

Comparison Table for PTC PDM/PLM Solutions

| Functionalities | PTC Creo E/D Model Manager V. 19.0 | PTC Windchill PDM Essentials V. 11.0 | PTC Windchill PDMLink V. 11.0 |
|---|------------------------------------|--------------------------------------|-------------------------------|
| MCAD data management | V | V | V |
| ECAD data management | X | X | Optional |
| Document management | V | V | V |
| Search management | Not Full-Text | V | V |
| Simple release management | V | V | V |
| 2D/3D Visualization & Publishing | Thumbnail Only | V | V |
| BOM management | V | CAD Structure Only | V |
| Change management | X | X | V |
| Project management | Optional | X | V |
| Project collaboration | V | X | Optional |
| Access documents via web page | Optional | V | V |
| Effectivity dates | V | X | V |
| New business object & UI customizations | V | X | V |
| Workflow process customizations | X | X | V |
| External System Integrations | Optional | X | V |
| Replication | Optional | X | V |
| Dedicated (private) instance | V | V | V |
| Database included | X | V | X |
| Part classification Management | Optional | X | Optional |
| Options & Variants Management | Optional | X | Optional |
| Supplier Management | X | X | Optional |
| Manufacturing Process Management | X | X | Optional |
| Quality solutions | X | X | Optional |
| CAD Integration | | | |
| PTC Creo | Optional | V | V |
| PTC Creo E/D | V | V | V |
| AutoCAD | Optional | V | X |
| Autodesk Inventor | Optional | V | X |
| SolidWorks | Optional | V | X |
| NX | X | X | Optional |
| Catia V5 | X | X | Optional |
| ECAD | Optional | X | Optional |
| Deployment | | | |
| Server location | On Premise | On Premise | On Premise/Cloud |
| Managed by PTC Cloud Services | X | X | V |
| IoT Connected | | | |
| Role based apps enabled (PTC Navigate) | X | X | V |
| Capture and analyze IoT data (ThingWorx) | X | X | V |
| System/software Lifecycle ALM Integration | X | X | V |
| Embedded IoT technology | X | X | V |
| Support to augmented reality technology | X | X | V |

Comparison Table for PTC PDM/PLM/CAD Data Management

| Capabilities | PTC Pro/INTRALINK V. 3.X | PTC Model Manager V. 19.X | PTC Windchill PDMLink V. 9.X | PTC Windchill PDMLink V. 10.X | PTC Windchill PDMLink V. 11.0 |
|--|--------------------------|---------------------------|-------------------------------|----------------------------------|----------------------------------|
| Store and track versions of electronic documents | ✓ | ✓ | ✓ | ✓ | ✓ |
| (Including CAD files and non-CAD files) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Define templates for different document types | ✓ | ☑ | ✓ | ✓ | ✓ |
| Define and manage user-defined attributes for electronic document objects | ✓ | ✓ | ✓ | ✓ | ✓ |
| Rename objects in the database apart from the CAD tool | ✓ | ☑ | ✓ | ✓ | ✓ |
| Define rules to control access to objects in the database | ✓ | ✓ | ✓ | ✓ | ✓ |
| Track and report object history (Audit Trail) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Use object type to define native viewing application | ✓ | ✓ | ✓ | ✓ | ✓ |
| Select multiple objects and modify the value of a common attribute | ✓ | ✓ | ✓ | ✓ | ✓ |
| Create user-defined relationships between non-CAD objects (structured documents) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Define different document types and assign a different lifecycle and set of attribute for each type | Rename | Rename | ✓ | ✓ | ✓ |
| Manage baseline creation with object relationships and configuration collections | ✓ | ✓ | ✓ | ✓ | ✓ |
| Document history reports (rename history, save-as history, location history) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Support multiple content files (e.g. primary, secondary...) for a single database object | ✓ | ✓ | ✓ | ✓ | ✓ |
| Manage non-CAD files as secondary content of CAD object (includes control over whether or not content is carried forward to new versions and iterations) | ✓ | ☑ | ✓ | ✓ | ✓ |
| Support broad product information access with a Web browser-based user interface for enterprise users | ✓ | ☑ | ✓ | ✓ | ✓ |
| Structure compare tool (CAD to-Part and Part-to-Part) | ✗ | ✓ | ✓ Part-to-Part only | ✓ | ✓ |
| Enterprise Top Down Design Capabilities | ✗ | ✗ | ✗ | ✓ | ✓ |
| Advanced Large Assembly Management capabilities with new Design-in-Context functionality | ✗ | ✗ | ✗ | ✓ Plus Creo Parametric | ✓ Plus Creo Parametric |

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|---|---------------------------|-------------------------------------|------------------------------|-------------------------------|-------------------------------|
| Access PDM documents in Windows Explorer | X | X | X | X | ✓✓ |
| Create a baseline, a configuration of objects, or bill of material, at a specific point in time for future reference | ✓ | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓ |
| Checkout and download specific configurations and/or versions of a design (for example, latest or named baseline) for use in a CAD application | ✓ | ✓ | ✓ | ✓ | ✓ |
| Automatically track the “As-stored” (or as checked in) configuration of a set of CAD objects | ✓ | ✓ | ✓ | ✓ | ✓ |
| Configure part numbering and versioning schemes | ✓ | <input checked="" type="checkbox"/> | ✓ | X | X |
| Annotate bills of material (product structures) and 2D or 3D views | ✓ Requires ProductView | X | ✓ | ✓ | ✓ |
| Completely define a digital product structure, with associated documents, created in various authoring tools (including CAD files, requirements documents, and specification documents) | X | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓ |
| Effectivity-based change control | X | X | ✓ | ✓ | ✓ |
| Define and manage alternate bills of material | X | X | ✓ | ✓ | ✓ |
| Define and manage substitutes (alternate parts), part occurrences, serialized parts, and product instances | X | X | ✓ | ✓ | ✓ |
| Create and modify enterprise product structure, which may or may not include heterogeneous CAD content | X | ✓ | ✓ | ✓ | ✓ |
| Designate and track serialized parts | X | X | ✓ | ✓ | ✓ |
| Flexible searching tools for locating objects based on attribute values and multiple sets of criteria | ✓ | ✓ | ✓ | ✓ | ✓✓ |
| Store searches and queries for future use | ✓ | ✓ | ✓ | ✓ | ✓✓ |
| Search for objects in the database without leaving the CAD environment | X | ✓ | ✓ | ✓ | ✓✓ |
| Search for text in documents (full text search) | X | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓✓ |
| Lifecycle and Change Management | | | | | |
| Define and track object lifecycles (release levels) | ✓ | ✓ | ✓ | ✓ | ✓ |
| End-user “set state” capabilities | ✓ | ✓ | ✓ | ✓ | ✓ |

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| Lifecycle and Change Management | | | | | |
| Configure simple routing processes for releasing objects from one release level or lifecycle state to another | ✓ | ✓ | ✓ | ✓ | ✓ |
| Viewable access from promotion form for non-CAD users | ✗ | ✓ Requires Creo View | ✓ | ✓ | ✓ |
| Task notification integrated with corporate email | ✗ | ✓ | ✓ | ✓ | ✓ |
| Ad-hoc approval/routing teams | ✗ | ✓ | ✓ | ✓ | ✓ |
| Web-based review form for easy access | ✗ | ✓ | ✓ | ✓ | ✓ |
| Predefined rules for “set state” and “revise” behavior | ✗ | ✓ | ✓ | ✓ | ✓ |
| Multiple version schemes | ✗ | ✓ | ✓ | ✓ | ✓ |
| Subscription and notification tools for automatic email notification for object changes | ✗ | ✓ | ✓ | ✓ | ✓ |
| Promotion Request process | ✓ | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓ |
| Track and monitor engineering change process statistics | ✗ | ✗ | ✓ | ✓ | ✓ |
| Out-of-the-box, closed-loop change process management | ✗ | ✗ | ✓ | ✓ | ✓ |
| Define custom, workflow-driven change process | ✗ | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓ |
| Change Task Sequencing | ✗ | ✗ | ✗ | ✓ | ✓ |
| Change Notice templates | ✗ | ✗ | ✗ | ✓ | ✓ |
| Managing Workflows | | | | | |
| Out-of-the-box routing workflows | ✓ | ✓ | ✓ | ✓ | ✓ |
| Document the configuration, policies, and procedures for the operation of the “system” in support of ISO 9000 or other business process initiatives | ✓ | ✓ | ✓ | ✓ | ✓ |
| Use a graphical interface to create a custom workflow consisting of tasks and roles | ✗ | ✗ | ✓ | ✓ | ✓ |
| Create automated tasks and assign role-based tasks in a workflow. This includes the ability to sequentially lay out tasks, so that one must be completed before another begins | ✗ | ✗ | ✓ | ✓ | ✓ |
| Have multiple branches or paths, depending on conditions | ✗ | ✗ | ✓ | ✓ | ✓ |
| Notify an individual of a new task via email or when user logs into the system, and the ability to send notifications on task events (for example, overdue or complete) | ✗ | ✗ | ✓ | ✓ | ✓ |

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|--|--|---------------------------|---|---|---|
| Managing Workflows | | | | | |
| Workflow Process Administration Utility | X | X | X | ✓ | ✓ |
| Lock objects from being changed (e.g., workspace hold/reserve) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replace contents of workspace and CAD session with new designs from database | ✓ | ✓ | ✓ | ✓ | ✓ |
| Communicate a designer's intention to modify an object | ✓ Lock Object and/or Intent-to-modify Status | ✓ Lock Object | ✓ Lock Object | ✓ Lock Object | ✓ Lock Object |
| Easily and securely share data with suppliers across firewalls | X | X | ✓ Including automatic registration and email invitation | ✓ Including automatic registration and email invitation | ✓ Including automatic registration and email invitation |
| Exchange and update packages of product design content between PLM and customers, partners or suppliers | X | ☑ | ✓ Export Only | ✓ Export & Windchill to Windchill | ✓ Export & Windchill to Windchill |
| Automatically warn users when changing objects that are not checked out (that is, locked) | X | ✓ | ✓ | ✓ | ✓ |
| Design branching (ability to pursue design alternatives in a temporary environment and later merge changes back into main design branch) | ✓ Branching | ✓ Revise | ✓ Revise or through Windchill ProjectLink Integration | ✓ Revise or through Windchill ProjectLink Integration | ✓ Revise or through Windchill ProjectLink Integration |
| Perform peer-to-peer sharing of visualization sessions | ✓ Requires ProductView | ☑ | ✓ Requires Creo View | ✓ Requires PCreo View | ✓ Requires Creo View |
| Participate in user discussion forums | X | X | ✓ | ✓ | ✓ |
| Automate the process of integrating changes made by different users to a common CAD model (parts or assemblies) | ✓ | X | ✓ | ✓ | ✓ |
| Access PDM/PLM data anywhere and anytime from a mobile device | X | X | X | ✓ | ✓ |
| Visually interrogate data relationships | X | X | X | ✓ Expanded | ✓ Expanded |
| Support for all CAD object types and relationships | ✓ | ☑ | ✓ | ✓ | ✓ |
| Relationship reporting capabilities (Model structure, BOM membership, family tables, where-used, and CAD relationship reports) | ✓ | ☑ | ✓ | ✓ | ✓ |
| Manage PTC Creo family tables as separate objects | ✓ | ✓ SIT AREO MMI | ✓ | ✓ | ✓ |

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|--|---|-------------------------------------|--|--|--|
| Managing Workflows | | | | | |
| Manage local working environment (workspace) | ✓ | X | ✓ | ✓ | ✓ |
| Support off-line or briefcase work mode | ✓ | ✓ | ✓ | ✓ | ✓ |
| Import or export workspace data with the local disk | ✓ | X | ✓ | ✓ | ✓ |
| Update command to keep users aware of latest changes made by others | ✓ | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓ |
| Switch between workspaces | ✓ | X | ✓ | ✓ | ✓ |
| Support bi-directional transfer and change of CAD (file-based) attributes | ✓ | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓ |
| Support non-file-based attributes | ✓ | ✓ | ✓ | ✓ | ✓ |
| Workspace Duplicate (save as) CAD product structures, including update parent | ✓ | X | ✓ | ✓ | ✓ |
| Configure the display of object and attribute information (saved displays) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Drag and drop | ✓ Limited | ✓ Limited | ✓ Limited | ✓ Limited | ✓ Limited |
| Multiple servers connected to one PTC CAD session | X | X | ✓ | ✓ | ✓ |
| Single integrated user interface | X | ✓ | ✓ | ✓ | ✓ |
| Automatically number new CAD objects based on a company's part numbering system | X | ✓ | ✓ | ✓ | ✓ |
| Out-of-the-box integrations with leading third-party CAD authoring tools | X | ✓ SIT AREO MMI (3D Parts) | ✓ Many | ✓ Many | ✓ Many |
| Workspace Frames (to undo unwanted changes made in a user's workspace) | ✓ Frames & Pro/ENGINEER Undo/Redo | X | ✓ Frames & Creo Parametric Undo/Redo | ✓ Frames & Creo Parametric Undo/Redo | ✓ Frames & Creo Parametric Undo/Redo |
| Find and Featured Item Display within the workspace | ✓ | X | ✓ | ✓ | ✓ |
| Support for multiple CAD Document Soft Type definitions | X | X | X | ✓ | ✓ |
| Flexibility in editing CAD driven Product Structures | X | X | X | ✓ | ✓ |
| Upload any content in any state to the server workspace | X | X | X | ✓ | ✓ |
| Enterprise System Iteration | | | | | |
| Leverage a toolkit to create customizations that provide integrations with other legacy business systems | ✓ | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓ |
| Standard (out-of-the-box) integrations with leading ERP vendors | X | X | ✓ | ✓ | ✓ |

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|---|---|---|--|--|--|
| Visualizing Data | | | | | |
| Basic lightweight 3D object preview from Workspace and Commonsense for CAD users | ✓ From Pro/INTRALINK 3.x Client Window | ✓ | ✓ Through Standalone or Embedded Browser | ✓ Through Standalone or Embedded Browser | ✓ Through Standalone or Embedded Browser |
| Advanced visualization with markup and annotation capabilities | ✓ Requires Division ProductView | <input checked="" type="checkbox"/> Requires Creo View | ✓ Requires Creo View | ✓ Requires Creo View | ✗ |
| Client-side viewable generation | ✗ | ✓ | ✓ | ✓ | ✓ |
| Checkout and add to workspace “as links” | ✓ | ✗ | ✓ | ✓ | ✓ |
| Scalable, web-based, three-tier architecture | ✗ | ✗ | ✓ | ✓ | ✓ |
| Performance sensitivity to network | ✓ High | ✓ Medium | ✓ Low | ✓ Low | ✓ Low |
| Sharing of data between separate databases (e.g., “Package” replication) | ✓ Package Replication | <input checked="" type="checkbox"/> | ✓ Windchill PLM Connector | ✓ Windchill PLM Connector | ✓ Windchill PLM Connector |
| Distributed content storage (vault/content replication) with local download | ✓ | ✓ | ✓ | ✓ | ✓ |
| Replication rules | ✓ Folders/domains | <input checked="" type="checkbox"/> | ✓ Folders/domains, Object Type, Object State, Viewables | ✓ Folders/domains, Object Type, Object State, Viewables | ✓ Folders/domains, Object Type, Object State, Viewables |
| Replication file-size threshold | ✗ | ✗ | ✓ | ✓ | ✓ |
| Replication fault tolerance | ✗ | ✓ | ✓ | ✓ | ✓ |
| Replication compression | ✗ | ✓ | ✓ | ✓ | ✓ |
| Distributed content storage (vault/content replication) with local upload | ✗ | ✓ | ✓ | ✓ | ✓ |
| Automated content replication | ✗ | ✓ | ✓ | ✓ | ✓ |
| Cross-locale support | ✗ | ✓ | ✓ | ✓ | ✓ |
| Metadata compression for data transfer between client and server | ✗ | ✗ | ✓ | ✓ | ✓ |
| Multi-threaded downloading and uploading, with uploading in background | ✗ | ✗ | ✓ | ✓ | ✓ |
| Domain-based access control (applied to objects in given domain using users, groups, roles) | ✓ | <input checked="" type="checkbox"/> | ✓ | ✓ | ✓ |

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|---|--------------------------|---------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Visualizing Data | | | | | |
| Maturity-based access control (applied to objects based on release-level or lifecycle state) | ✓ | ☑ | ✓ | ✓ | ✓ |
| Instance-based access control (overrides domain-based access control to grant additional permissions to individual objects) | X | ☑ | ✓ | ✓ | ✓ |
| Audit reporting capabilities (user activity, project activity, etc.) | X | ✓ | ✓ | ✓ | ✓ |
| License usage reporting | ✓ | ✓ | ✓ | ✓ | ✓ |
| Client-server communication protocol | ✓ Sqlnet | ✓ TCP/IP/HTTP | ✓ HTTP/HTTPS | ✓ HTTP/HTTPS | ✓ HTTP/HTTPS |
| Network zones (firewalls) | X | X | ✓ Optional, from 1-3 Firewalls | ✓ Optional, from 1-3 Firewalls | ✓ Optional, from 1-3 Firewalls |
| Authenticate users with standard, web-based authentication | X | X | ✓ | ✓ | ✓ |
| Security Labels and Agreements | X | X | ✓ | ✓ | ✓✓ |
| Manage users and groups | ✓ | ✓ | ✓ | ✓ | ✓ |
| Enable administrator to undo checkout | ✓ | ✓ | ✓ | ✓ | ✓ |
| Backup and recovery | ✓ | ✓ | ✓ | ✓ | ✓ |
| Deletion of latest iteration | ✓ | X | ✓ | ✓ | ✓ |
| Purging old versions and iterations | ✓ | X | ✓ | ✓ | ✓ |
| Enable administrator to set default user behavior | ✓ | ✓ | ✓ | ✓ | ✓ |
| Open APIs for Customization (for example, triggers) | ✓ | ✓ | ✓ | ✓ | ✓ |
| External LDAP server | X | ✓ Windows | ✓ | ✓ | ✓ |
| Customize application user interface | X | ✓ | ✓ | ✓ | ✓ |
| Archive & restore | X | ✓ | ✓ | ✓ | ✓ |
| Provide a user-specific home page where users can view current work, tasks, and assignments | X | X | ✓ | ✓ | ✓ |
| Support for multi-Organizations | X | X | ✓ | ✓ | ✓ |
| Cloud-based enabled | X | X | X | ✓ | ✓✓ |
| IoT (Internet of Things) support | X | X | X | ✓ | ✓✓ |

Legend:

X = N/A ✓ = Enabled ✓✓ = Highly Enhanced ☑ = Available through standard add-on/customization