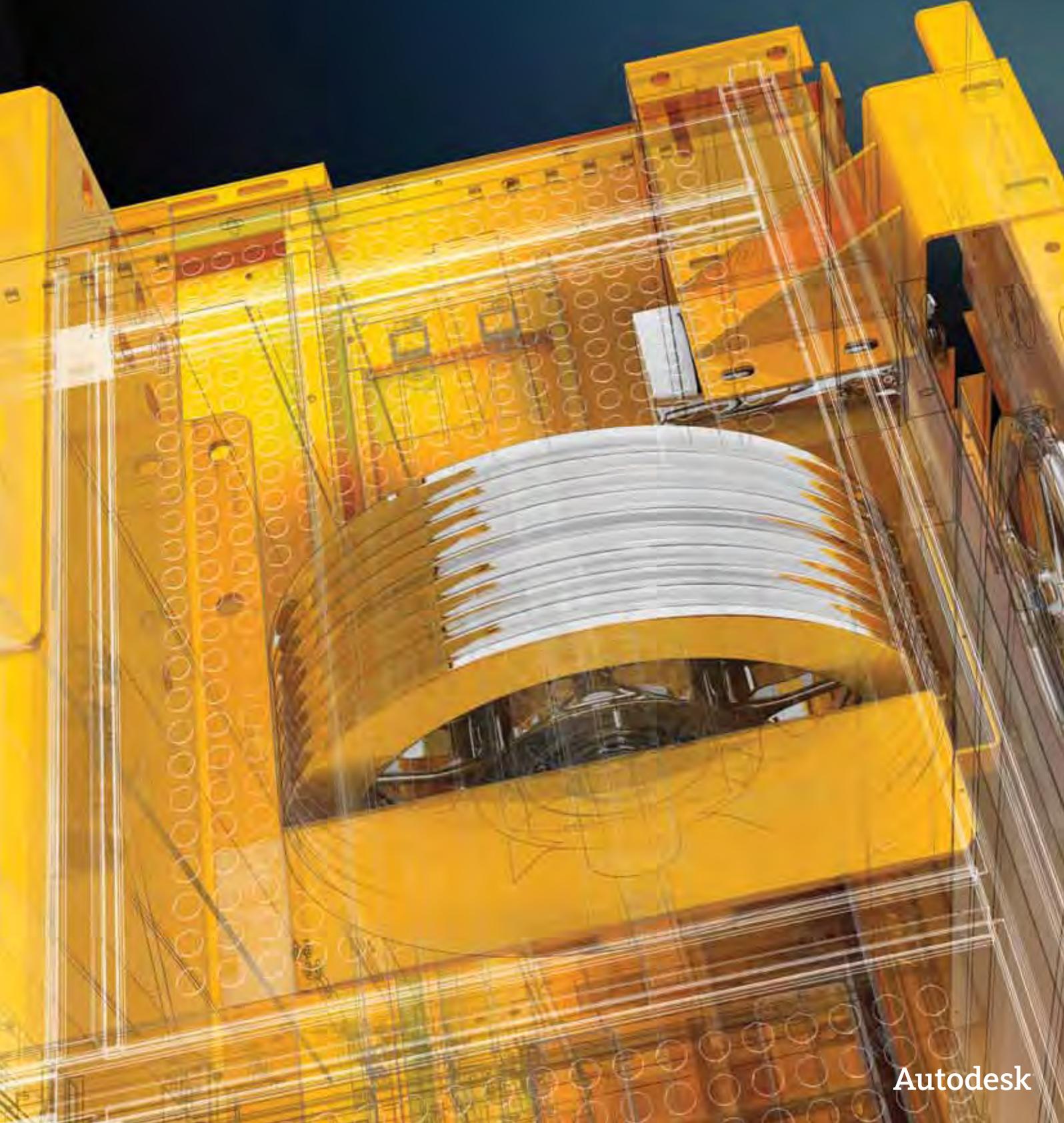Technical What's New

Autodesk®
**Vault** Products

# Technical What's New

## Contents

## Welcome to the Autodesk Vault 2012 Products

Autodesk® Vault 2012 software, part of the Autodesk® solution for Digital Prototyping, securely stores and manages engineering information, design data, and documents— shortening the design-to-manufacturing process. Vault software helps design, engineering, and manufacturing departments collaborate and share Digital Prototyping information with tools to connect workgroups across multiple locations. Take advantage of advanced functionality by giving design departments the tools they need to track engineering change orders, manage bills of materials (BOMs), and promote earlier collaboration through integration to manufacturing business systems.

Key areas of focus for Vault 2012 are deeper integration with multiple Autodesk® CAD applications, improved collaboration with workgroups, customer-driven usability improvements to help users increase productivity, and API enhancements to support client-side customization.

Following is an overview of the key new features and enhancements to Autodesk Vault for the 2012 release. All of the functionality described is available in Autodesk® Vault Professional 2012 software, some of the features and enhancements listed are also available in Autodesk® Vault 2012, Autodesk® Vault Workgroup 2012, and Autodesk® Vault Collaboration 2012 software.
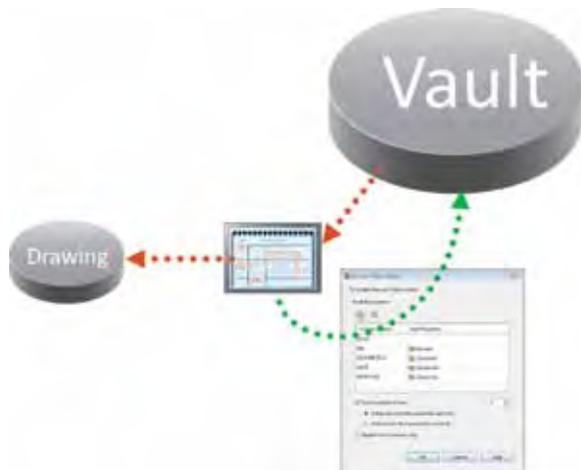
# Technical What's New

## Integrate

Autodesk Vault 2012 software provides a single, visually oriented platform for connecting Autodesk users to their data. Frequently, this involves multiple CAD applications. A number of new integrations available with the 2012 release of Vault provide expanded coverage of Digital Prototyping and Building Information Modeling (BIM) solutions, ranging from simulation to technical publication.

### AutoCAD Integration

Autodesk Vault has always offered best-in-class integration with AutoCAD® software. The current release of Autodesk Vault takes integration with AutoCAD even further with a new revision table feature and a direct integration within the Sheet Set Manager.

### Revision Block

The 2012 release of Autodesk Vault provides new Revision Table support between Vault revisions and CAD platforms. An administrator can map Vault revision data into Autodesk® Inventor® revision tables and AutoCAD revision blocks. You can now use the automated revision-bumping rules to update revision tables directly on a drawing. As a file is managed by Vault and a revision is bumped, the table adds a new row to communicate this change.



### Sheet Set Manager

Autodesk Vault 2012 software now integrates with the AutoCAD Sheet Set Manager for supported AutoCAD products. This integration enables you to add, access, and modify sheet sets in a collaborative environment. Vault Collaboration and Vault Professional software also enable multisite workflows for sheet set users. In addition, users can rely on up-to-date Vault status on sheet drawings within the Sheet Set Manager.

Vault also supports all sheet set functionality, including property management, plotting, and publishing tasks. Within Vault Explorer, you can use search capabilities to find sheets and sheet sets based on properties in the Sheet Set Manager. Sheets are represented within the Project Explorer environment, indicating the relationship between sheets and associated drawings.
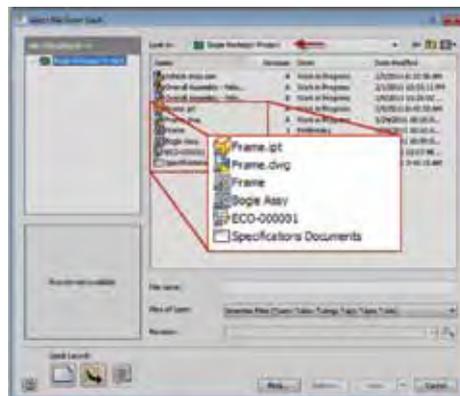


### Request Ownership

In a connected workgroup (full replication) environment, while you are working within your CAD application, you can request ownership without leaving the application. Specifically, you can request, extend, or release ownership of the files you currently have open in the CAD application. This integration enables users to remain within their CAD package, saving time and streamlining workflows.

### Digital Prototyping Integration

The Autodesk solution for Digital Prototyping bridges the gaps that typically exist among conceptual design, engineering, and manufacturing teams. Autodesk Vault software helps manage and track design components for a digital prototype, helping you to better design, visualize, and simulate complete products.
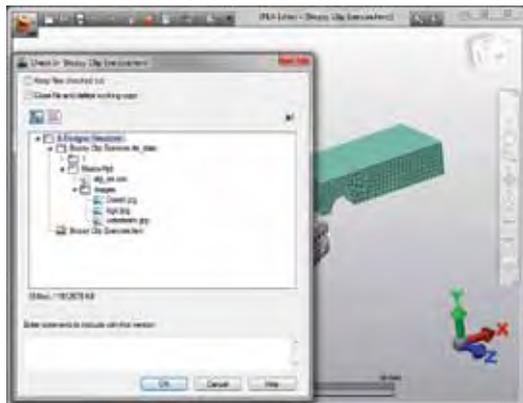
*Autodesk Inventor*

Autodesk Vault 2012 software provides deeper integration with Autodesk Inventor software as Items and Change Orders are available through the Open and Place from Vault commands. This gives Inventor users seamless access to all necessary Vault information.

# Technical What's New

## Autodesk Simulation

The new integration of Autodesk Vault 2012 with Autodesk® Simulation 2012 software provides users more control over design and simulation data with revision-management capabilities and enables them to quickly find and reuse that data for easier management of design and engineering information.



## Autodesk Inventor Publisher

Autodesk Vault 2012 integration with Autodesk® Inventor® Publisher software helps technical documentation teams to work concurrently with engineering teams. Product documentation can start earlier in the design cycle, helping you get your products to market on time.



A new Vault add-in for Inventor Publisher delivers an integrated Vault experience that lets Publisher users log in and access any Autodesk Vault Server their company is using—all directly from the Inventor Publisher product. Inventor data stored in Vault is now easily accessed and inserted directly into Inventor Publisher. Users can now manage Publisher .ipb files in Vault with check in/out capabilities.

## Autodesk Inventor Fusion

Autodesk® Inventor® Fusion software changes the way people work with 3D mechanical design data and sets new ease-of-use standards for 3D modeling in native DWG™ file format. Vault integration with Inventor Fusion helps to expand the capabilities of AutoCAD, Inventor, Autodesk® Moldflow®, and Autodesk Simulation products, enabling users to intelligently work with and edit 3D data from virtually any source.

## BIM Integration

Today, BIM is breaking down barriers and bridging communication between extended design and construction teams, providing consistent and reliable information across the scope of a project. Vault integration with Autodesk products for BIM helps project teams manage and track digital models; secure, organize, and access project documentation; and facilitate team collaboration.
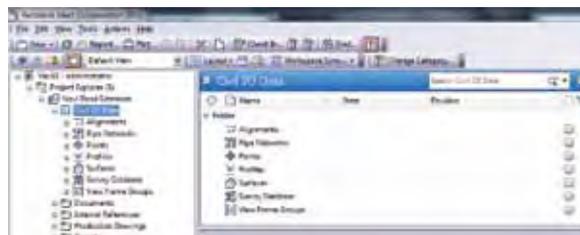
## Autodesk Revit

Autodesk Vault Workgroup, Collaboration, and Professional software now integrate with Autodesk® Revit® Architecture, Autodesk® Revit® MEP, and Autodesk® Revit® Structure software to help connect your Revit designs with the rest of the project data. Supporting the Revit work sharing feature, the Revit central model is captured during the Sync with Central function, meaning Revit users do not need to modify their standard workflows to work with a vault. As project models are added to a vault, the linked file relationships are automatically captured, tracking where models are used and providing a "where-used" analysis to understand the impact of change. Use the Autodesk Vault integration with Revit in concert with Revit Server to connect dispersed user groups for improved model-sharing tools.

Use Vault products to manage content and drive content standardization by controlling the release of approved content for consumption by the project team. Revit users can use the Vault search feature or browse the vault for Revit content directly within Revit and load the selected family into the current project, making it easier to find the correct content.

## AutoCAD Civil 3D Integration

Autodesk Vault Workgroup, Autodesk Vault Collaboration, and Autodesk Vault Professional 2012 software provide deeper integration with AutoCAD® Civil 3D® software, introducing many enhancements to help you manage your Civil 3D files.
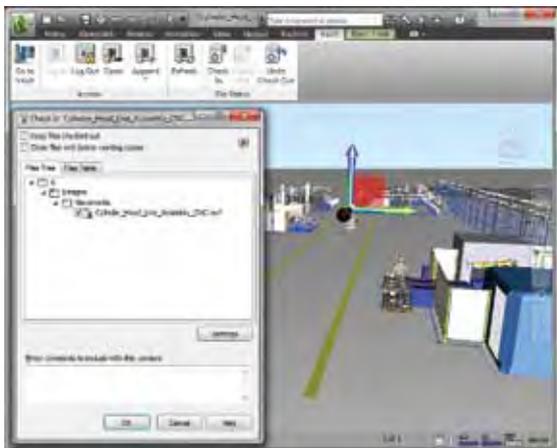
# Technical What's New

AutoCAD Civil 3D users will find a more consistent user interface between the Prospector and Vault Explorer, providing a seamless management experience. Civil 3D model objects, or data references, are now presented within Vault project folders, enabling users to see the relationship between source drawings, data references, and consumer drawings. Enhanced search capabilities help users locate Civil 3D model objects and search for civil projects based on folder properties. In addition, with the newly added support for Sheet Set Manager, users can access vaulted sheet sets from the plan and production tools. Finally, in connected workgroup environments, you can manage file and objects ownership from the AutoCAD Civil 3D window, enabling globally distributed engineering teams to work collaboratively on a civil design with local network-like performance.

Other improvements include support for the Autodesk Vault interface and Civil 3D–specific DWF™ publishing options, providing a consistent user experience with other Vault integrations. In addition, enhancements to the Civil 3D integration provide users greater control to locate data where they would like within their vaults and enable unique file name enforcement.

## Autodesk Navisworks Integration

Autodesk Vault 2012 software is now fully integrated with Autodesk® Navisworks® software. This pivotal new integration provides customers in the factory design, architectural, engineering, and construction industries a key connection to crucial project data stored and managed within Vault. Integration with Vault 2012 means that Navisworks users can now securely draw in content from a multitude of CAD sources for aggregation, simulation, clash detection, and visualization, enabling reliable data management of aggregated model data.



A large part of maintaining this accurate model is controlling access to and updating a single centralized model repository. You can now aggregate vaulted data directly from within Navisworks. Use vaulted project data to compare multiple iterations for design reviews, perform clash detection using up-to-date information from Vault, and securely share the results with the team.

The new integration incorporates the user interface found in many Autodesk applications, such as AutoCAD, Revit, and Navisworks, offering a unified user experience as users open and append models directly from Vault. Simple access to Vault via the user interface makes it easy to maintain your Navisworks model even with the most complex mix of data sources.

## Microsoft Outlook Integration

Vault software's Microsoft compatibility now extends to Microsoft® Outlook® software, enabling users to access message check-in within Outlook. Users can now select multiple email messages, right-click and check in, or use the ribbon commands to assign emails to a folder within the vault. Alternatively, using virtual folders, users can map folders in Outlook to Vault folders and use drag-and-drop or email rules to automate the add-to Vault process. In addition, users can now preview email within the Vault Explorer window.
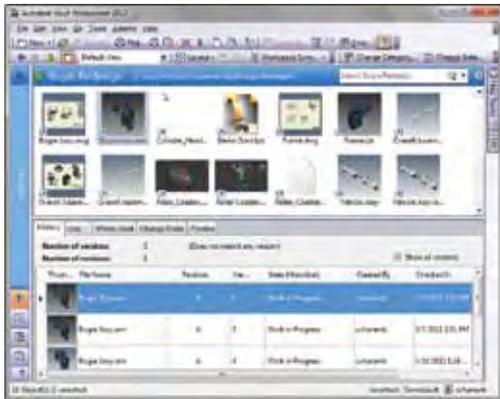
# Technical What's New

## Collaborate

Autodesk Vault 2012 products provide new features and tools that facilitate project management within a central interface. This introduces Projects—a folder collection of all related information for a job/customer/project—which helps save time and reduce navigation to various locations in the vault by housing all data in one project context.
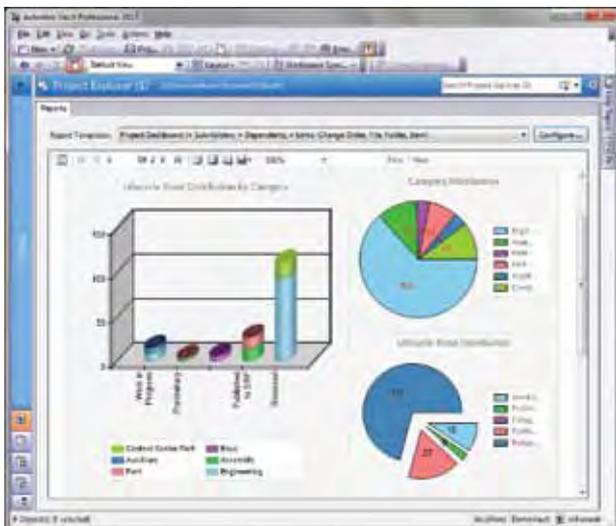
### Projects

Folders within Vault 2012 can take on new functionality so users can collaborate on a project basis and more easily reuse their designs. Users can now categorize Vault folders like files and have user-defined properties assigned to them.



### Project Dashboard

The new release of Vault offers a dashboard-style reporting tool built into the folder detail pane, offering immediate feedback on project status. In the preview pane, you can easily generate and view reports based on data contained within the Project structure. The reports include Files, Sub-projects, Items, and Change Orders within the Project. In addition, you can easily include linked data and implied data in the report. Communicate more effectively with your design team using the new Project Dashboard reports.



## Links

A new file navigation system has been introduced in the new release: links allow users to collect and share documents, Items, and Change Orders across folders in Vault. This new environment enables you to manage all data types within a consolidated project context. Links enable users to create shortcuts to objects, so team members can share content across projects without copying or moving files from folder to folder.

Links are an exact representation of the original document (Object). Users can create links for Files, Change Orders, or Items. This means there is a simple method to organize all project items and engineering change orders (ECOs) within the Vault virtual folder structure, keeping the user security level intact. Users cannot open a link if they are denied permission to the original folder.

Now linking is as good as having the object in the linked location. However, the object is still stored in one location—users can link one file or object to a number of project folders. Unlike shortcuts, links are available to all users in Vault.



## Enhance

Autodesk Vault 2012 software offers numerous customer-requested enhancements. These enhancements provide a more productive work environment that you can tailor to meet your needs.
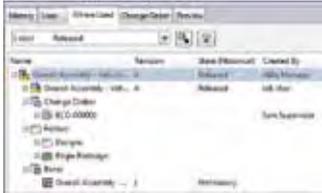
### Vault Navigation Enhancements

Vault includes new user interface improvements, enabling users to configure Vault for their own workflows. First, the Properties window in Vault 2012 provides three optional layout views: Detail view, Small Icon, and Larger Icon. Users can opt for this easy display of their files and thumb through documents quickly.
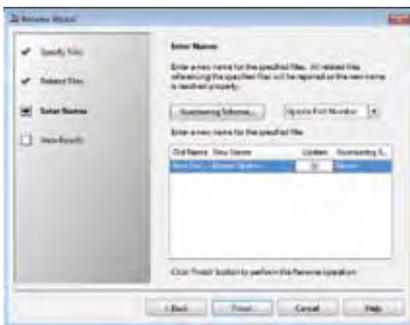
# Technical What's New

## Where Used

Within Autodesk Vault Professional, the Where Used tab provides an additional level of detail by enabling users to see not only parent files but also Items and Change Orders. This provides all users with a simple, single access point to analyze the impact of change to Files.



## Autodesk Inventor File Management Improvements

When working with Autodesk Inventor files in Vault, Inventor project files are frequently involved in path change operations for Inventor files (for example, renaming a file, moving a file, copy design, or replace). The correct Inventor project file must be specified so that Vault can resolve the Inventor files correctly. With Vault 2012, the Autodesk Inventor project file for Vault can be specified to either always use Inventor software's last vault-controlled project file or always use the default administrator-enforced project file. This enforces consistency within Vault for all users.



## Item Workflow Enhancements

Significant enhancements have been made to Item Master workflows in Autodesk Vault Professional 2012 software, including new communication of linked files types, purge functionality, and lifecycle flexibility.
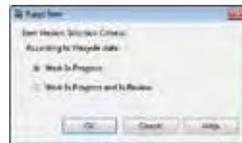
In the new release, effectivity is now a property that may be displayed in bills of materials and the Item Master, and the rules governing effectivity have been improved, making it easier to accomplish workflows.

## Multiple Link Types

Vault Professional 2012 introduces enhanced communication on Items with linked files: two new link types include Primary Subcomponent and Secondary Subcomponent to communicate that file's role in the Item. This additional level of detail provides greater flexibility in defining and editing files linked to the Item Master.
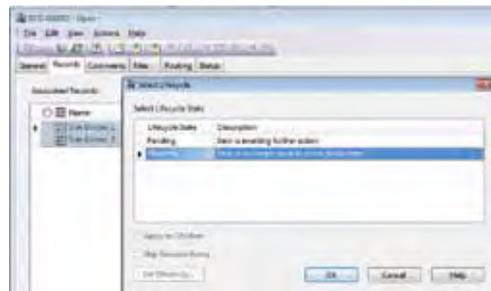
## Purge Item History

Much like historical file versions, users can now purge item versions in Work in Progress and In Review states. This helps not only to shrink the size of the vault, but also free up item numbers that were used and reserved by historical item versions or files linked to historical item versions. You can run Purge on a single Item, a selection of Items, or all Items in the Item Master.
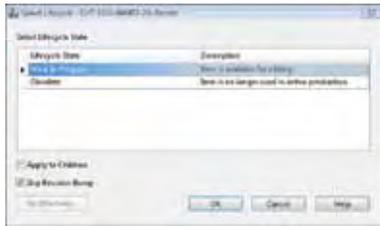


## Relaxed Item Release Rules

In the new version of Vault Professional software, rules regarding lifecycle transitions have been relaxed to provide flexible workflows that customers have asked for, such as allowing Items in states that would have been blocked because of parent states. In addition, it is now easier to work with Obsolete Items. A parent item no longer needs to be Obsolete in order to designate a single part as Obsolete. In addition, you can now set Items to Obsolete within a Change Order.

# Technical What's New

## Skip Revision Bump

New to Vault Professional 2012, users can now skip a preconfigured revision bump when changing an Item's state. This introduces Quick-Change style functionality for Items, similar to the Lifecycle feature of File workflows.



## Change Order Improvements

Realize greater productivity with Items and Change Orders by reducing steps when managing information. With Autodesk Vault Professional software, ECO participation is now visible in the Item Master, and restriction messages due to change order now state the number of the change order. In addition, expanded permission has been granted to Administrator and the new Change Order Editor (Level 2) role, allowing those users to make revisions to change orders in an Approved state.
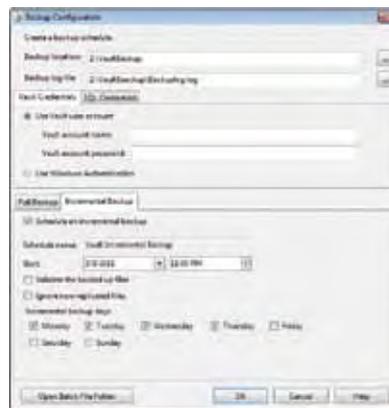


## Improved Property Edits

Enhanced editing of properties on multiple Items and Change Orders is now available within a common interface for all Vault object types. Now you can use the Edit Properties Grid and the Add/Remove Properties command to modify properties for Items and Change Orders as you would for file property editing.



## Autodesk Data Management Server Enhancements

Autodesk Vault software has always provided the ability to back up through a command line–driven script. With Vault 2012, the data management console can schedule full and incremental backup scripts. This feature creates a batch file and schedules the task in the Windows® Task Scheduler. This allows Vault administrators to implement Vault with a quicker ROI (return on investment) and secure their intellectual property in Vault immediately after installation.



## Installation Improvements

Autodesk Vault 2012 now supports checking and downloading service packs during the installation process. In addition, you can now run the installation pre-check before starting the installation process to make sure your computer is ready for the server installation.

## SSL Certificates

Previous releases of Autodesk Vault supported the use of SSL (secure socket layer) certificates on the Vault server. The Autodesk Vault 2012 product line now offers support for client SSL certificates. These SSL certificates provide a way to identify a client during the connection process. When a client attempts to connect, the server verifies that client's certificate to a trusted certificate authority before it allows access. If it is not a trusted certificate, the user is denied access to the server regardless of having a valid user name and password. This also provides for secure communication to and from the server and client for those customers who request secure connections.

## Customize

The API for Autodesk Vault 2012 software has enhanced application capability and streamlines processes to meet a company's business needs. Users can automate and enforce custom processes using pre- and post-event handlers. For example, users can send a model out for analysis when it is released. Or they can prevent files from being added if they are not named correctly.

Vault 2012 software now permits users to define actions and custom jobs for Items and Change Orders during lifecycle transitions. Jobs also have a priority feature, allowing the user to distinguish between background tasks and tasks that need to be done immediately. The new Project functionality is customizable through the API as well.

There are also many API enhancements designed to make things easier for the programmer. There is now a built-in service manager for working with web services. Several complex client operations, such as property editing, are now available as simple API functions.

## Conclusion

We thank you for your continued support of the Autodesk Vault product family: Autodesk Vault, Autodesk Vault Workgroup, Autodesk Vault Collaboration, and Autodesk Vault Professional. We strive to listen to your needs, and we trust that the new and enhanced product functionality helps make you more productive and your company more competitive while returning true value to your bottom line.

## Feedback

Autodesk Vault customers can interact with the Autodesk development team through a number of methods, including the Autodesk Manufacturing Community at **mfgcommunity.autodesk.com.**

## Learn More or Purchase

Access specialists worldwide who can provide product expertise, a deep understanding of your industry, and value that extends beyond your software. To license Autodesk Vault software, contact an Autodesk Authorized Reseller. Locate a reseller near you at **www.autodesk.com/reseller.**

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