Deltek

Deltek Project Information Management

Recommended Hardware Requirements for Deltek PIM 22

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Contents

Overview

This document is aimed at server administrators to identify the hardware required to provision the Deltek PIM application. It provides minimum and recommended hardware specifications for the following:

- Document storage
- Up to 99 users
- 100 to 199 users
- 200 to 299 users
- 300 to 499 users
- 500 to 999 users
- 1000 to 1500 users
- Cache servers
- Development, Training & Test servers.

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Considerations

When looking to provision hardware for Deltek PIM, the following should be taken into consideration:

- None of the Deltek PIM components, including its data, can be implemented onto a domain controller.

- Memory specifications are dedicated recommendations, therefore for virtual environments the dynamic memory allocation feature cannot be utilized and must be disabled.

- If you plan to share resources with another application and/or service, please contact Deltek for advice.

- If you opt for minimum specifications then you may experience some performance issues over time.

- All specifications provided are based on dedicated resources. These have been calculated based on average usage of the Deltek PIM application over a 3-year period.

- As server usage is difficult to predict, we recommend live testing and system monitoring to determine your ongoing hardware requirements. We cannot guarantee against the need to upgrade your existing hardware in any situation.

- The document storage recommendations have been listed under the Deltek PIM Web Server; however, this location can be placed on a SMB-compatible server that is accessible to Deltek PIM via a UNC path.

- If the Deltek PIM installation is to be integrated with Deltek Vision, the SQL instance running Deltek PIM must be an equal or higher version than the SQL instance running Deltek Vision.

Document Storage

The table below outlines the average amount of documents published to Deltek PIM per user per month. These recommendations are based on an average user publishing 300MB of documents per calendar month.

File Type	Estimated Published Documents	Estimated Storage (MB)
Emails	193	153
Word Documents	19	13
Excel Spreadsheets	15	5
PowerPoint Presentations	2	14
PDF Documents	39	34
Drawings	10	7
Others (Zip Archives, Photos etc.)	73	73
Total	**351**	**299**

Server Requirements

The following sections provide guidance for server requirements based on the expected number of users.

1 to 99 Users

To support up to 99 users, a single server with the following hardware requirements is recommend for the provision of Deltek PIM.

Deltek PIM Server (Web Application, Microsoft SQL Database, Workflow Engine, Search Service)

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Microsoft SQL Server:	Microsoft SQL Server 2012 Standard	Microsoft SQL Server 2019 Standard
Processor:	4 CPU Cores, 1.4 GHz or faster	6 CPU Cores, 2.0. GHz or faster
Memory:	32 GB	48 GB
	Note: Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	

Hard drive:
 	
    Installation: 5 GB
 	
    Database Data: 25 GB
 	
    Database Logs: 2.5 GB
 	
    Document Storage: 1,100 GB
 	
    Document Index: 110 GB
 	
    Workflow Data: 25 GB
	1 TB* SSD	1.3+ TB* SSD

* Available disk space to accommodate the storage of the outlined components.

100 to 199 Users

To support between 100 and 199 users, it is recommended that two servers are provisioned. The second server is recommended for the Microsoft SQL database to facilitate the additional demand on resources and to provide better overall performance.

Server 1: Deltek PIM Server (Web Application, Workflow Engine, Search Service)

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Processor:	4 CPU Cores, 1.4 GHz or faster	4 CPU Cores, 2.0. GHz or faster
Memory:	12 GB	24 GB
	Note: Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	
Hard drive: Installation: 5 GB Document Storage: 2,200 GB Document Index: 220 GB Workflow Data: 50 GB	2 TB* SSD	2.5+ TB* SSD

* Available disk space to accommodate the storage of the outlined components.

Server 2: Microsoft SQL Database

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Microsoft SQL Server:	Microsoft SQL Server 2016 Standard (or SQL Server 2012 for existing clients)	Microsoft SQL Server 2016 Standard
Processor:	4 CPU Cores, 1.4 GHz or faster	4 CPU Cores, 2.0. GHz or faster

	Minimum	Recommended
Memory:	32 GB	48 GB
Hard drive: Database Data: 50 GB Database Logs: 5 GB	100 GB* SSD	100+ GB* SSD

* Available disk space to accommodate the storage of the outlined components.

200 to 299 Users

To support between 200 and 299 users, it is recommended that three servers are provisioned. The additional servers are recommended for the Microsoft SQL database and the Deltek PIM search service component, as each of these will benefit from a dedicated resource to enable better overall performance.

Server 1: Deltek PIM Server (Web Application, Workflow Engine)

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Processor:	4 CPU Cores, 1.4 GHz or faster	4 CPU Cores, 2.0. GHz or faster
Memory:	12 GB	24 GB
	Note: Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	
Hard drive: Installation: 5GB Document Storage: 3.3TB Workflow Data: 75GB	3 TB* SSD	3.4+ TB* SSD

* Available disk space to accommodate the storage of the outlined components.

Server 2: Microsoft SQL Database

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Microsoft SQL Server:	Microsoft SQL Server 2016 Standard (or SQL Server 2012 for existing clients)	Microsoft SQL Server 2019 Standard
Processor:	4 CPU Cores, 1.4 GHz or faster	6 CPU Cores, 2.0. GHz or faster
Memory:	48 GB	64 GB

Hard drive:
 	
    Database Data: 75GB
 	
    Database Logs: 7.5GB
	150 GB* SSD	150+ GB* SSD

* Available disk space to accommodate the storage of the outlined components.

Server 3: Search Service

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Processor:	4 CPU Cores, 1.4 GHz or faster	6 CPU Cores, 2.0. GHz or faster
Memory:	12 GB	16 GB
Hard drive: Document Index: 330GB	500 GB* SSD	500+ GB* SSD

* Available disk space to accommodate the storage of the outlined components.

300 to 499 Users

To support between 300 and 499 users, it is recommended that three servers are provisioned. The additional servers are recommended for the Microsoft SQL database and the Deltek PIM search service component, as each of these will benefit from a dedicated resource to enable better overall performance.

Server 1: Deltek PIM Server (Web Application, Workflow Engine)

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Processor:	6 CPU Cores, 1.4 GHz or faster	8 CPU Cores, 2.0. GHz or faster
Memory:	12 GB	16 GB
	Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	
Hard drive: Installation: 5GB Document Storage: 5.5 TB Workflow Data: 125 GB	5 TB* SSD	5.7+ TB* SSD

* Available disk space to accommodate the storage of the outlined components.

Server 2: Microsoft SQL Database

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Microsoft SQL Server:	Microsoft SQL Server 2016 Standard (or SQL Server 2012 for existing clients)	Microsoft SQL Server 2019 Standard
Processor:	6 CPU Cores, 1.4 GHz or faster	8 CPU Cores, 2.0. GHz or faster
Memory:	48 GB	64 GB
Hard drive: Database Data: 125 GB Database Logs: 12.5 GB	250 GB* SSD	250+ GB* SSD

* Available disk space to accommodate the storage of the outlined components.

Server 3: Search Service

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2019
Processor:	6 CPU Cores, 1.4 GHz or faster	6 CPU Cores, 2.0. GHz or faster
Memory:	24 GB	32 GB
Hard drive: Document Index: 550 GB	700 GB* SSD	700+ GB* SSD

* Available disk space to accommodate the storage of the outlined components.

500 to 999 Users

To support between 500 and 999 users, it is recommended that three servers are provisioned. The additional servers are recommended for the Microsoft SQL database and the Deltek PIM search service component, as each of these will benefit from a dedicated resource to enable better overall performance.

Server 1: Deltek PIM Server (Web Application, Workflow Engine)

	Minimum	Recommended
Operating System:	Windows Server 2016	Windows Server 2019
Processor:	6 CPU Cores, 3 GHz or faster	
Memory:	32 GB	
	Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	

Hard drive:
    Installation: 10 GB
    Document Storage: 6 TB
    Workflow Data: 125 GB
	6.5 TB* SSD
	* PIM installation files and file storage to be separate from the OS drive	

* Available disk space to accommodate the storage of the outlined components.

Server 2: Microsoft SQL Database

	Minimum	Recommended
Operating System:	Windows Server 2016	Windows Server 2019
Microsoft SQL Server:	Microsoft SQL Server 2019 Enterprise Edition with SSRS	
Processor:	8 CPU Cores, 2.2 GHz or faster	
Memory:	128 GB	
Hard drive: Database Data: 500 GB Database Logs: 300 GB Database Backups / Temp Drive: 250 GB	1 TB SSD	

* Available disk space to accommodate the storage of the outlined components.

Server 3: Search Service

	Minimum	Recommended
Operating System:	Windows Server 2016	Windows Server 2019
Processor:	6 CPU Cores, 3 GHz or faster	
Memory:	48 GB	
Hard drive: Installation: 10 GB Document Index and Extract Storage: 1 TB	1 TB* SSD	

* Available disk space to accommodate the storage of the outlined components.

1000 to 1500 Users

To support between 1000 and 1500 users, it is recommended that five servers are provisioned. The additional servers are recommended for the Microsoft SQL database, the Deltek PIM search service component, the workflow engine, and the file server, as each of these will benefit from a dedicated resource to enable better overall performance.

Server 1: Deltek PIM Server (Web Application)

	Minimum	Recommended
Operating System:	Windows Server 2016	Windows Server 2019
Processor:	6 CPU Cores, 3 GHz or faster	
Memory:	32 GB	
	Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	
Hard drive: Installation and Temp Files	300 GB SSD * PIM installation files and file storage to be separate from the OS drive	
X2 Load Balanced		

Server 2: Microsoft SQL Database

	Minimum	Recommended
Operating System:	Windows Server 2016	Windows Server 2019
Microsoft SQL Server:	Microsoft SQL Server 2019 Enterprise Edition with SSRS	
Processor:	8 CPU Cores, 2.2 GHz or faster	
Memory:	128 GB	

	Minimum	Recommended
Hard drive: Database Data: 1 TB Database Logs: 300 GB Database Backups / Temp Drive: 500 GB	2 TB* SSD	

* Available disk space to accommodate the storage of the outlined components.

Server 3: Search Service

	Minimum	Recommended
Operating System:	Windows Server 2016	Windows Server 2019
Processor:	6 CPU Cores, 3 GHz or faster	
Memory:	48 GB	
Hard drive: Installation: 10 GB Document Index and Extract Storage: 1 TB	1 TB* SSD	
X2 Load Balanced		

* Available disk space to accommodate the storage of the outlined components.

Server 4: Workflow Server

	Minimum	Recommended
Operating System:	Windows Server 2016	Windows Server 2019
Processor:	6 CPU Cores, 3 GHz or faster	
Memory:	32 GB	
	Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	

Hard drive:
 	
    Installation: 10 GB
 	
    Extracts and Database: 240 GB
	250 GB* SSD	

* Available disk space to accommodate the storage of the outlined components.

Server 5: File Server

Separate file store server can be hosted on one webserver if needed.

	Minimum	Recommended
Operating System:	Windows Server 2016	Windows Server 2019
Processor:	4 CPU Cores	
Memory:	32 GB	
	Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	
Hard drive:	6 TB SSD	

Cache Server

A single cache server with the following hardware specifications is required to provision a PIM installation.

	Minimum	Recommended
Operating System:	Windows Server 2016 (or Server 2012 for existing clients)	Windows Server 2016
Processor:	1 CPU Core, 1.4 GHz or faster	4 CPU Cores, 2.0. GHz or faster
Memory:	4 GB	4 GB
Hard drive: Installation: 5GB Document Storage: 1 – 20 Users: 380 GB 20 – 49 Users: 930 GB 50 – 99 Users: 1.88 TB 100+ Users: ~540 MB per user, per month	100 GB* SSD	100+ GB* SSD

* Available disk space to accommodate the storage of the outlined components.

Additional Servers

When implementing a development, training, or test server, the usage of the server dictates the recommended hardware requirements.

Development and Test Servers

If you want to create a development server to test Deltek PIM extensions, or a test server to test the latest updates to Deltek PIM, we recommend the following server hardware to support up to 10 concurrent users.

Deltek PIM Server (Web Application, Microsoft SQL Database, Workflow Engine, Search Service)

	Minimum	Recommended
Operating System:	Windows Server 2012	Windows Server 2019
Microsoft SQL Server:	Microsoft SQL Server 2012 Standard	Microsoft SQL Server 2019 Standard
Processor:	4 CPU Cores, 1.4 GHz or faster	6 CPU Cores, 2.0. GHz or faster
Memory:	12 GB	32 GB
	Note: Please liaise with Deltek for additional memory requirements if you are implementing Deltek PIM Business Intelligence (BI)	
Hard drive: Installation: 5 GB Database Data: 25 GB Database Logs: 2.5 GB Document Storage: 105 GB (based on 10 concurrent users) Document Index: 11 GB Workflow Data: 25 GB	200 GB* SSD	200+ GB* SSD

* Available disk space to accommodate the storage of the outlined components.

Training Server

If you want to create a training server, for example to train new users to the business, you should use the above recommendations for live production servers to provide a consistent user experience, based on the expected number of concurrent users.

Additional Server Considerations

Before provisioning hardware for an additional installation of Deltek PIM, you should consider the following points:

- A different URL address is required to provision an additional Deltek PIM installation, for example pimtest.server.com. This may require an additional SSL certificate if your current SSL certificate does not cover the additional URL address.

- If you use an existing Microsoft SQL server that is used for another Deltek PIM installation, resources could be split between the installations, which may cause performance issues.

- Additional installations of Microsoft SQL Server may require additional licensing.

- It is possible to use a virtual snapshot of an existing installation of Deltek PIM to create a secondary instance for testing, training, or development purposes. However, this will require reconfiguring and re-licensing before it can be used.

- During the installation of an additional Deltek PIM installation, the same data will be cloned from another installation. This includes project, enquiry, and document records. The actual documents will not be copied; however, you must configure an additional document storage location to prevent any conflicts.

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