ProjectWise i5 Hosting Services Operations

This document describes the operational standards that are included when Bentley hosts ProjectWise Design Integration Server on behalf of any account. These services are not applicable to any software and servers managed by the account itself.

ProjectWise Managed Services Scope of Services

This section describes the standard services that are included within the software product subscription fees when Bentley hosts ProjectWise Design Integration Server on behalf of you. These services are not applicable to any software and servers managed by your organization.

For easy comparison between what is provided in an on-premises versus hosted deployment please see the section **Standard Support Services** below.

Server Provisioning and Optional Migration of Existing ProjectWise Datasources

As part of your ProjectWise Design Integration subscription, at your request, Bentley, will provision a ProjectWise cloud-hosted server environment and will provide support to migrate your existing ProjectWise SQL Server datasources to the Bentley cloud-hosted (Managed Services) environment subject to the successful completion of a Situation Assessment Workshop (SAW). This requires review and resolution planning of any outstanding migration issues found during the SAW session. Upon initiation of a ProjectWise Migration project, Bentley's ProjectWise Managed Services team will provide a ProjectWise Migration project plan and will communicate tasks with corresponding roles/responsibilities. Timelines for migration completion are dependent upon both, user and Bentley teams, resource availability and amount of scope outlined.

Services and resources which are included, for no additional fee, when migrating data (SQL database and associated files) from an on-premise ProjectWise-hosted system to Bentley's cloud environment are the following:

A Bentley Managed Services Project Manager, responsible for:

- Creating and maintaining a project plan complete with tasks, estimated timelines and assigned roles/responsibilities
- Facilitating project milestones and providing regular status updates

The Bentley Managed Services Technical Team will provide:

- Server provisioning – one FQDN / hosted server environment will be provided in one of the Bentley-selected available regions
- Transfer of database and file storage using Bentley's preferred applications and methods
- Resolution support of issues found by your team during the testing phase for those issues which are directly related to the servers and ProjectWise configuration managed by Bentley in their cloud environment. Customizations are not included within the scope of ProjectWise Hosting Services.

- Guidance on required outages to your on-premise ProjectWise system and proper planning of personnel and change requests
- Guidance and technical support for copying files from on-premise storage areas to Bentley's cloud environment. GoodSync is Bentley's preferred software for transferring data which your team will use to transfer their data to an established Azure cloud storage account. Bentley will provide GoodSync licenses and support for no additional fee during the migration process
- Guidance and support for copying existing SQL server databases to Bentley's cloud environment.
- Guidance and support for installation and configuration of ProjectWise Caching Servers so they connect to the ProjectWise Bentley cloud environment
- Conversion of existing ProjectWise Windows Domain or Logical User accounts within the migrated ProjectWise datasource to type IMS
- Guidance concerning the naming of the ProjectWise Hosted Server environment (FQDN using XXX-pw.bentley.com where "XXX" is determined by your team)
- If you wishe to use an FQDN that is different than xxx-pw.bentley.com, you need provide a SSL certificate at their cost which is acceptable to Bentley. You are responsible for renewing the certificate when needed and notifying Bentley in advance that a new certificate needs to be installed.

Optional System Configuration Services

If your organization is interested in additional, add-on services, the assigned Bentley Enterprise Success Manager can provide a plan to order services via E365 blueprint(s) (dependent upon contract entitlements) or the Bentley Account Manager can provide a separate time and materials proposal Examples of possible additional services to be requested and delivered by the Bentley Success Services Team(s) include but are not limited to:

- ProjectWise software configuration to extend or change how ProjectWise capabilities are used by your organization.
- ProjectWise Administrator and\or end-user training.
- Converting an Oracle ProjectWise database to a SQL server ProjectWise database in order to be hosted by Bentley.
- Guidance and support for using PowerShell Scripts to synchronize active directory with the user accounts and groups within a ProjectWise datasource
- Assessment of requirements to migrate partial data from an existing ProjectWise datasource The creation of scripts for automating installation of client software forupgrading on-premise software. To determine software compatibility, the ProjectWise application integration matrix can be found at:
    https://docs.bentley.com/LiveContent/web/ProjectWise%20Version%20Support%20Matrix-v1/en/GUID-1A2E193F-C3D9-4709-92A2-E5B9301B5946.html
  which lists the applications that Bentley supports working with ProjectWise. If an application or version is not listed on this matrix, Bentley does not provide any support for the application.

- Updating ProjectWise links to documents which refer to the previous environment as part of the migration to Bentley's ProjectWise cloud-hosted environment

Operation and Support

This section describes both your organization's, and Bentley's roles and responsibilities when Bentley is hosting the ProjectWise Design Integration Server environment for you. If you choose to have the ProjectWise Design Integration Server environment, including any other ProjectWise components installed on-premise, then you are entirely responsible for that environment.

Bentley Responsibilities

Server Software Updates/Upgrades

Ensuring that your ProjectWise system is continuously maintained for best performance, the latest security updates, as well as access to new product capabilities, The Bentley ProjectWise Managed Services team will update the ProjectWise Server software as required. Additionally, general monthly maintenance/patch weekends are scheduled one year in advance outside of normal working hours for where the datacenter is located for each country The patch schedule is posted to the Bentley Communities website
https://communities.bentley.com/communities/other_communities/pwhosting/c/32 so your team can plan project work accordingly. The patching schedule cannot be changed and there is no possibility for opting out

Service Desk and Technical Support Services

Bentley delivers technical support services as defined in the SELECT Agreement. For any reported issues specific to a ProjectWise cloud-hosted server, Bentley's Service Desk will be the owner of such cloud-hosted service tickets and will handle the resolution, reporting, and closure of the tickets raised. They will contact the originator of the ticket to confirm satisfactory resolution and will close the ticket. For all product-related issues, Bentley's product technical support will own such service tickets to resolution. For all support calls, the nature of the incident will be assessed and sent to the appropriate support team who will then confirm the severity, priority, and criticality of the incident in accordance with Bentley's SELECT agreement and, as appropriate, Bentley's SLA as defined in Appendix Service Level Agreement.

Your Organization's Responsibilities

On-Premises Infrastructure Configuration

You are responsible for maintaining the necessary on-premises computers, software, and network configuration to allow your organization's users to access the ProjectWise cloud-hosted environment. Examples of necessary configuration include but are not limited to:

- Providing appropriate on-premise computers, tablets, mobile devices and associated licenses for all operating systems and desktop applications. Note: This ProjectWise CONNECT Edition proposal does not include licenses for any of the Bentley desktop design applications.
- Network connectivity from your on-premise computers to the Internet including appropriate firewall settings for ProjectWise client software.
- Your organization's server access and permissions for personnel installing ProjectWise Caching Servers, or client software
- Use of Bentley's hosted SELECT server environment. SELECT server cannot be installed on-premise and be in use by your organization. The SELECT Server must be cloud-hosted. Please see the Bentley Account Manager for guidance for the Select Server setup.

User Administration

Provisioning of access credentials for any new user rests with the your organization's ProjectWise Administrator(s) who is responsible for ensuring:

- Appropriate user privileges are assigned, including when roles change
- Users are end-dated or deleted as required

Overall User Account Contact

Communication of your organization's change requests to their hosted ProjectWise environment, you must provide to Bentley an Overall User Account Contact (OUAC). The OUAC is responsible for approving change requests made by your organization's personnel that may impact costs, usage, or affect the existing contract between your organization and Bentley. Additionally, the OUAC is the ultimate point-of-contact for your organization's ProjectWise hosted system and is responsible for ensuring that the proper contact details for the cloud-hosted environment are correct and will notify Bentley when changes to these contacts occurs. If any request is made to change the contacts on file at Bentley, the Account Contact is the sole approver of such changes. You must supply the name and contact information of your appointed OUAC via a form that will be provided by Bentley.

Ongoing Project Administration

During the execution of work-in-progress design integration and work-sharing, there are project-level administrative tasks that are best completed by your organization's ProjectWise Administrator(s) most familiar with the project requirements. Some examples of this administration include:

- Installation and upgrading of all ProjectWise Client software
- Create/provision of new projects
- Create, modify, or delete project sub-folders
- Create and manage User Group membership
- Update project Access Control settings
- Change standard workflows and states
- Deploy and configure additional desktops/users
- Deploy and configure additional on-premise ProjectWise Caching Servers

First-Level Support Activities for Your Organization's End-Users

Your organization's super-users are responsible for supplying first-level support services for end-users. These first-level support activities include:

- Communicating your organization's work-processes to your staff
- Addressing frequently asked questions
- Announcements
- Documenting and routing of calls to the Bentley Service Desk
- Communicating all outages and changes to your organization's ProjectWise users

Standard Support Services

The following table shows the standard support services provided by Bentley for either a cloud-provisioned service or an on-premises deployed service.

Operations Management			
	Cloud	On-Premise	
Proactive Monitoring	✓	✗	Infrastructure Monitoring including system availability (system health, access, node availability), hardware (CPU, Disk Queue, storage availability, etc.) and software performance to supply proactive scaling and necessary load balancing
Reporting	✓	✓	Server Usage reporting is available for both cloud-provisioned and on-premises deployments.
SLA Tracking / Management	✓	✗	A continuous improvement process that is used to track the SLA for Bentley to improve the services provided to users. A collection of data from a number of monitoring points throughout the network and servers allows Bentley to monitor performance and fine-tune the system for optimal performance. This includes recording and historical tracking of performance management in support of the SLA.
Maintain Systems Performance	✓	✗	Bentley supplies a Service Level Agreement (SLA) to guarantee uptime. Bentley Systems data centers from which our cloud provisioned services are delivered are resilient with diversely routed power supplies both into and within the data centers and all network connectivity utilizes two distinct Tier 1 ISPs. Performance monitoring includes software actions (automation job status, orchestration actions, etc.), and hardware performance.
Troubleshoot Server Issues	✓	✗	The Bentley Service Desk troubleshoots server issues through resolution. With an SLA in place, it is Bentley's responsibility to maintain and troubleshoot server issues. This minimizes the risk of long outages. Bentley technical support remains available to assist the user in troubleshooting on-premises issues under SELECT services.

Upgrades to Server Operating System Software	✓	✗	Upgrades to new versions of server operating systems are tested and implemented as soon as possible to ensure users always have the most up-to-date versions of the software and can take advantage of innovations as soon as they are released. Operating system upgrades will occur according to a schedule that will be published regularly. Users will be notified in advance for changes outside of that schedule (e.g., emergency).
Change Management	✓	✗	Bentley procedures follow ITIL best practice and are designed to ensure that any changes are managed through to conclusion with minimal business impact. The change management framework delivers consistent services, using common language across the various service line teams and technologies.
Systems Maintenance	✓	✗	The system maintenance procedure follows several procedures, including patch management and updates, change management policy, and major release policies. As stated above, systems maintenance will be executed according to a published schedule.
Security Monitoring	✓	✗	Bentley monitors and ensures security in a variety of ways. Commercial antivirus protection, network encryption, routine penetration, and vulnerability testing, device hardening, network protection, logging, and auditing are all part of our security monitoring.
Data Center Physical Security	✓	✗	Data centers used by Bentley in the provision of our services are guarded and secured by multiple layers of security. These may include security personnel, video surveillance, blast and ram raid protection, key security, multi-level electronic authorization, and security vetting and clearance processes.

Application Management

	Cloud	On-Premise	
System Deployment	✓	✗	Design and implementation of ProjectWise server system, software installation, and datasource creation.
Monitoring	✓	✗	Application Performance Monitoring.
Problems / Incidents	✓	✗	Management and resolution of any problems or incidents that occur within the ProjectWise servers hosted by Bentley. Product Issues will be handled by the Bentley Product Team(s).
High Availability	✓	✗	High availability only for the ProjectWise Design Integration hosted solution.

Service / Support Desk

	Cloud	On-Premise	

	Cloud	On-Premise	
Help Desk	✔	✔	The Bentley Service Desk provides incident and problem management functions. For all Bentley support calls, the nature of the incident will be assessed and forwarded to the appropriate Service Line Team who will then confirm the severity, priority, and criticality of the incident following the standard Incident Management process
Service Request Fulfillment	✔	✘	User and datasource creation requests, etc.
Problems / Incidents	✔	✔	The Bentley Service Desk will provide incident and problem management functions. For all Bentley support calls, the nature of the incident will be assessed and sent to the appropriate Service Line Team who will then confirm the severity, priority, and criticality of the incident in accordance with the standard Incident Management process.
System Level Administrative Configurations	✔	✘	Bentley will create ProjectWise datasources.

Technology / Infrastructure Management

	Cloud	On-Premise	
Access & Security	✔	✘	Bentley monitors and manages the access and security of the cloud-provisioned infrastructure.
Monitoring	✔	✘	Bentley monitors the infrastructure health.
Problems / Incidents	✔	✘	Bentley monitors and manages any problems or incidents that occur within cloud provisioned infrastructure.
Patches / Updates	✔	✘	Bentley will update the hosted ProjectWise software to the latest release, apply patches, and perform software updates to hosted systems as required by Bentley.
Capacity Planning	✔	✘	Bentley monitors and manages storage and performance to ensure sufficient capacity for all our users.
Continuity	✔	✘	Bentley provides business continuity services.
Availability	✔	✘	Bentley monitors and manages the system availability.

Implementation

	Cloud	On-Premise	
Server Installations and Configurations	✔	✘	On-Premise installation of server modules is not included in Bentley's service but is available as a blueprint-based services.
Server/Client Customizations	✘	✘	Customizations are outside of the scope of the standard offering. Bentley will assess whether any requested customization can be supported as an additional service.

Global Project Coaching / Configuration	✓	✖	With many of today's projects extending to many geographies, Bentley will collaborate with your organization to determine the architecture and set up initial configuration. If your team wants support for this service for on-premise system, it is available as blueprint-based service(s).