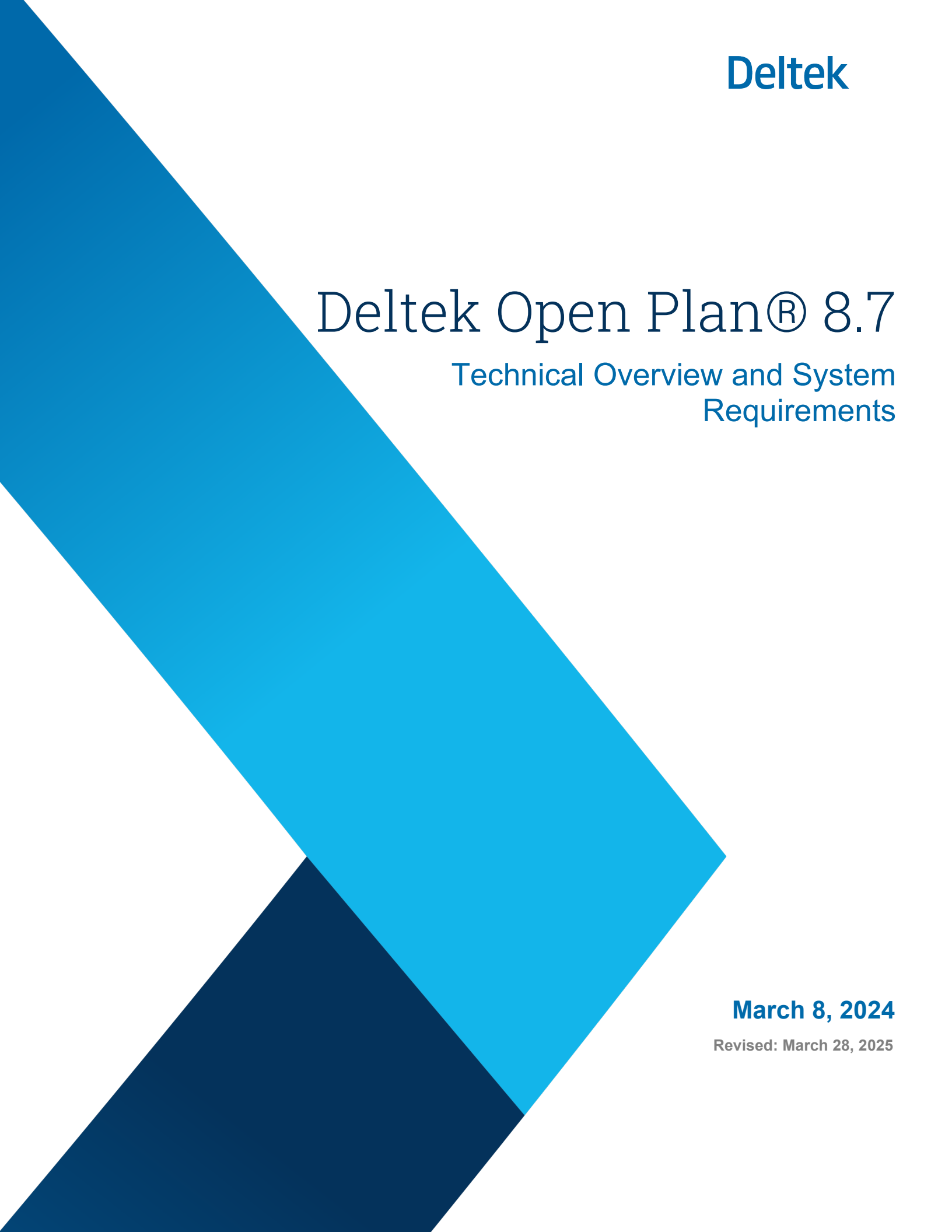




Deltek

Deltek Open Plan® 8.7

Technical Overview and System
Requirements

March 8, 2024

Revised: March 28, 2025



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This edition published March 2025.

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Overview

Open Plan is an enterprise-class project management software solution that offers the power and flexibility to complete medium to large or multiple projects on time and on budget. With multi-project analysis, critical path planning and resource management, Deltek Open Plan offers the power and flexibility to serve the differing needs of business, resource and project managers. With Deltek Open Plan, you can improve project success, allocate resources across projects more effectively and share project information across the enterprise.

This document is meant to serve as a guideline for hardware and software requirements and provide your firm's IT department with information about the technical deployment architecture.

It is important to note that the choices of hardware, relational database software, and operating systems in these examples represent guidelines, are subject to change, and do not replace a needs analysis and site survey with a Deltek Technical Consultant. Contact a Deltek Technical Systems Engineer for suitability of legacy equipment.

Consulting

Deltek, Inc. can provide onsite consulting and training services as well as phone support on a contract or time-and-materials basis.

Contact Information

Please contact a Deltek Technical Systems Engineer techse@deltek.com for more information.

Additional Notes

Legal Disclaimer: The recommendations in this document are intended to convey general information and should not be relied upon as a substitute for a professional consultation with Deltek. All the information in this document is provided "as is" and without warranties of any kind, either expressed or implied.

Note: The evolution of technology dictates the way IT professionals plan their network hardware and software environments. While this document does not account for all possible options in the deployment of Deltek software, it does provide specific recommendations based on testing metrics and years of experience working directly with Deltek customers. Prior to making assumptions on how specific 3rd party technologies will perform with Deltek applications, Deltek recommends contacting your sales representative to arrange a discussion with a Deltek Technical Systems Engineer who can help you plan for a cost-effective and optimally performing application environment.

Before You Begin Deployment

Before you begin deployment, it is important to understand the following:

- Logical Tiers
- Installation / Deployment Models
- Hardware and Software Requirements

Logical Tiers Overview

Open Plan uses a two-tier architecture. The logical tiers are as follows:

- **Client / Application Tier** — This tier performs Open Plan's functional process logic and provides the user interface layer. This tier can be a workstation or a Citrix/Terminal Server.
- **Database Tier** — This tier consists of a database server where the Open Plan data is stored and retrieved.

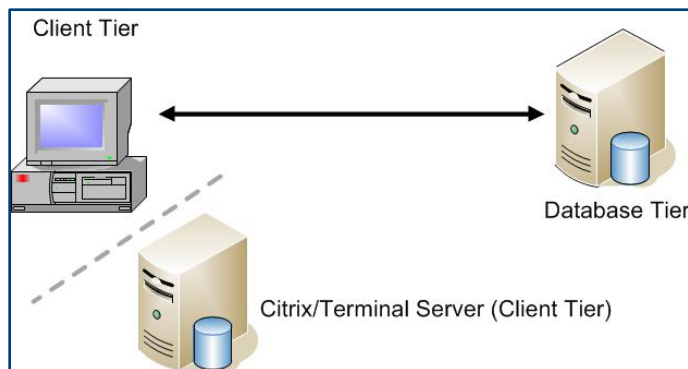
Installation/Deployment Models

Stand-Alone Deployment

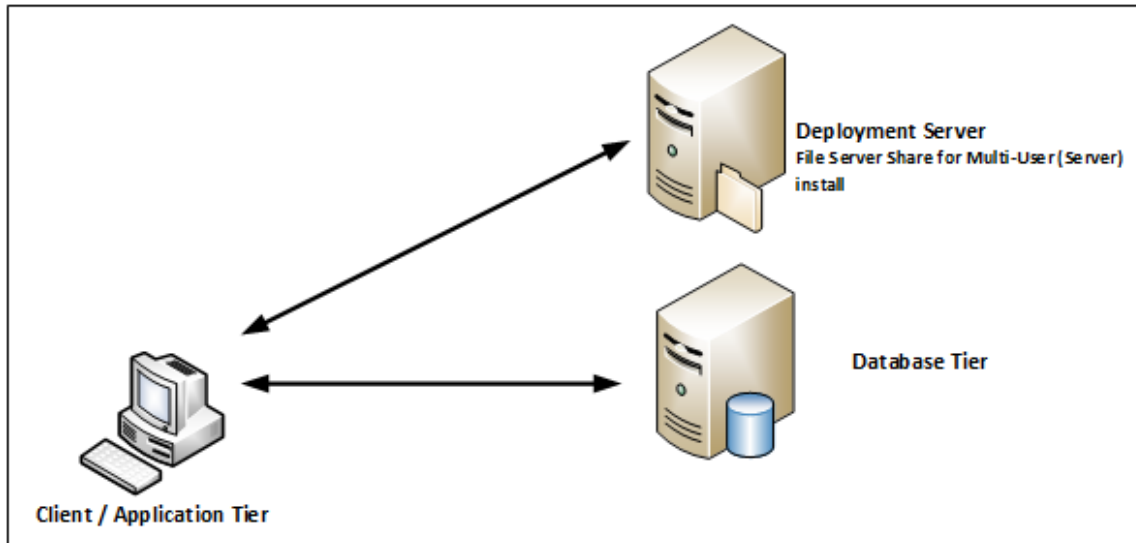
The stand-alone model is designed for a single-user setup. The client, application, and database tiers all reside on the same machine.

Client/Server Deployment

In the client/server model, you install the client / application tier on workstations that directly connect to a database server. However, when a client workstation that is connected to the database goes through a router or a firewall, this type of setup often yields poor performance. This model can be deployed in a Citrix / Terminal Server environment to improve performance in that scenario.



In addition, the Multi-User (Server) install can be performed, where the application files reside on a network file share and the Workstation installation is performed on each workstation.



Unsupported Scenarios

The Open Plan installation does not support installing any Open Plan tiers on any of the following servers:

- Domain Controller
- Microsoft Exchange Server
- Proxy, Firewall, or ISA Server
- Microsoft SharePoint Portal Server
- Installing any Open Plan Tier on Small Business/Essential Business Server

Using these services / servers can cause significant issues in the performance, reliability, and functionality of the Open Plan application and the other applications on your network.

System Requirements

Your organization has made a substantial commitment to ensure it has a fully integrated earned value management (EVM) solution. To support that commitment, Deltek recommends that you carefully consider the hardware requirements necessary to run Open Plan properly.

Platform Virtualization

Platform Virtualization is a technology that allows multiple operating systems and platforms to run simultaneously as separate virtual machines on a single set of server hardware.

Deltek recognizes the use of virtual and cloud environments by our customers. Cloud environments consist of hosted resources that typically include virtual environments made available over the internet, such as “Amazon Web Services”. Virtual environment software, such as VMware®, resides in the hardware layer underneath the operating system and is used to partition a single server or cloud environment into a multiple server/multiple operating system environment. Deltek’s product development makes extensive use of cloud and virtualized environments.

Support of Virtual Environments

Deltek supports customers who run its products on any of the supported native operating systems (whereby “native operating systems” means any operating system specified in the *Deltek Product Support Compatibility Matrix* available on the Deltek Customer Care Connect site), irrespective of whether or not the customer is running the product in a cloud and/or a virtualized environment. However, Deltek does not have the capacity to rigorously test its products inside the many available cloud and virtualized environments.

Each cloud and virtual environment software supports a set of operating systems and hardware certified by the software operating system and cloud/hardware vendors. The customer and virtualization vendor are responsible for any interactions and/or issues that arise at the hardware or operating system layer as a result of their use of a cloud-based environment and/or virtualization software. Virtualization software is supplied in both production and non-production versions. Deltek will only support the use of its products inside virtualization products that are recommended by the virtualization vendors for enterprise production use, and as further described below.

Troubleshooting and Fixes

The following requirements apply to those Deltek customers who experience issues with the Deltek software while using such products inside cloud and/or virtual environments:

- Deltek customers will not be required to recreate and troubleshoot every issue in a non-cloud or nonvirtualized environment.
- Deltek may request its customers to diagnose issues in a native certified operating system environment without the use of virtualization and/or within a non-cloud based environment. Deltek will only make this request when there is reason to believe that the cloud or virtual environment is a contributing factor to the issue.
- Software problems will only be fixed if they can be replicated in a dedicated local hardware and operating system environment without the use of virtualization.

Deltek Customer Support is unable to accept virtual images from customers in order to evaluate problems in deployments using virtualization.

Performance

The use of cloud-based environment and/or virtualization software adds software overhead which may impact performance or scalability of all Deltek software products. Customers should not interpret any Deltek performance recommendations for the Deltek software on a dedicated hardware platform as directly applicable to one or more cloud or virtual environments running on the same or similar hardware. The customer should consult with the cloud and/or virtualization software vendor with respect to virtual system performance and tuning.

Recommendation

Deltek will keep developing knowledge about the use of virtualization software solutions as these solutions continue to mature and extend into our user communities' information technology infrastructure. Deltek strongly recommends that its customers deploy the Deltek software in a nonproduction environment when initially utilizing virtualization technology as a first step. By doing so, the customer will allow for resolution of any issues and customer-specific performance data to be developed for the virtual environment solution, without having an adverse impact on production operations. Please contact Deltek Customer Support for additional information on use of the Deltek software in a virtualized environment.

Display Settings

Deltek recommends a display resolution of 1920 x 1080 with a minimum resolution of 800 x 600.

Using Open Plan with Citrix or Remote Desktop

If you are integrating Open Plan with PM Compass, the PM Compass Smart Client application uses the Microsoft .NET Framework ClickOnce deployment technology which makes it easy for administrators to deliver Windows-based applications to end-users by sending them a URL. However, in some cases, the ClickOnce deployment behavior may not be supported.

Hardware Sizing Considerations

There are several factors that go into sizing an appropriate server infrastructure. The number of concurrent users accessing the system at any given time, the amount of data being analyzed, and growth expectations all have an impact on the initial sizing plans. The hardware profiles provided in the previous sections are intended as a starting point for deployment. It is expected that our clients will use the product in many different ways, plan for future release, and client customizations will all impact the growth and scaling of the overall solution. Further in-depth discussion of the business needs of the solution during implementations of application will provide final guidance on hardware requirements.

Memory Requirements for Typical/Average Use

Below are details on the memory footprint of the product. This can be helpful when sizing a client tier that runs in a virtual environment, Citrix, or Terminal Server.

Tier	Memory*
Client Tier	50 MB for an Open Plan project with about 2,000 activities, 2,000 relationships and 4,000 resource assignments (plus memory required by the database driver being used).

Tier	Memory*
Application Tier (Citrix/Terminal Server only)	Please see your vendor for recommendations.
Database Tier	Database instance memory should be 10% - 15% of the database size. For example, if database size is expected to be 500GB then allocate 50GB - 75GB memory.

* Per concurrent client instance and in addition to any memory needed for the operating system and other applications that may run in parallel with this product.

Definition of Typical/Average Use

A user working with moderate-sized projects (2,000 – 5,000 activities), one project at a time, in either exclusive or shared mode, and using spreadsheet or bar chart views of moderate complexity.

If the user is working with views in Open Plan that put a heavy demand on memory (for example, a bar chart view with many types of bars defined, a large number of “normal” calculated fields, or a smaller number of calculated fields that are calculation-intensive), larger amounts of memory will be used.

In addition, for customers doing either Microsoft Project or Primavera integrations, Open Plan requires more memory.

Note: With the 32-bit version of Open Plan, a maximum of 3-4 GB may be used by the application due to operating system constraints. The 64-bit version of Open Plan can use up to 192 GB for the Professional, Enterprise, and Ultimate versions of Windows 8.1.

Hardware Requirements

The number of people using Open Plan, the PM Compass processes they are using, and the size of your database all have an effect on the hardware and software requirements for your servers.

Note: Specific server hardware configurations may have an impact on your overall Deltek product licensing requirements. Deltek recommends that you confirm with a Deltek Technical Sales Engineer that the server hardware you plan to deploy is in line with your Deltek license agreement and that you learn how overall server infrastructure expansion in the future may affect your Deltek licensing.

Standalone Deployment

The following table lists the recommended minimum hardware and software requirements for a deployment of Deltek Open Plan in standalone, workstation environment.

Tier	Hardware/Software Required	Determining Factors
Client Database Tier	- Intel 2.0 GHz or higher 2 GB RAM	Usage Integration Requirements Database Size

Tier	Hardware/Software Required	Determining Factors
	10-20GB of available disk space for application, plus additional space for each project	Database Growth

Client/Server and Citrix/Terminal Server Deployment

In the client/server model, you install the client and application tiers on workstations (or Citrix / Terminal Server) that directly connect to a database server.

The following tables list the recommended minimum hardware and software requirements for a deployment of Deltek Open Plan in a client / server environment.

Small Client/Server Installation: 1 - 25 Concurrent Users

Tier	Hardware/Software Required	Determining Factors
Database	Server Class Machine: 4 x Logical Cores 2.8 GHz or faster CPU 8+ GB Physical Memory	- Database Size - Database Growth - Usage
Application Server (Citrix/Terminal Server only)	Server Class Machine: 4 x Logical Cores 2.0 GHz or faster CPU 8+ GB Physical Memory 125 MB of available disc space for application, plus additional space for each project	- Total Users - Power Users - User Location
Client	Desktop Class Machine: 1.8 GHz or faster CPU - Recommend 4 GB Physical Memory 530 MB of available disk space for application, plus additional space for each project - Monitor resolution must be at least 1024×768	Applications running in client machine

Medium Client/Server Installation: 25 – 50 Concurrent Users

Tier	Hardware Required	Determining Factors
Database	Server Class Machine: 8 x Logical Cores 2.8 GHz or faster CPU	- Database Size - Database Growth

Tier	Hardware Required	Determining Factors
	8+ GB Physical Memory	
Application Server (Citrix/Terminal Server only)	Server Class Machine: 8 x Logical Cores 2.5 GHz or faster CPU 12 GB Physical Memory 125 MB of available disc space for application, plus additional space for each project	- Total Users - Power Users - User Location
Client	1.8 GHz or faster CPU - Recommend 4 GB Physical Memory 530 MB of available disk space for application, plus additional space for each project - Monitor resolution must be at least 1024×768	Applications running in client machine

Large Client/Server Installation: 50+ Concurrent Users

Tier	Hardware Required	Determining Factors
Database	Server Class Machine: 8 x Logical Cores 2.8 GHz or faster CPU 8+ GB Physical Memory	- Database Size - Database Growth
Application Server (Citrix/Terminal Server only)	Server Class Machine: 8 x Logical Cores 2.5 GHz or faster CPU 16 GB Physical Memory 125 MB of available disc space for application, plus additional space for each project	- Total Users - Power Users - User Location
Client	Desktop Class Machine 1.8 GHz or faster CPU - Recommend 4 GB Physical Memory 530 MB of available disk space for application, plus additional space for each project - Monitor resolution must be at least 1024×768	Applications running in client machine

Software Requirements

The supported minimum software requirements for a complete installation of Deltek Open Plan are listed below.

Attention: For a complete list of the recommended minimum software requirements, see the *Deltek Product Support Compatibility Matrix* document that you can download from the [Deltek Customer Care Connect site](#).

Supported Deployment Technology

Supported versions are the current actively tested versions of technologies used to deploy Open Plan. Except for the Deltek Integrated Products, these technologies are not directly supported by Deltek. Changes to these technologies occur at the discretion of the individual technology vendors.

Supported Deployment Technology	
Operating System	- Windows Server 2016 - Windows Server 2019 - Windows Server 2022 - Windows 10 - Windows 11
Citrix	- XenApp 7.* (Windows Server 2016) - Citrix Virtual Apps and Desktop 7 (Windows Server 2019) - Citrix Virtual Apps and Desktop 7 (Windows Server 2022)
VMWare Horizon	VMWare Horizon 8
Database Platform	Microsoft SQL Server - SQL Server 2016 - SQL Server 2017 (also supported on Linux and Unix) - SQL Server 2019 (also supported on Linux and Unix) - SQL Server Express 2016 - SQL Server Express 2017 - SQL Server Express 2019 Oracle - Oracle 12.2 - Oracle 18.3 - Oracle 19.3 Oracle is supported on Linux, Unix, and Exadata Microsoft Access

Supported Deployment Technology	
	- Microsoft Access 2016 - Microsoft Access 2019 - Microsoft Access 2021
Database Driver	Open Plan supports Access, Oracle, and SQL Server databases through an OLEDB 2.1 compliant provider. The data source providers to use for each database type are listed below. - Oracle Provider for OLE DB - MS SQL Server 2012 Native Client, version 11.4.7001.0 or higher - MS OLE DB Driver for SQL Server, version 18.2.2.0 or higher - Microsoft OLE DB Provider for Jet - Microsoft Office 15.0 Access Database Engine OLEDB Provider - Microsoft Office 16.0 Access Database Engine OLEDB Provider Note: The 64-bit version of Open Plan requires the 64-bit version of the Microsoft Access Database Engine. The 64-bit Microsoft Access Database Engine can be obtained from the Microsoft Download Center at the following location: https://www.microsoft.com/en-us/download/details.aspx?id=13255.
Scheduling Tools	Microsoft Project Standard - Microsoft Project Standard 2016 - Microsoft Project Standard 2019 - Microsoft Project Standard 2021 Microsoft Project Professional - Microsoft Project Professional 2016 - Microsoft Project Professional 2019 - Microsoft Project Standard 2021 Microsoft Project Server - Microsoft Project Server 2016 SP1 (with update applied from KB 4461598) - Microsoft Project Server 2019 Oracle Primavera - Primavera P6 18.8 - Primavera P6 19.12

Supported Deployment Technology	
	- Primavera P6 20.12 - Primavera P6 21.12 - Primavera P6 22.12 Kidasa - Kidasa Milestones 2017 - Kidasa Milestones 2019 - Kidasa Milestones Professional 2021 - Kidasa Milestones Professional 2023 - Kidasa Milestones Professional 2025 IPMDAR Schedule Performance Format
Embedded Technology	- Visual C++ 2013 Redistributable Package (x86) - Visual C++ 2017 Redistributable Package (x86)
.NET Framework	Microsoft .NET Framework 4.8

Supported PPM Product Versions

The table below outlines the PPM product versions compatible with Open Plan 8.7. The versions listed below are the minimum supported versions. Subsequent cumulative update (CU) releases within the listed major/minor release will be supported unless otherwise specified. Subsequent major/minor releases are not supported.

Supported PPM Product Versions	
Deltek Acumen	8.9 8.8 8.7
Deltek Acumen Touchstone	8.2
Deltek Cobra	8.5 8.4
Deltek PM Compass	8.4 Cumulative Update 06 and later 8.3 Cumulative Update 11 and later
Deltek wlnsight Analytics	8.3.2 8.3.1 8.3.

Compatible Deployment Technology

Compatible versions are the recent previously supported and tested technologies used to deploy Open Plan. These are not actively being tested but are believed to be compatible with Open Plan. Deltek does not recommend these technologies for new deployments but will make its best effort to answer questions concerning these technologies. These technologies may not be available for troubleshooting at Deltek.

Compatible Deployment Technology	
Database Platform	Microsoft SQL Server - SQL Server 2014 - SQL Server Express 2014
Scheduling Tool	Microsoft Project Standard - Microsoft Project Standard 2013 Microsoft Project Professional - Microsoft Project Professional 2013 Microsoft Project Server - Microsoft Project Server 2013 Oracle Primavera - P6 8.4 - P6 17.12

Open Source Software Included with Open Plan

Open Plan includes the following open source software:

Software	Company
D3DES	Public domain implementation of the Triple DES encryption algorithm from the book "Applied Cryptography" http://www.schneier.com/book-applied-source.html
Natural Sort	Freeware sort algorithm. http://sourcefrog.net/projects/natsort/
Pcrypt	Public domain Password encryption based on D3DES
PJNSMTP	Freeware SMTP protocol library

Appendix A: If You Need Assistance

If you need assistance installing, implementing, or using Deltek Open Plan, Deltek makes a wealth of information and expertise readily available to you.

Customer Services

For over 30 years, Deltek has maintained close relationships with client firms, helping with their problems, listening to their needs, and getting to know their individual business environments. A full range of customer services has grown out of this close contact, including the following:

- Extensive self-support options through the Deltek Support Center.
- Phone and email support from Customer Care analysts
- Technical services
- Consulting services
- Custom programming
- Classroom, on-site, and Web-based training

Attention: Find out more about these and other services from the Deltek Support Center.

Deltek Support Center

The Deltek Support Center is a support Web site for Deltek customers who purchase an Ongoing Support Plan (OSP).

The following are some of the many options that the Deltek Support Center provides:

- Search for product documentation, such as release notes, install guides, technical information, online help topics, and white papers
- Ask questions, exchange ideas, and share knowledge with other Deltek customers through the Deltek Support Center Community
- Access Cloud-specific documents and forums
- Download the latest versions of your Deltek products
- Search Deltek's knowledge base
- Submit a support case and check on its progress
- Transfer requested files to a Customer Care analyst
- Subscribe to Deltek communications about your products and services
- Receive alerts of new Deltek releases and hot fixes
- Initiate a Chat to submit a question to a Customer Care analyst online

Attention: For more information regarding Deltek Support Center, refer to the online help available from the Web site.

Access Deltek Support Center

To access the Deltek Support Center:

1. Go to <https://deltek.custhelp.com>.
2. Enter your Deltek Support Center **Username** and **Password**.
3. Click **Login**.

Note: If you forget your username or password, you can click the **Need Help?** button on the login screen for help.

Additional Documentation

The following table lists the Deltek documentation available for this release. Except where noted, all the user guides and quick reference guides listed in this table are available for download from the Deltek Support Center.

Document Name	Description
Deltek Open Plan Batch Processor Guide	This document contains information about running the Open Plan multi-instance batch processor.
Deltek Open Plan Developer's Guide	This document is meant to serve as a reference manual for more technical topics in Open Plan.
Deltek Open Plan Guided Tour	This document introduces you to the basic Open Plan operations using sample project data that comes with your installation.
Deltek Open Plan Installation Guide	This document is meant to serve as a guideline for hardware and software requirements and provide your firm's IT department with information about the technical deployment architecture.
Deltek Open Plan Milestone Professional Interface Add-In Module	This document is meant to serve as a guideline for using the Milestones Link tool.
Deltek Open Plan Release Notes	This document contains a summary of the pre-installation information, new features and enhancements, database changes, and software issues resolved.



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