Deltek Vantagepoint 3.x

Technical Overview and System Requirements:
Advanced Deployment (150 or More Employees)

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Contents

Introduction

This document provides your firm's IT department with information about the technical deployment of Vantagepoint using the advanced deployment model for 150 or more employees (three Vantagepoint logical tiers, and three or more physical servers).

Advanced Deployment Model (150 or More Employees)
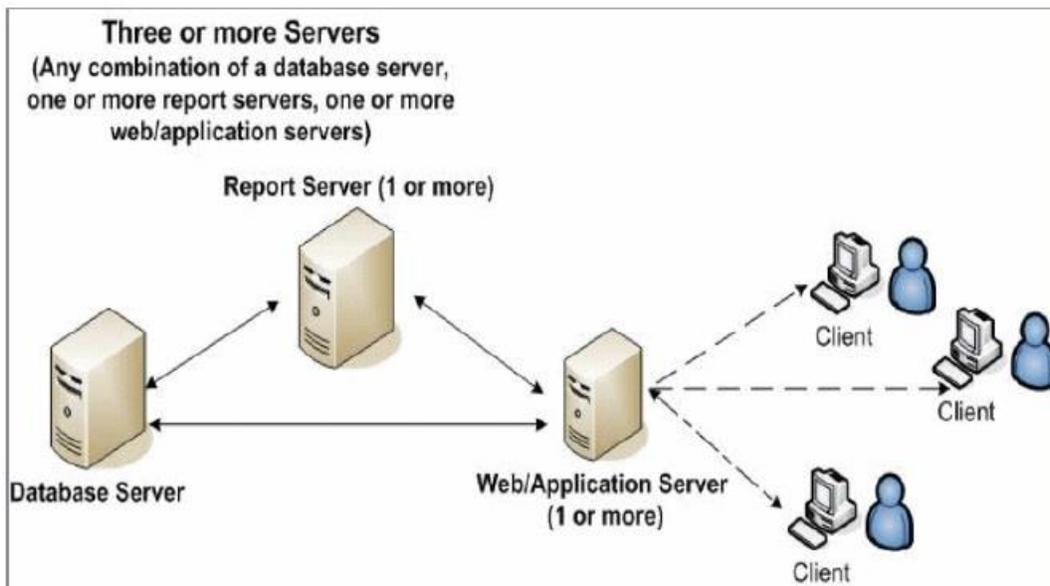
Deployment Models

Deltek has designed several Vantagepoint deployment models to ensure the best fit with your firm's environment:

- **Simple**: One physical server (1–25 employees)
- **Basic**: Two physical servers (25–150 employees)
- **Advanced**: Three or more physical servers (150 or more employees)

For information on the simple and basic deployments, see the following guides:

- *Deltek Vantagepoint Technical Overview & System Requirements: Simple Deployment (1–25 Employees)*
- *Deltek Vantagepoint Technical Overview & System Requirements: Basic Deployment (25-150)*

Vantagepoint Tiers

The Vantagepoint tiers are all logical tiers, which can be collapsed or allocated to as many physical servers as needed by your firm.

The Vantagepoint tiers that you must deploy are:

- Web/Application
- Reporting
- Database

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.

The choices of hardware, database, and operating system in these examples represent *guidelines* that are subject to change. These guidelines do not replace a needs analysis and site survey with a Deltek Technical Consultant.

> **Attention:** Contact a Deltek Technical Systems Engineer for suitability of legacy equipment.

The evolution of technology dictates the way that 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.

Rather than making assumptions on how specific third-party technologies will perform with Deltek applications, Deltek recommends that you contact 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.

Consulting

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

Contact Information

Contact a Deltek Technical Systems Engineer at techse@deltek.com for more information.

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Unsupported Configurations

The Vantagepoint installation does **not** support installing any Vantagepoint tier on any of the following servers:

- Domain Controller
- Microsoft Exchange Server
- Windows Terminal Server/Citrix Server
- Proxy, Firewall, or ISA Server
- Microsoft SharePoint Portal Server
- Installing any Vantagepoint tier (except Database tier) on Small Business Server

Using these servers causes significant issues in the performance, reliability, and functionality of the Vantagepoint application and the other applications on your network.

If you try to install Vantagepoint on any one of these servers, the installation routine will detect the unsupported server and cancel the installation.

Distributed Computing

Vantagepoint architecture is based on Microsoft .NET, which allows the application to use the distributed computing model. In this model, each Vantagepoint tier is responsible for handling a specific set of application processes. This allows each process to pull from its own pool of resources, thereby improving performance and reliability.

The distributed computing model also improves the scalability of Vantagepoint, which means that you can deploy as many servers as necessary to meet the needs of your clients. In many cases, these changes to the server environment are seamless to end users.

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Vantagepoint Tier Model and Technologies

Web Client Tier

The Vantagepoint interface is browser-agnostic. Workstations or other devices with a supported browser can access the Vantagepoint application. For a list of supported browsers, see the Deltek Compatibility Matrix. No other local components, add-ons, or software applications are required at the client to support the use of Vantagepoint in the browser.

> **Note:** The Presentation tier only communicates with the Web/Application server.

Operating system and browser requirements for the Web Client are described in the following table.

Web Client Tier Technologies	
Operating System	▪ Windows 10
	▪ Windows 8.1
	▪ Windows 7 SP1
Browser	▪ Microsoft Edge, Chrome, Safari, Firefox 11, (latest builds)

Web/Application Tier

The Web/Application tiers are always installed to the same physical server. The Vantagepoint installation does not allow for these tiers to be installed on separate physical servers.

Operating system, browser, and system requirements for the Web/Application tier are described in the following table.

Web/Application Tier Technologies	
Operating System Essentials and Foundation editions not supported	▪ Windows Server 2019
	▪ Windows Server 2016
	▪ Windows Server 2012 R2
Browser	▪ Microsoft Edge (WebLink Utility)
System	▪ IIS 10 or 8.5, depending on your OS version
	▪ Microsoft .NET Framework version 4.7.2: The infrastructure of the .NET platform, including Common Language Runtime and the .NET class library
	▪ ADO.NET: Database Communication, installed with .NET Framework 4.7.2
	▪ PowerShell 5.1 (Execution Policy, Unblock-File –Path)
	▪ Microsoft Visual C++ 2017 Redistributable (x86)

Report Tier

The Report tier contains the SQL Reporting Services software. All Vantagepoint reports are generated, previewed, and printed on this tier.

Operating system, browser, and system requirements for the Report tier are described in the following table. Please contact the Deltek Technical Systems Engineers at techse@deltek.com with any questions.

Report Tier Technologies	
Operating System Essentials and Foundation editions not supported	▪ Windows Server 2019 ▪ Windows Server 2016 ▪ Windows Server 2012 R2
System	▪ Microsoft SQL Server 2019 RTM, Microsoft SQL Server 2017 CU15, Microsoft SQL Server 2016 SP2 CU7, Standard, Business Intelligence, or Enterprise editions ▪ Microsoft .NET Framework version 4.7.2: The infrastructure of the .NET platform, including Common Language Runtime and the .NET class library

Database Tier

The Database tier is the repository of all your firm's data and business information. Operating system, browser, and system requirements for the Database tier are described in the following table. Please contact the Deltek Technical Sales Engineers at techse@deltek.com with any questions.

Database Tier Technologies	
Operating System Essentials and Foundation editions not supported	▪ Windows Server 2019 ▪ Windows Server 2016 ▪ Windows Server 2012 R2
System	▪ Microsoft SQL Server 2019 RTM, Microsoft SQL Server 2017 CU15, Microsoft SQL Server 2016 SP2 CU7, Standard, Business Intelligence, or Enterprise editions ▪ Microsoft .NET Framework version 4.7.2: The infrastructure of the .NET platform, including Common Language Runtime and the .NET class library ▪ SQL Server FILESTREAM ▪ PowerShell 5.1 (Execution Policy, Unblock-File –Path)

Mobile Applications

Deltek Time & Expense and Deltek CRM for Vantagepoint are tools that allow users to interact with Vantagepoint data from anywhere, at any time, using Android and iOS devices. You can install the applications (Deltek Time & Expense and Deltek CRM for Vantagepoint) from Google Play or from the Apple App Store.

Mobile Application Technologies	
Operating Systems	▪ Apple iOS 5.0 or higher ▪ Android 2.3.3 and higher (excluding 3.x)
Devices	▪ All devices that support the mobile operating systems listed above ▪ Tablet devices are supported, but application screens are designed for smaller phone screens

Microsoft Outlook Add-in

Outlook Add-in Technologies	
Microsoft Exchange	▪ Microsoft Exchange 2016 CU5 or later
Microsoft Outlook	▪ Microsoft Outlook 2016 for Windows Desktop ▪ Microsoft Outlook 2013 for Windows Desktop ▪ Microsoft Outlook 2016 Web App (OWA) ▪ Microsoft Outlook 2016 for Mac ▪ Microsoft Office 365

Presentation (Client) Tier/Vantagepoint Smart Client

Deltek uses Microsoft's ClickOnce technology to deploy the Smart Client applications. These Windows Forms-based Smart Client applications require that the client workstation has .NET Framework 4.7.2 installed. If that pre-requisite is missing, ClickOnce displays an Application Run – Security Warning form and stops the application download. Provided that the .NET Framework 4.7.2 is installed, a download of approximately 16 MB is initiated and completed on the end user's workstation after that one click from the user. When the one-click installation completes, the end user can work with the Smart Client application.

The ClickOnce technology does not require that end users have local administrative rights on their workstation. It allows Vantagepoint to recognize when an update is required on the client machine for our Smart Client applications and performs the download automatically. This eliminates the need for IT employees to perform the upgrade process.

Attention: ClickOnce only applies to the Purchasing, Asset Management, Payroll and some of the Utilities and Settings portions of Vantagepoint.

Note: The Presentation tier only communicates with the Web/Application server.

Operating system and browser requirements for the Presentation (Client) Tier are described in the following table.

Presentation (Client) Tier Technologies	
Operating System	▪ Windows 10 ▪ Windows 8.1 ▪ Windows 7 SP1
Browser	▪ Microsoft Edge Browser ▪ Microsoft .NET Framework version 4.7.2: The infrastructure of the .NET platform, including Common Language Runtime and the .NET class library

Advanced Deployment (Three or More Physical Servers)

The Web/Application, Reporting, and Database tiers all reside on individual physical servers.

The advanced deployment model is designed for large firms with 150 or more employees that may have multiple locations and who will be using Vantagepoint on an internal Wide Area Network (WAN). Additional Reporting, Web, or Application servers may be needed to meet your firm's load, performance, security, or fault tolerance requirements.

This model is designed for firms that have complex deployment requirements. Firms that deploy this model should have in-house IT staff who are proficient in firewall management.
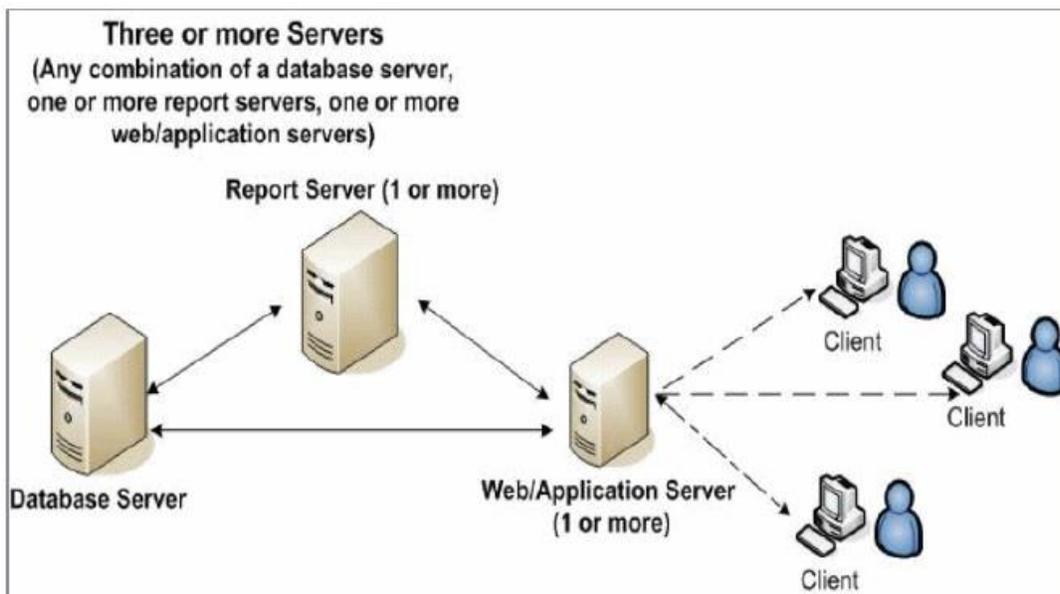
Hardware and Software Requirements

The number of people using Vantagepoint, the Vantagepoint modules that they are using, and the size of your database determine the hardware and software requirements for your servers.

Your hardware and software requirements are also affected by the deployment model that you choose.

Minimum Hardware and Software Requirements

The following table lists the recommended minimum hardware and software requirements for a Vantagepoint advanced deployment (three or more physical servers).

Client Tier	Hardware/Software Required	Determining Factors
Database Tier Essentials and Foundation editions not supported	▪ Server Class Machine ▪ 4-8 logical cores 2.5 GHz or faster CPU ▪ 32+ GB Physical Memory 64-bit ▪ RAID 5 or RAID 10 Disk array, SSD preferred ▪ Windows Server 2019, Windows Server 2016, Windows Server 2012 R2 ▪ Microsoft SQL Server 2019 RTM, SQL Server 2017 CU15, SQL Server 2016 SP2 CU7, Standard, Business Intelligence, or Enterprise editions	▪ Database Size ▪ Database Growth ▪ Vantagepoint Modules
Reporting Tier *Additional SQL licensing costs may be incurred if installing SQL Reporting Services on a dedicated report server Essentials and Foundation editions not supported	▪ Server Class Machine ▪ 4-8 logical cores 2.5 GHz or faster CPU ▪ 16+ GB Physical Memory 64-bit ▪ RAID 1 Disk array – SSD preferred ▪ Windows Server Windows Server 2019, Windows Server 2016, Windows Server 2012 R2 ▪ Microsoft SQL Server 2019 RTM, SQL Server 2017 CU15, SQL Server 2016 SP2 CU7, Standard, Business Intelligence, or Enterprise editions	▪ Power Users ▪ Database Size
Web/Application Tier *These specs can also be used for a dedicated Deltek CRM Server Essentials and Foundation editions not supported	▪ Server Class Machine ▪ 4-8 logical cores 2.5 GHz or faster CPU ▪ 8+ GB Physical Memory 64-bit ▪ RAID 1 Disk array – SSD Preferred ▪ Windows Server 2019, Windows Server 2016, Windows Server 2012 R2	▪ Total Users ▪ Power Users ▪ User Location ▪ Vantagepoint Modules

Workstation: Minimum Requirements

The following table lists the minimum hardware and software requirements for the Client tier (web application only).

Client Tier	Hardware/Software Required	Determining Factors
Minimum	- Intel 1.8 GHz or higher 1 GB RAM 40 GB Hard Drive 1024x768 SVGA Video Display 100 Mb Network Card - Windows 10, Windows 8, Windows 7 SP1 - Microsoft.NET Framework v.4.7.2	Usage

Workstation: Recommended Requirements

The following table lists the recommended hardware and software requirements for the Client tier.

Client Tier	Hardware/Software Required	Determining Factors
Recommended	- Intel 2.0 GHz or higher 2 GB RAM 40 GB Hard Drive 100 Mb Network Card - Windows 10, Windows 8.0, Windows 7 - Microsoft.NET Framework v.4.7.2 - The infrastructure of the .NET platform, including the Common Language Runtime and the .NET	Usage

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