Deltek

Deltek Acumen 8.8

Installation Guide

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Contents

Overview

This document is meant to serve as a guideline for hardware and software requirements and provides 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 system 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

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

Additional Notes

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.

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 of the information in this document is provided "as is" and without warranties of any kind, either expressed or implied.

Downloading Deltek Products Using Deltek Software Manager (DSM)

You can use Deltek Software Manager (DSM) to download complete Deltek products, cumulative updates, and sub-releases. You can access DSM through the Deltek Support Center or use Deltek Software Manager Lite to download Deltek products.

Accessing DSM from within the Deltek Support Center

To access DSM from within the Deltek Support Center:

1. In your web browser, go to https://deltek.custhelp.com.

2. Enter your Deltek Support Center **Username** and **Password**, and click **Login**.

3. When the Deltek Support Center page displays, click **Product Downloads**.

4. On the Deltek Software Manager screen, click **Launch Deltek Software Manager**.

5. Click **Settings** at the top right of the dialog box to use the Settings dialog box to specify the folder where you want to download Deltek products, and click **OK**.

> **Note:** When you log on for the first time, DSM asks you to select a default folder where Deltek products are to be downloaded. You can change this folder anytime in the Settings dialog box.

6. In the left pane, expand the Deltek product that you want to download, if it is not already expanded.

7. Select the product type that you want to download.

8. In the table, select the checkbox that corresponds to the Deltek product that you want to download.

   The right pane displays a message stating that the product has been added to the download queue.

> **Note:** To view the items in the download queue, click **View Download Queue** at the bottom of the left pane.

9. Click **Download** at the bottom of the left pane to download the product to the folder that you selected.

Accessing DSM Lite

To access Deltek Software Manager Lite:

1. In your web browser, go to https://dsm.deltek.com/DeltekSoftwareManagerLite.

2. Enter your Deltek Support Center **Username** and **Password**, and click **Logon**.

3. When the Deltek Software Manager Lite page displays, select a product from the drop-down list.

4. Click the product type that you want to download.

> **Note:** The download behavior and download folder may differ depending on the browser and browser settings that you are using.

Subscribe to a Product Version in DSM

You can subscribe to a product in DSM so that you get an email every time an update is posted. You must subscribe to each version for which you want to receive email notifications. For example, you must subscribe separately to Acumen 8.7 and Acumen 8.8 if you want email notifications for both versions of the product.

To subscribe to a product in Deltek Software Manager (DSM):

1. Log in to DSM.

2. Click **Settings** in the top right corner of the window.

3. Scroll down to the product and version for which you want notifications and select the **Email** option.
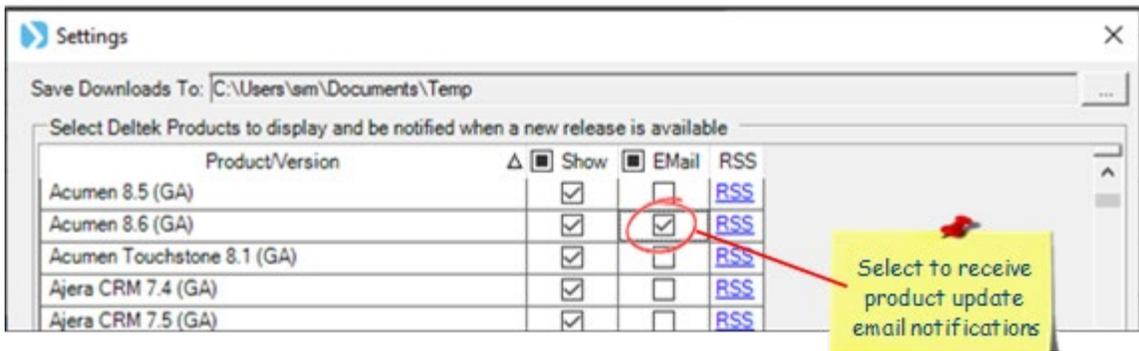
4. Click **OK**.

When an update is posted, you will receive an email with the product name and release details and a **Download** link that launches Deltek Software Manager with the release pre-selected.

DSM Documentation and Troubleshooting

- To view the online help for Deltek Software Manager, click here.

- To view a tutorial on how to use Deltek Software Manager, click here.

- To view more information on troubleshooting Deltek Software Manager, click here.

> **Note:** When you click a link, you will be asked to log into DSM if you aren't already logged in.

If You Need Assistance

If you need assistance installing, implementing, or using Acumen, 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 website 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 the Deltek 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

> **Note:** For more information regarding Deltek Support Center, refer to the online help available from the website.

Access Deltek Support Center

To access the Deltek Support Center:

1. Go to http://support.deltek.com.

2. Enter your Deltek Support Center **Username** and **Password**.

3. Click **Login**.

> **Note:** If you forget your user name or password, click **Need Help?** on the login screen for assistance.

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

Acumen uses a single tier architecture. The logical tiers are as follows:

- **Client/Application Tier:** This tier performs Acumen's functional process logic an provides the user interface layer. This tier can be a workstation or a Citrix/Terminal Server.

Installation/Deployment Models

Application Deployment

This model is designed for a single-user setup. The client and application tiers reside on the same machine. There is no backend database tier required to store Acumen data. This tier can be a workstation or a Citrix/Terminal Server.
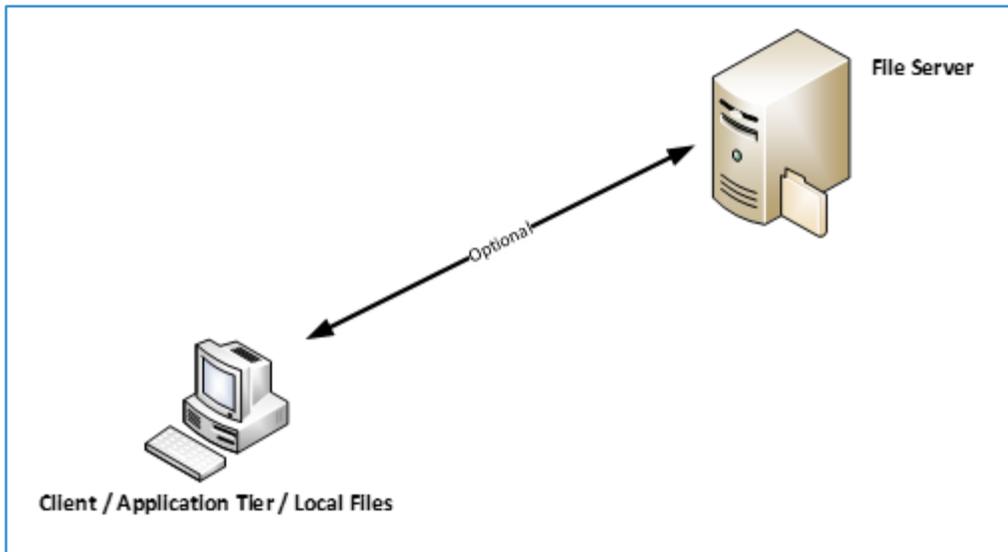
Installation Overview

Feature	Description
Installation	Download the software using Deltek Software Manager.
Sample Files	The sample files are available in the C:\Program Files (x86)\Deltek\Acumen <version>\Samples folder on your computer.

Feature	Description
	A shortcut for the Samples folder is also available on the **Start** menu.
Templates	The templates are available in the C:\Program Files (x86)\Deltek\Acumen <version>\Templates folder on your computer.
	A shortcut for the Templates folder is also available on the **Start** menu.
Documentation	The PDF guides are available in the C:\Program Files (x86)\Deltek\Acumen <version>\Documentation folder on your computer.
	A shortcut for the Documentation folder is also available on the **Start** menu.
DECM Sample Files	The sample files and templates are available in the C:\Program Files (x86)\Deltek\Acumen <version>\Templates folder on your computer.
	If you have questions or comments on them, please communicate with your DOE contact person.
Check for Updates	Log into Deltek Software Manager and manually check, or you can subscribe to product updates in DSM so that you can get email notifications whenever there is an update.
	Attention: For steps to set up a DSM subscription, see Subscribe to a Product Version in DSM.

Unsupported Scenarios

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

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

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

System Requirements

Your organization has made a substantial commitment to project management. To support that commitment, Deltek recommends that you carefully consider the hardware requirements necessary to run Acumen 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 growing 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 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 they are running 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 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. Customer 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 its cloud and/or virtualization software vendor with respect to virtual system performance and tuning.

Recommendation

Deltek will continue to develop 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.

> **Note:** Acumen is a multi-threaded application that takes advantage of multi-core processors.

Display Settings

Deltek recommends display resolution of 1920 x 1080 with a minimum resolution of 1024 x 768.

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, the number of code and other user-defined fields loaded from schedules, customizations, and growth expectations all have an impact on the initial sizing plans. The hardware profiles are intended as a starting point for deployment. Further in-depth discussion of the business needs of the solution during implementations of application will provide final guidance on hardware requirements.

Multi-Threading

Acumen tries to use as many CPUs as the computer has available when performing certain calculations (running Diagnostics, Risk Analysis, and so on).

> **Note:** In Acumen 8.3 and above, there is an option to control the maximum number of threads used during risk analysis.

Memory Requirements for Typical/Average Use

The table below includes details about the Acumen memory footprint. This can be helpful when sizing a client tier that runs in a virtual environment, Citrix, or Terminal Server.

Tier	Memory
Database Tier	Database instance memory should be 10% – 15% of the database size. For example, if database size is expected to be 500 GB then allocate 50 GB – 75 GB memory. This is in addition to any memory needed for the operating system and other applications that may run in parallel with Acumen.

Tier	Memory
	Note: For related information, see <u>Publish Metric Results and Definitions to a Database</u>.
Client/Terminal Server Tier	*This is per concurrent client instance and in addition to any memory needed for the operating system and other applications that may run in parallel.* ▪ **2 GB:** Typical project size is <10K activities ▪ **4 GB:** Typical project size is 10K–50K activities ▪ **8 GB:** Typical project size is >50k activities

Definition of Typical/Average Use

A user working with moderate size projects (10,000–20,000 activities), one project at a time. When combining multiple months' worth of data or multiple projects in a workbook, consider the total expected size of the data. For example, three months' work of a 10K activity project is 30K activities.

Hardware Requirements

The number of people using Acumen, the Acumen processes they are using, and the size of the projects all have an effect on the server hardware and software requirements.

Standalone Deployment

The following table lists the recommended minimum hardware requirements for a deployment of Deltek Acumen in a standalone workstation environment.

Tier	Hardware Required	Determining Factors
Client/Application Tier	▪ 2.0 GHz or higher, 4 cores recommended, 2 cores minimum ▪ 16 GB RAM recommended ▪ SSD with at least 50 GB free space (to give the page file room to grow)	▪ Usage ▪ Integration Requirements

Using Task Manager to View Information about Physical Memory and the Page File

▪ The number in the top right corner of the view shows you the amount of physical RAM.

▪ The **Committed** field shows you how much memory the page file has been allocated and how much is currently in use. When you run large Acumen Risk jobs, the page file can grow to accommodate the large jobs.
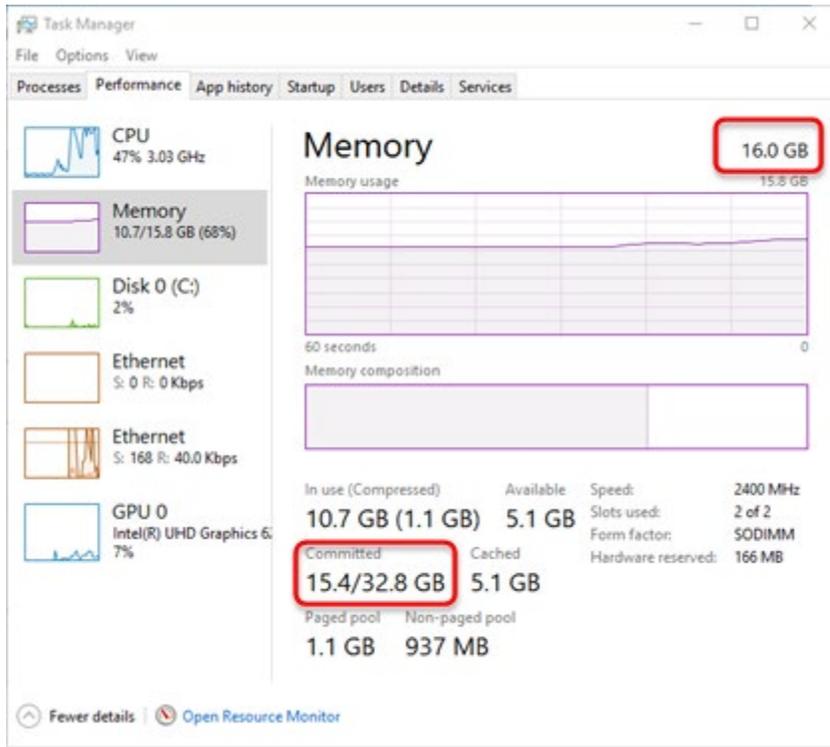
Virtual Machine (VM)

If Acumen is hosted on a virtual machine, Deltek recommends the following:

Component	Recommended Hardware
CPU	▪ **Multi-core CPU:** Acumen is a multi-threaded application that takes advantage of multi-core processors.

Acumen Risk can require a large virtual address space; therefore, Deltek recommends enabling memory ballooning.

Resources are sometimes scarce on a VM and the Administrator may sometimes disable the page file. It is often better from a performance standpoint to make sure that the VM has sufficient memory so that it doesn't have to use the page file. One exception is when you are using a Hyper-V host. Microsoft recommends that you configure a Hyper-V host to use system-managed page files so that it can dynamically manage the memory allocations.

Database Requirements

If you intend to publish Acumen metric results and definitions to a database, you need to have a database and data source configured. See Publish Metric Results and Definitions to a Database.

Software Requirements

This section lists the supported and compatible deployment technology.

> **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.

64-bit Application

Acumen is a 64-bit application.

Supported Deployment Technology

> **Note:** Supported versions are the currently actively tested versions of technologies used to deploy Acumen. 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.

Category	Supported Deployment Technology
Operating Systems	**Windows Server** ▪ Windows Server 2016 ▪ Windows Server 2019 ▪ Windows Server 2022 **Windows** ▪ Windows 10 ▪ Windows 11 **Citrix** ▪ XenApp 7.* (Win Svr 2016) ▪ Citrix Virtual Apps and Desktop 7.* (Win Svr 2019) **Mac** ▪ Mac OS X (Requires Parallels or VMware) > **Note:** For more information, see Installing Acumen on a Mac Operating System. **VMWare Horizon** ▪ VMWare Horizon 7 ▪ 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)

Category	Supported Deployment Technology
	Oracle ▪ Oracle 12.2 ▪ Oracle 18.3 ▪ Oracle 19.3 Oracle is supported on Linux, Unix, and Exadata. > **Note:** For information about using a database, see Publish Metric Results and Definitions to a Database.
Database Driver	Acumen supports 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 > **Note:** For information about this support matrix, see Support Policies for SQL Server Native Client. ▪ MS OLE DB Driver for SQL Server, version 18.2.2.0 or higher

Scheduling Tools	Acumen integrates with multiple project management platforms. Each Acumen workbook can contain projects from any of the following platforms:
	
	Microsoft Project
	
	Acumen links to MS Project files through your installed copy of MS Project or by directly reading an MS Project file (without needing MSP installed on your PC).
	
	▪ **Microsoft Project Standard**
	
	    ▪ Microsoft Project Standard 2013
	
	    ▪ Microsoft Project Standard 2016
	
	    ▪ Microsoft Project Standard 2019
	
	    ▪ Microsoft Project Standard 2021
	
	▪ **Microsoft Project Professional**
	
	    ▪ Microsoft Project Professional 2013
	
	    ▪ Microsoft Project Professional 2016
	
	    ▪ Microsoft Project Professional 2019
	
	    ▪ Microsoft Project Professional 2021
	
	▪ Microsoft Project Online (Office 365)
	
	▪ **Microsoft Project Server**

Category	Supported Deployment Technology
	- Microsoft Project Server 2013 - Microsoft Project Server 2016 - Microsoft Project Server 2019 <table><tr><td>**Microsoft Project Server:** Because MSP Server runs on SharePoint, it uses the same authentication scheme that is configured on the SharePoint server. Acumen allows http or https secure connections to MSP Server. Acumen does not support Two Factor Authentication (2FA). If the server is configured for 2FA, you can create an App password for Acumen.</td></tr></table>**Oracle** **Risk Analysis** - Risk Analysis 8.x **Primavera P6 (XER, Web, and XML)** - Primavera P6 8.4 - Primavera P6 17.12 - Primavera P6 18.8 - Primavera P6 19.12 - Primavera P6 20.12 - Primavera P6 21.12 <table><tr><td>**Note:** Acumen supports Oracle-hosted P6 web as part of the integration with Primavera Web Services. Acumen does not support Two Factor Authentication (2FA). If the server is configured for 2FA, you can create an App password for Acumen.</td></tr></table>**Other** - IPMDAR Schedule Performance Format (SPD) - IPMDAR Contract Performance Format (CPD) - UN/CEFACT (IPMR Format 6 v1.0) - Ares Prism G2 - Phoenix 4.0-4.6, 4.8 <table><tr><td>**Note:** For upgrade information, see Upgrading Powerproject.</td></tr></table>

Category	Supported Deployment Technology
	▪ PowerProject 16.0.1
Deltek Integrated Products	**Deltek Open Plan** ▪ Deltek Open Plan 8.4 through 8.6 **Deltek Cobra** ▪ Deltek Cobra 8.4 ▪ Deltek Cobra 8.5 **Note:** When Cobra 8.5 is released, check Cobra 8.5 Compatibility Matrix. **Deltek wInsight** ▪ Deltek wInsight 8.3 ▪ Deltek wInsight 8.3.1 ▪ Deltek wInsight 8.3.2 **Note:** You cannot publish metric results and definitions to a wInsight database. You can export to a DCDE file and use wInsight Administrator to import into a wInsight database. **Important:** You must not install Acumen tables in an existing Deltek database that has wInsight installed.
Web Browser	▪ Internet Explorer 11 ▪ Microsoft Edge ▪ Google Chrome ▪ Firefox
.NET Framework	▪ Microsoft .NET Framework 4.8
Microsoft Office	**Microsoft Word** ▪ Microsoft Word 2013 ▪ Microsoft Word 2016 ▪ Microsoft Word 2019 ▪ Microsoft Word 2021 **Microsoft Excel** ▪ Microsoft Excel 2013 ▪ Microsoft Excel 2016 ▪ Microsoft Excel 2019

Category	Supported Deployment Technology
	▪ Microsoft Excel 2021

Compatible Deployment Technology

> **Note:** Compatible versions are the recent previously supported and tested technologies used to deploy Acumen. These are not actively being tested but are believed to be compatible with Acumen. 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.

Category	Compatible Deployment Technology
Operating System	**Windows Server** ▪ Windows Server 2012 R2 **Windows** ▪ Windows 8.1 **Citrix** ▪ XenApp 7.* (Win Svr 2012) ▪ XenApp 7.* (Win Svr 2012 R2)
Database Platform	**Microsoft SQL Server** ▪ SQL Server 2014
Scheduling Tools	**Primavera** ▪ Primavera P6 15.2 ▪ Primavera P6 16.2 **Other** ▪ Phoenix 3.7 ▪ Powerproject 15.0.1

Open Source Software Included with Acumen

Acumen includes the following open source software:

Software	Company
JSON.NET Library 12.0.2	Newtonsoft
CsvHelper v12.1.2	Josh Close

Installation and Upgrades

> **Note:** When you install Acumen, you must run the installer in **Administration** mode.

Installing Acumen for the First Time

To perform an initial Acumen installation:

1. From Internet Explorer, navigate to https://dsm.deltek.com.
2. Click **Run Deltek Software Manager**.
3. Log in using your Deltek Customer Care Connect credentials.
4. In the left pane of the Deltek Software Manager, expand the Acumen folder.
5. Expand the Complete folder and select the file version you wish to download.
6. Click **Download** at the bottom of the screen.
7. Locate the folder you downloaded Acumen to.

   > **Note:** If you are installing to a server and you're unable to use DSM from your server, you will need to copy the Acumen folder to your server.

8. Run the Acumen 8.8 executable (.exe) file.

   > **Note:** Before the installation begins, the installer checks to see if your .NET framework needs to be updated. If it does, the Acumen installation will exit, and you will be guided through the .NET upgrade process. After

9. On the Welcome screen, click **Next**.
10. If you are doing a new installation, accept the default and click **Next**. If you are upgrading, ensure you selected a folder that is not the same as the one with the prior version of the software, and click **Next**.
11. Take note of your installation path, and click **Next**.
12. After the update is complete, click **Next**.

Next Step

Your next step is to activate your license. See License Activation Procedure for details.

Checking for Acumen Updates

You can log in to Deltek Software Manager (DSM) and manually check for updates, or you can subscribe to DSM product updates so that you get email notifications whenever there is an update.

> **Attention:** For steps to set up a DSM subscription, see Subscribe to a Product Version in DSM.

Upgrading from Earlier Versions of Acumen

When upgrading from an earlier version of Acumen, Deltek recommends that you install the new version of Acumen into a new folder rather than attempting to overwrite/upgrade an existing Acumen installation. Acumen supports concurrent installations with previous versions of Acumen, provided that:

- The two versions are installed to different folders.
- Only one version can be run at a time.

To upgrade Acumen, use the steps in Installing Acumen for the First Time above but select a different folder into which it is installed.

> **Attention:** If you are upgrading from a version earlier than Acumen 8.4, see License Activation Procedure.

> **Note:** If you have an earlier version of Powerproject that is currently supported, you will need to manually uninstall it before Acumen installs the updated version. You can uninstall Powerproject in Control Panel.

Upgrading the Database

Upgrading from Acumen 8.6

If you currently use Acumen 8.6 to publish metric results and definitions to a database, you need to create a new database when you upgrade to Acumen 8.7 and Acumen 8.8 because the 8.6 database is not compatible with this new version. In addition, there are scripts provided that drop metric results tables created in the 8.6 version. These scripts do not drop any common tables shared with other Deltek products.

> **Note:** Run the **WA_Procedures_platform.sql** script when you upgrade to 8.7 CU12 to effectively publish metric results to a database.

Upgrading from Acumen 8.7

If you currently use Acumen 8.7 to publish metric results to a database, you will need to upgrade that database to use it with Acumen 8.8.

To upgrade an 8.7 database for use in 8.8, you will need to run the following scripts:

- For SQL Server:
- AMR88_Upgrade_SqlServer.sql
- WA_Procedures_SqlServer.sql
- For Oracle:
- AMR88_Upgrade_Oracle.sql
- WA_Procedures_Oracle.sql

> **Note:** You can find these scripts in the Utilities folder in the following locations:
> - C:\Program Files (x86)\Deltek\Acumen <version>\Database\Metric Results\MSSQL
> - C:\Program Files (x86)\Deltek\Acumen <version>\Database\Metric Results\Oracle

If you currently use Acumen 8.7 to publish metric definitions to a database, you will need to upgrade that database to use it with Acumen 8.8. Run the following scripts:

- For SQL Server:
  - AMD88_Upgrade_SqlServer.sql
  - This can be found in the
    C:\Program Files (x86)\Deltek\Acumen 8.8\Database\Metric Definitions\MSSQL folder.
- For Oracle:
  - AMD88_Upgrade_Oracle.sql
  - This can be found in the
    C:\Program Files (x86)\Deltek\Acumen 8.8\Database\Metric Definitions\Oracle folder.

> **Note:** For more information about using a database, see *Publish Metric Results and Definitions to a Database* below.

Publish Metric Results and Definitons to a Database

If you intend to publish Acumen metric results and definitions to a database, you need to have a database and data source configured. For hardware and database requirements and setup, see Hardware Requirements.

> **Note:** If you currently use Acumen to publish metric results and definitions to a database and are upgrading, see Upgrading the Database.

Upgrading Powerproject

Acumen integrates with a specific version of Powerproject (see Software Requirements for the latest version).

To install the supported Powerproject version, upgrade to the latest Acumen version and click the **Powerproject** icon on the S1 // Projects menu. Acumen will ask you if you want to install the components. When you click **Yes**, Acumen installs the supported Powerproject version.

> **Note:**
> - If you have existing Developer's Toolkit and Powerproject File Format Converter, and try to import a Powerproject file, an error message displays. Deltek strongly recommends that you uninstall them to get rid of the error message and install the latest Acumen version successfully.
> - If there are still no Developer's Toolkit and Powerproject File Format Converter installed, and you try to import the Powerproject file, Acumen prompts you to install them.

Acumen first installs the Developer Toolkit. During the installation, on the Customer Information page in the **Serial Number** field, enter **12345**. Acumen next installs Powerproject File Format Converters. When the file format converter installation is complete, you can import projects into Acumen.

> **Note:** After a Powerproject schedule file has been converted, you can no longer import it into an earlier version of Acumen.

Trial License

Trial licenses have the following characteristics:

- They have activity limits.
- Acumen only exports the first n number of activities to Excel from anywhere the export to Excel is employed.
- Fuse only runs on the first n number of activities.
- You cannot publish any Word / PDF reports from S2 // Diagnostics or S3 // Risk.
- You cannot export scenarios to XER, MPP, or Open Plan.

License Activation Procedure

> **Important:** Starting with the Acumen 8.4 release, changes were made to the Acumen licenses. When you upgrade from a version earlier than Acumen 8.4, you will need a new license key.
>
> Email Hq-distribution@deltek.com to request a new license key. You will need to provide the name of your company, client ID, and the list of existing license keys that need replacing. For a domain license, you will also need to provide the domain name. The license keys that are being replaced must have an active maintenance agreement.
>
> After Deltek receives and verifies the above information, Deltek will email you the new license key(s) and instructions for using it/them. If you do not receive this information, contact Deltek Customer Care.
>
> You can find your client ID by logging into your Customer Care account. Click on the gear/settings icon ( ) in the top right corner of the view and select **My Account**. On the My Account dialog box, click **Support Plan**. You can find the current license key on the Deltek Acumen Options dialog box *About Deltek Acumen* page.

License keys can be activated on the local machine. Each key can be activated more than once as long as you have the key to reactivate the software. Activation does not require local admin privileges.

When you launch Acumen for the first time after installing or upgrading the product, you are required to enter your license key and client ID.
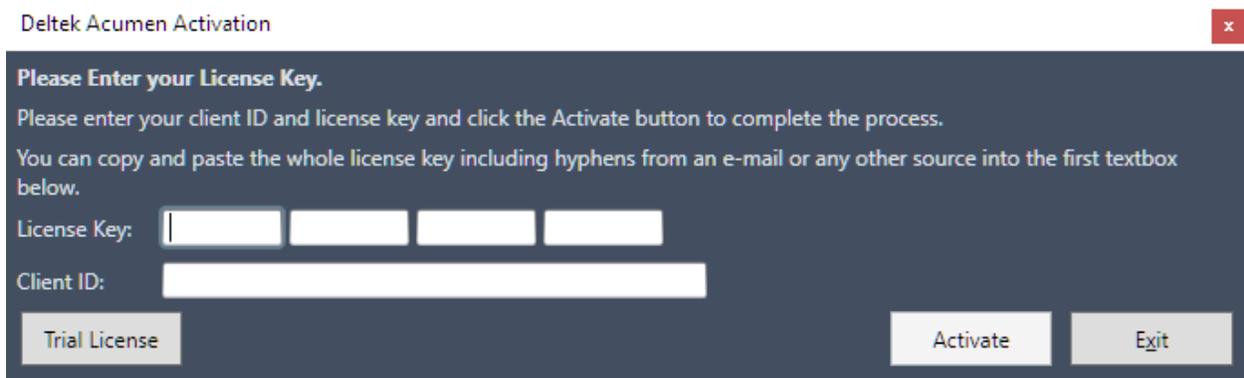
Trial Activation

If you are installing a trial version of Acumen, select the **Trial** button on the License Activation dialog box, and Acumen will prompt you for your trial license.
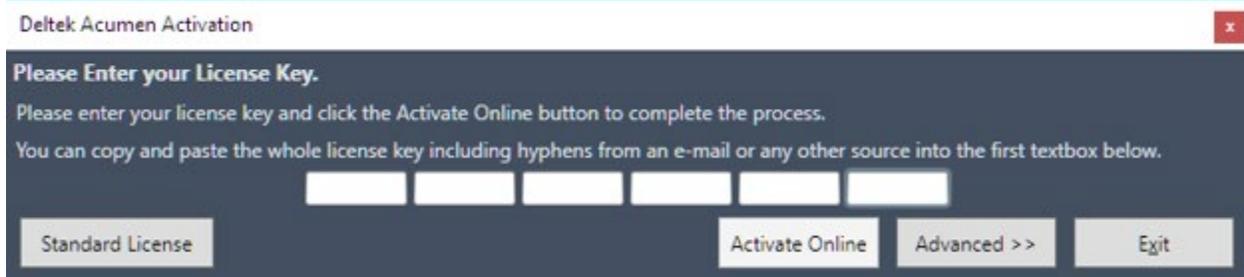
Enterprise Domain License Activation

If you are using a Domain license, you will need your license key, client ID, and your encrypted domain key.
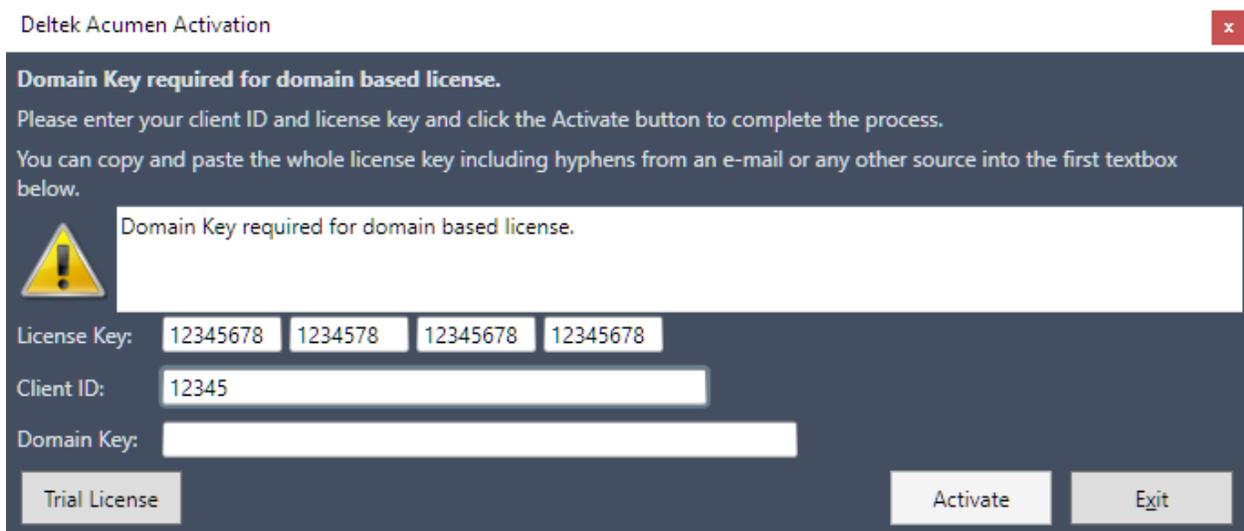
Citrix/Terminal Server License Activation

> **Note:** Acumen allows only an Enterprise Domain license to be shared between servers. All other license types need to be installed on the server that is being used.

When you install Acumen on a Citrix/Terminal Server with concurrent users, you need to activate the license once only. Copy the **License.json** file to the **Documents\Acumen\Fuse\License** folder to begin the activation. After completion, Acumen will work for all users on that machine. If you have more than one server, they will need licenses to run Acumen.

Check the Current Version Number

In Acumen, you can view the current version number in the bottom-right corner of the screen or on the About Deltek Acumen tab of the Deltek Acumen Options dialog box.

User Pool Manager

Use the Acumen User Pool Manager to manage the named users who are licensed to use Deltek Acumen when you have a concurrent use pool license.

When you have a concurrent use license with a pool of users, Acumen automatically tracks the users who run Acumen as long as there are available licenses. These are stored in a secure file in a shared location. This tool, with its own password, allows management to maintain that pool of users who have access to Acumen.

After you log in, you can see the list of users currently in the pool and can add or remove users as needed.

The utility is a separate app that you install on a dedicated server (not a load-balancing server).

The maximum number of users allowed in the list, as well as the number of users currently in the list, display at the bottom of the User Pool Manager dialog box. The number of users in the list cannot exceed your license. For example, if you have a 50-user license, the utility allows you to store up to 50 users in the list.

> **Note:** You need to log into Acumen and activate your license prior to running this utility for the first time.

Hosting Acumen on Microsoft Azure

When you host Acumen on Microsoft Azure, you cannot use the User Pool Manager. If you use a concurrent license, Deltek recommends that you use a dedicated server and don't use the User Pool Manager.

Storing the License and User Details

The license and user details are stored in files. The default location for license files is **C:\Users\%USER NAME%\Documents\Acumen Fuse\License**; however, for concurrent licenses Deltek recommends that you use a different location that is accessible to all users.

If you want to use a different folder location, you must set the LicenseStorageLocation in Fuse.exe.config to the new location otherwise you will see the following error when you launch UserPoolManager: The License key is not a user pool key.

Storing the User Details

The user list is stored in a file called **userpool.lic**. The default location for this file is **\users\public\public documents\acumen fuse\license**.

License.json File (License Dictionary)

When you log into Acumen for the first time, and you enter your license key, the license key is activated and the system creates a **license.json** file where it stores the license key (encrypted), client ID (plain text), and domain key (if applicable, encrypted). The default location for this file is **C:\Users\%USER NAME%\Documents\Acumen Fuse\License**.

Using the User Pool Manager for the First Time

Before you use the User Pool Manager, you must log into Acumen and enter your license key. When the license key is activated, the system creates a **license.json** file where it stores the License key (encrypted), client ID (plain text), and domain key (if applicable, encrypted).

To use the User Pool Manager:

1. Log onto your server.

2. Navigate to the UserPoolManager folder and double-click the **UserPoolManager.exe** file. The default location is **C:\Program Files (x86)\Deltek\Acumen\UserPoolManager**.

3. The first time you use the utility, a Browse for Folder dialog box displays. Locate the folder on the server where the license directory is stored and click **OK**.

   This is the folder that contains the **license.json** file; the password-protected file that is used to save the license information. The default location is **C:\Users\%USER NAME%\Documents\Acumen Fuse\License**; however, for concurrent licenses Deltek recommends that you use a different location that is accessible to all users.

   If you want to use a different folder location, you must set the LicenseStorageLocation in Fuse.exe.config to the new location otherwise you will see the following error when you launch UserPoolManager: The License key is not a user pool key.

4. On the User Pool Manager Log In dialog box, enter the following information and click **OK**:

   - **User ID**: SYSADMIN

   - **Password**: Your User Pool Manager password

   > **Note:** The default password is **Password**. Deltek strongly recommends that you change it the first time you log in (**File » Change Password**).

The next time you want to use the utility, double-click **UserPoolManager.exe** file. The Login dialog box displays. Enter **SYSADMIN** and the password and click **OK**.

Change the License Directory

The **license.json** file stores the license information and resides on the server. The first time you run the User Pool Manager, you are prompted to select the folder where this file resides. If the License Directory has been moved, you can use these steps to select a different folder location.

To change the License Directory:

1. On the User Pool Manager dialog box, click **File » Set License Directory**.

2. Use the Browse for Folder dialog box to locate the folder where your license directory is stored.

3. Click **OK**.

Change the Password

Use these steps to change the User Pool Manager password.

To change the User Pool Manager password:

1. Log in to the utility using SYSADMIN and the current password.

2. Click **File » Change Password**.

3. Enter a new password.

4. Confirm the password.

5. Click **OK**.

Configuring the Fuse.exe.config File

You can tailor the Acumen system configuration file (**Fuse.exe.config**) to meet your specific needs. The file is in an XML format that can be opened with any text editor.

The location of the **Fuse.exe.config** file is the C:\Program Files (x86)\Deltek\Acumen folder.

> **Note:** This is the default location that you can change at the time of installation.

Acumen now stores Fuse results in a Cache by default, you can control the size of the cache in the Fuse.exe.config file. The default value of -1 represents unlimited results. Use the Fuse.exe.config file to limit the results, if needed. You typically would not need to change this value. The valid options are:

- The default =-1 which is unlimited.
- Setting to 0 would effectively disable caching.
- Any other number would set the limit to the amount cached.

Useful Configuration File Settings

Default Field Mappings

Set this value to **True** if you want Acumen to always default to using the built in field mapping when you import from Open Plan. If you set this value to **False**, you must specify a template in **FieldMappingTemplateDeltek** that Acumen should use by default.

You can override this setting using the **Use built in field mapping** field on the Platforms (Deltek) page of the Deltek Acumen Options dialog box.

```
<setting name="UseDefaultFieldMappingDeltek" serializeAs="String">

    <value>True</value>

</setting>
```

Default File Open and Save Location

To set the default File » Open / File » Save location, add the full folder path to the **DefaultFuseFolder** configuration file setting:

```
<setting name=" DefaultFuseFolder" serializeAs ="String">

    <value><full path to folder></value>

</setting>
```

End Use License Agreement

To prevent users from having to agree to the End User Agreement when they first launch Acumen, change the **AreTermsAccepted** value to **True**:

```
<setting name="AreTermsAccepted" serializeAs="String">

    <value>True</value>

</setting>
```

Field Mapping Template

When you add a default mapping template value, Acumen defaults to using the specified field mapping template when you import from Open Plan.

If **UseDefaultFieldMappingDeltek** is set to **True**, Acumen ignores this setting and uses the built in field mapping. If **UseDefaultFieldMappingDeltek** is set to **False** and there is no value specified here, Acumen defaults to using the build in field mapping.

You can override this setting using the **Default field mapping location** field on the Platforms (Deltek) page of the Deltek Acumen Options dialog box.

```
<setting name="FieldMappingTemplateDeltek" serializeAs="String">

    <value />

</setting>
```

Microsoft Default Field Mapping

Set this value to **True** if you want Acumen to always default to using the built in field mapping when you import from Microsoft. If you set this value to **False**, you must specify a template in **FieldMappingTemplateMicrosoft** that Acumen should use by default.

You can override this setting using the **Use built in field mapping** field on the Platforms (Microsoft) page of the Deltek Acumen Options dialog box.

```
<setting name="UseDefaultFieldMappingMicrosoft" serializeAs="String">

    <value>True</value>

</setting>
```

Microsoft Field Mapping Template

When you add a default mapping template value, Acumen defaults to using the specified field mapping template when you import from Microsoft.

If **UseDefaultFieldMappingMicrosoft** is set to **True**, Acumen ignores this setting and uses the built in field mapping. If **UseDefaultFieldMappingMicrosoft** is set to **False** and there is no value specified here, Acumen defaults to using the build in field mapping.

You can override this setting using the **Default field mapping location** field on the Platforms (Microsoft) page of the Deltek Acumen Options dialog box.

```
<setting name="FieldMappingTemplateMicrosoft" serializeAs="String">

    <value />

</setting>
```

Microsoft Server Hide Unpublished Projects

Set this value to **True** to only display published projects in the project picker when you import Microsoft Project server projects.

You can override this setting using the **Hide Unpublished Projects** field on the Platforms (Microsoft) page of the Deltek Acumen Options dialog box.

```
<setting name="MspServerHideUnpublished" serializeAs="String">

    <value>False</value>
```

```
        </setting>
```

MSP Server Code Assignments

This setting controls whether Acumen retrieves project code assignments when you connect to an MSP Server project list. If set to **True**, code assignment columns display in the grid on the MSP Server Project Selection dialog box (used when importing a project). It is set to **False** by default.

```
        <setting name="MspServerGetProjectCodes" serializeAs="String">

         <value>False</value>

         </setting>
```

Oracle Default Field Mapping

Set this value to **True** if you want Acumen to always default to using the built in field mapping when you import from Oracle. If you set this value to **False**, you must specify a template in **FieldMappingTemplateOracle** that Acumen should use by default.

You can override this setting using the **Use built in field mapping** field on the Platforms (Oracle) page of the Deltek Acumen Options dialog box.

```
        <setting name="UseDefaultFieldMappingOracle" serializeAs="String">

         <value>True</value>

         </setting>
```

Oracle Field Mapping Template

When you add a default mapping template value, Acumen defaults to using the specified field mapping template when you import from Oracle.

If **UseDefaultFieldMappingOracle** is set to **True**, Acumen ignores this setting and uses the built in field mapping. If **UseDefaultFieldMappingOracle** is set to **False** and there is no value specified here, Acumen defaults to using the build in field mapping.

You can override this setting using the **Default field mapping location** field on the Platforms (Oracle) page of the Deltek Acumen Options dialog box.

```
        <setting name="FieldMappingTemplateOracle" serializeAs="String">

         <value />

         </setting>
```

Primavera P6 Default Authentication Type

When you connect to P6 Web Services, your user ID must be authenticated in order to retrieve information. Authentication type determines the means by which a user's identity is authenticated against the user account. You can use the configuration file to set **Cookie** or **UserToken** as the default authentication type.

```
          <setting name="P6WebSettings2" serializeAs="Xml">

           <value>

           <P6LoginSettings xmlns:xsd="http://www.w3.org/2001/XMLSchema"
           xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
           CurrentProfileIndex="0">
```

```
<Profiles>

  <Profile Name="PPMDB on server1" Hostname="server1" Port="443"

    UseHttps="true" AuthenticationType="UserToken">

    <DatabaseId>1</DatabaseId>

    <DatabaseName>PPMDB</DatabaseName>

    <User name>admin</User name>


            <Code>AQAAANCMnd8BFdERjHoAwE/Cl+sBAAAAnJaVLWk+TEifBX5pQ+8ID
            AAAAAACAAAAAAADZgAAwAAAABAAAAAXjdHTSULOX6y2xXk54H5AAAAAAASA
            AACgAAAAEAAAAEWgOfUlBhvgY6TRhH43GBEQAAAAP2wM6+PRPElBIVKPuoT
            AAxQAAACCw25lROUaKvriDZm7/Og21QML1w==</Code>

    <LoginFailed>false</LoginFailed>

  </Profile>

</Profiles>

</P6LoginSettings>

</value>

</setting>

</Acumen.Fuse.Properties.Settings>
```

Risk Driver Bar Segments Limit

Use this setting to specify the number of bar segments that Acumen displays in the Risk Drivers chart. The setting defaults to **100**. When the number of segments in a bar in the risk drivers chart exceeds the threshold, Acumen summarizes the bar as a single segment. The tool tip for the bar explains that the bar is summarized.

```
<setting name=" TornadoSegmentThreshold" serializeAs="String">

  <value>100</value>

</setting>
```

S2 // Benchmarking Tab

To hide the S2 // Benchmarking (Acumen Cloud) tab, change the **IsAcumenCloudEnabled** value to **False**:

```
<setting name="IsAcumenCloudEnabled" serializeAs="String">

  <value>False</value>

</setting>
```

Using the /configOverride Command Line Option

The /configOverride option allows you to tell Acumen to read settings (user or system) from a file in a location specified on the command line used to launch Acumen. These settings override the settings in the default Acumen files (fuse.exe.config and user.config).

The file specified on the command line does not need to have all of the settings found in the default files, only those you want to override.

> **Note:** This option is available in Acumen 7.0 CU6 and later for standard installations only.

You can get the default system values from the fuse.exe.config file and the current user values from the user.config file under your AppData/Roaming/Deltek folder.

Example of a .config file that you can use with the /configOverride Command

```
<configuration>
 <userSettings>
  <Acumen.Fuse.Properties.Settings>
   <setting name="PracDefaultFontSize" serializeAs="String">
    <value>14</value>
   </setting>
   <setting name="ShowTimeInDates" serializeAs="String">
    <value>True</value>
   </setting>
  </Acumen.Fuse.Properties.Settings>
 </userSettings>
 <applicationSettings>
  <Acumen.Fuse.Properties.Settings>
   <setting name="DisplayModulesInVersion" serializeAs="String">
    <value>False</value>
   </setting>
      <setting name="LicenseStorageLocation" serializeAs="String">
        <value />
      </setting>
  </Acumen.Fuse.Properties.Settings>
 </applicationSettings>
</configuration>
```

While this example uses some of the settings available in existing config files, all settings can be used in this override file.

Add the /configOverride Command Line

To add the /configOverride command line:

1. Create a config file (for example, override.config) that you want to use to override user or application settings.

2. Save the file to a server folder or other secure location.

3. In the Acumen Properties dialog box Target field, after **Fuse.exe**, add a space and the following:

   ```
   /configOverride:"<location of the config file>\override.config"
   ```

   Where **override.config** is the name of your override file.

   > **Note:** Make sure that there <u>is</u> a space between **Fuse.exe** and **/configOverride**. There should <u>**not**</u> be a space between the colon and the quoted filename.

Installing Acumen in a Citrix® XenApp™ Environment

Installing Acumen on the XenApp Servers

This section covers the steps needed to install Acumen on <u>every</u> XenApp server that will run Acumen.

You can install Acumen in one of two ways:

- Install the application on one server that will run multiple instances of Acumen
- Load balance across multiple servers (highly recommended)

Deltek recommends that you enable the CPU Utilization Management in the server farm. Refer to the Citrix documentation for that information.

> **Warning:** Acumen does not support streamed application in XenApp. It only runs in XenApp as an installed application accessed from the server. Therefore, Acumen is installed on the server, and accessed from the server where the processing takes place.

To install Acumen:

1. Download and extract the latest version of the CD installer from the link provided.
2. Run **setup.exe** and follow the instructions on the screen.
    - On the Choose Destination Location screen:
        - Select the same installation location for all servers.
        - Select **Everyone**.
3. Continue through to the end of the installation.

The next step is to enter the license keys.

Enter the License Keys

After Acumen is installed, run the application on each server at least once in order to enter the license keys.

To enter the license key, complete the following steps on each server:

1. Open Acumen by double-clicking on the desktop icon or accessing it from the Start menu under the Deltek folder.
2. Read and accept the terms of the agreement, then click **Continue**.
3. On the Acumen Activation screen, enter the license key provided by Deltek.

   > **Note:** Each server may use a different license key depending on the license type purchased.

4. Click **Activate**.
5. Close Acumen.

The next step is to publish Acumen in XenApp.

Publish Acumen in XenApp

To publish Acumen in XenApp:

1. On the Citrix® Delivery Services Console, expand the farm that you will be using.

2. Rick-click on **Applications** and select **Publish Application**.

3. On the Name screen, in the **Display Name** field, enter **Acumen**.
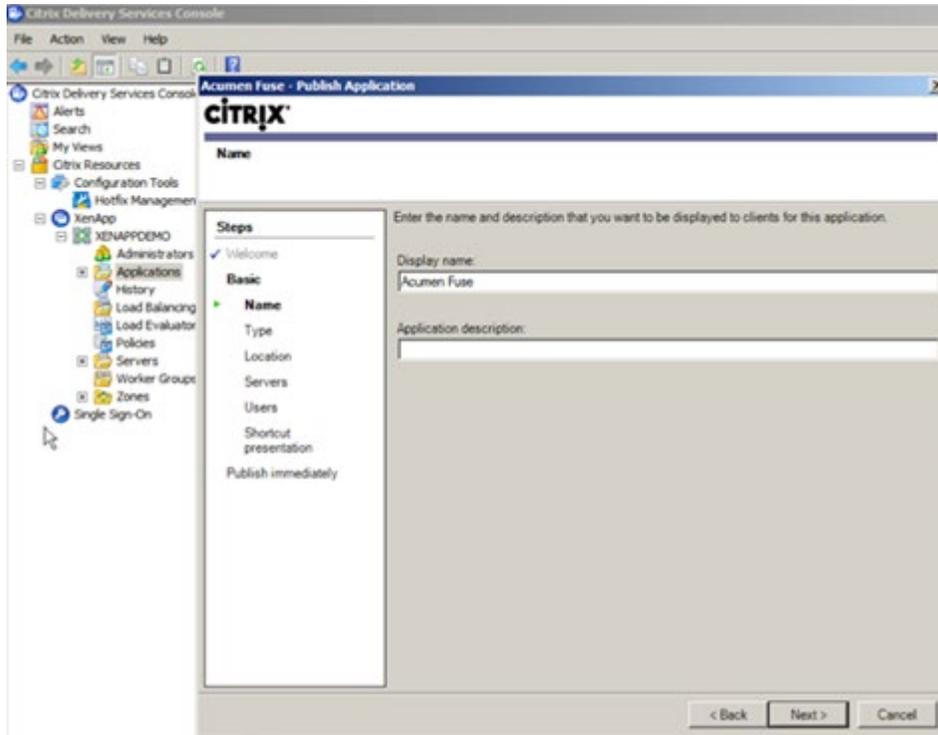
4. Click **Next**.

5. On the Type screen:

   a. Select **Application**.

   b. In the Application Type group box:

      i. Select **Accessed from a server**.

      ii. In the **Server application type** field, select **Installed application**.
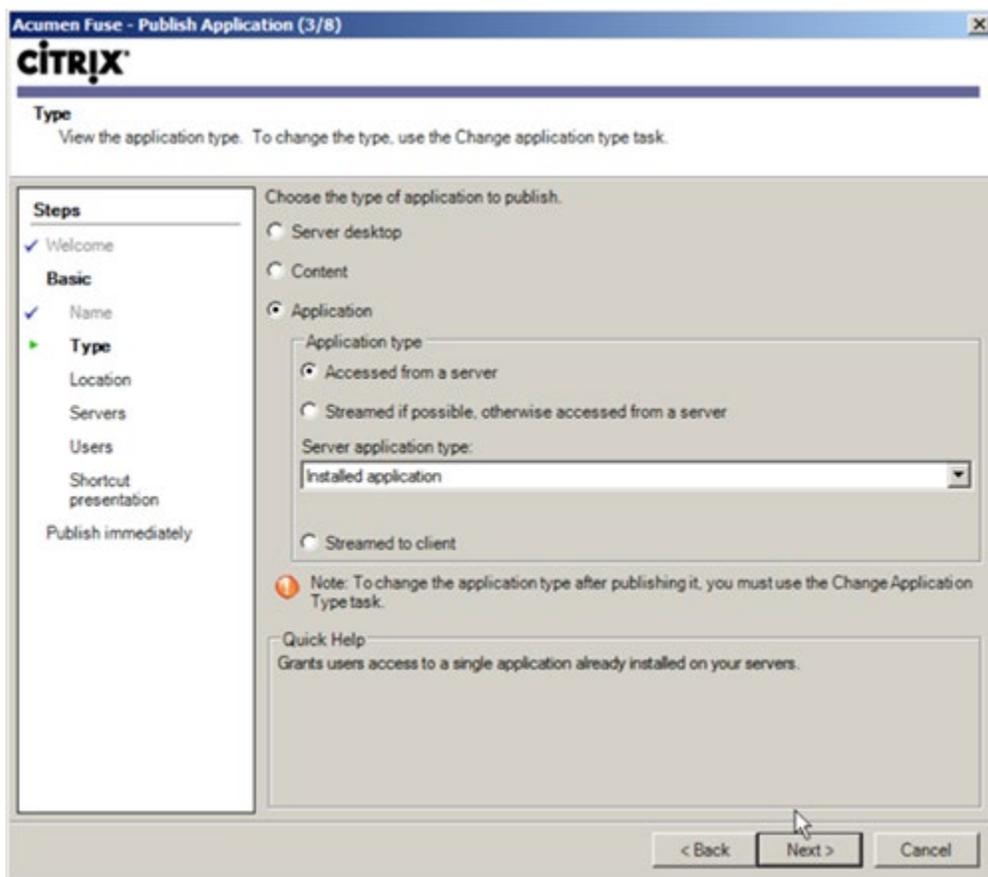
> **Note:** Acumen does not support the *streamed to server* or *streamed to client* delivery methods in XenApp. It can only be run in XenApp as an installed/hosted application accessed from the server, which is the traditional XenApp publishing model.

6. Click **Next**.

7. On the Location screen, select the location where Acumen is installed. By default, this is in the program files folder (that is **C:\Program Files\Deltek\Acumen 8.x\Fuse.exe** or **C:\Program Files (x86)\Deltek\Acumen 8.x\Fuse.exe**).

> **Note:** This location should be the same for all servers.
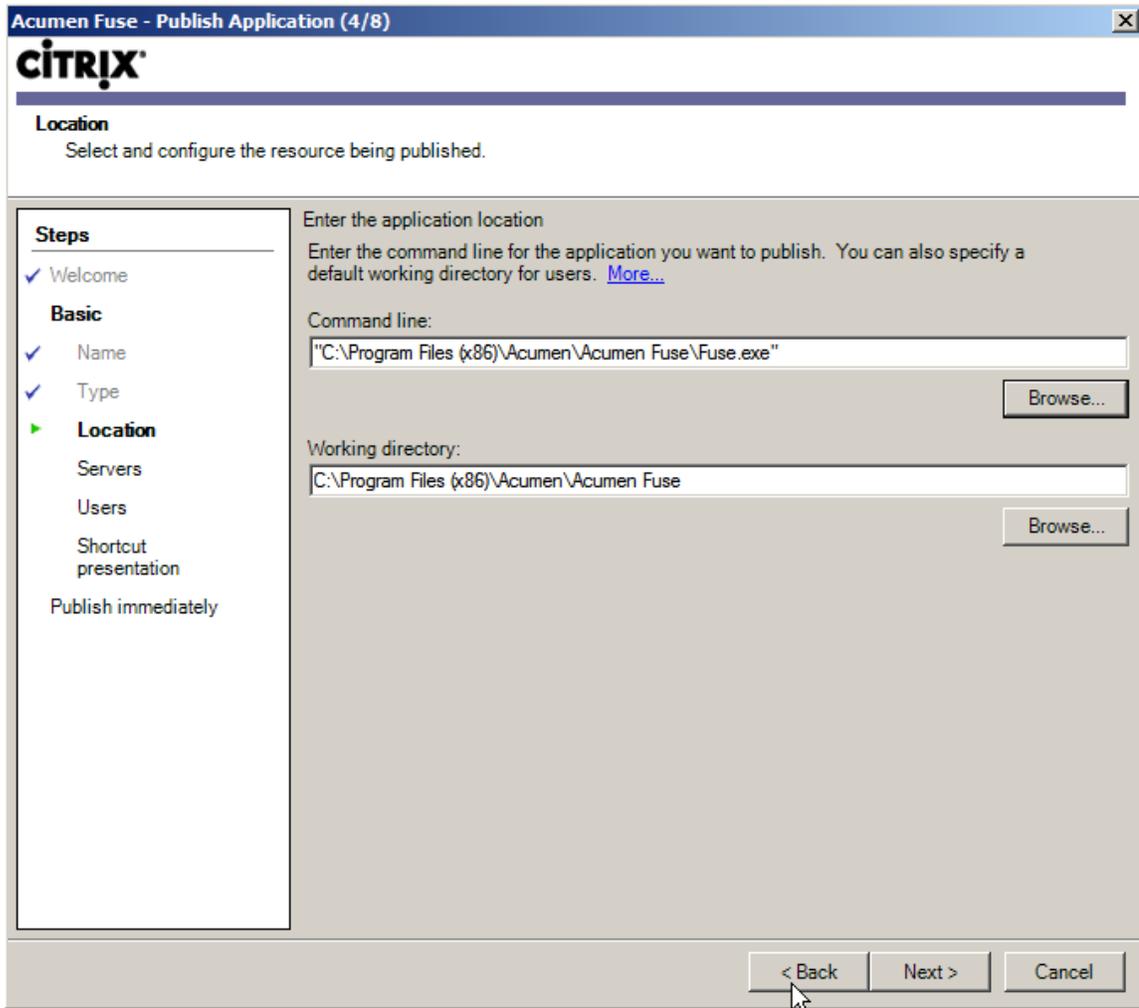
8. Click **Next**.

9. On the Servers screen, select the servers that will run Acumen.

   If you are load balancing Acumen across multiple servers, which is the recommended approach, then you will have one server per concurrent license.
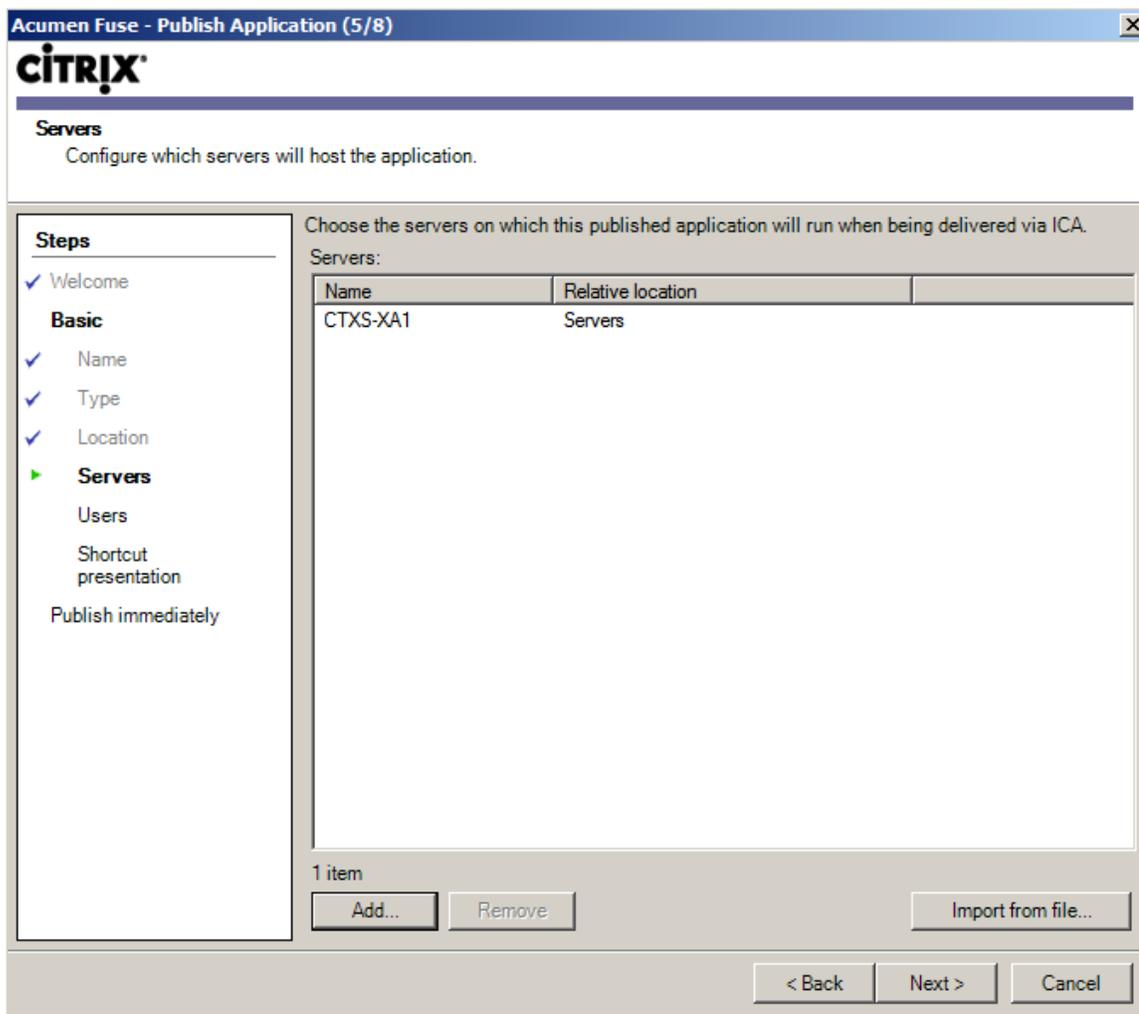
10. Click **Next**.

11. On the Users screen, select only the users that should have access to Acumen in your domain.

> **Note:** The number of users in this list should not exceed the number of users in the license pool.
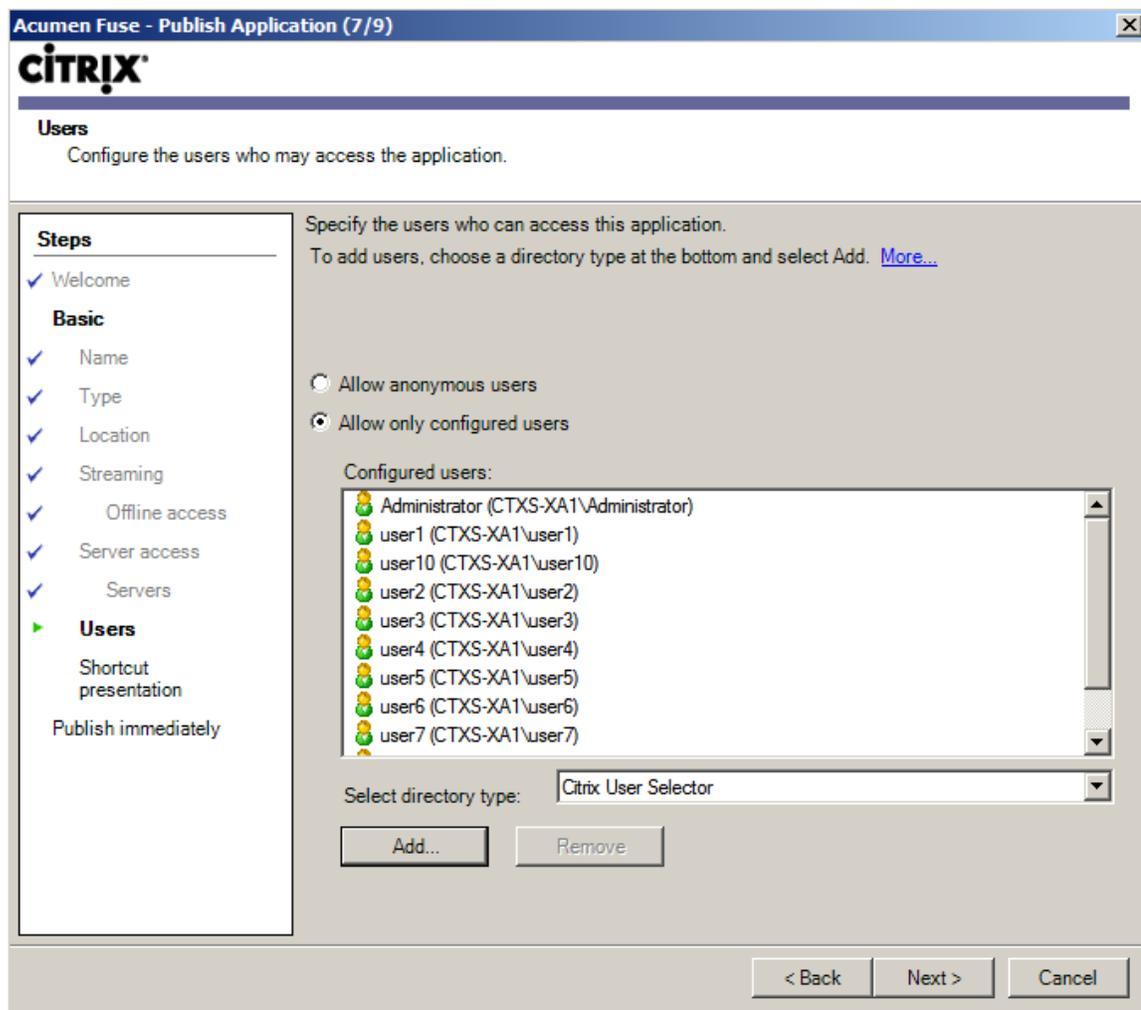
12. Click **Next**.

13. On the Shortcut presentation screen, select or change options as needed.
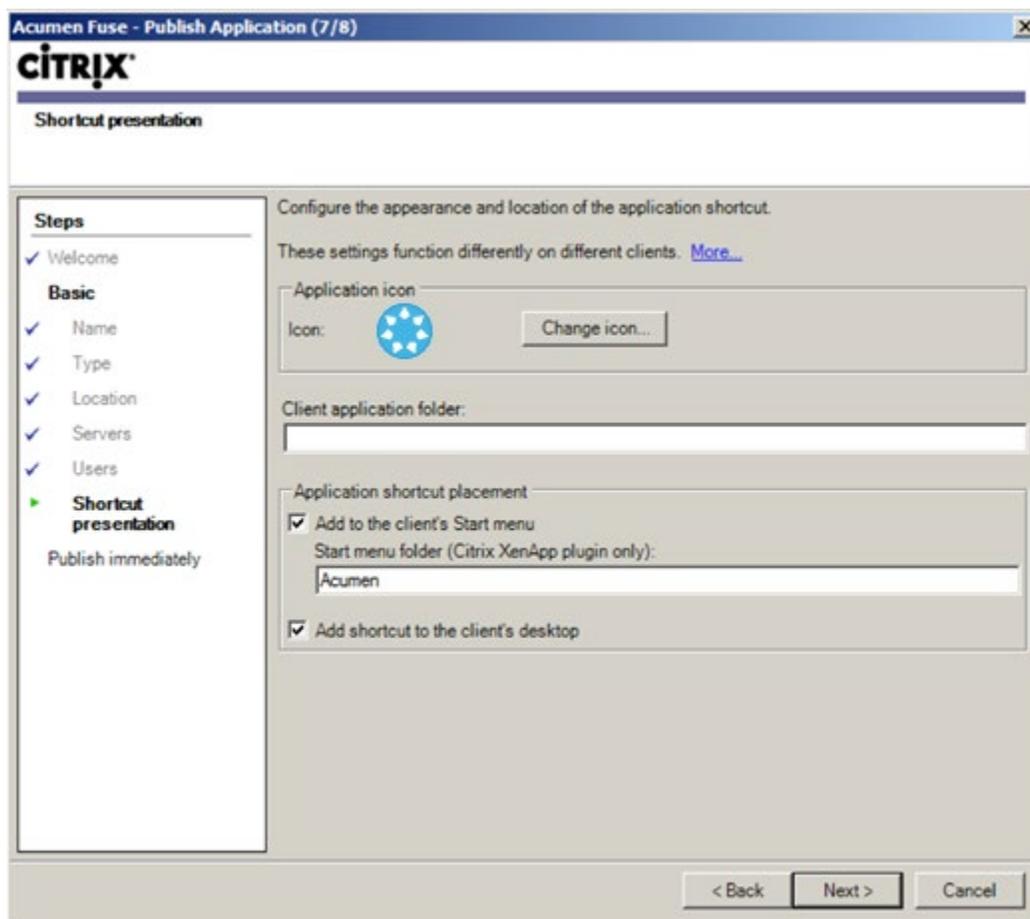
14. Click **Next** on each screen until you get to the Limits screen.

15. On the Limits screen:

   - Select **Limit instances allowed to run in server farm**.

   - In the **Maximum instances** field, select the number of maximum instances equal to the number of concurrent licenses that you have acquired.

   - Select **Allow only one instance of application for each user**.
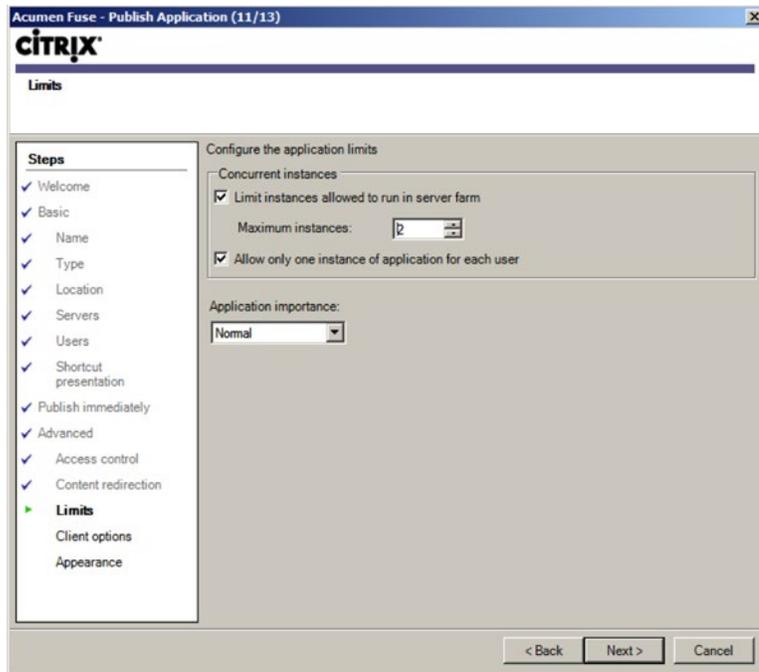
16. Click **Next** until you reach the Appearance screen where you can click **Finish**.

Create a Load Evaluator

If you have more than one concurrent license of Acumen and you are load balancing, you will have to create a load evaluator.

To create a load evaluator:

1. On the server farm, right-click **Load Evaluators** then select **Add Load Evaluator**.

2. On the Add Load Evaluator dialog box:

   a. In the **Name** field, enter **Acumen Load Balance**.

   b. Select **Application User Load Balance**.

   c. In the **Report full load when the number of users for this application equals** field, enter **1**.

   d. In the **Application** field, click **Browse** and select **Acumen Fuse**.
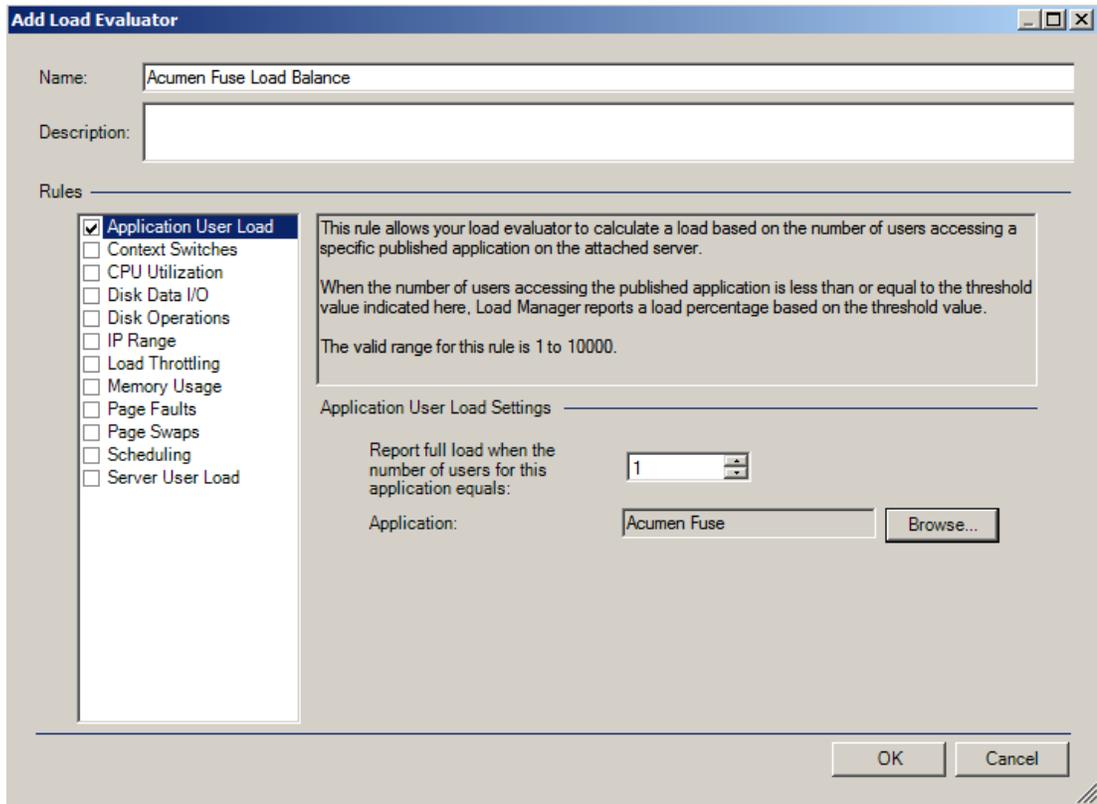
3. Click **OK**.

4. Under Application, right-click on **Acumen Fuse** and select **Other Tasks » Attach application to load evaluator**.

5. On the Assign Load Evaluator dialog box, in the **Load Evaluator** field, select the **Acumen Fuse Load Balance** evaluator that you just created.
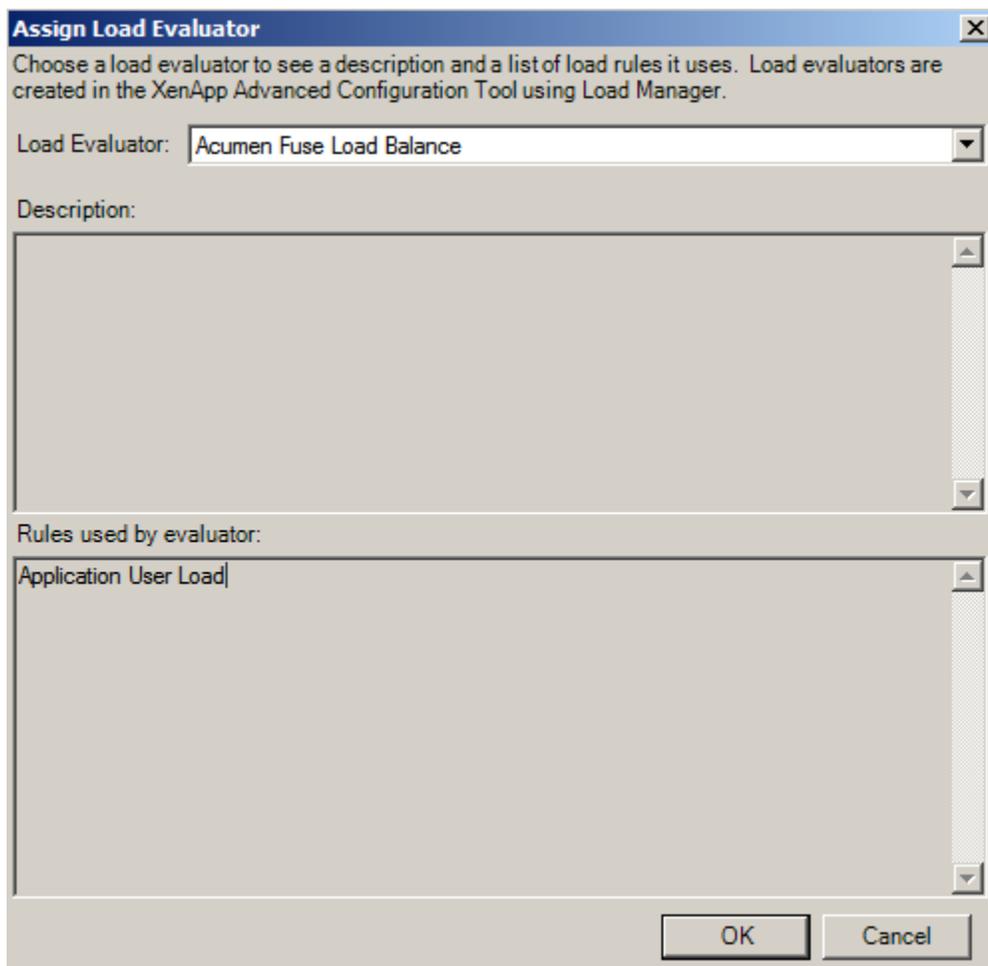
6. Click **OK** to finish.

Testing the Deployment

To test the Acumen deployment:

1. On one of the client computers, use one of the Citrix® Plug-Ins to log into the server farm and run the application.
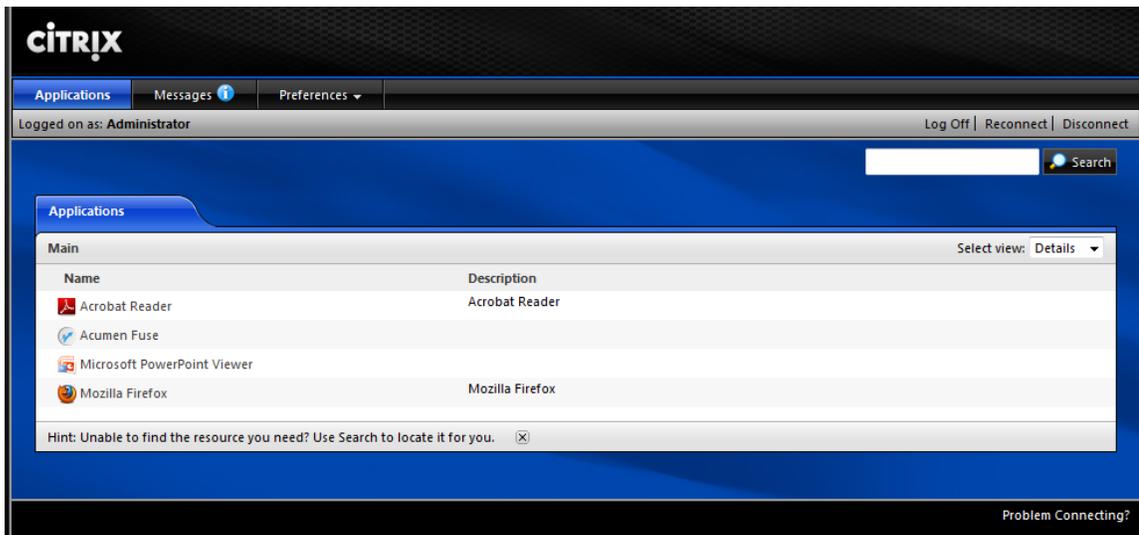
If you use the full online plug-in and you configured Acumen to display a shortcut in the desktop or start menu, the client should be able to see it now.
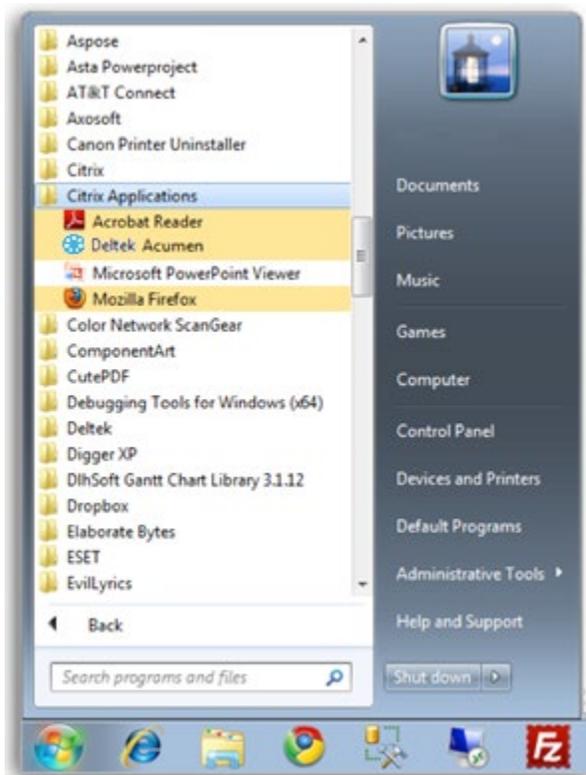
Note: Instruct users to allows access to local resources if they are prompted by the Citrix plug-in while using Acumen.

2. After the application is running, navigate to the Application Menu and click **Open** to see if you have access to the local folders.
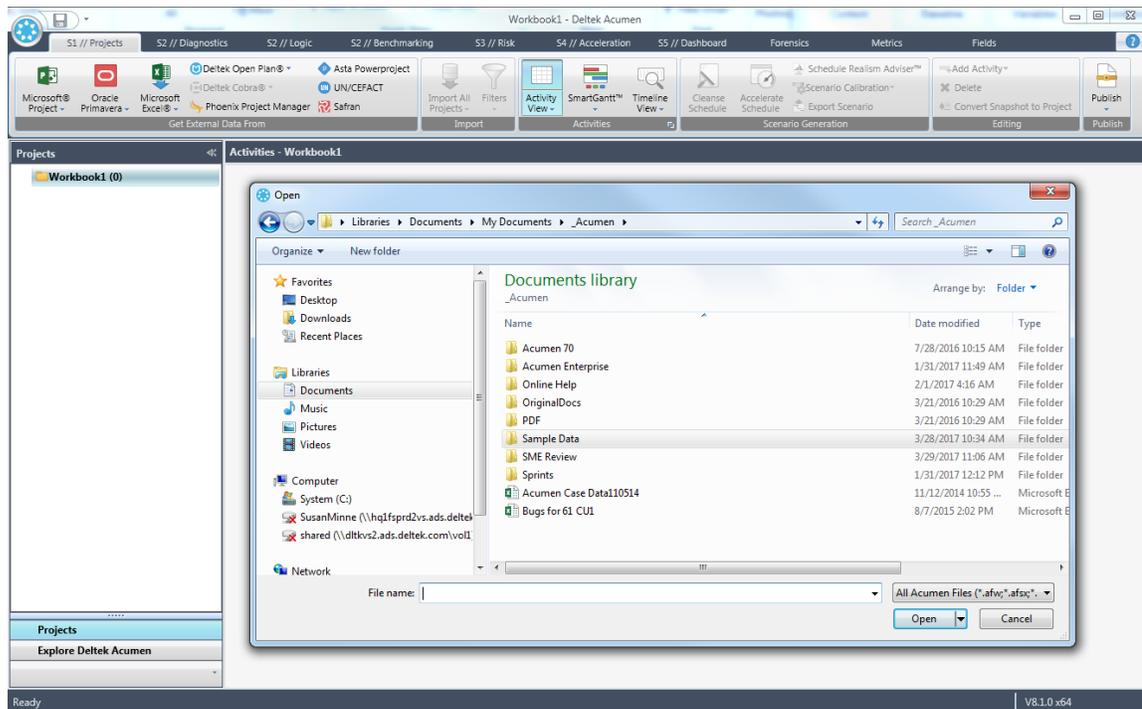
Your clients should now be able to run Acumen.

Troubleshooting

Multi-Monitor Client Issues (XenApp Server 4.5 or 5.0)

Review the following KB article if you are experiencing issues with multi-monitor configurations:
http://support.citrix.com/article/CTX115637.

Screen Flickering Issues (Windows 2003 Server)

Review the following KB article if you are experiencing screen flickering and your farm server is Windows 2003-based: http://support.microsoft.com/kb/955692/en-us.

Installing Acumen on a Mac Operating System

To install Acumen on a Mac operating system, open Parallels or VMWare into a Windows environment and follow the standard Acumen installation instructions.

For more information, see:

- Installing Acumen for the First Time
- Upgrading from Earlier Versions of Acumen

Publish Metric Results and Definitions to a Database

If you intend to publish Acumen metric results and definitions to a database, you need to have a database and data source configured.

There are different scripts that you need to run, depending on whether you want to create a database to support exporting metric results from the S2 // Diagnostics tab or metric definitions from the Metrics tab.

- Exporting Metric Results from the S2 // Diagnostics Tab: Set Up a Database to Support Exporting Metric Results
- Export Metric Definitions from the Metrics Tab: Set Up a Database to Support Exporting Metric Definitions

Before you begin, verify that you have the supported database platforms installed for the database tier.

> **Note:** For software requirements, see Software Requirements.

Acumen supports the use of an Oracle or SQL Server database. To use a database, you first need to create tables and define a data source. When you configure a database, you should consider:

- Database size
- Transaction log size
- Database permissions

Refer to your Oracle or MS SQL documentation for information on how to create a database.

Database Size

When creating the Acumen database, consider the number of anticipated project elements that will be created in Acumen as well as the number of records the project elements will contain. Generally, each project activity uses 3000-4000 bytes.

Following these rules, a typical 1000-activity project would require approximately 10 MB of disk space, not including database-specific overhead.

Database Permissions

To create and modify project elements in the database, you must have the following permissions on the Acumen tables: SELECT, INSERT, UPDATE, DELETE, and EXECUTE.

It is not necessary to create a separate user account for each Acumen user on the database, nor is it necessary for users to see the database login prompts.

Database Memory Requirements for Typical/Average Use

Information about the memory footprint of the product can be helpful when sizing a client tier that runs in a virtual environment, Citrix, or Terminal Server.

For Acumen, the database instance memory should be 10% - 15% of the database size. For example, if database size is expected to be 500GB then allocate 50 GB-75 GB memory. This is in addition to any memory needed for the operating system and other applications that may run in parallel with Acumen.

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.

For the Acumen Database tier, the recommended minimum hardware requirements for an Acumen deployment in a client / server environment are as follows:

- Quad-core 2.0+ GHz or faster CPU
- 8+ GB physical memory

This is for a small client/server Installation of between one and 25 concurrent users.

Set Up a Database to Support Exporting Metric Results

Use these procedures to set up an Oracle or SQL Server database to use when you export metric results from the S2 // Diagnostics tab to a database.

The Acumen installer provides batch files to assist with the creation of a new Acumen database. The batch files are saved in **C:\Program Files (x86)\Deltek\Acumen\Database\Metric Results** and are database-specific.

Before you begin, confirm that you have created a database to store the Acumen tables. Acumen tables can be installed into the same database with Open Plan, Cobra, and PM Compass. The installations apply schema changes (tables, views, stored procedures, and so on) to your existing database in order to support the integration.

> **Important:** Acumen tables <u>cannot</u> be installed in an existing Deltek database that has wInsight installed.

> **Note:** Acumen supports Oracle and SQL Server databases through an OLEDB 2.1 compliant provider.
>
> You must run the scripts in the Acumen database that you created. The scripts for creating tables on Oracle and SQL Server default to a Unicode installation. You may edit the scripts to create non-unicode tables. See the scripts for instructions on changing the Unicode table options.
>
> The Oracle scripts include support for specifying the tablespaces for tables and indexes. See the Oracle scripts for instructions on changing the tablespaces that are used when creating tables and indexes.

Create an MS SQL Server Database

The scripts mentioned in this procedure only create the Acumen schema. Your Database Administrator (DBA) should have already created the necessary database and tablespaces that will contain the Acumen objects (user, tables, indexes, and stored procedures) and Acumen database user that will be used to access them. You can check this using SQL Management Studio or an equivalent tool.

By default, the scripts and batch file discussed in this section are located in **C:\Program Files (x86)\Deltek\Acumen\Database\Metric Results\MSSQL**.

To create a Microsoft SQL Server database:

1. Connect to the SQL database as the Acumen user.

2. Open and run the **RunAllCreateScripts_SQLServer.bat** script from the Windows Command Line to run all the Acumen scripts to create a database. There are several options to run this batch file, one of which is to use the **[.bat file name] [database name] [server name/instance name] [database user ID] [database password]** parameters.

    For example, `RunAllCreateScripts_SQLServer.bat WINST81 SQLDB\MSSQL2012R2 SA SAPWD`. If you do not enter the user name and password, the script uses **winst** as the default database name and Windows authentication to log on to the database.

    > **Note:** For more information about running the batch file, see Appendix A: Run the "RunAllCreateScripts" Batch File.

    You also have the option to create the database by running the following scripts individually and in sequence (except for the last two scripts which you can run in any order):

    - WST_Tables_SqlServer.sql
    - WST_Upgrade_SqlServer.sql
    - WST_Data_SQLServer.sql
    - WA_Tables_SqlServer.sql
    - WA_Data_SqlServer.sql
    - WA_Procedures_SqlServer.sql

    The .bat file and all scripts should be in the same location. By default, they are saved in **C:\Program Files (x86)\Deltek\Acumen\Database\Metric Results\MSSQL**.

3. If you choose to run the scripts individually, respond to the script prompts as required.

> **Next Step:** To connect to a newly created database in Acumen, you must add an Acumen data source. An Acumen data source has all the connection information that Acumen needs in order to work with a database.
>
> For steps, see Set Up a Data Source for a New SQL Server Database.

Create an Oracle Database

The scripts mentioned in this procedure only create the Acumen schema. Your Database Administrator (DBA) should have already created the necessary database and tablespaces that will contain the Acumen objects (user, tables, indexes, and stored procedures) and Acumen database user that will be used to access them. You can check this using SQL Plus or an equivalent tool.

The Acumen database user requires the CREATE ANY TABLE and CREATE SEQUENCE privileges. These privileges must be applied directly to the database user. It is not sufficient for these privileges to be available through granted roles assigned to the user. You can use the WA_User_Oracle.sql script to grant the said privileges. Deltek recommends that these privileges are granted before executing any of the Acumen scripts.

To create an Oracle database:

1. Connect to the Oracle database as the Acumen user.

2. Open and run the **RunAllCreateScripts_Oracle.bat** script from the Windows Command Line to run all the scripts to create an Oracle database. If you choose to run the .bat file, the

WST_Oracle_CI_Indexes.sql script is run automatically. This script creates CI and regular indexes for the WST tables in wInsight Analytics.

There are several options to run the batch file, one of which is to use the **[.bat file name] [server name/instance name] [database user ID] [database password]** parameters. In addition, if you choose to run the .bat file, the **WST_Oracle_CI_Indexes.sql** script is run automatically. This script creates CI and regular indexes for the WST tables in wInsight Analytics.

For example, `RunAllCreateScripts_Oracle.bat ORADB\ORC1 SA SAPWD`. If you do not enter the user name and password, the script uses winst as the default database name, and winst/winst as the default user name/password.

> **Note:** For more information about running the batch file, see Appendix A: Run the "RunAllCreateScripts" Batch File.

You can also create the database by running the following scripts individually and in sequence (except for the last two scripts, which you can run in any order):

- WST_Tables_Oracle.sql
- WST_Oracle_CI_Indexes.sql
- WST_Upgrade_Oracle.sql
- WST_Data_Oracle.sql
- WA_Tables_Oracle.sql
- WA_Data_Oracle.sql
- WA_Procedures_Oracle.sql

The .bat file and all scripts should be in the same location. By default, these are saved in **C:\Program Files (x86)\Deltek\Acumen\ Database\Metric Results\Oracle**.

3. If you choose to run the scripts individually, respond to the script prompts as required.

> **Next Step:** To connect to a newly created database in Acumen, you must add an Acumen data source. An Acumen data source has all the connection information that Acumen needs in order to work with a database.
>
> For steps, see Set Up a Data Source for a New Oracle Database.

Set Up a Database to Support Exporting Metric Definitions

Use these procedures to set up an Oracle or SQL Server database to use when you export metric definitions from the Metrics tab to a database. The main purpose of this export is to share metric definitions with Acumen Touchstone.

The Acumen installer provides batch files to assist with the creation of a new Acumen database. The batch files are saved in **C:\Program Files (x86)\Deltek\Acumen 8.8\Database\Metric Definitions** and are database-specific.

Before you begin, confirm that you have created a database to store the Acumen tables. Acumen tables can be installed into the same database with Acumen Touchstone, Open Plan, Cobra and PM Compass. The installations apply schema changes (tables, views, stored procedures, and so on) to your existing database in order to support the integration.

> **Note:** Acumen supports Oracle, and SQL Server databases through an OLEDB 2.1 compliant provider.
>
> You must run the scripts in the Acumen database that you created. The scripts for creating tables on Oracle and SQL Server default to a Unicode installation. You may edit the scripts to create non-unicode tables. See the scripts for instructions on changing the Unicode table options.
>
> The Oracle scripts include support for specifying the tablespaces or tables and indexes. See the Oracle scripts for instructions on changing the tablespaces that are used when creating tables and indexes.

Create an Oracle or MS SQL Server Database

To set up the database:

1. Navigate to your Acumen installation folder and locate the **Database** folder.

2. Open the subfolder that matches the type of database you want to set up: **Oracle** or **MSSQL**.

3. Select the scripts to run based on whether you are using Oracle or SQL Server.

   Oracle: If you are using Oracle, run the following scripts located in the Oracle subfolder:

   - WST_Tables_Oracle.sql
   - WST_Oracle_CI_Indexes.sql
   - WST_Upgrade_Oracle.sql
   - WST_Data_Oracle.sql
   - Metric_Tables_Oracle.sql
   - Metric_Upgrade_Oracle.sql

   SQL Server: If using SQL Server, run the following scripts located in the SQL Server subfolder:

   - WST_Tables_SqlServer.sql
   - WST_Upgrade_SqlServer.sql
   - WST_Data_SQLServer.sql
   - Metric_Tables_SQLServer.sql
   - Metric_Upgrade_SQLServer.sql

> **Next Step:** To connect to a newly created database in Acumen, you must add an Acumen data source. An Acumen data source has all the connection information that Acumen needs in order to work with a database.
>
> For steps, see *Set Up a Data Source for a New Database* below.

Set Up a Data Source for a New Database

To connect to a newly created database in Acumen, you must add an Acumen data source. An Acumen data source has all the connection information that Acumen needs in order to work with a database.

Acumen stores information about how to connect to a data source in a file called **datasource.dat**. Other Deltek products, such as Open Plan and Cobra, also use the **datasources.dat** file. If you have another

Deltek product installed that uses a database, you can share the data source information by pointing Acumen to an existing **datasource.dat** file; otherwise, you will need to create one.

For steps to set up a data source, see one of the following topics:

- [Set Up a Data Source for a New Oracle Database](#)
- [Set Up a Data Source for a New SQL Server Database](#)

## Set Up a Data Source for a New Oracle Database

Use the procedure in this section to set up an Acumen data source for a new Oracle database.

For Oracle, you can either set up an account (user name and password) that automatically restricts access to a specific schema, or use a general account and specify the schema name in the Edit Data Source dialog box.

**To set up an Acumen data source for a new Oracle database:**

1. Launch Acumen.

2. Click **File** ✦ **» Deltek Acumen Options**.

3. On the Platforms (Deltek) page, click **Manage Data Sources**.

   Acumen asks you to either point to an existing **datasources.dat** file or to point to a folder where you want to create a **datasources.dat** file. Make sure that you have rights to create a file in the location you choose.
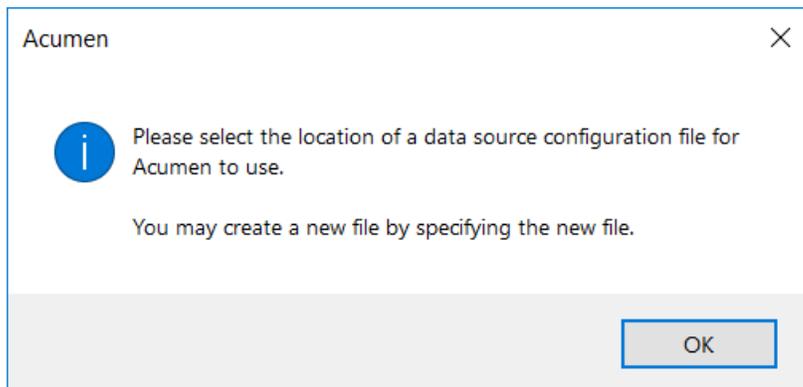
4. Click **OK**.

   The Data Sources dialog box displays. If you are creating a new file, it will be empty. If you pointed to an existing file, the dialog box lists the data sources.

5. Click **Add**.

6. On the Provider tab of the Data Link Properties dialog box, select the appropriate database provider from the list and click **Next**.

> **Note:** Acumen supports the Microsoft OLE DB provider for Oracle and the Oracle Provider for OLE DB. Acumen does not support the Microsoft OLEDB Provider for ODBC Drivers.

7. On the Connection tab, enter the Server Name and a valid user name and password for the database.

8. Click **Test Connection**.

9. When a message displays indicating that the connection tested successfully, click OK.

10. Click **OK** on the Connection tab of the Data Link Properties dialog box.

11. On the Edit Data Sources dialog box:

   ▪ Enter a **Name** for the Acumen data source.

   ▪ Enter the **Database Name (Schema)**. Acumen uses the **Database Name (Schema)** field to identify the source. Leave this field blank if you are not using schemas or Microsoft Access.

   ▪ The scripts for creating tables default to a Unicode installation. If the Acumen tables were created as non-Unicode, clear the **Database is Unicode** option.

12. Click **OK**. The new data source is added to the list on the Data Sources dialog box.

13. Select the new data source, and click **OK** to return to the Deltek Acumen Options dialog box.

Set Up a Data Source for a New SQL Server Database

Use the procedure in this section to set up an Acumen data source for a new SQL database.

**To set up an Acumen data source for a new SQL Server database:**

1. Launch Acumen.

2. Click **File** **» Deltek Acumen Options**.

3. On the Platforms (Deltek) page, click **Manage Data Sources**.

    Acumen asks you to either point to an existing **datasources.dat** file or to point to a folder where you want to create a **datasources.dat** file. Make sure that you have rights to create a file in the location you choose.
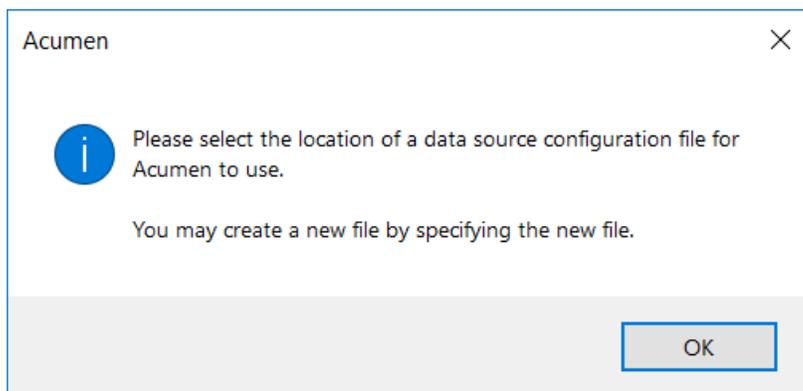
4. Click **OK**.

    The Data Sources dialog box displays. If you are creating a new file, it will be empty. If you pointed to an existing file, the dialog box lists the data sources.

5. Click **Add**.

6. On the Provider tab of the Data Link Properties dialog box, select the appropriate database provider from the list.

> **Note:** Acumen supports the Microsoft OLE DB Provider for SQL Server and the SQL Server Native Client. Acumen does not support the Microsoft OLE DB Provider for ODBC Drivers.

7. Click **Next**.

8. On the Connection tab, enter the following information:

   - **Server Name:** Select or enter the appropriate server name.

   - **Information to log on to the server:** Select whether to use Windows NT Integrated Security or to use a specific user name and password. If you elect to use a specific User name and Password, enter a valid user name and password for your database.

   - **Blank password:** Select this option only if your user name does not have an associated password.

   - **Allow saving password:** Always select this option. Both the user name and password are encrypted and the information is stored in the Datasources.dat file along with the connection properties. If this option is not selected, the users are prompted to log into the database each time they launch Acumen and they may encounter database errors.

   - **Select the database on the server:** Select the appropriate database to use on the server by default. This name is used to identify the data source in the Data Sources dialog box.

   - **Attach a database file as a database name:** Select this option if you want to attach a database file directly.

> **Note:** If you want to save your user name and password, select the **Allow saving Password** option.

9. Click **Test Connection**.

10. When a message displays indicating that the connection tested successfully, click **OK**.

11. Click **OK** on the Connection tab of the Data Link Properties dialog box.

12. On the Edit Data Source dialog box:

   ▪ Enter a name for the Acumen data source.

   ▪ If you selected a database name on the Connection tab of the Data Link Properties dialog box, leave the **Database Name (Schema)** field blank if you are not using schemas.

   ▪ The scripts for creating tables default to a Unicode installation. If the Acumen tables were created as non-Unicode, clear the **Database is Unicode** option.

13. Click **OK**. The new data source is added to the list on the Data Sources dialog box.

14. Select the new data source, and click **OK** to return to the Deltek Acumen Options dialog box.

Troubleshooting

SQL Server Connection Errors

▪ **Microsoft OLE DB Provider:** If your database server requires a secure connection, and you are using the default Microsoft OLE DB provider for SQL Server, you may see the following error when you log into Acumen:

> ❌ [DBNETLIB][ConnectionOpen (SECCreateCredentials())].]SSL Security error.

In order to resolve the issue, install the SQL Server Native Client and then follow the steps below.

▪ **SQL Server Native Client**: When you use SQL Server Native Client and specify a database username and password, you may see the following error when you log into Acumen:

> ⚠️ Login failed. Catalog information cannot be retrieved.

You must complete the steps below in order to get the data source to remember the password.

**To resolve the SQL Server connection errors:**

> **Note:** You will need to complete these steps any time you create or edit the properties in the Data Link Properties dialog box for the SQL Server Native Client.

1. In Acumen, click **File » Properties » Data Sources**.

2. Select the data source and click **Edit**.

3. Click Data Link Properties.

4. On the Provide tab, select **SQL Server Native Client <version>** and click **Next**.

   The Microsoft ODBC driver is not supported and does not display in this list.
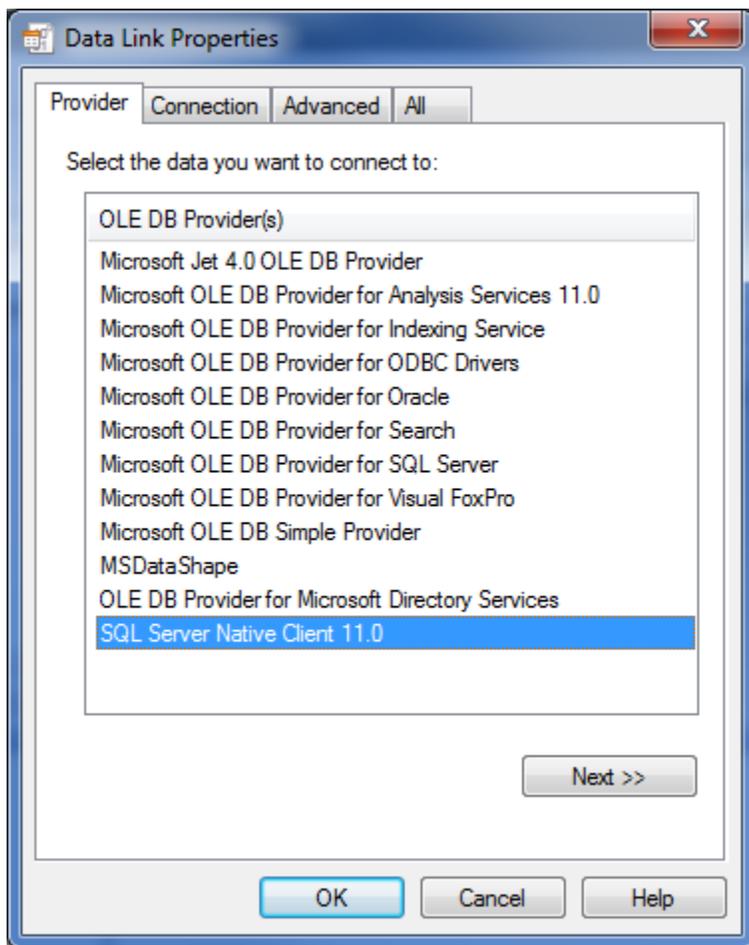
5. On the Connection tab:

    a. Select or enter a server name.

    b. Enter your SQL Server username and password. To enter the password, you will need to clear **Blank Password** and select **Allow saving password**.

    c. Select the database.
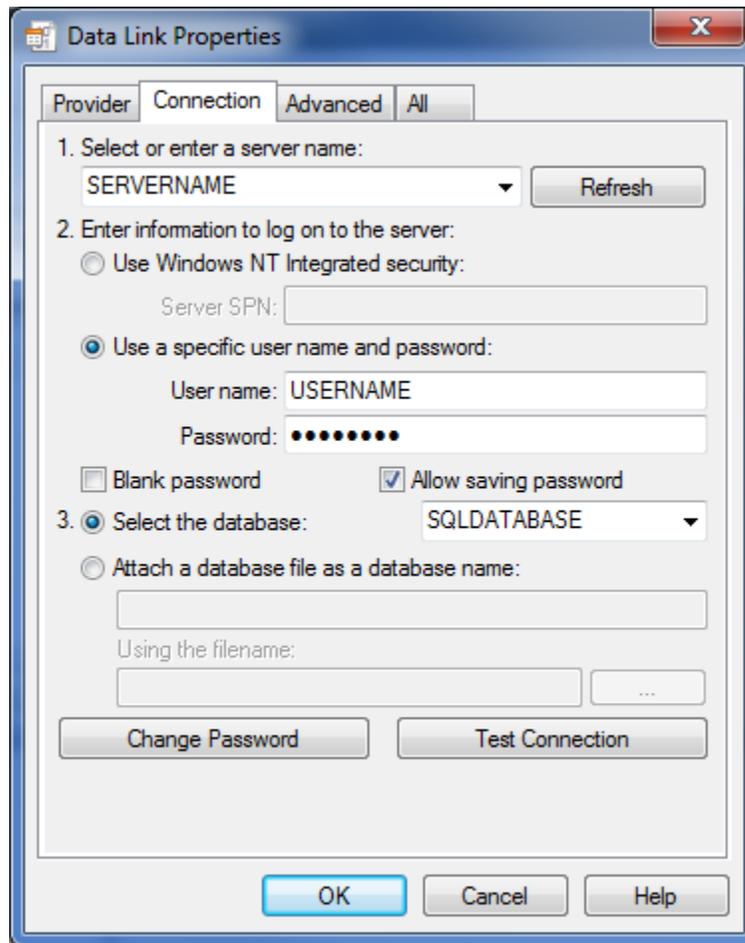
6. On the All tab, scroll down to **Persist Security Info**.

7. Double click the option and select **True** in the **Property Value** field.
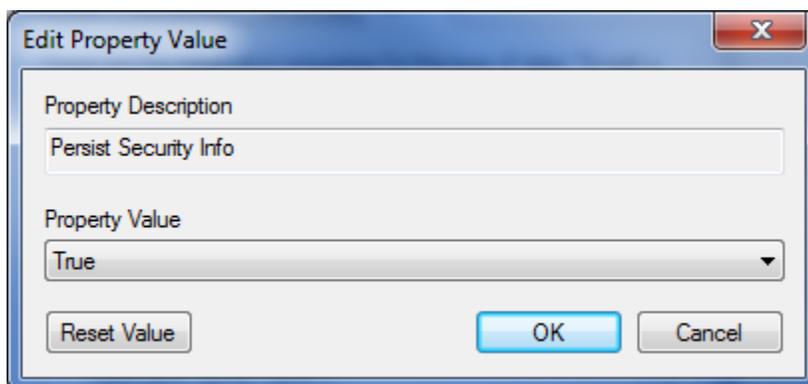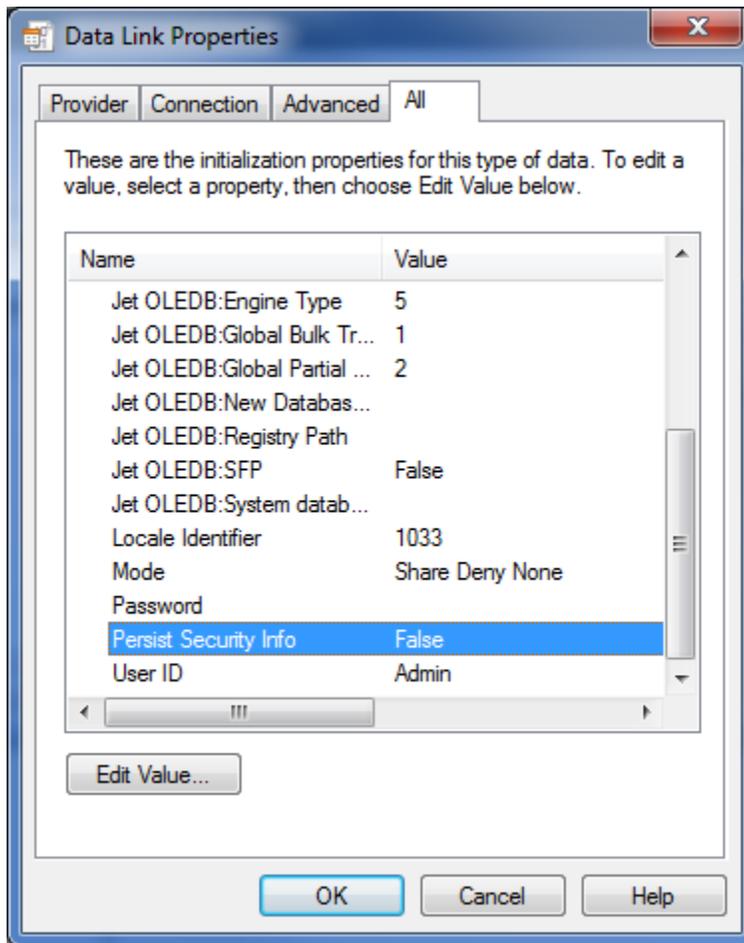
8. Click **OK** to close to the property dialog box.

9. Click **OK** to close the Data Link Properties dialog box.

Appendix A: Run the "RunAllCreateScripts" Batch File

When you create a new database, you have the option to run the scripts manually or you can automatically run the scripts using the **RunAllCreateScriptsSQLServer.bat** (for SQL) or **RunAllCreateScriptsOracle.bat** (for Oracle) file from the Windows command line. The .bat file automatically runs the following scripts (in this order):

Oracle Scripts	SQL Scripts
When you run the Oracle .bat file, the **WST_Oracle_CI_Indexes.sql** script is also automatically run. This script creates CI and regular indexes for the WST tables in Acumen. ▪ WST_Tables_Oracle.sql ▪ WST_Oracle_CI_Indexes.sql ▪ WST_Upgrade_Oracle.sql ▪ WST_Data_Oracle.sql ▪ WA_Tables_Oracle.sql ▪ WA_Data_Oracle.sql ▪ WA_Procedures_Oracle.sql	▪ WST_Tables_SqlServer.sql ▪ WST_Upgrade_SqlServer.sql ▪ WST_Data_SQLServer.sql ▪ WA_Tables_SqlServer.sql ▪ WA_Data_SqlServer.sql ▪ WA_Procedures_SqlServer.sql

The following table describes several ways to run the **RunAllCreateScripts_SQLServer.bat** and **RunAllCreateScripts_Oracle.bat** files.

> **Note:** If you manually ran the above scripts when you created the database, you do not need to run the RunAllCreateScripts batch file.

> **Additional note:** After running the scripts and installation is complete, update the database table statistics.

Method	Description	Example

Run the batch file with no parameters	This method runs the scripts against the default **winst** database.	`C:\<installation location>\RunAllCreateScripts_SqlServer.bat`
		
		`C:\<installation location>\RunAllCreateScripts_Oracle.bat ORADB\ORC1`
		
		For Oracle, you need to include the server name\instance name.

Method	Description	Example

Run the batch file with the **[database name] [server name]** parameters	This method uses Windows authentication to log on to the database server. You could use this to set up a database named **winst** or a custom database.	`C:\<installation location>\RunAllCreateScripts_SqlServer.bat WINST SQLDB`
		
		`C:\<installation location>\RunAllCreateScripts_Oracle.bat WINST ORADB\ORC1`

Run the batch file with the **[database name] [server name/instance name] [database user ID] [database password]** parameters	This uses the SQL Server Authentication or Authentication by Oracle Database to log on to the database server. You can use this method to set up a database named **winst** or a custom database.
	
	■ If you are using SQL authentication for the connection, you must have created and associated users with the database with appropriate rights to create and update the tables.
	
	■ For SQL, if you do not enter the user name and password, the script uses **winst** as the default database name and Windows authentication to log on to the database.
	
	■ For Oracle, if you do not enter the user name and password, the script uses **winst** as the default database name, and **winst**/**winst** as the default user name/password.
		`C:\<installation location>\RunAllCreateScripts_SqlServer.bat WINST SQLDB\MSSQL2012R2 SA SAPWD`
		
		`C:\<installation location>\RunAllCreateScripts_Oracle.bat ORADB\ORC1 SA SAPWD`
		
		Note: Oracle only users three parameters.

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