Deltek Cobra® 8.3

Installation Guide

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Overview

Welcome to Cobra, Deltek's Earned Value Management (EVM) solution. This installation guide will help you successfully install Cobra on your system and make it work efficiently according to your organization's business structure.

Adding Custom Notes to This Guide

If you would like to add custom notes to this guide that are specific to your company, Adobe® Reader® X provides this ability. If you do not already use Adobe Reader X, you can download it here free from Adobe.

To add a custom note using Adobe Reader X:

1. On the Reader toolbar, click **Comment** at the far right.

2. In the **Annotations** pane that displays, click **Sticky Note**. The cursor changes to match the button.

3. Position the cursor at the location in the guide where you want the note to appear, and click. A note icon is inserted at the location and a text box pops up.

4. Enter your information in the text box.

5. Continue adding notes as needed.

6. Save the document.

> **Note:** Deltek recommends that you save the document to a slightly different filename so as to keep the original from being overwritten.

When reading the document, cursor over a note icon to see the information. Double-click a note icon to edit the information.

Downloading Deltek Products using Deltek Software Manager

You can use Deltek Software Manager (DSM) to download complete Deltek products, hot fixes, 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.

   Options include:

   - **Complete**
   - **Cumulative Updates**
   - **HotFixes**
   - **Sub-Release**

8. In the table, select the check box 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.

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.

Getting Started

You should answer the following questions before installing Cobra:

- Are you upgrading from an earlier version of Cobra? See Upgrade from any version of Cobra to learn how to upgrade your Cobra installation.

- How many concurrent users do you expect to use Cobra? If you have fewer than four Cobra users, you can use the free Express Edition of the Microsoft SQL Server version that Cobra supports. Install Cobra on your server and/or workstations.

- Which installation model should you use? See Installation Models to learn more about which installation model is appropriate for your firm.

- Do your client workstations and servers meet hardware and software requirements? See System Requirements for more information on the hardware and software requirements.

- Are you using Oracle or Microsoft SQL as your database platform? Cobra can run on either platform. See Establish a Database.

- Does your technical staff need additional training on Microsoft Windows Server, Microsoft SQL Server, or Oracle?

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

- Logical Tiers

- Installation/Deployment Models

- Hardware and Software Requirements

Logical Tiers

Cobra uses a multitier (n-tier) architecture. Various parts of the Cobra application are distributed to logical tiers for performance and scalability. The logical tiers are as follows:

- **Client Tier**: This is Cobra's user interface layer. It presents input data to the application tier and displays the returned result in a format that you can understand. The client tier can be a workstation or a Citrix/Terminal Server.

- **Application Tier**: This tier performs Cobra's functional process logic. After a request is presented by the client tier, this tier processes that request (such as retrieving stored data or performing a specific function) and then returns the result to the client tier. The application tier can be a workstation (when running in Stand-Alone or Client/Server mode) or the n-tier server (when running in n-tier mode).

- **Database Tier**: This tier consists of database servers where the Cobra data is stored and retrieved.

Installation Models

When you install Cobra, you are prompted to select an installation model. Each model is described in the following sections.

Stand-Alone

The stand-alone model is designed for a single-user setup. The client, application, and database tiers all reside on the same machine. There are instances where the stand-alone setup is the appropriate installation method when installing Cobra on a Citrix environment.

> **Note:** See Run Cobra from a Citrix/Terminal Server for more information.

This diagram contains the logical tiers and technologies utilized at each tier of a Deltek Cobra Stand Alone model. Logical tiers do not necessarily require a separate physical server for each tier.

Client Tier

Database Tier

Citrix/Terminal Server
(Client Tier)
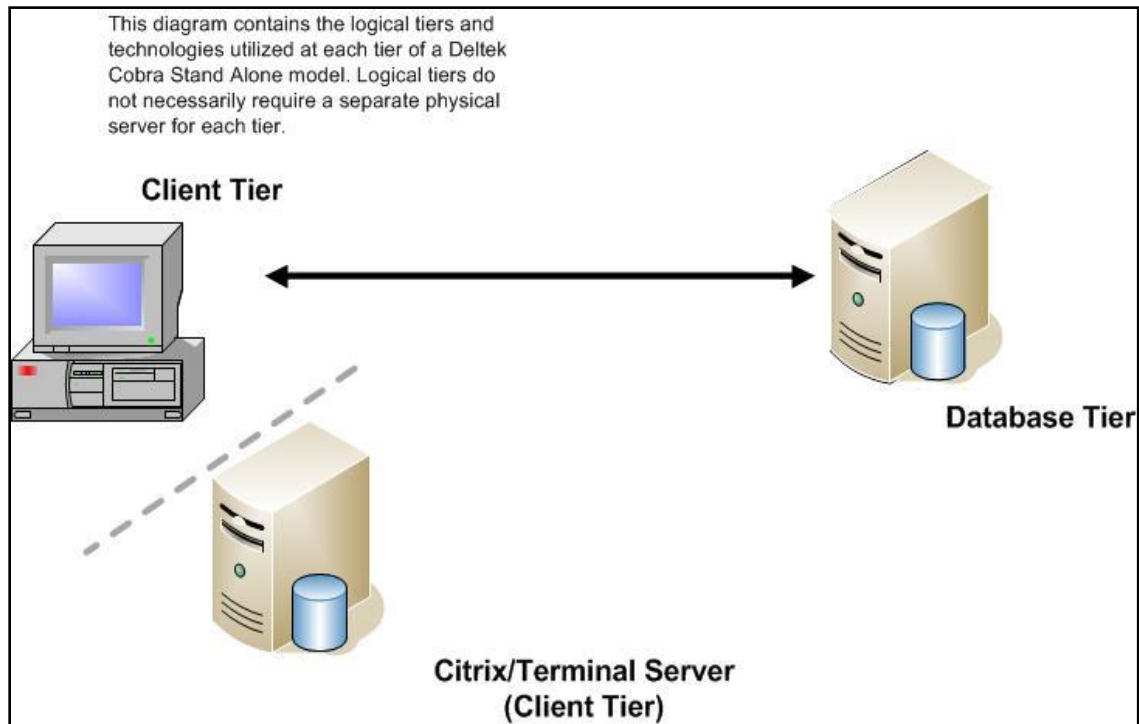
Client/Server (Deployment Server)

In the client/server model, you install the client and application tiers on workstations that directly connect to a database server. However, when a client workstation that is connected to the database goes through a router or a firewall, this type of setup often yields poor performance. This model is designed for a distributed system that does not have a dedicated server for the application tier, for installing the client and database in a "black box" or secure area, or for deploying Cobra on a Citrix environment.

> **Note:** See Run Cobra from a Citrix/Terminal Server for more information.
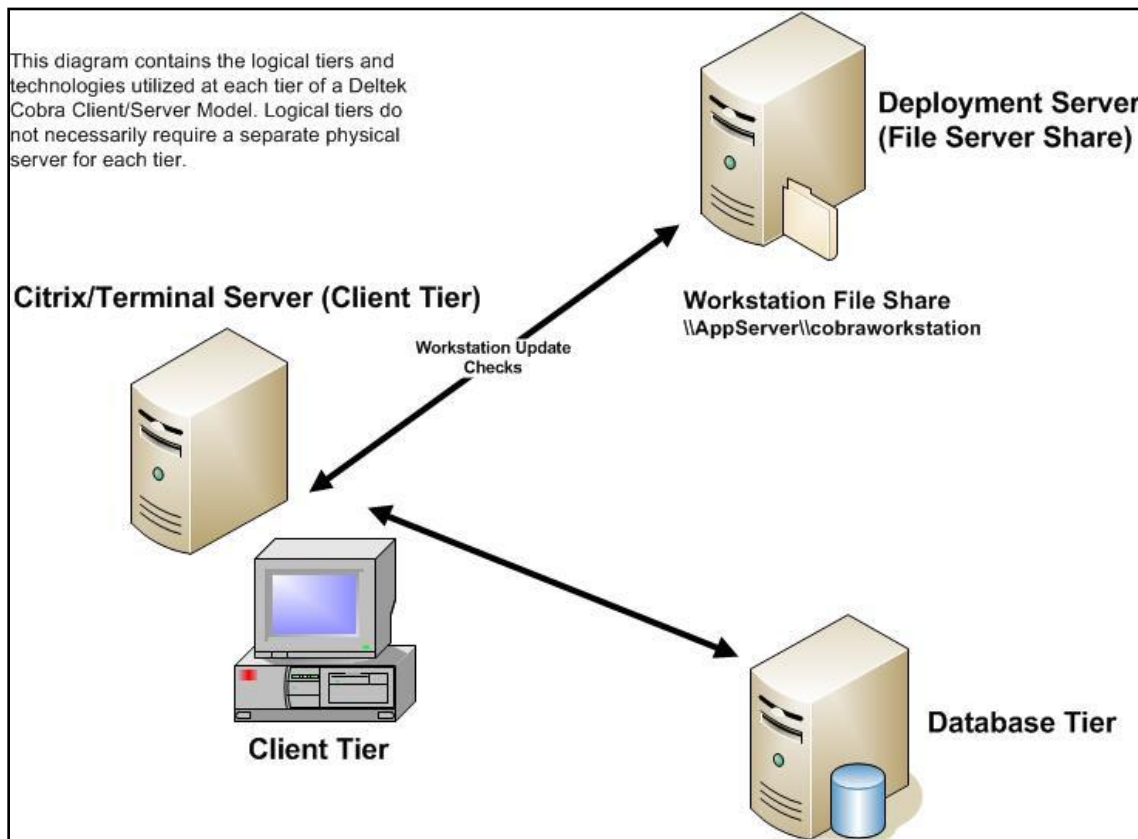
Figure 3 shows how a deployment server functions in a client/server tier model. The deployment server is appropriate if you have multiple users who use Cobra in client/server mode. The deployment server is the server where the first installation is performed. After you run the installation on this server, you can install Cobra on subsequent client workstations from this machine.

N-Tier Application Server

The n-tier application server model is designed for multi-user implementations. It provides quick access to Cobra via LAN or internal WAN. With this model, users can also remotely connect to Cobra across the Internet via VPN connection into the corporate network. Load balancing can also be implemented in this model for large-scale implementations (see Load Balancing). You can also use this model when deploying Cobra on a Citrix environment (see Run Cobra from a Citrix/Terminal Server).See Benefits of Using N-Tier for more information about the n-tier architecture.
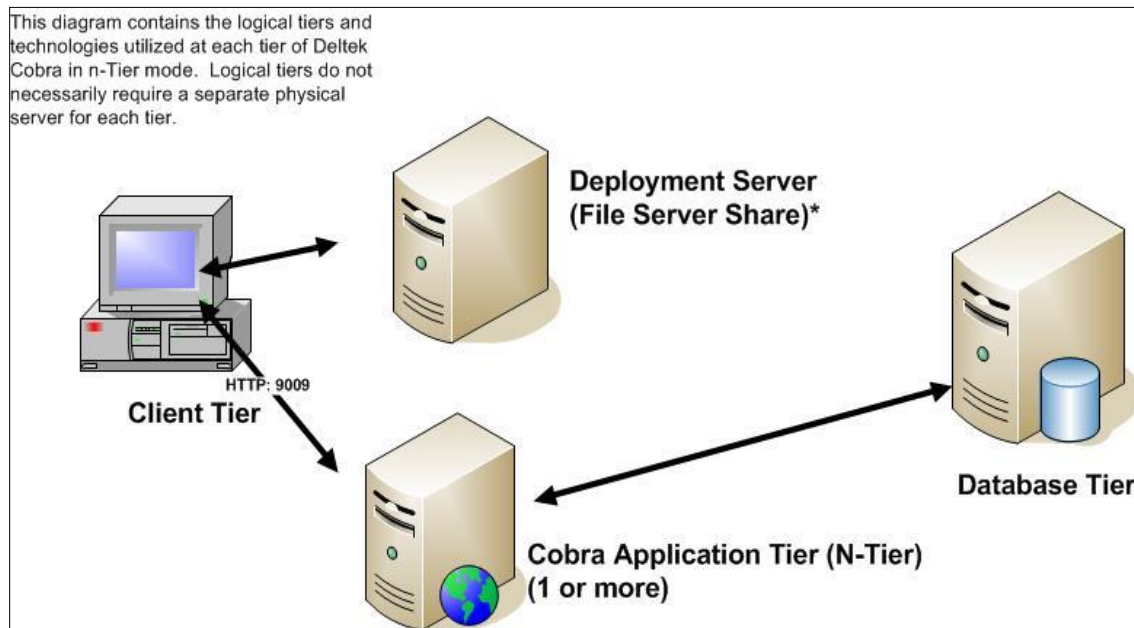
Benefits of Using N-Tier

In an n-tier setup, the application server is the one that communicates with the database server. This makes the client a dedicated request input and result output device, which lightens its workload so that its processing power can be used for other system applications.

- **Enhanced performance and scalability:** An n-tier application distributes its tiers among three or more separate computers. In this setup, the client tier is installed on user workstations, the application tier resides on a more centralized computer, and the database tier is on a computer that manages data storage. Having each tier on a separate machine enhances performance and scalability because each tier runs on a dedicated machine.

- **Load balancing**: Load balancing distributes the processing workload between two or more application servers. This optimizes the use of your resources and minimizes the response time of requested tasks. See Load Balancing to learn how to configure Cobra for load balancing.

- **Automatic client updating**: When an update to Cobra is available, you update only the application server. When a client accesses an updated application server, the updates are automatically applied to the client.

Load Balancing

Configure load balancing according to your vendor's (for example, Microsoft Windows Server) recommendations. Make sure to set the affinity to Single or Sticky (terminology depends on the vendor).

This ensures that user sessions are maintained on the same server as long as a user remains logged on. The default port that needs to be load balanced is 9009.

> **Note:** For load balancing to work, you must perform these updates before running any workstation/client installations.
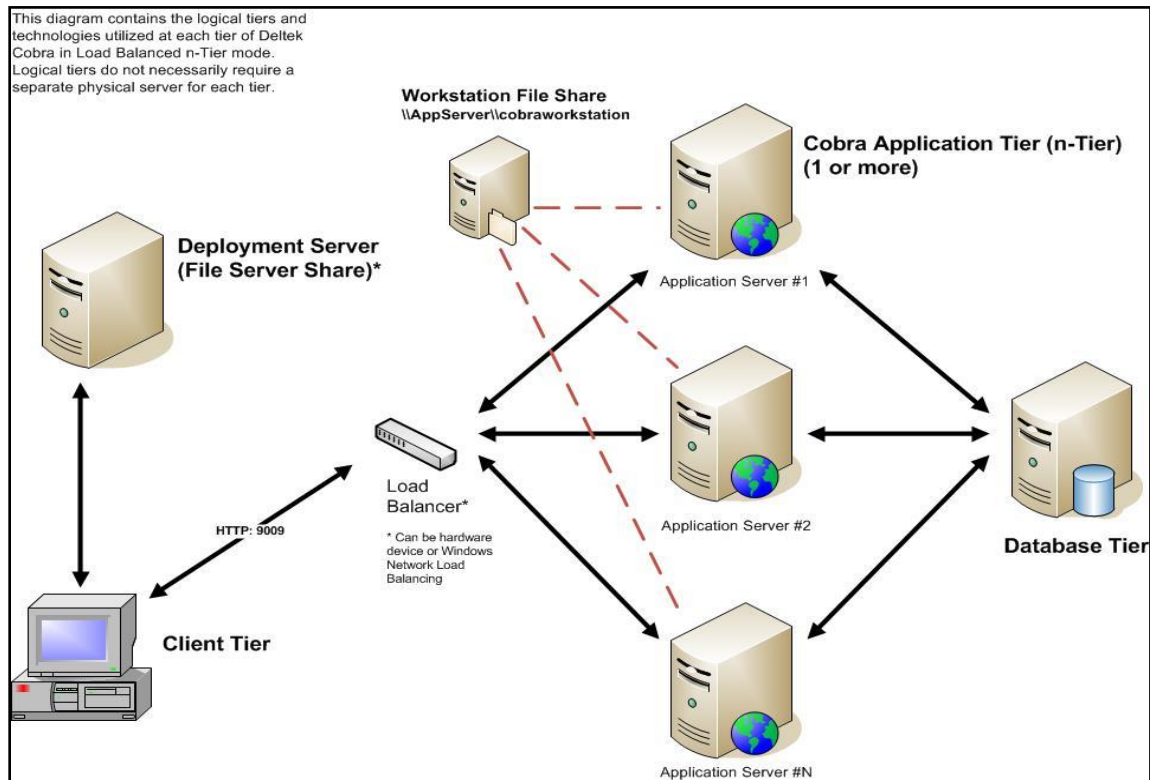
Unsupported Scenarios

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

- Domain Controller
- Microsoft Exchange Server
- Proxy, Firewall, or ISA Server
- Microsoft SharePoint Portal Server
- Small Business/Essential Business Server

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

System Requirements

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

> **Note:** Although hardware and software requirements vary from one Cobra implementation to another, Deltek does provide some general recommendations. The *Cobra Technical Overview and System Requirements* document is available on the Deltek Support Center.

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's product development makes extensive use of cloud and virtualized environments.

Support of Virtual Environments

Deltek supports customers who run its products on any of the supported native operating systems (whereby "native operating systems" means any operating system specified in the *Deltek Product Support Compatibility Matrix* available on the Deltek Customer Care Connect site), irrespective of whether or not 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 conditions apply to those Deltek customers who experience issues with the Deltek software while using such products inside cloud and/or virtual environments:

- Deltek customers will not be required to recreate and troubleshoot every issue in a non-cloud or non-virtualized environment.

- Deltek may request its customers to diagnose issues in a native certified operating system environment without the use of virtualization and/or within a non-cloud based environment. Deltek will only make this request when there is reason to believe that the cloud or virtual environment is a contributing factor to the issue.

- Software problems will only be fixed if they can be replicated in a dedicated local hardware and operating system environment without the use of virtualization.

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

Performance

The use of cloud-based environment and/or virtualization software adds software overhead which may impact performance or scalability of all Deltek software products. The 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.

Display Settings

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

Run Cobra from a Citrix/Terminal Server

You can install Cobra on a Citrix/Terminal Server under any of the three deployment models depending on how users will access Cobra.

> **Note:** See Installation Models for more information.

If users will run Cobra primarily via a Citrix/Terminal Server and you do not need to install Cobra on a lot of individual client workstations, it is more appropriate to run a stand-alone installation. In this model, individual client workstation installations can be updated without much effort.

If some users will run Cobra via a Citrix/Terminal Server and many others will access Cobra on their workstations, a client/server (deployment server) or n-tier application server installation is more appropriate to use because the client can be readily updated from the workstation share automatically when the server is updated. When using this type of setup, you treat the Citrix/Terminal Server as a client workstation and you must install Cobra using the **DeltekCobraWorkstation.exe** file from the workstation share. After installing, update the client in the Citrix/Terminal Server immediately after the application server (deployment or n-tier application server) is updated.

> **Note:** See Client on a Workstation Installation for more information.

Since there is only one instance of Cobra installed on a Citrix/Terminal Server, updating the Cobra client on this environment must be controlled by a system administrator for maintenance and security purposes. Regular users who access Cobra via the Citrix/Terminal Server cannot install updates because the client resides on the Citrix/Terminal Server and not on their machines.

Hardware Sizing Considerations

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

Memory Requirements for a Typical/Average Use

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

Tier	Memory*
Client Tier	▪ 600 MB
Application Tier	▪ Hardware requirements for n-tier deployment
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.

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

Definition of Typical/Average Use

A typical Cobra user consumed approximately 600 MB in one session where at least 20 processes (such as Advance Calendar, Recalc, Rolling Wave, and Reclass) were run against a medium-sized project.

Sample Project Details

Project: Learn Cobra	
Number of Control Accounts	671
Number of Work of Packages	5,544
Number of COSTELEM Records	76,897
Number of Time-Phased Records	1,026,540
Number of Processes	20

Hardware Requirements

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

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

Stand-Alone Deployment

The following table lists the recommended minimum hardware requirements for a deployment of Deltek Cobra in a stand-alone, workstation environment.

Tier	Hardware Required	Determining Factors
Client Tier	▪ Intel 2.0 GHz or higher ▪ 2 GB RAM ▪ 40 GB Hard Drive ▪ 100 MB Network Card	▪ Usage ▪ Integration Requirements

Client/Server Deployment

In the client/server model, you install the client and application tiers on workstations that directly connect to a database server. However, when a client workstation that is connected to the database goes through a router or a firewall, this type of setup often yields poor performance. This model is designed for a distributed system that does not have a dedicated server for the application tier, for installing the client and database in a "black box" or secure area, or for deploying Cobra on a Citrix environment.

The following table lists the recommended minimum hardware requirements for a deployment of Deltek Cobra in a client/server environment.

Tier	Hardware Required	Determining Factors
Database Tier	**Server Class Machine** ▪ 1–2 x Quad-core 2.5 GHz or faster CPU ▪ 8+ GB Physical Memory ▪ RAID 5 Disk array	▪ Database Size ▪ Database Growth ▪ Usage
Deployment Server (File Server Share for client updating)	**Server Class Machine** ▪ 1–2 x Quad-core 2.5 GHz or faster CPU ▪ 8+ GB Physical Memory ▪ RAID 1 Disk array	▪ Total Users ▪ Power Users ▪ User Location ▪ Integration Requirements

N-Tier Deployment

Sizing for the n-tier deployment model is described in the following sections.

N-Tier Installation for 1 to 25 Concurrent Users

Tier	Hardware Required	Determining Factors
Database Tier	**Server Class Machine** ▪ Quad-core 2.8 GHz or faster CPU ▪ 8+ GB Physical memory ▪ 100 GB Hard drive ▪ RAID 5 Disk array ▪ 100 MB Network card	▪ Database Size ▪ Database Growth
Application Tier	**Server Class Machine** ▪ Quad-core 2.0 GHz or faster CPU ▪ 8 GB Physical memory ▪ 200 GB Hard drive space ▪ 100 MB Network card	▪ Total Users ▪ Power Users ▪ User Location
Client Tier	**Desktop Class Machine** ▪ Intel 1.8 GHz or faster CPU ▪ Recommend 4 GB Physical memory ▪ 250 MB Hard drive space ▪ 100 MB Network card ▪ Monitor resolution must be at least 1024×768	▪ Applications running in client machine

N-Tier Installation for 25 to 50 Concurrent Users

Tier	Hardware Required	Determining Factors
Database Tier	**Server Class Machine** ▪ 2 x Quad-core 2.8 GHz or faster CPU ▪ 8+ GB Physical memory ▪ 100 GB Hard drive ▪ RAID 5 Disk array ▪ 100 MB Network card	▪ Database Size ▪ Database Growth

Tier	Hardware Required	Determining Factors
Application Tier	**Server Class Machine** ▪ 2 x Quad-core 2.5 GHz or faster CPU ▪ 12 GB Physical memory ▪ 200 GB Hard drive space ▪ 100 MB Network card	▪ Total Users ▪ Power Users ▪ User Location
Client Tier	**Desktop Class Machine** ▪ Intel 1.8 GHz or faster CPU ▪ Recommend 4 GB Physical memory ▪ 250 MB Hard drive space ▪ 100 MB Network card ▪ Monitor resolution must be at least 1024×768	▪ Applications running in client machine

N-Tier Installation for 50+ Concurrent Users

Tier	Hardware Required	Determining Factors
Database Tier	**Server Class Machine** ▪ 2 x Quad-core 2.8 GHz or faster CPU ▪ 8+ GB Physical memory ▪ 100 GB Hard drive ▪ RAID 5 Disk array ▪ 100 MB Network card	▪ Database Size ▪ Database Growth
Application Tier	**Two Load-Balanced Server Class Machine** ▪ 2 x Quad-core 2.5 GHz or faster CPU ▪ 16 GB Physical memory ▪ 200 GB Hard drive space ▪ 100 MB Network card	▪ Total Users ▪ Power Users ▪ User Location
Client Tier	**Desktop Class Machine** ▪ Intel 1.8 GHz or faster CPU ▪ Recommend 4 GB Physical memory ▪ 250 MB Hard drive space ▪ 100 MB Network card	▪ Applications running in client machine

Tier	Hardware Required	Determining Factors
	▪ Monitor resolution must be at least 1024×768	

Concurrency Feature System Requirements

The table below displays the recommended system requirements to implement concurrency in your environment depending on your setup.

> **Attention:** For more information on the Concurrency feature, see the Concurrency in Cobra topic in the Cobra Help System.

Cobra Process Server

Cobra Web Services Instance	Hardware Required
No Cobra Web Service	▪ Intel 2.0 GHz ▪ 4 GB Physical memory
1 to 3 Instances	▪ 1-2 x Quad-core 2.6 GHz or faster CPU ▪ 8+ GB Physical memory
4 to 5 Instances	▪ 2 x Quad-core 2.6 GHz or faster CPU ▪ 12+ GB Physical memory

Cobra Web Service on Remote Machines

Dedicated Machine

Cobra Web Services Instance	Hardware Required
1 Instance	▪ 1-2 x Quad-core 2.6 GHz or faster CPU ▪ 4+ GB Physical memory
2 to 3 Instances	▪ 1-2 x Quad-core 2.6 GHz or faster CPU ▪ 8+ GB Physical memory
4 to 5 Instances	▪ 2 x Quad-core 2.6 GHz or faster CPU ▪ 12+ GB Physical memory

On top of an existing PM Compass Process Server

Cobra Web Services Instance	Hardware Required
1 to 2 Instances	▪ 2 x Quad-core 2.8 GHz or faster CPU ▪ 12+ GB Physical memory
3 to 4 Instances	▪ 2 x Quad-core 3.0 GHz or faster CPU ▪ 16+ GB Physical Memory

> **Note:** The PM Compass Process Server requires a 2.8 GHz Quad-core processor and an 8+ GB Physical memory.

Software Requirements

The table below displays the supported technologies used to deploy Cobra.

> **Note:** Supported versions are the currently actively tested versions of technologies used to deploy Cobra. These technologies are not embedded or directly supported by Deltek. Changes to these technologies occur at the discretion of the individual technology vendors.
>
> Compatible versions are the recent previously supported and tested technologies used to deploy Cobra. These are not actively being tested but are believed to be compatible with Cobra. 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.
>
> For a full explanation of compatible versus supported versions, see the *Deltek Product Support Compatibility Matrix* document that you can download from the Deltek Support Center.

Supported Deployment Technology

This table displays the supported deployment technologies.

Supported Deployment Technology	
Operating System	▪ Microsoft Windows 8.1 ▪ Microsoft Windows 10 ▪ Microsoft Windows Server® 2012 R2 ▪ Microsoft Windows Server 2016 ▪ Microsoft Windows Server 2019
Citrix	▪ XenApp® 7.* (Windows Server 2012) ▪ XenApp 7.* (Windows Server 2012 R2) ▪ XenApp 7.* (Windows Server 2016) ▪ Citrix Virtual Apps and Desktop 7.* (Windows Server 2019)

Supported Deployment Technology	
VMWare Horizon	▪ VMWare Horizon 7
Database Platform	**Microsoft SQL Server** ▪ Microsoft SQL Server 2014 ▪ Microsoft SQL Server 2016 ▪ Microsoft SQL Server 2017 ▪ Microsoft SQL Server 2017 is also supported on Linux and Unix ▪ Microsoft SQL Server Express 2014 ▪ Microsoft SQL Server Express 2016 ▪ Microsoft SQL Server Express 2017 **Oracle** ▪ Oracle 11.2 (Oracle Server 11.2.0.4 or later, Oracle Client 11.2.0.4 or later) ▪ Oracle 12.2 ▪ Oracle 18.3 ▪ Oracle 19.3 Oracle is also supported on Linux, Unix, and Exadata
Database Driver	▪ Oracle Provider for OLE DB ▪ MS SQL Server Native Client 11.0 (SQL Server 2012 (11.x)) ▪ MS OLE DB Provider for SQL Server ▪ MS OLE DB Driver for SQL Server **Note:** If you use MS SQL Server Native Client 11.0 or MS OLE DB Driver for SQL Server, see Add/Edit Data Source in the Data Tool. **Note:** Refer to Microsoft Support Matrix for the MS SQL Server Native Client drivers. **Note:** If you encounter errors or warnings related to supported drivers when performing the backup/restore or export/import features of Cobra, it is recommended that you install the latest Microsoft ODBC Driver for SQL Server on all machines that run Cobra. These Cobra features use an OLEDB driver that is part of Windows, and not the same driver selected in the Data Tool's data source connection. For more information, see Download ODBC Driver for SQL Server.

Supported Deployment Technology	
Scheduling Tools	**Microsoft Project Standard** ▪ Microsoft Project Standard 2013 ▪ Microsoft Project Standard 2016 ▪ Microsoft Project Standard 2019 **Microsoft Project Professional** ▪ Microsoft Project Professional 2013 ▪ Microsoft Project Professional 2016 ▪ Microsoft Project Professional 2019 **Microsoft Project Server** ▪ Microsoft Project Server 2013 SP1 ▪ Microsoft Project Server 2016 ▪ Microsoft Project Server 2019
Microsoft Office	▪ Microsoft Excel® 2013 ▪ Microsoft Excel 2016 ▪ Microsoft Excel 2019
Primavera	▪ Primavera® P6 8.4 ▪ Primavera P6 15.2 ▪ Primavera P6 16.2 ▪ Primavera P6 17.12 ▪ Primavera P6 18.8
Deltek Integrated Products	The versions listed below are the minimum supported versions. Subsequent cumulative update (CU) releases within the listed major/minor release will be supported unless otherwise noted in the *Technology No Longer Supported with this Release* table. Subsequent major/minor releases are not supported. **Deltek wInsight** ® ▪ 8.0.2 ▪ 8.1.1 ▪ 8.2 ▪ 8.3 (When wInsight 8.3 is released, check the wInsight 8.3 Compatibility Matrix.) **Deltek Open Plan** ® ▪ 8.0 ▪ 8.1

Supported Deployment Technology	
	▪ 8.2
	▪ 8.3
	▪ 8.4 (When Open Plan 8.4 is released, check the Open Plan 8.4 Compatibility Matrix.)
	Deltek PM Compass ™
	▪ 8.0
	▪ 8.0.1
	▪ 8.1
	Deltek Acumen ®
	▪ 8.0
	▪ 8.1
	▪ 8.2
	▪ 8.3
	▪ 8.4
	▪ 8.5
	▪ 8.6
Embedded Technologies	▪ Microsoft OLE DB Provider for Visual FoxPro 9.0
	▪ Visual C++ 2017 Redistributable Package (x86)
	▪ MSXML 6.0 Service Pack 2 (Microsoft XML Core Services)
.NET Framework	▪ Microsoft .NET Framework 4.5.2
	▪ Microsoft .NET Framework 4.6
	▪ Microsoft .NET Framework 4.6.1
	▪ Microsoft .NET Framework 4.6.2
	▪ Microsoft .NET Framework 4.7
	▪ Microsoft .NET Framework 4.7.1
	▪ Microsoft .NET Framework 4.7.2
Browsers	▪ Internet Explorer 11 ®
	▪ Edge
	▪ Chrome©
	▪ Firefox©

Compatible Deployment Technology

This table displays the compatible deployment technologies.

Compatible Deployment Technology	
Operating System	▪ Windows 7 ▪ Windows Server 2008 R2 (x64) ▪ Windows Server 2012
Citrix	▪ XenApp 6.* (Windows Server 2008 R2) ▪ XenApp 7.* (Windows Server 2008 R2)
Database	▪ Microsoft SQL Server 2012 ▪ Microsoft SQL Server Express 2012
Microsoft Office	▪ Microsoft Excel 2010
Scheduling Tools	▪ Microsoft Project Standard 2010 SP2 ▪ Microsoft Professional Standard 2010 SP2 ▪ Microsoft Project Server 2010
Deltek Integrated Products	▪ wInsight 8.0.1

Open Source Software Included with Cobra

Cobra includes the following open source software:

Software	Company
wwDotNetBridge 6	West Wind Technologies
Open XML SDK (2.0)	Microsoft
Visual C++ Redistributable Package (x86)	Microsoft
Oracle Data Provider for .Net	Oracle

Logical Tier Requirements

The following are brief technical descriptions and requirements for each logical tier:

Tier Name	Description
Client Tier	The client tier can be a workstation or a Citrix/Terminal server. (32-bit or 64-bit/x64) - Windows 10 - Windows 8.1 - XenApp 7.*(Windows Server 2012) - XenApp 7.* (Windows Server 2012 R2) - XenApp 7.* (Windows Server 2016) - Citrix Virtual Apps and Desktop 7.* (Windows Server 2019)
Application Tier	The application tier can be a workstation (when running in stand-alone or Client/Server mode) or the n-tier server (when running in n-tier mode). - Windows Server 2019 - Windows Server 2016 - Windows Server 2012 R2 **Client** - Oracle Client 11.2.0.4 or later
Database Tier	**Oracle Database (UNIX supported with Oracle databases)** **Database** - Oracle 11.2 (Oracle Server 11.2.0.4 or later, Oracle Client 11.2.0.4 or later) - Oracle 12.2 - Oracle 18.3 - Oracle 19.3 - Oracle is also supported on Linux, Unix, and Exadata **Microsoft SQL Server Databases** - Microsoft SQL Server 2017 - Microsoft SQL Server 2016 - Microsoft SQL Server 2014 - Microsoft SQL Server 2017 is also supported on Linux and Unix - Microsoft SQL Server Express 2017 - Microsoft SQL Server Express 2016 - Microsoft SQL Server Express 2014

Tier Name	Description
	The database tier can be any platform capable of running Windows or Unix as long as the database can be accessed via the supported client/application tier drivers.

> **Note:** You must install the Oracle client on the client workstation if you are using an Oracle database on a Server - Deployment (Client/Server Mode) or Server – N-Tier (N-Tier Application Server Mode) deployment.

> **Warning:** If you have implemented TLS 1.2, see Appendix F: Secure Transport Layer Security (TLS) before you proceed with the installation.

Integrate Cobra with other PPM Products

Before installing any PPM product (PM Compass, Open Plan, wInsight, or Acumen), confirm that the supported Cobra version is installed and any upgrade database scripts have been run.

> **Note:** Refer to the Installation Guide of each PPM product for installation details.

> **Note:** If you are installing Cobra to a database which already contains another Deltek PPM application that is not configured to use Unicode, you must update the existing database tables to use Unicode structures before installing Cobra. Contact Customer Care if you require assistance.

Cobra Architecture

Cobra's entire architecture is built on the Microsoft's® .NET Framework.

Microsoft® .NET Architecture

.NET Framework is Microsoft's name for a set of software technologies they have developed to connect information, people, systems, and devices. Visit http://www.microsoft.com/net/ for more information about Microsoft .NET Framework.

The .NET Framework allows Cobra to be an n-tier application and provide quick access for remote users without using Windows Terminal Server or Citrix®. This architecture allows some processing to occur on the client—such as the spreading of time-phased budgets—while another process—such as Recalculate—occurs on the application server at the same time. The .NET Framework literally provides both quick remote access to the data like a Web application and the rich user interface of a Windows application.

.NET Framework-based applications are easier to build, deploy, and integrate with outside systems than those built using earlier technologies. The move to .NET Framework promises enhanced performance, reliability, and scalability. It also provides easier deployment and faster product development. The .NET Framework must be installed on the client and the application server.

Run Multiple Instances of Cobra

The Cobra n-tier server installation is designed to connect to a single database. If you wish to have two Cobra databases, you will need two Cobra server (or client) installations. Stand-alone and client/server installations both support multiple databases in a single Cobra instance.

If you have multiple versions of Cobra and you upgraded to Cobra 8.2, use the Data Source Migration tool to migrate data sources information from the IdeaBlade.ibconfig file to the Datasources.dat file. For more information, refer to KB Article 92142 in the Knowledge Center of the Deltek Support Center.

> **Warning:** You can run multiple client versions of Cobra on the same machine, but Deltek does not recommend it.

The Cobra Engine and PM Compass

If you are integrating Cobra with PM Compass, review the Integrating with Cobra section in the PM Compass Installation Guide.

Establish a Database

Cobra requires databases to store data.

> **Note:** Deltek recommends, as part of best practice, to install all products in the PPM suite into the same database. The installations apply schema changes (tables, views, stored procedures, and so on) to your existing database in order to support the integration. While it is highly recommended that you install wInsight and Acumen into the same database, the integration between PM Compass, Open Plan, and Cobra requires it.

Supported Database	
Microsoft SQL Server	• Microsoft SQL Server 2014 • Microsoft SQL Server 2016 • Microsoft SQL Server 2017 • Microsoft SQL Server 2017 is also supported on Linux and Unix • Microsoft SQL Server Express 2014 • Microsoft SQL Server Express 2016 • Microsoft SQL Server Express 2017 If you have fewer than four Cobra users, you can use the free Express Edition of the Microsoft SQL Server version that Cobra supports. Install Cobra on your server and/or workstations.
Oracle	• Oracle 11.2 (Oracle Server 11.2.0.4 or later, Oracle Client 11.2.0.4 or later) • Oracle 12.2 • Oracle 18.3 • Oracle 19.3 • Oracle is also supported on Linux, Unix, and Exadata You must install the Administrator version of the Oracle client on the application tier.
Database Drivers	• Oracle Provider for OLE DB • MS SQL Server Native Client 11.0 (SQL Server 2012 (11.x) • MS SQL Server Native Client 11.0 (SQL Server 2014 (12.x) • MS SQL Server Native Client 13.0 (SQL Server 2016 (13.x) • MS OLE DB Provider for SQL Server • MS OLE DB Driver for SQL Server **Note:** Refer to Microsoft Support Matrix for the MS SQL Server Native Client drivers.

Take note of the following when establishing the Cobra database:

- Make sure that one of the database applications is installed.

  The Oracle client and OLE DB drivers need to be installed on the application tier. This is the workstation in Stand-Alone and Client/Server installation modes. These are installed through the Oracle Administrator client installation. You must also ensure that you have a valid connection to your database (TNSnames.ora) before you begin your installation.

- If you have fewer than four Cobra users, you can use the free Express Edition of the Microsoft SQL Server version that Cobra supports. Install Cobra on your server and/or workstations.

- You must create a database for storing Cobra data. You also need:

  - Name of the database server

  - A user ID and password (with rights to create tables) for the database

  - The server name of the database

  > **Note:** Refer to the Microsoft SQL or Oracle documentation on how to create a database, define a database name, and define a username and password with rights to create tables.

- After establishing your database, you must install .NET Framework on your server and client workstations. See Software Requirements for the list of supported versions.

- If you are installing Cobra to a database which already contains another Deltek PPM application that is not configured to use Unicode, you must update the existing database tables to use Unicode structures before installing Cobra. Contact Customer Care if you need assistance.

> **Note:** Deltek recommends, as part of best practice, to install all products in the PPM suite into the same database. The installations apply schema changes (tables, views, stored procedures, and so on) to your existing database in order to support the integration. While it is highly recommended that you install wInsight and Acumen into the same database, the integration between PM Compass, Open Plan, and Cobra requires it.

Store Cobra Data on Microsoft SQL Server Database

You must create a Microsoft SQL Server logon account used for the Cobra database. It can either be an existing Windows account or a Microsoft SQL Server user name. Specific permissions are necessary for Cobra to function properly. The account requires membership in the **db_owner** database role membership on the Login Properties and User Mapping dialog box for the Cobra database.

Store Cobra Data on an Oracle Database

To store the Cobra data in an Oracle database, the following is required:

- Oracle database Standard or Enterprise editions.

- Contact your Oracle DBA to obtain the Oracle server name/SID and the user credentials for the Cobra database schema. Your DBA will need the information in order to configure the account.

  Specific privileges are necessary for Cobra to function properly. Below is a list of required Oracle GRANT statements:

  - GRANT CONNECT, RESOURCE TO <USER>

- GRANT CREATE TABLE TO <USER>
- GRANT CREATE VIEW TO <USER>
- GRANT CREATE TRIGGER TO <USER>
- GRANT CREATE ANY CONTEXT TO <USER>
- GRANT EXECUTE ON DBMS_RANDOM TO <USER>;

> **Note:** Although granting rights to the Resource Role includes the CREATE TABLE and CREATE TRIGGER grants, you must still explicitly run all of the grant statements above to ensure that all functions of Cobra (including database upgrade procedures) run correctly.
>
> The Cobra installation queries the session_privs and user_role_privs tables to validate that all of these grants have been applied.

- You must install the Administrator version of the Oracle client on the application tier.
- The Oracle Server name/SID defined in tnsnames.ora must be the same on your Cobra application server.

Required Database Permissions for Integration

Generally, Cobra will only read data from a product that is being integrated from such as actual costs from an accounting system, or from scheduling tools like Primavera or Microsoft Project. This means a user connecting to the database only needs a Read access rights.

The following table summarizes the minimum required permissions for a database management system (DBMS) account when integrating Cobra with another product.

	MS SQL	Oracle
Primavera	SELECT permission	READ ANY TABLE Privilege for Oracle 12c and higher SELECT OBJECT Privilege for prior versions
MS Project	READ permission	READ ANY TABLE Privilege
Actual Costs	READ permission	READ ANY TABLE Privilege
wInsight	READ permission	READ ANY TABLE Privilege

Permissions Required for Installing Cobra

To install the application tier, you must have full rights to the application tier.

To install the administrator client, you must have administrator privileges. After the installation, you must have full rights to the Deltek Cobra folder and subfolders where error logs are created and reports are saved by default (C:\Documents and Settings\<USER PROFILE>\My Documents\Deltek\Cobra).

See Logical Tiers for a clear explanation of where the application tier exists in a stand-alone or client server install.

In an n-tier installation, there are no specific file system rights necessary for users to install the standard client tier. If you are not an administrative user, see System Requirements for a list of Microsoft components needed on your client workstation.

Your n-tier server service should be granted permissions (or run under a suitable account which has the permissions) to access network paths that users might normally use to store backups, import files, and so on. This allows your application server to directly read/write to those locations rather than always sending data via a client workstation.

After the installation, users must have read rights to a number of folders:

- <Cobra Installation Directory>\ReportTemplates
- <Cobra Installation Directory>\Samples
- <Cobra Installation Directory>\Workstation

> **Note:** You need to create the Import Files folder manually. The folder is used to improve performance when importing data. The Integration Wizard can either transfer data from the local machine to the server or allow you to copy the file manually to the application server before the process starts. The second option is typically faster to process.

> **Note:** If you are using a 64-bit platform, the installation location will contain "x86" in the path. For example: C:\Program Files (x86)\Deltek\Cobra\.

Cobra New Installation Steps

Cobra can be set up for single- or multi-user use. Follow this sequence to successfully install Cobra:

Step	Description	Refer to These Sections
1	Make sure that that your system meets the hardware requirements and install the required software.	See System Requirements
2	Establish which installation model your firm requires.	See Installation Models
3	Set up a database for the Cobra data.	See Establish a Database
4	Download the Cobra installer from the Deltek support site.	See Downloading Deltek Products using Deltek Software Manager
5	Install Cobra on your server and/or workstations.	See Stand – Alone Installation, Multi – User Installation, Server – Deployment Installation (Client/Server Mode), and Server – N-Tier Installation (N-Tier Application Server Mode).
6	If you opted to manually run the scripts during installation, run the scripts to create or upgrade database tables.	See Run Scripts to Create or Upgrade Database Tables
7	Run the Data Tool to add two or more databases to be used by Cobra or to add new results to your database.	See Data Tool and Data Source and the Data Tool Help System.
8	Run the EPM Security Administrator to define the security rights for Cobra users.	See Configure the EPM Security Administrator
9	Verify that the users have permission for the Cobra folders.	See Permissions Required for Installing Cobra

> **Warning:** If you have implemented TLS 1.2, see Appendix F: Secure Transport Layer Security (TLS) before you proceed with the installation.

Stand-Alone Installation

The stand-alone model is designed for a single-user setup. The client, application, and database tiers all reside in the same machine. There are instances where the stand-alone setup is the appropriate installation method when installing on a Citrix environment.

> **Note:** See Run Cobra from a Citrix/Terminal Server for more information.

> **Warning:** If you have implemented TLS 1.2, see Appendix F: Secure Transport Layer Security (TLS) before you proceed with the installation.

Stand-Alone Model Prerequisites Checklist

	Step	Description
	1	Make sure that your system meets the client, application, and database tier requirements (see Logical Tier Requirements).
	2	Make sure that one of the database applications is installed (see Database Requirements).
	3	Establish a database for storing the Cobra data (see Establish a Database).
	4	Install the supported version of Microsoft .NET Framework (see Software Requirements.) You can download the installer from https://www.microsoft.com/net/download/all.
	5	Download the Cobra installer from this site: https://deltek.custhelp.com.

> **Note:** Cobra automatically installs the following prerequisite software:
> - Visual C++ Redistributable Packages for Visual Studio 2017 (x86).

Stand-Alone Installation on an Oracle Database

To install Cobra in a Stand-Alone mode on an Oracle database:

1. Locate and double-click the **DeltekCobra83.exe** file to launch the Cobra Installation Wizard, and click **Next** on the Welcome page.

2. On the Customer Information page, enter the **User Name**, **Company Name**, and the **Serial Number** that came with the software and click **Next**.

3. On the License Information page, enter the license key that came with the software and click **Next**.

> **Note:** When an upgraded license is purchased, a user receives a new license key. The license key specifies the number of users who can log on to Cobra at one time. For more information about changing the license key, see the *Upgrade a Software License* section of the EPM Security Administrator Help.

4. On the Setup Type page, select the **Stand-Alone** option, click **Browse** to specify a directory where the Cobra files will be installed, and click **Next**.

5. On the Setup Type page, select the **Oracle** option and click **Next**.
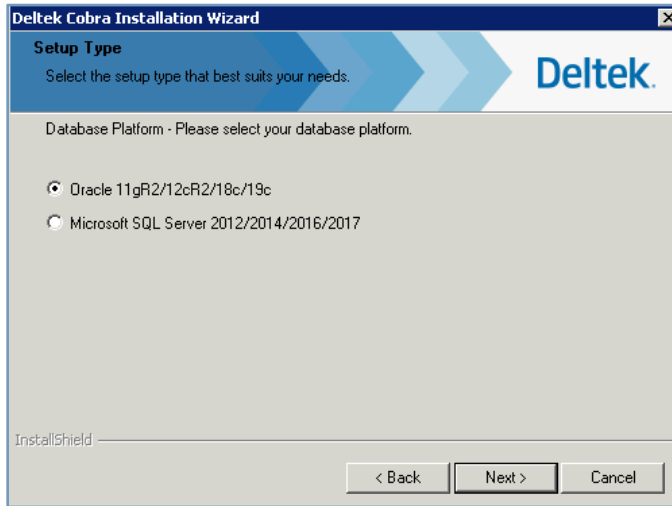
6. On the Oracle Connection Information page, enter the **Service name/SID**, **Username**, and **Password** and click **Next**

> **Note:** If you are using an Oracle database with Oracle 12c R2 client and you encounter an error, refer to KB Article #93397 in the Knowledge Center of the Deltek Support Center.

7. On the Setup Type page, select one of the following options and click **Next**:

- **Automatically run scripts during the installation – creates the Cobra tables**: Select this option to automatically create the Cobra database tables during the installation process.

- **Create batch file (CreateCobraTables.bat) to run scripts manually**: Select this option to manually create the Cobra database tables (after installation) using a batch file. The batch file is located in the <Cobra Installation Directory>\ Scripts\Create folder.

- **I will manually run the upgrade scripts. No batch file will be created**: Select this option to manually create the Cobra database tables (after installation) using the scripts located in the <Cobra Installation Directory>\Scripts\Create folder.

> **Note:** If you are upgrading from Cobra 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.
>
> See Run Scripts to Create or Upgrade Database Tables for more information.

> **Note:** You can configure additional data sources once the setup is complete using Data Tool and Cobra Database Upgrade Wizard.

If Cobra detects that your database is already at the current version, the following message displays:

8. The Customer Experience Improvement Program (CEIP) page displays. This page allows you to participate in the CEIP by submitting your installation and product usage information to Deltek. This information is used by Deltek to improve the functionality of the product.

▪ **Send installation data to Deltek**: Selecting this option means you allow Deltek to collect the following installation information:

- Operating System

- Operating System build number

- Number of CPUs

- Amount of RAM installed

- Language

▪ **Automatically send usage statistics to Deltek**: Selecting this option means you allow Deltek to collect the following usage information:

- Menu, toolbar, and other user interface clicks and selections

- Names of screens accessed

- Help topics accessed

- Number of Control Account key fields used in a project

- Names of processes run through the user interface, API, and Web services, and the execution time of a process

- Exception error descriptions

> **Note:** You can later change the value of the **Automatically send usage statistics to Deltek** option on the About Deltek Cobra dialog box in the Cobra application. See the Cobra Help System.

9. On the **Start Copying Files** page, review the **Current Settings** information. **Install workstation from** indicates the workstation installation location.

10. Click **Next** to start copying the files or **Back** to modify your settings.

    The Setup Status page displays the installation progress.

11. When the InstallShield Wizard Complete page displays, click **Finish**.

12. To test launching the software, click the Start menu, and locate **Deltek Cobra 8.x**.

> **Note:** Beginning Windows 7, Deltek recommends that you always run Cobra as an Administrator. See Set Cobra to Always Run as an Administrator.

> **Note:** Upon starting Cobra, you must enter a user ID and password. The default user ID is 'SYSADMIN' and the default password is 'password.' For security reasons, you must change this password as soon as possible. For more information on how to change your password, see .Change your Cobra Password.

13. See Cobra New Installation Steps to proceed with the remaining installation steps.

Stand-Alone Installation on a Microsoft SQL Database

> **Warning:** If you have implemented TLS 1.2, see Appendix F: Secure Transport Layer Security (TLS) before you proceed with the installation.

To install Cobra in a Stand-Alone mode on a Microsoft SQL database:

1. Locate and double-click the **DeltekCobra83.exe** file to launch the Cobra Installation Wizard and click **Next** on the Welcome page.

2. On the Customer Information page, enter the **User Name**, **Company Name**, and the **Serial Number** that came with the software and click **Next**.

3. On the License Information page, enter the license key that came with the software and click **Next**.

> **Note:** When an upgraded license is purchased, a user receives a new license key. The license key specifies the number of users who can log on to Cobra at one time. For more information about changing the license key, see the *Upgrade a Software License* section of the EPM Security Administrator Help.

4. On the Setup Type page, select the **Stand-Alone** option and click **Browse** to specify a directory where the Cobra files will be installed and click **Next**.
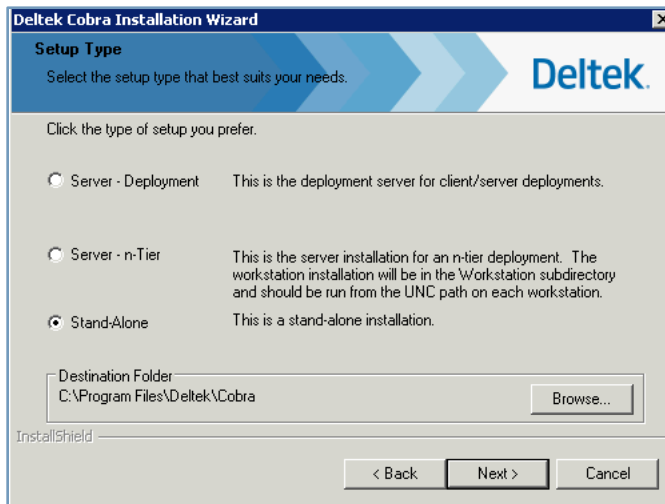
5. On the Setup Type page, select the **Microsoft SQL Server** option and click **Next**.
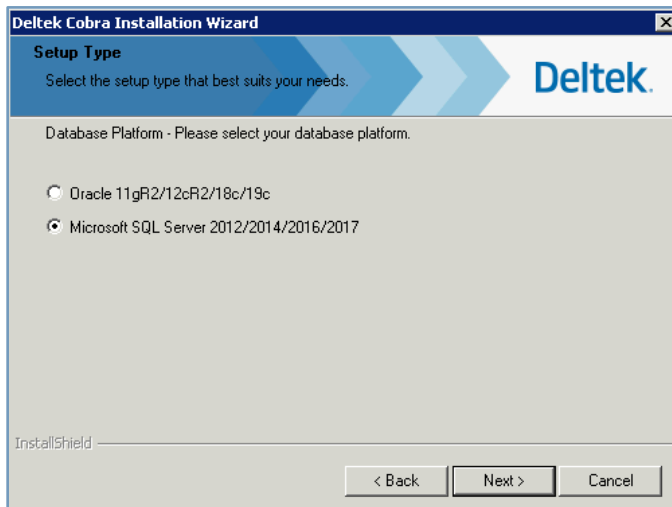
6. On the Database Server page, enter the name of the database server where the components will be installed in the **Database server that you are installing to** field. Select **SQL Server authentication using the Login ID and password below** and enter the **Login ID** and

Password of the database to use. Enter the catalog name of the specified database in the **Name of database catalog** field and click **Next**.

> **Note:** You can use Windows Authentication when setting up a connection to the database. The connection to the database is always from the application tier to the database. In stand-alone mode, the credentials are taken from the Windows user ID of the workstation.

The InstallShield wizard checks if TLS 1.0 is enabled or disabled on the machine where you are installing Cobra. If TLS 1.0 is disabled, the following message displays:

7. On the Setup Type page, select one of the following options and click **Next**:

- **Automatically run scripts during the installation – creates the Cobra tables:** Select this option to automatically create the Cobra database tables during the installation process.

- **Create batch file (CreateCobraTables.bat) to run scripts manually:** Select this option to manually create the Cobra database tables (after installation) using a batch file. The batch file is located in the <Cobra Installation Directory>\Scripts\Create folder.

- **I will manually run the scripts to create the Cobra tables. No batch file will be created:** Select this option to manually create the Cobra database tables (after installation) using the scripts located in the <Cobra Installation Directory>\Scripts\Create folder.

> **Note:** If you are upgrading from Cobra 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.
>
> See Run Scripts to Create or Upgrade Database Tables for more information.

> **Note:** You can configure additional data sources once the setup is complete using Data Tool and Cobra Database Upgrade Wizard.

If Cobra detects that your database is already at the current version, the following message displays:

8. The Customer Experience Improvement Program (CEIP) page displays. This page allows you to participate in the CEIP by submitting your installation and product usage information to Deltek. This information is used by Deltek to improve the functionality of the product.

- **Send installation data to Deltek**: Selecting this option means you allow Deltek to collect the following installation information:

- Operating System

- Operating System build number

- Number of CPUs

- Amount of RAM installed

- Language

- **Automatically send usage statistics to Deltek**: Selecting this option means you allow Deltek to collect the following usage information:

  - Menu, toolbar, and other user interface clicks and selections

  - Names of screens accessed

  - Help topics accessed

  - Number of Control Account key fields used in a project

  - Names of processes run through the user interface, API, and Web services, and the execution time of a process

  - Exception error descriptions

> **Note:** You can later change the value of the **Automatically send usage statistics to Deltek** option on the About Deltek Cobra dialog box in the Cobra application. See the Cobra Help System.

9. On the **Start Copying Files** page, review the **Current Settings** information. **Install workstation from** indicates the workstation installation location.

10. Click **Next** to start copying the files or **Back** to modify your settings.

    The Setup Status page displays the installation progress

11. When the InstallShield Wizard Complete page displays, click **Finish**.

12. To test launching the software, click the Start menu, and locate **Deltek Cobra 8.x**.

> **Note:** Beginning Windows 7, Deltek recommends that you always run Cobra as an Administrator. See Set Cobra to Always Run as an Administrator.

> **Note:** Upon starting Cobra, you must enter a user ID and password. The default user ID is 'SYSADMIN' and the default password is 'password.' For security reasons, you must change this password as soon as possible. For more information on how to change your password, see Change your Cobra Password.

13. See Cobra New Installation Steps to proceed with the remaining installation steps.

Multi-User Installation

There are two types of multi-user installations:

- Client/Server (deployment server)

- N-tier application server

See Installation Models for more information about these multi-user installations.

Installing Cobra for multiple users has two parts: you must first run the **Server** setup on your server (see Server - Deployment Installation (Client/Server Mode) or Server – N-Tier Installation (N-Tier Application Server Mode)), and run the **Workstation** setup on each machine that will access that server (see Client on a Workstation Installation).

> **Note:** You only have to run the **Server** setup once.

The server setup will check the following:

- User installing is a local administrator on the server
- Supported version of Microsoft .NET Framework is installed

Server - Deployment Installation (Client/Server Mode)

The client/server installation creates the configuration file, copies the workstation setup, creates a network share to run the workstation setup, and enables automatic update capabilities. This is the server model to select if you are going to be running in client/server mode. In the client/server mode, processing is performed on the client. This server model is useful for small implementations (for example, 2 – 5 users) and ideal for a black-box or secure environment.

> **Warning:** If you have implemented TLS 1.2, see Appendix F: Secure Transport Layer Security (TLS) before you proceed with the installation.

Database Server Prerequisites Checklist

	Step	Description
	1	Make sure that your system meets the database tier requirements (see Logical Tier Requirements).
	2	Make sure that one of the database applications is installed.
	3	Establish a database for storing the Cobra data (see Establish a Database).

Client Workstation Prerequisites Checklist

	Step	Description
	1	Make sure that your system meets the client and application tier requirements (see Logical Tier Requirements).
	2	Install the Oracle client on the client workstation if you are using an Oracle database (see Software Requirements). You must select the **Administrator** option during installation.

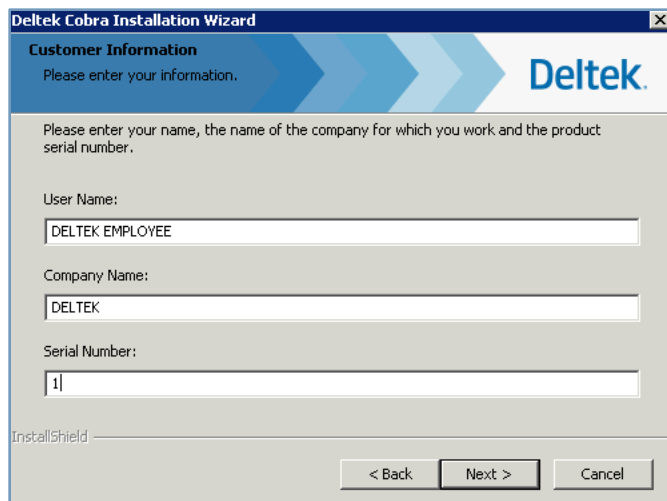| ![icon]	Step	Description
	3	Install the supported version of Microsoft .NET Framework (see Software Requirements.) You can download the installer from https://www.microsoft.com/net/download/all.
	4	Download the Cobra installer from this site: https://deltek.custhelp.com.

> **Note:** Cobra automatically installs the following prerequisite software:
>
> - Visual C++ Redistributable Packages for Visual Studio 2017 (x86).

Server - Deployment Installation on an Oracle Database

To install Cobra in a Client/Server mode on an Oracle database:

1. Locate and double-click the **DeltekCobra83.exe** file to launch the Cobra Installation Wizard and click **Next** on the Welcome page.

2. On the Customer Information page, enter the **User Name**, **Company Name**, and the **Serial Number** that came with the software and click **Next**.

3. On the License Information page, enter the license key that came with the software and click **Next**.

> **Note:** When an upgraded license is purchased, a user receives a new license key. The license key specifies the number of users who can log on to Cobra at one time. For more information about changing the license key, see the *Upgrade a Software License* section of the EPM Security Administrator Help.
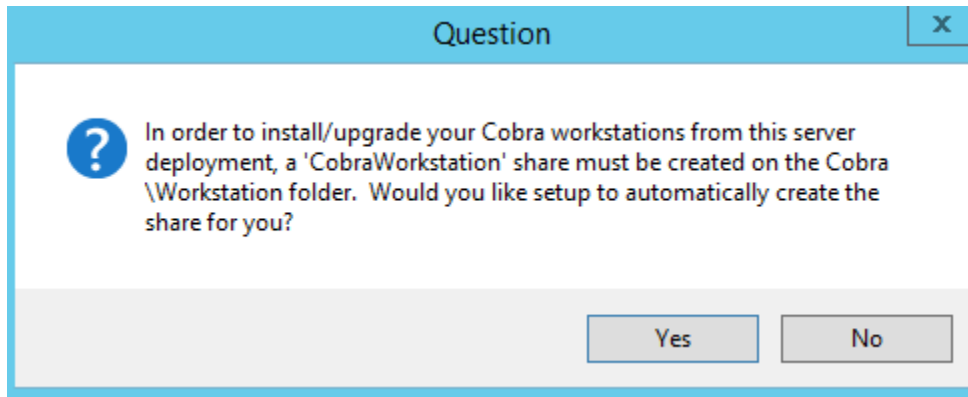
4. On the Setup Type page, select the **Server – Deployment** option and click **Browse** to specify a directory where the Cobra files will be installed and click **Next**.

5. If you are performing a clean install of Cobra 8.x, the UNC share that contains the Cobra workstation components has to be created. The Cobra workstation components are installed in the **Workstation** folder (the default location is <Cobra Installation Directory>\Workstation).

> **Note:** Aside from the Workstation folder, users should also have access to the Report Templates and Import Files folders. The Report Template folder is created as part of the installation; you need to manually create the Import Files folder. While the Integration wizard can automatically import a file selected on the client, the performance is noticeably faster if you copy the file to the application server using Windows Explorer. The Import Files folder provides a location for the user to copy the file to import onto the application server, and from the Integration Wizard, select the file from the Import Files folder.

The UNC share named **CobraWorkstation** enables the client workstations to launch Cobra on the network. Click **Yes** to allow setup to create the UNC share for you. Click **No** to create the UNC share manually at a later time. Click **OK** to continue.
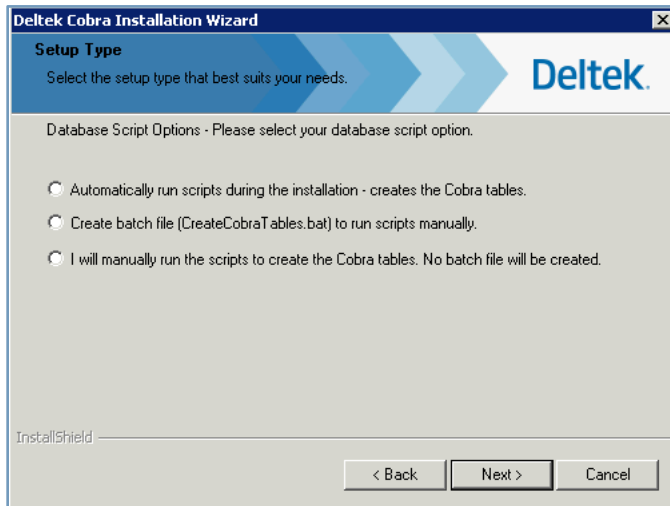

> **Note:** If you are creating the UNC share manually, note that although the installation folder containing the Workstation components is named **Workstation**, the UNC share must be created with a shared name of **CobraWorkstation.** If this share name is changed, upgraded Cobra clients fail when launching Cobra after the installation.

6. On the Setup Type page, select the **Oracle** option and click **Next**.

7. On the Oracle Connection Information page, enter the **Service name/SID**, **Username**, and **Password** and click **Next**. On the Setup Type page, select one of the following options and click **Next**.

> **Note:** If you are using an Oracle database with Oracle 12c R2 client and you encounter an error, refer to KB Article #93397 in the Knowledge Center of the Deltek Support Center.
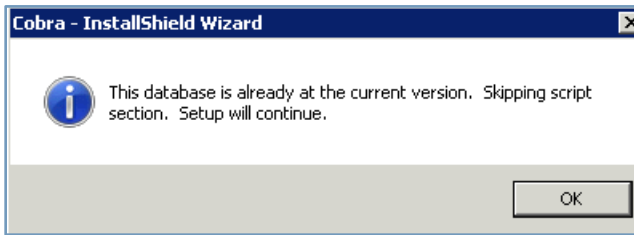

- **Automatically run scripts during the installation – creates the Cobra tables:** Select this option to automatically create the Cobra database tables during the installation process.

- **Create batch file (CreateCobraTables.bat) to run scripts manually:** Select this option to manually create the Cobra database tables (after installation) using a batch file. The batch file is located in the <Cobra Installation Directory>\Scripts\Create folder.

- **I will manually run the scripts to create the Cobra tables. No batch file will be created:** Select this option to manually create the Cobra database tables (after installation) using the scripts located in the <Cobra Installation Directory>\Scripts\Create folder.

> **Note:** If you are upgrading from Cobra 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.
>
> See Run Scripts to Create or Upgrade Database Tables for more information.

> **Note:** You can configure additional data sources once the setup is complete using Data Tool and Cobra Database Upgrade Wizard.

If Cobra detects that your database is already at the current version, the following message displays:

8. The Customer Experience Improvement Program (CEIP) page displays. This page allows you to participate in the CEIP by submitting your installation and product usage information to Deltek. This information is used by Deltek to improve the functionality of the product.

-   **Send installation data to Deltek**: Selecting this option means you allow Deltek to collect the following installation information:

    -   Operating System

    -   Operating System build number

    -   Number of CPUs

    -   Amount of RAM installed

    -   Language

-   **Automatically send usage statistics to Deltek**: Selecting this option means you allow Deltek to collect the following usage information:

    -   Menu, toolbar, and other user interface clicks and selections

    -   Names of screens accessed

    -   Help topics accessed

    -   Number of Control Account key fields used in a project

    -   Names of processes run through the user interface, API, and Web services, and the execution time of a process

    -   Exception error descriptions

> **Note:** You can later change the value of the **Automatically send usage statistics to Deltek** option on the About Deltek Cobra dialog box in the Cobra application. See the Cobra Help System.

    Clear the check boxes if you prefer not to participate in the program and click **Next**.

9. On the **Start Copying Files** page, review the **Current Settings** information. **Install workstation from** indicates the workstation installation location.

10. Click **Next** to start copying the files or **Back** to modify your settings. The Setup Status page displays the installation progress.

11. When the InstallShield Wizard Complete page displays, click **Finish**.

12. After you install Cobra on your application server, install the client on each workstation that will use Cobra.

> **Note:** See Client on a Workstation Installation for more information.

14. To test launching the software, click the Start menu, and locate **Deltek Cobra 8.x**.

> **Note:** Beginning Windows 7, Deltek recommends that you always run Cobra as an Administrator. See Set Cobra to Always Run as an Administrator.

> **Note:** Upon starting Cobra, you must enter a user ID and password. The default user ID is 'SYSADMIN' and the default password is 'password.' For security reasons, you must change this password as soon as possible. For more information on how to change your password, see Change your Cobra Password.

Server – Deployment Installation on a Microsoft SQL Database

> **Warning:** If you have implemented TLS 1.2, see Appendix F: Secure Transport Layer Security (TLS) before you proceed with the installation.

To install Cobra in a Client/Server mode on a Microsoft SQL database:

1. Locate and double-click the **DeltekCobra83.exe** file to launch the Cobra Installation Wizard and click **Next** on the Welcome page.

2. On the Customer Information page, enter a **User Name**, **Company Name**, and the **Serial Number** that came with the software and click **Next**.

3. On the License Information page, enter the license key that came with the software and click **Next**.

> **Note:** When an upgraded license is purchased, a user receives a new license key. The license key specifies the number of users who can log on to Cobra at one time. For more information about changing the license key, see the *Upgrade a Software License* section of the EPM Security Administrator Help.
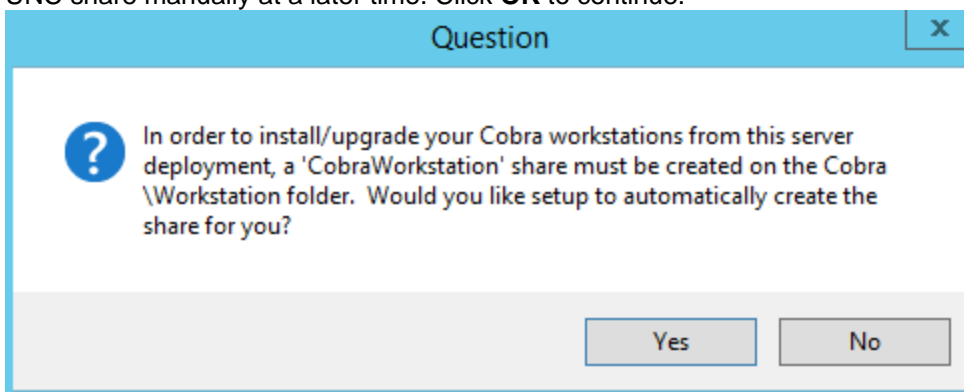
4. On the Setup Type page, select the **Server – Deployment** option and click **Browse** to specify a directory where the Cobra files will be installed and click **Next**.

5. If you are performing a clean install of Cobra 8.x, the UNC share that contains the Cobra workstation components has to be recreated. The Cobra workstation components are installed in the **Workstation** folder (the default location is <Cobra Installation Directory>\Workstation).
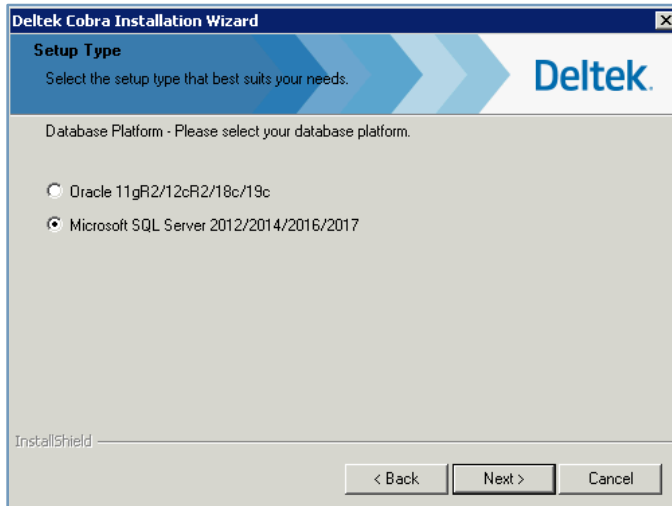
Note: Aside from the Workstation folder, users should also have access to the Report Templates and Import Files folders. The Report Template folder is created as part of the installation; you need to manually create the Import Files folder. While the Integration Wizard can automatically import a file selected on the client, the performance is noticeably faster if you copy the file to the application server using Windows Explorer. The Import Files folder provides a location for the user to copy the file to import onto the application server and then, from the Integration Wizard, select the file from the Import Files folder.

The UNC share named **CobraWorkStation** enables the client workstations to launch Cobra on the network. Click **Yes** to allow setup to create the UNC share for you. Click **No** to create the UNC share manually at a later time. Click **OK** to continue.
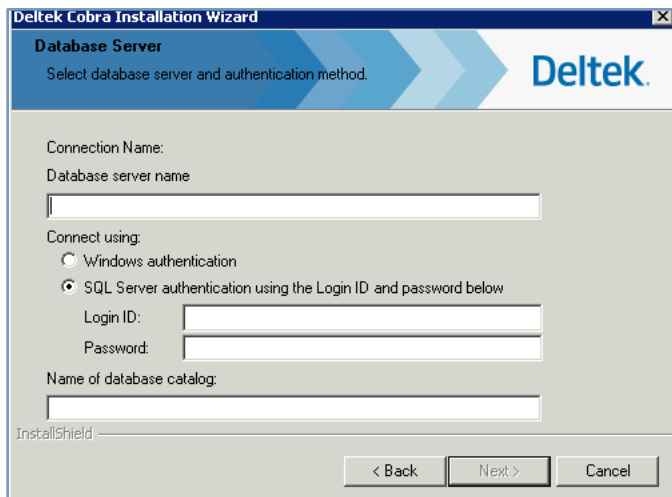

Note: If you are creating the UNC share manually, note that although the installation folder containing the Workstation components is named **Workstation**, the UNC share must be created with a shared name of **CobraWorkstation**. If this share name is changed, upgraded Cobra clients fail when launching Cobra after the installation.

6. On the Setup Type page, select the **Microsoft SQL Server** option and click **Next**.

7. On the Database Server page, enter the name of the database server where the components will be installed in the **Database server that you are installing to** field. Select **SQL Server authentication using the Login ID and password below** and enter the **Login ID** and **Password** of the database to use. Enter the catalog name of the specified database in the **Name of database catalog** field and click **Next**.
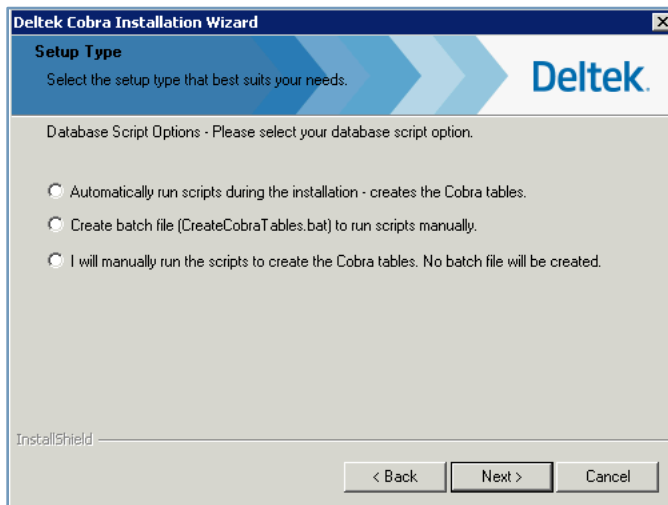

> **Note:** You can use Windows Authentication when setting up a connection to the database. The connection to the database is always from the application tier to the database. In client/server mode, the credentials are taken from the Windows user ID of the workstation.

The InstallShield wizard checks if TLS 1.0 is enabled or disabled on the machine where you are installing Cobra. If TLS 1.0 is disabled, the following message displays:

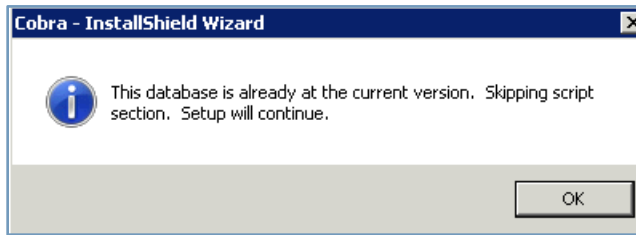8. On the Setup Type page, select one of the following options:

- **Automatically run scripts during the installation – creates the Cobra tables:** Select this option to automatically create the Cobra database tables during the installation process.

- **Create batch file (CreateCobraTables.bat) to run scripts manually:** Select this option to manually create the Cobra database tables (after installation) using a batch file. The batch file is located in the <Cobra Installation Directory>\Scripts\Create folder.

- **I will manually run the scripts to create the Cobra tables. No batch file will be created:** Select this option to manually create the Cobra database tables (after installation) using the scripts located in the <Cobra Installation Directory>\Scripts\Create folder.

> **Note:** If you are upgrading from Cobra 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.
>
> See Run Scripts to Create or Upgrade Database Tables for more information.

> **Note:** You can configure additional data sources once the setup is complete using Data Tool and Cobra Database Upgrade Wizard.

If Cobra detects that your database is already at the current version, the following message displays:

9. The Customer Experience Improvement Program (CEIP) page displays. This page allows you to participate in the CEIP by submitting your installation and product usage information to Deltek. This information is used by Deltek to improve the functionality of the product.

- **Send installation data to Deltek**: Selecting this option means you allow Deltek to collect the following installation information:

  - Operating System
  - Operating System build number
  - Number of CPUs
  - Amount of RAM installed
  - Language

- **Automatically send usage statistics to Deltek**: Selecting this option means you allow Deltek to collect the following usage information:

  - Menu, toolbar, and other user interface clicks and selections
  - Names of screens accessed
  - Help topics accessed
  - Number of Control Account key fields used in a project
  - Names of processes run through the user interface, API, and Web services, and the execution time of a process
  - Exception error descriptions

  > **Note:** You can later change the value of the **Automatically send usage statistics to Deltek** option on the About Deltek Cobra dialog box in the Cobra application. See the Cobra Help System

10. On the Start Copying Files page, review the **Current Settings** information. **Install workstation from** indicates the workstation installation location.

11. Click **Next** to start copying the files or **Back** to modify your settings. The Setup Status page displays the installation progress.

12. When the InstallShield Wizard Complete page displays, click **Finish**

13. After you install Cobra on your application server, install the client on each workstation that will use Cobra.

> **Note:** See Client on a Workstation Installation for more information.

15. To test launching the software, click the Start menu, and locate **Deltek Cobra 8.x**.

> **Note:** Beginning Windows 7, Deltek recommends that you always run Cobra as an Administrator. See Set Cobra to Always Run as an Administrator.

> **Note:** Upon starting Cobra, you must enter a user ID and password. The default user ID is 'SYSADMIN' and the default password is 'password.' For security reasons, you must change this password as soon as possible. For more information on how to change your password, see Change your Cobra Password.

16. See Cobra New Installation Steps to proceed with the remaining installation steps.

Server – N-Tier Installation (N-Tier Application Server Mode)

The n-tier application server installation copies the files needed for an n-tier deployment model, creates the configuration file, copies the workstation setup, creates a network share to run the workstation setup from, and enables automatic update capabilities. This is the server model to select if you are going to be running in n-tier mode. This server model is useful for large or many-user environments. Processing is performed on the application server.

> **Note:** To perform the installation, you must know the Oracle or Microsoft SQL Server connection information (although it is not validated during the installation).

> **Warning:** If you have implemented TLS 1.2, see Appendix F: Using TLS 1.2 with Microsoft SQL Server before you proceed with the installation.

Database Server Prerequisites Checklist

	Step	Description
	1	Make sure that your system meets database tier requirements (see Logical Tier Requirements).
	2	Make sure that one of the database applications is installed (see Software Requirements).
	3	Establish a database for storing the Cobra data (see Establish a Database).

Application Server Prerequisites Checklist

	Step	Description
	1	Make sure that your system meets the application tier requirements (see Logical Tier Requirements).
	2	Install the supported version of the following software (see Software Requirements):

☑	Step	Description
		▪ Microsoft .NET Framework. You can download the software from: https://www.microsoft.com/net/download/all. ▪ Supported ODBC driver (see Supported Drivers)
	3	Download the Cobra installer from this site: https://deltek.custhelp.com.
	4	If your firewall is turned on, add an inbound rule that will allow connection to the default port 9009 in your application server (see Firewall).

Client Workstation Prerequisites Checklist

☑	Step	Description
	1	Make sure that your system meets the client tier requirements (see Logical Tier Requirements).
	2	Install the Oracle client on the client workstation if you are using an Oracle database (see Software Requirements.). You must select the **Administrator** option during installation.
	3	Install the supported version of Microsoft .NET Framework (see Software Requirements.) You can download the installer from https://www.microsoft.com/net/download/all.

> **Note:** Cobra automatically installs the following prerequisite software:
>
> ▪ Visual C++ Redistributable Packages for Visual Studio 2017 (x86).

Server N-Tier Installation on an Oracle Database

To install Cobra in an n-tier application mode on an Oracle database:

1. Locate and double-click the **DeltekCobra83.exe** file to launch the Cobra Installation Wizard and click **Next** on the Welcome page.

2. On the Customer Information page, enter the **User Name**, **Company Name**, and the **Serial Number** that came with the software and click **Next**.

3. On the License Information page, enter the license key that came with the software and click **Next**.

> **Note:** When an upgraded license is purchased, a user receives a new license key. The license key specifies the number of users who can log on to Cobra at one time. For more information about changing the license key, see the *Upgrade a Software License* section of the EPM Security Administrator Help.

4. On the Setup Type page, select the **Server – n-Tier** option and click **Browse** to specify a directory where the Cobra files will be installed. Click **Next**.

5. If you are performing a clean install of Cobra 8.x, the UNC share that contains the Cobra workstation components has to be recreated. The Cobra workstation components are installed in the **Workstation** folder (the default location is <Cobra Installation Directory>\Workstation).
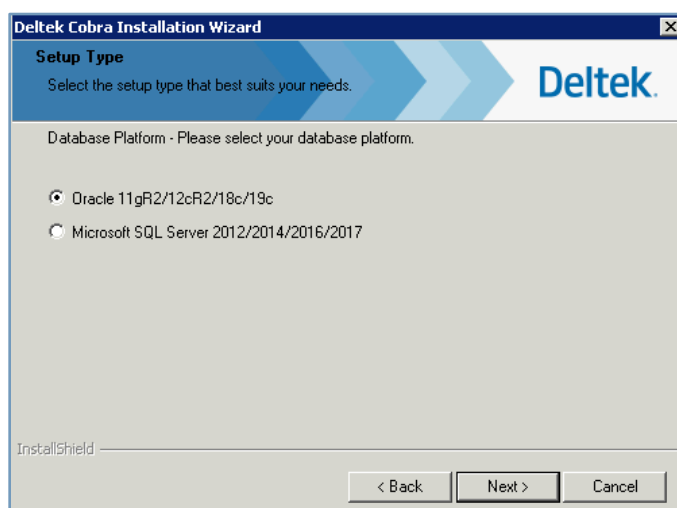
> **Note:** Aside from the Workstation folder, users should also have access to the Report Templates and Import Files folders. The Report Template folder is created as part of the installation; you need to manually create the Import Files folder. While the Integration Wizard can automatically import a file selected on the client, the performance is noticeably faster if you copy the file to the application server using Windows Explorer. The Import Files folder provides a location for the user to copy the file to import onto the application server and then, from the Integration Wizard, select the file from the Import Files folder

The UNC share named **CobraWorkstation** enables the client workstations to launch Cobra on the network. Click **Yes** to allow setup to create the UNC share for you. Click **No** to create the UNC share manually at a later time. Click **OK** to continue.

> **Note:** If you are creating the share manually, note that although the installation folder containing the Workstation components is named **Workstation**, the UNC share must be created with a shared name of **CobraWorkstation**. If this share name is changed, upgraded Cobra clients fail when launching Cobra after the installation.
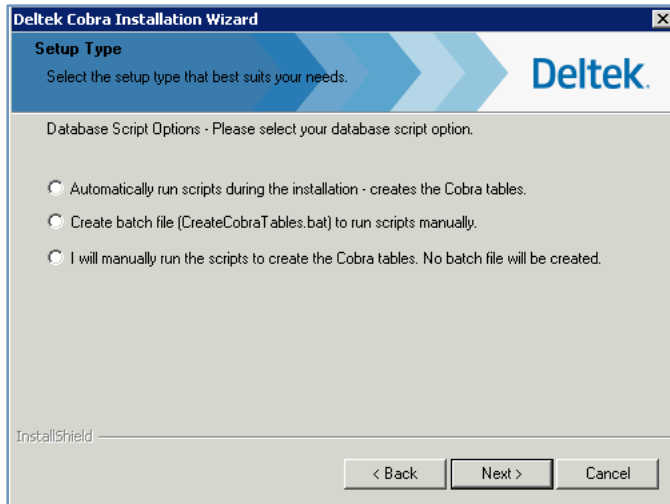
6. On the Setup Type page, select the **Oracle** option and click **Next**.

7. On the Oracle Connection Information page, enter the **Service name/SID**, **Username**, and **Password** and click **Next**.

> **Note:** If you are using an Oracle database with Oracle 12c R2 client and you encounter an error, refer to KB Article #93397 in the Knowledge Center of the Deltek Support Center.

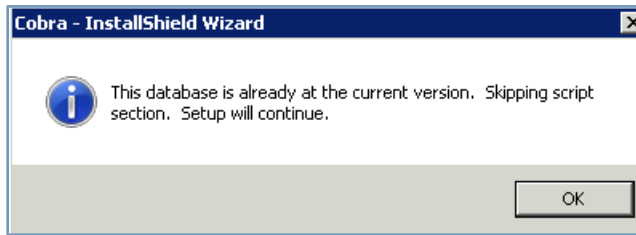8. On the Setup Type page, select one of the following options and click **Next**:

- ▪ **Automatically run scripts during the installation – creates the Cobra tables:** Select this option to automatically create the Cobra database tables during the installation process.

- ▪ **Create batch file (CreateCobraTables.bat) to run scripts manually:** Select this option to manually create the Cobra database tables (after installation) using a batch file. The batch file is located in the <Cobra Installation Directory>\Scripts\Create folder.

- ▪ **I will manually run the scripts to create the Cobra tables. No batch file will be created:** Select this option to manually create the Cobra database tables (after installation) using the scripts located in the <Cobra Installation Directory>\Scripts\Create folder.

> **Note:** If you are upgrading from Cobra 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.
>
> See Run Scripts to Create or Upgrade Database Tables for more information.

> **Note:** You can configure additional data sources once the setup is complete using Data Tool and Cobra Database Upgrade Wizard.

If Cobra detects that your database is already at the current version, the following message displays:

9. The Customer Experience Improvement Program (CEIP) page displays. This page allows you to participate in the CEIP by submitting your installation and product usage information to Deltek. This information is used by Deltek to improve the functionality of the product.

- **Send installation data to Deltek**: Selecting this option means you allow Deltek to collect the following installation information:

  - Operating System

  - Operating System build number

  - Number of CPUs

  - Amount of RAM installed

  - Language

- **Automatically send usage statistics to Deltek**: Selecting this option means you allow Deltek to collect the following usage information:

  - Menu, toolbar, and other user interface clicks and selections

  - Names of screens accessed

  - Help topics accessed

  - Number of Control Account key fields used in a project

  - Names of processes run through the user interface, API, and Web services, and the execution time of a process

  - Exception error descriptions

> **Note:** You can later change the value of the **Automatically send usage statistics to Deltek** option on the About Deltek Cobra dialog box in the Cobra application. See the Cobra Help System.

10. On the **Start Copying Files** page, review the **Current Settings** information. **Install workstation from** indicates the workstation installation location.

11. Click **Next** to start copying the files or **Back** to modify your settings. The Setup Status page displays the installation progress.

12. When the InstallShield Wizard Complete page displays, click **Finish**.

13. After you install Cobra on your application server, install the client on each workstation that will use Cobra.

> **Note:** See Client on a Workstation Installation for more information

14. To test launching the software, click the Start menu, and locate **Deltek Cobra 8.x**.

> **Note:** Beginning Windows 7, Deltek recommends that you always run Cobra as an Administrator. See Set Cobra to Always Run as an Administrator.

> **Note:** Upon starting Cobra, you must enter a user ID and password. The default user ID is 'SYSADMIN' and the default password is 'password.' For security reasons, you must change this password as soon as possible. For more information on how to change your password, see Change your Cobra Password.

15. See Cobra New Installation Steps to proceed with the remaining installation steps.

Server N-Tier Installation on a Microsoft SQL Database

> **Warning:** If you have implemented TLS 1.2, see Appendix F: Using TLS 1.2 with Microsoft SQL Server before you proceed with the installation.
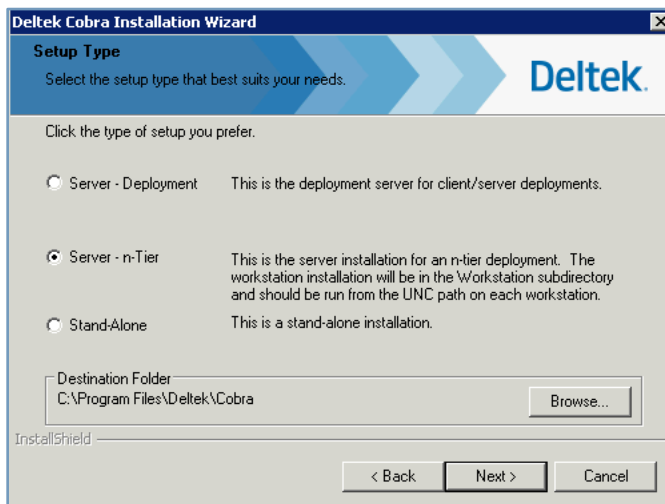
To install Cobra in an n-tier application server mode on a Microsoft SQL database:

1. Locate and double-click the **DeltekCobra83.exe** file to launch the Cobra Installation Wizard and click **Next** on the Welcome page.

2. On the Customer Information page, enter the **User Name**, **Company Name**, and the **Serial Number** that came with the software and click **Next**.

3. On the License Information page, enter the license key that came with the software and click **Next**.

> **Note:** When an upgraded license is purchased, a user receives a new license key. The license key specifies the number of users who can log on to Cobra at one time. For more information about changing the license key, see the *Upgrade a Software License* section of the EPM Security Administrator Help.
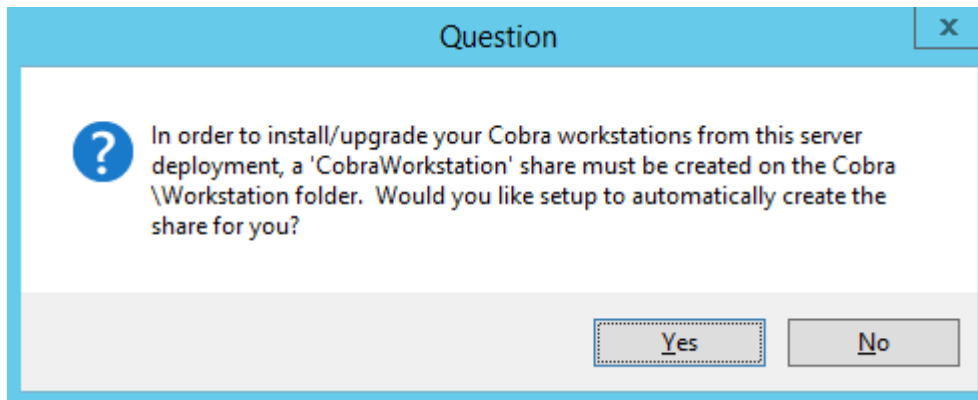
4. On the Setup Type page, select the **Server – n-Tier** option and click **Browse** to specify a directory where the Cobra files will be installed and click **Next**.

5. If you are performing a clean install of Cobra 8.x, the UNC share that contains the Cobra workstation components has to be recreated. The Cobra workstation components are installed in the **Workstation** folder (the default location is <Cobra Installation Directory>\Workstation).
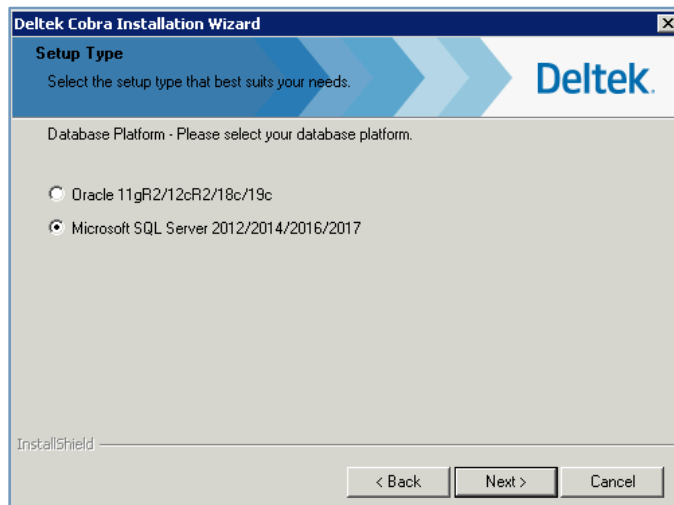
> **Note:** Aside from the Workstation folder, users should also have access to the Report Templates and Import Files folders. The Report Template folder is created as part of the installation; you need to manually create the Import Files folder. While the Integration wizard can automatically import a file selected on the client, the performance is noticeably faster if you copy the file to the application server using Windows Explorer. The Import Files folder provides a location for the user to copy the file to import onto the application server and then, from the Integration Wizard, select the file from the Import Files folder.

The UNC share named **CobraWorkstation** enables the client workstations to launch Cobra on the network. Click **Yes** to allow setup to create the UNC share for you. Click **No** to create the UNC share manually at a later time. Click **OK** to continue.

> **Note:** If you are creating the share manually, note that although the installation folder containing the Workstation components is named **Workstation**, the UNC share must be created with a shared name of **CobraWorkstation**. If this share name is changed, upgraded Cobra clients fail when launching Cobra after the installation.

6. On the Setup Type page, select the **Microsoft SQL Server** option and click **Next**.
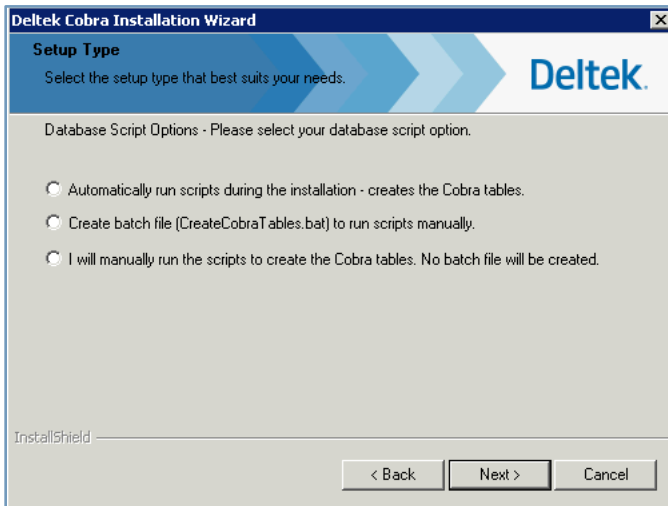

7. On the Database Server page, enter the name of the database server where the components will be installed in the **Database server that you are installing to** field. Select **SQL Server authentication using the Login ID and password below** and enter the **Login ID** and

Password of the database to use. Enter the catalog name of the specified database in the **Name of database catalog** field and click **Next**.

> **Note:** You can use Windows Authentication when setting up a connection to the database. The connection to the database is always from the application tier to the database. In n-tier mode, the credentials (or user ID) used for Windows Authentication to the database are taken from the Windows account of the server service (the windows user ID on the application server — not the user logging into Cobra).

The InstallShield wizard checks if TLS 1.0 is enabled or disabled on the machine where you are installing Cobra. If TLS 1.0 is disabled, the following message displays:

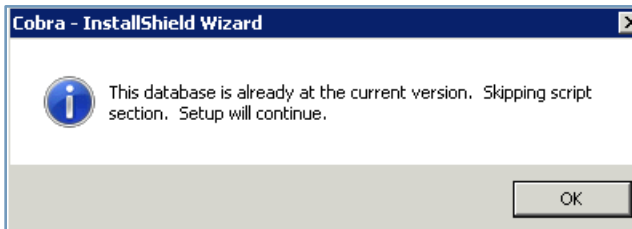8. On the Setup Type page, select one of the following options and click **Next**:

- **Automatically run scripts during the installation – creates the Cobra tables:** Select this option to automatically create the Cobra database tables during the installation process.

- **Create batch file (CreateCobraTables.bat) to run scripts manually:** Select this option to manually create the Cobra database tables (after installation) using a batch file. The batch file is located in the <Cobra Installation Directory>\Scripts\Create folder.

- **I will manually run the scripts to create the Cobra tables. No batch file will be created:** Select this option to manually create the Cobra database tables (after installation) using the scripts located in the <Cobra Installation Directory>\Scripts\Create folder.

> **Note:** If you are upgrading from Cobra 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.
>
> See Run Scripts to Create or Upgrade Database Tables for more information.

> **Note:** You can configure additional data sources once the setup is complete using Data Tool and Cobra Database Upgrade Wizard.

If Cobra detects that your database is already at the current version, the following message displays:

9. The Customer Experience Improvement Program (CEIP) page displays. This page allows you to participate in the CEIP by submitting your installation and product usage information to Deltek. This information is used by Deltek to improve the functionality of the product.

- **Send installation data to Deltek**: Selecting this option means you allow Deltek to collect the following installation information:

    - Operating System

- Operating System build number

- Number of CPUs

- Amount of RAM installed

- Language

- **Automatically send usage statistics to Deltek**: Selecting this option means you allow Deltek to collect the following usage information:

  - Menu, toolbar, and other user interface clicks and selections

  - Names of screens accessed

  - Help topics accessed

  - Number of Control Account key fields used in a project

  - Names of processes run through the user interface, API, and Web services, and the execution time of a process

  - Exception error descriptions

  > **Note:** You can later change the value of the **Automatically send usage statistics to Deltek** option on the About Deltek Cobra dialog box in the Cobra application. See the Cobra Help System.

10. On the Start Copying Files page, review the **Current Settings** information. **Install workstation from** indicates the workstation installation location.

11. Click **Next** to start copying the files or **Back** to modify your settings. The Setup Status page displays the installation progress.

12. When the InstallShield Wizard Complete page appears, click **Finish**.

13. After you install Cobra on your application server, install the client on each workstation that will use Cobra.

> **Note:** See Client on a Workstation Installation for more information.

14. To test launching the software, click the Start menu, and locate **Deltek Cobra 8.x**.

> **Note:** Beginning Windows 7, Deltek recommends that you always run Cobra as an Administrator. See Set Cobra to Always Run as an Administrator.

> **Note:** Upon starting Cobra, you must enter a user ID and password. The default user ID is 'SYSADMIN' and the default password is 'password.' For security reasons, you must change this password as soon as possible. For more information on how to change your password, see Change your Cobra Password.

15. See Cobra New Installation Steps to proceed with the remaining installation steps.

N-Tier Application Mode Installation in Load Balancing Configuration

If you have two or more application servers, you can set up the n-tier application server for load balancing. This will distribute the processing workload among your application servers, optimizing the use of your resources and minimizing the response time of requested tasks.

To install in n-tier Application Server mode in load balancing configuration:

1. Install Cobra on each application server (see Server – N-Tier Installation (N-Tier Application Server Mode) that will host the load balancing configuration.

2. Configure a virtual IP (VIP) address in conjunction with the load balancing technology being deployed.

3. Locate the following files in the C:\Program Files\Deltek\Cobra\Workstation folder:

   - **IdeaBlade.ibconfig**
   - **Cobra.WinUI.exe.config**
   - **Cobra.API.exe.config**

4. Use a file editor to open each file and replace the server name in the `<remoteBaseURL>` tag with the VIP address you configured for this load balancing setup. For example, if your VIP address is cobra.yourcompany.com, replace the existing address with: `http://cobra.yourcompany.com` (see the sample code below).

```
<remoting>

<remotePersistenceEnabled>false</remotePersistenceEnabled>

<communicationsTechnology>Remoting</communicationsTechnology>

<remoteBaseURL>http://cobra.yourcompany.com</remoteBaseURL>

<serverPort>9009</serverPort>

<serviceName>PersistenceService</serviceName>

<serverDetectTimeoutMilliseconds>-1</serverDetectTimeoutMilliseconds>

<proxyPort>0</proxyPort>

</remoting>
```

Firewall

Since Cobra is using the Windows Communication Foundation (WCF) service that runs through the network, it is required to allow the machine that hosts the Cobra server service to listen to the applications from remote machines. By default, the host listens to port 9009 using the Transmission Control Protocol (TCP). If your firewall is turned on, add an inbound rule that will allow connection to the default port 9009 in your application server.

> **Note:** If you need assistance, contact your firm's Cobra Administrator. For more information on WCF, refer to KB Article # 74127 in the Knowledge Center of the Deltek Support Center.

Optional Settings

If you want to keep your Cobra sessions active even with intermittent connectivity, you may enable the reliable session setting. For more information, refer to KB Article # 91937 in the Knowledge Center of the Deltek Support Center.

Client on a Workstation Installation

You must run the **Workstation** setup from the network share (<SERVER>\CobraWorkstation) that is created during installation so that auto-update capabilities are enabled and will work. If you chose the option to manually create the CobraWorkstation share, you must do so before continuing. You must run this setup on each workstation initially, and the auto-update capabilities will take over.

> **Note:** Administration Tools are not installed by default. If you already have the Administration Tools feature installed, it will be automatically upgraded. If you want to install this feature in a new Cobra workstation installation, you must start a command prompt as an administrator and run the following command: **DeltekCobraWorkstation.exe /Admin**.

Perform a New Cobra Workstation Installation

To perform a new Cobra installation on a workstation:

1. On the workstation, locate and double-click the **DeltekCobraWorkstation.exe** file in the application server (<SERVER>\CobraWorkstation folder) to launch the Cobra Installation Wizard.

2. Click **Next** on the Welcome page.

3. On the Select Features page, select **Workstation** and click **Next**.

   > **Note:** See Install Administration Tools on a New Cobra Workstation for information on how to install the Administration tools.

4. On the Start Copying Files page, review the **Current Settings** information.

   Click **Next** to start copying the files or **Back** to modify your settings.

5. The Customer Experience Improvement Program (CEIP) page displays. This page allows you to participate in the CEIP by submitting your installation and product usage information to Deltek. This information is used by Deltek to improve the functionality of the product.

▪ **Send installation data to Deltek**: Selecting this option means you allow Deltek to collect the following installation information:

  ▪ Operating System

  ▪ Operating System build number

  ▪ Number of CPUs

  ▪ Amount of RAM installed

  ▪ Language

▪ **Automatically send usage statistics to Deltek**: Selecting this option means you allow Deltek to collect the following usage information:

  ▪ Menu, toolbar, and other user interface clicks and selections

  ▪ Names of screens accessed

  ▪ Help topics accessed

  ▪ Number of Control Account key fields used in a project

▪ Names of processes run through the user interface, API, and Web services, and the execution time of a process

▪ Exception error descriptions

> **Note:** You can later change the value of the **Automatically send usage statistics to Deltek** option on the About Deltek Cobra dialog box in the Cobra application. See the Cobra Help System.

6. The **Setup Status** page displays the installation progress.

7. Click **Finish** to exit setup.

Install Cobra with Administration Tools on a New Cobra Workstation

To install Cobra with Administration Tools on a new Cobra workstation:

1. Launch and right-click the **Command Prompt** and select **Run as administrator.**

2. On the Administrator Command Prompt window, enter the following:

   \\<Application Server>\CobraWorkstation\DeltekCobraWorkstation.exe /Admin

   The Deltek Cobra Workstation Installation wizard displays.

3. On the Select Features page, select **Administration Tools** to install these tools:

▪ **Data Tool**: After installing Cobra, you must run this tool to install the system data. This tool allows you to add new results to your database.

▪ **EPM Security Administrator**: This tool is used to set up access control to Cobra.

4. Click the pages of the wizard to complete the installation.

Check Client Configuration Files

Use this procedure to ensure that the client configuration files are updated correctly after you install Cobra for the first time.

After installing the Cobra on n-tier server:

1. Navigate to the Cobra Installation Directory where the Cobra client configuration files reside.

2. Edit the Cobra.WinUi.exe.config and Cobra.Api.exe.config files as needed.

3. Copy the client configuration files you edited in the Cobra folder into the shared workstation folder. This is the folder share that was created by the Cobra installer where Cobra client installers are saved for distribution to the end-user machines.

4. Future server upgrades will transfer the Cobra.WinUi.exe.config and Cobra.Api.exe.config files from the Cobra folder on the server to the shared workstation folder.

> **Note:** Refer to the Windows Authentication section of the Cobra Help System for more information on modifying the configuration files.

Cobra Upgrades

If you have a previous version of Cobra installed, you can upgrade your existing installation. The Cobra installer supports in-place upgrades of your existing installation to the current version.

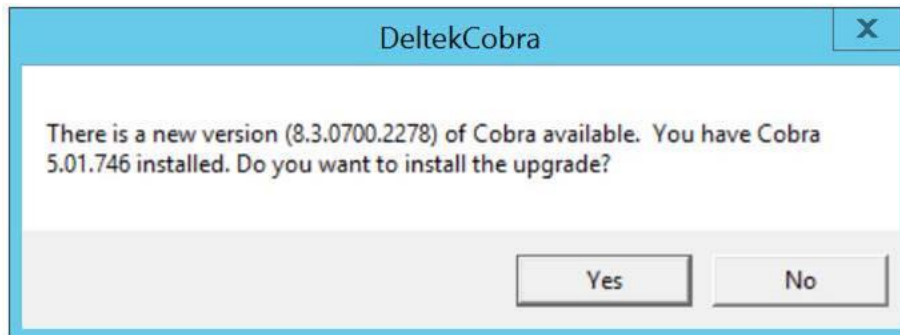## Upgrade from Cobra 8.x to the Latest Version

To upgrade your existing version of Cobra, you must run the Cobra installation from the same machine where you initially installed Cobra. That is your workstation if you are using the stand-alone model or your deployment server if you are using the client/server or n-tier application server model. Client workstations will automatically update the subsequent users' log into Cobra.

If you are upgrading your Cobra from 5.1.4 to the latest version, take note of the following:

- For any type of deployment (standalone, server-deployment, or n-tier), you must first upgrade to Cobra 8.0 and then upgrade to the latest version.

> **Note:** If you are using a version lower than 5.1.4, you must first upgrade to Cobra 5.1.4.

- Once the server is upgraded to the latest version, any workstation can be directly upgraded from Cobra 5.1.4 to the latest version. Cobra displays this example message asking if you want to upgrade the workstation:

> **Note:** If you are upgrading from Cobra 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.
>
> See Run Scripts to Create or Upgrade Database Tables for more information.

To upgrade from Cobra 8.x to the latest version:

1. Log onto the application server as an administrator.

2. From the application server, launch the **DeltekCobra83.exe** file that you downloaded from the Deltek Support site.

> **Note:** See Downloading Deltek Products using Deltek Software Manager for more information.

3. On the Welcome page of the Deltek Cobra Upgrade Installation wizard, click **Next** to start the upgrading process.

Cobra displays a message if it detects that you have more than one configured data source. Click **Yes** to launch the Database Upgrade Wizard immediately after the update is complete.

> **Note:** You can configure additional data sources once the setup is complete using Data Tool and Cobra Database Upgrade Wizard.

The InstallShield wizard checks if TLS 1.0 is enabled or disabled on the machine where Cobra is installed. If TLS 1.0 is disabled, the following message displays:
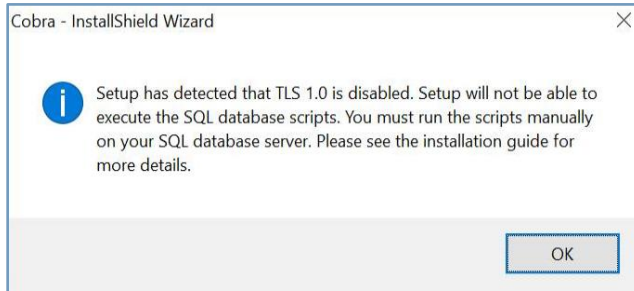

4. On the Setup Type page, select one of the following options and click **Next**:

- **Automatically run upgrade scripts during the installation:** Select this option to automatically update the Cobra database tables during the installation process.

- **Create batch file (CreateUpgradeScripts.bat) to run scripts manually:** Select this option to manually upgrade the Cobra database tables (after installation) using a batch file.

- **I will manually run the upgrade scripts. No batch file will be created:** Select this option to manually upgrade the Cobra database tables (after installation) using the upgrade scripts.

> **Note:** If you are upgrading from Cobra 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.
>
> See Run Scripts to Create or Upgrade Database Tables for more information.

The following message displays. Click **OK** to continue.
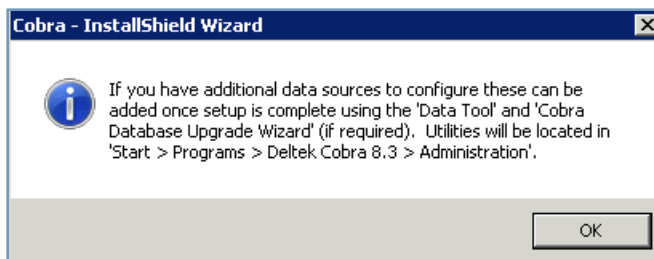
If Cobra detects that your database is already at the current version, the following message displays. Click **OK t**o continue.
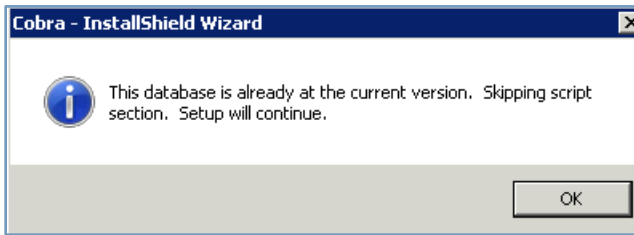
5. If you are upgrading a Cobra 5.x n-tier or deployment server installation to Cobra 8.x, the UNC share that contains the Cobra workstation components has to be recreated. The Cobra workstation components are installed in the **Workstation** folder (the default location is <Cobra Installation Directory>\Workstation).
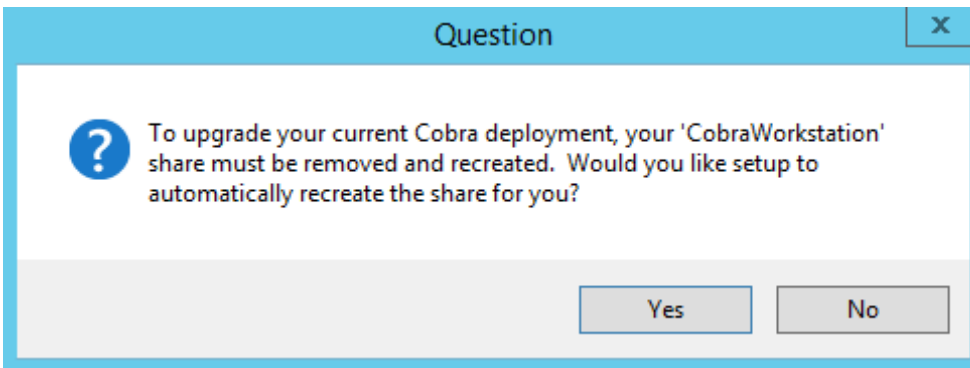
> **Note:** This prompt does not display if you are upgrading a Cobra 8.x n-tier or deployment server installation to the latest Cobra 8.x.

> **Note:** If you are upgrading a stand-alone deployment, proceed to step 6. The UNC share needs to be recreated only for n-tier and deployment server installations and upgrades.

The UNC share named **CobraWorkstation** enables the client workstations to launch Cobra on the network. Click **Yes** to allow setup to recreate the UNC share for you. Click **No** to recreate the UNC share manually at a later time.

> **Note:** If you are creating the UNC share manually, note that although the installation folder containing the workstation components is named Workstation, the UNC share must be created with a shared name of CobraWorkstation. If this name is changed, upgraded Cobra clients fail when launching Cobra after the upgrade.

6. The Customer Experience Improvement Program (CEIP) page displays. This page allows you to participate in the CEIP by submitting your installation and product usage information to Deltek. This information is used by Deltek to improve the functionality of the product.

- **Send installation data to Deltek**: Selecting this option means you allow Deltek to collect the following installation information:
  - Operating System
  - Operating System build number
  - Number of CPUs

- Amount of RAM installed

- Language

- **Automatically send usage statistics to Deltek**: Selecting this option means you allow Deltek to collect the following usage information:

  - Menu, toolbar, and other user interface clicks and selections

  - Names of screens accessed

  - Help topics accessed

  - Number of Control Account key fields used in a project

  - Names of processes run through the user interface, API, and Web services, and the execution time of a process

  - Exception error descriptions

> **Note:** You can later change the value of the **Automatically send usage statistics to Deltek** option on the About Deltek Cobra dialog box in the Cobra application. See the Cobra Help System.

7. The Setup Status page displays the progress of the upgrading process.

8. When the Update Complete page displays, click **Finish**.

In an n-tier or client/server installation, notify users that they will be prompted to upgrade their client next time they log in. Select **Yes** in response to the following question: *Do you want to install the upgrade?*

> **Note:** You do not have to be logged on as an administrator to update the client, unless the client is on Citrix. In those cases, the administrator must launch DeltekCobraWorkstation.exe from the workstation network share.

> **Note:** Aside from the Workstation folder, users should also have access to the Report Templates and Import Files folders. The Report Template folder is created as part of the installation; you need to manually create the Import Files folder. While the Integration Wizard can automatically import a file selected on the client, the performance is noticeably faster if you copy the file to the application server using Windows Explorer. The Import Files folder provides a location for the user to copy the file to import onto the application server and then, from the Integration Wizard, select the file from the Import Files folder.

Upgrade an Existing Workstation Installation

To upgrade an existing Cobra client installation on a workstation:

1. On the workstation, launch the Cobra client application. Cobra detects that a new version is available and displays a message asking if you want to install the upgrade. Click **Yes** to install the upgrade.

> **Note:** If you chose to manually create the **CobraWorkstation** share, you must do so before users launch the Cobra client application on their workstations.

2. Cobra copies the installation updates and automatically updates the local Cobra installation to the latest version. Once the update is completed, setup terminates automatically. You can then launch Cobra from the shortcut to log on to the application.

> **Note:** Deltek recommends that you run Cobra as an Administrator. See <u>Set Cobra to Always Run as an Administrator</u>.

Check Configuration Files

Use this procedure to ensure that the client configuration files are updated correctly when you upgrade your existing version of Cobra.

Before installing the Cobra 8.x upgrade on the server:

1. On the Cobra n-tier server, navigate to the Cobra Installation directory where the Cobra client configuration files reside.

2. Edit the Cobra.WinUi.exe.config and Cobra.Api.exe.config files as needed.

3. If you have previously edited the configuration files and stored them in another location, you must copy and paste them to the Cobra installation directory before you perform the Cobra server upgrade.

4. During the server installation, the installer will copy the two configuration files from this location into the shared workstation folder.

> **Note:** Refer to the Windows Authentication section of the Cobra Help System for more information on modifying the configuration files.

Deploy the Windows Authentication Bindings Configuration Files

The Cobra workstation installation (new and upgrade) deploys the Cobra.WinUI.exe.config and Cobra.Api.exe config files from the Cobra n-tier server to the workstations. This adds support to those administrators who have been assigned to enable Cobra support for the Microsoft Windows Communication Foundation (WCF) enhanced Windows authentication security settings. The security changes to client configuration files must be applied to the Cobra server and then deployed to each Cobra n-tier client before you can successfully connect to the server.

Refer to the following sections to ensure that your client configuration files are updated correctly, depending on what you want to do:

- Upgrade existing version of Cobra
- Install Cobra for the first time

Post Installation

This section contains post-installation topics for Cobra.

Installation Logs

Cobra logs the installation information on the following directories:

- **Complete new or upgrade installation**: <Cobra Installation Directory>\Logs

  Example: C:\Program Files (x86)\Deltek\Cobra\Logs

- **Incomplete new or upgrade installation**: C:\Users\<username>\AppData\Local or C:\Users\<username>\AppData\Roaming

Note: If you encountered any errors during installation, contact Deltek Contact Customer Care Connect and send them the log file.

Contact Technical Services

While Deltek has worked hard to ensure an easy installation, in certain situations installation can be complex, and may require special consideration. The complexity can increase, for example, with multiple server installation, load balancing, database replication, or other complex deployments. In such cases, we recommend contacting Deltek Technical Services to schedule your Cobra installation.

Deltek's team of technical consultants can assist you with your installation in a timely manner. When you contact the Technical Services department, technical specialists schedule a phone and Microsoft Live Meeting appointment to walk your IT staff through your Cobra installation. Deltek's involvement ensures that all applications are installed properly, regardless of the complexity of the deployment scenario.

The Technical Services department's assistance is billed on a time and materials basis. While installation assistance is not required, it is recommended to ensure that you optimize your investment in Cobra from the time of installation. Many Deltek clients have benefited from the Deltek Technical Services department's experience and knowledge of the Cobra installation process.

Launch Cobra

To test launching the software, click the Start menu, and locate **Deltek Cobra 8.x**.

Set Cobra to Always Run as an Administrator

Beginning with Windows 7, Deltek recommends that you run Cobra as an Administrator when there are restrictive User Account Control (UAC) security settings.

To set Cobra to always run as an Administrator:

1. Navigate to the <Cobra Installation Directory>.
2. Right-click **DeltekCobra.exe**, and click **Properties**.
3. On the DeltekCobra Properties dialog box, click **Compatibility**.
4. Select **Run this program as an Administrator**.
5. Click **Apply**, and then click **OK**.

> **Note:** You can also pass the /configfolder parameter to launch Cobra and to specify the location of the Config.dat file and IdeaBlade.Ibconfig file if Cobra is not installed in the default installation location. Refer to the **Run Cobra with Command Line Parameters** topic in the Cobra Help System for more information.

Change your Cobra Password

Upon starting Cobra, you must enter a user ID and password. The default user ID is 'SYSADMIN' and the default password is 'password.' For security reasons, you must change this password as soon as possible.

To change your password:

1. Click **» Change Password** to display the Change Password dialog box.
2. Enter your current password in the **Old Password** field.
3. Enter a new password in the **New Password** field.
4. Re-enter the new password in the **Re-enter New Password** field.
5. Click **OK** to save the new password and close the Change Password dialog box.

> **Note:** If you are a system administrator, you can change each Cobra user's password using the EPM Security Administrator (see Change User Passwords).

After you have tested launching Cobra, the next step is to establish user security rights. See Configure the EPM Security Administrator for more information.

Verify Proper Installation

Check that the version number reflects the version that you installed. Click **» Help » About Deltek Cobra**

Run Scripts to Create or Upgrade Database Tables

The Cobra installer allows you to choose whether to create or upgrade database tables automatically or manually. If you opted to automatically update the Cobra database tables, the scripts are run during the installation process. Otherwise, you can update database tables manually using a batch file (created during installation) or individual scripts located in this folder: <Cobra Installation Directory>\Scripts.

Run Scripts Manually

If you opted to manually run the scripts, you can use one of the .bat files found in the <Cobra Installation Directory>\Scripts folder depending on what database you are using.

Purpose	Location	Scripts
Create a database	<Cobra Installation Directory>\Scripts\<ServerType>Create	▪ **RunAllCreateScripts_Oracle.bat** if you are using an Oracle database

Purpose	Location	Scripts
	Example: C:\Program Files\Deltek\Cobra\Scripts\<Ser verType>Create	▪ **RunAllCreateScripts_Sql.bat** if you are using a Microsoft SQL database
Upgrade from Cobra 8.0 to the latest version	<Cobra Installation Directory>\Scripts\<ServerType >Upgrade Example: C:\Program Files\Deltek\Cobra\Scripts\<Ser verType>Upgrade	▪ **Run83UpgradeScripts_Oracle. bat** if you are using an Oracle database ▪ **Run83UpgradeScripts_Sql.bat** if you are using a Microsoft SQL database

There are parameters that can be passed to the batch, but they must be passed in a specific order, with a space between each parameter. The following table indicates what order the parameters must be passed:

Oracle Batch Parameter Order	Microsoft SQL Batch Parameter Order
1. Server\Instance Name 2. User ID (default is **cobra50**) 3. Password (default is **cobra50**)	1. Database Name 2. Server\Instance Name 3. User ID 4. Password

Data Tool and Data Source

Use the Cobra Data Tool to create or update data sources and connection information, load system data (such as reports, menu items, and required users and groups) during installation, and define result field names.

> **Note:** For more information, see the Data Tool Help System which you can access from within the tool or from the Cobra folder.

Supported Providers

The Cobra Data Tool supports the following .NET and OLE Database providers:

- **.NET Data Providers**
  - Oracle ODP.NET
  - SQL Server .NET Framework
- **OLE DB Providers**
  - Microsoft OLE DB Provider for SQL Server
  - Microsoft OLE DB Driver for SQL Server
  - Oracle Provider for OLE DB
  - SQL Server Native Client

> **Note:** Deltek recommends to use .NET data providers when setting up your data connection. For instructions on how to configure Oracle ODP.NET, see Appendix I: Configure Oracle ODP.NET in Cobra.

> **Note:** If you use MS OLE DB Driver for SQL Server, see Add/Edit Data Source in the Data Tool.

Configure the ODBC Connection

Cobra's main connection to the database uses the connection configured using the Data Tool (either a .NET Data Provider or an OLE DB Provider). Cobra's application processing functions that use the Visual FoxPro interfaces (which include Backup, Restore and Integration) use the Open Database Connectivity (ODBC) interface instead of the Data Tool connection. By default, Cobra automatically attempts to create the ODBC connection from the settings defined in the Data Tool connection. If you encounter errors, or have any other reason to manually configure the ODBC connection settings, the information in this section explains how to do so.

> **Note:** Cobra 8.1 and earlier versions relied on an explicitly created Open Database Connectivity Data Source Name (ODBC DSN) definition. Cobra 8.2 and higher no longer have this requirement because the connection is configured automatically.

> **Note:** For more information, see the Data Tool Help System which you can access from within the tool or from the Cobra folder.

Supported Drivers

This table lists the drivers Cobra will attempt to use when creating the ODBC connection. If you use a driver that is not supported, Cobra displays a warning message in the log informing you that the driver is no longer supported.

> **Note:** Refer to the Microsoft SQL or Oracle documentation for instructions in installing the driver.

Database Type	Driver	Common Name	Notes
Oracle	SQORA32.DLL	Oracle ODBC driver	This is the preferred driver for Oracle server.
SQL	MSODBCSQL*nn*.DLL	ODBC Driver *nn* for SQL Server	This is the preferred driver for SQL server. Cobra will find the most recent version of this driver and attempt to use it.
	SQLCLI*nn*.DLL	SQL Server Native Client *nn*	This is the SQL Server Native Client OLE DB provider.

Database Type	Driver	Common Name	Notes
			Microsoft no longer develops this provider and recommends to use the OLE DB Driver for SQL Server instead. Cobra will find the most recent version of this driver and attempt to use it.

Unsupported Drivers

Database Type	Driver	Common Name	Notes
Oracle	MSORCL32.DLL	Microsoft ODBC for Oracle	Cobra displays a warning message in the log informing you that the driver is no longer supported and that you should install one of the supported drivers.
SQL	SQLSRV32.DLL	SQL Server	This is the SQL server OLE DB driver. Microsoft no longer develops this driver and recommends to use the ODBC driver instead. Cobra displays a warning message in the log informing you that the driver is no longer supported and that you should install one of the supported drivers.

The process of how Cobra determines which ODBC driver to use is described in this diagram:
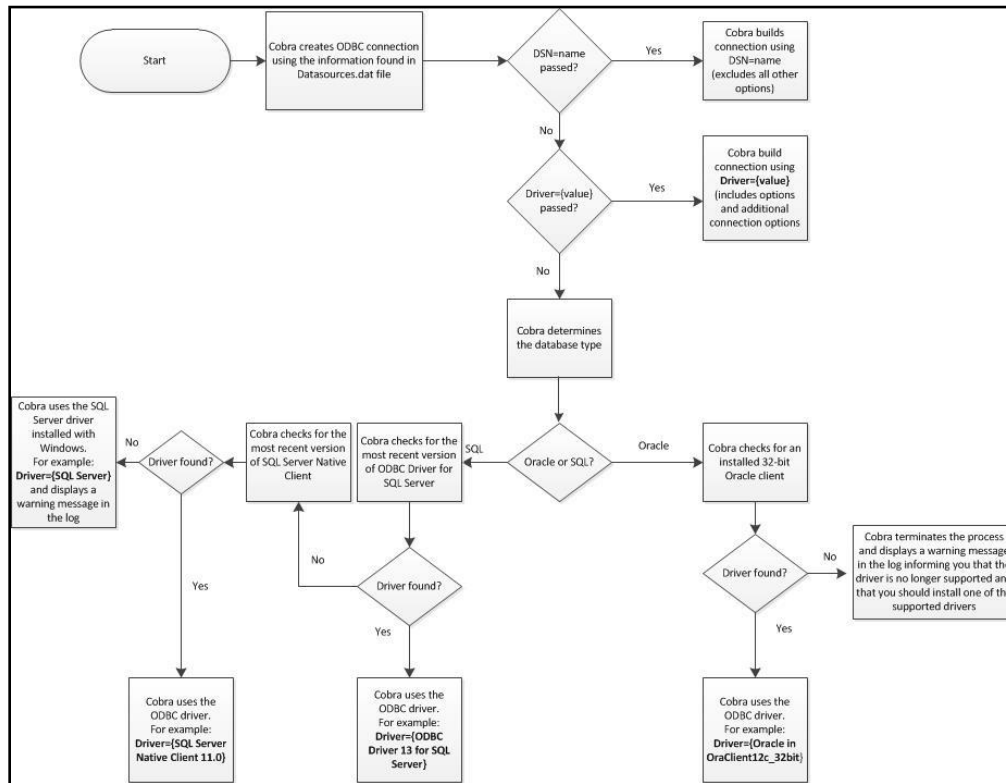
Additional ODBC Connection Options

This section describes how to manually configure the ODBC connection options if you encounter errors or have any other reason to do so.

Default Options

When you create a data source using the Data Tool, Cobra stores the connection options in the Datasources.dat file. These options will be used as the default options for the ODBC connection. The following is an example:

```
[Cobra8ORCL]

USER ID=2D4AB1E623CB84FA

PASSWORD=2D4AB1E623CB84FA

DATA SOURCE=Cobra8

PERSIST SECURITY INFO=True

Provider=Oracle.DataAccess.Client

SchemaName=COBRA8
```

Options Specific to a Data source

You can specify additional options that relate to the ODBC connection for each of the specific data sources section of the Datasources.dat file.

Syntax:

```
Extended Properties=Cobra:ODBC={key=value;key=value…}
```

Example:

```
Extended Properties=Cobra:ODBC={Driver={ODBC Driver 11 for SQL Server}}
```

Global Options

Global options are defined for all connections in the global **[RdbKeyOptions]** section in the Datasources.dat file. These options apply to all connections of the relevant database type.

Global tags are defined for each of the database type.

Syntax:

```
[RdbKeyOptions]
Oracle=keyword=value;keyword=value;
SQLServer=keyword=value;keyword=value;
```

Example:

```
[RdbKeyOptions]
Oracle=Driver={Oracle in OraClient12c_32bit};
SQLServer=Driver={ODBC Driver 11 for SQL Server};
```

Order of Precedence

A global option takes precedence over a default option. An option defined on an individual data source takes precedence over global and default options.

Connection Options

The following table lists the most commonly used connection options.

Option	Definition
DSN=name	The **DSN=name** option remains for existing connections created using the previous version of Cobra. To use the new functionality, remove this option. If **DSN=name** is specified, additional options specified in the **Extended Properties=Cobra:ODBC** section are ignored. If the specified **DSN=name** does not exist as a 32-bit ODBC data source, and you try to run an application process, the log file displays errors.
Driver={value}	The **Driver={value}** option allows you to specify a specific driver instead of letting Cobra to determine it automatically. Make sure to put the value inside the braces {}.
Data Source=value	The **Data Source=value** option can be used for both Oracle and SQL Server. For SQL Server connection, the **Data Source** option is translated to **Server=value**. If both **Data Source=value** and **Server=value** are

Option	Definition
	found, the connection string uses **Server=value** when generating the string and ignores **Data Source=value**. For Oracle connection, **Data Source=value** is translated to **DBQ=value**. If both **Data Source=value** and **DBQ=value** are found, the connection string uses **DBQ=value** and ignores **Data Source=value**.
Server=value	This option only applies to SQL database connection. The **Server=value** option determines the server being connected to. This option is used in preference to **Data Source=value**.
Initial Catalog=myDataBase	This option only applies to SQL database connection The **Initial Catalog=myDataBase** option determines the database to connect to. If specified, the application process connection string translates this to **Database=<value>**.
Database=value	This option only applies to SQL server database connection. The **Database=value** option determines the database on the server to connect to. This option is used in preference to **Initial Catalog=value**.
DBQ=value	This option only applies to Oracle connection and specifies the TNS Service Name for the Oracle database. This option is used in preference to **Data Source=value** option if both are specified.

Define Connection Options

For options specific to a data source, you define connection options using the **keyword=value;** format. Multiple options can be defined in a single string or over multiple lines, with each option separated by a semi-colon.

To define connection options:

1. Locate the Datasources.dat file on the Cobra Installation Directory and create a backup copy of it

2. Open the file using a text editor (such as Notepad), add or edit the specific section (depending on the tags you want to add or edit), and save your changes.

▪ **For default options and options specific to a data source:**

```
Extended Properties=Cobra:ODBC={key=value;key=value…}
```

▪ **For global options:**

```
[RdbKeyOptions]

Oracle=keyword=value;keyword=value;

SQLServer=keyword=value;keyword=value;
```

> **Note:** Exclude options by adding a tilde (~) character before the string to be ignored.

3. In n-tier deployment, restart the IdeaBlade Persistence Server Service using the Windows Services administration tool on the server or the command line to apply the changes.

> **Note:** See Restart the Service in an N-Tier Environment.

Help and Troubleshooting

If there are errors encountered when running application processes, Cobra logs information on how the connection string is generated in the ClientDebugLog.xml file or ServerDebugLog.xml file for n-tier installation. Cobra logs information about the options found, how the driver is determined, as well as any options that are excluded from the connection string. The connection string generated is also displayed to the debug log file (with sensitive data masked).

Cobra follows this format when generating the connection string.

If the **DSN=name** option is specified, the connection string format will be as follows: *DSN=name;uid=value;pwd=value;*. If it is not specified, the connection string format will be: *Driver={name};uid=value;pwd=value;server=value;database=value;<additional options using keyword=value format>;*.

If the **Debug Log** option on the Data Access tab of the Application Preferences dialog box is selected, the ProcessLog.xml Log file stores additional information. This includes information generated when trying to connect, as well as the string used to connect to the database (with sensitive data masked).

> **Note:** Refer to the *ProcessLog.xml Log File* and *ClientDebugLog.xml Log File* topics in the Cobra Help System for more information on logs and related procedures.
>
> If you encounter other error, which are most likely returned from the database server you are using, search the Web for troubleshooting steps.

Configure the EPM Security Administrator

The EPM Security Administrator (EPM SA) allows you to define the security rights for Cobra users. You can add a new or edit an existing data source using the EPM SA tool. To launch, click the Start menu, and locate **Deltek Cobra 8.x » Deltek EPM Security Administrator**.

> **Note:** For more information about the tool, see the EPM Security Administrator Online Help.

Add a New Data Source

To add a new data source:

1. Launch the EPM SA tool.

2. Click **Tools » Change data source** to display the Data Sources dialog box.

3. Click **Add** to open the Data Link Properties dialog box, and select your database server:

    - If you are using an SQL Server database, select the **Microsoft OLE DB Provider for SQL Server** option.

    - If you are using an Oracle database, select the **Microsoft OLE DB Provider for Oracle** or **Oracle Provider for OLE DB** option.

> **Note:** If you are using .NET Data Provider, use the Cobra Data Tool to add or edit the data source connection information.

4. Click **Next** to go to the Connection tab and follow the appropriate set of actions:

   ▪ If you are using SQL Server, enter the server name of the data source. Next, in the **Enter information to log on to the server** field, enter the **User name** and **Password** you use to log on to the database and make sure that the **Allow saving password** option is selected. Lastly, select the **Select the database on the server** option and specify the location of the Cobra records.

> **Note:** You can also use Windows NT Integrated security to log on to the server

   ▪ If you are using an Oracle server, enter the server name of the data source in the **Data Source** field. Then, select the **Use a specific user name and password** option and enter the **User name** and **Password** you use to log on to the database. Make sure that the **Allow saving password** option is selected.
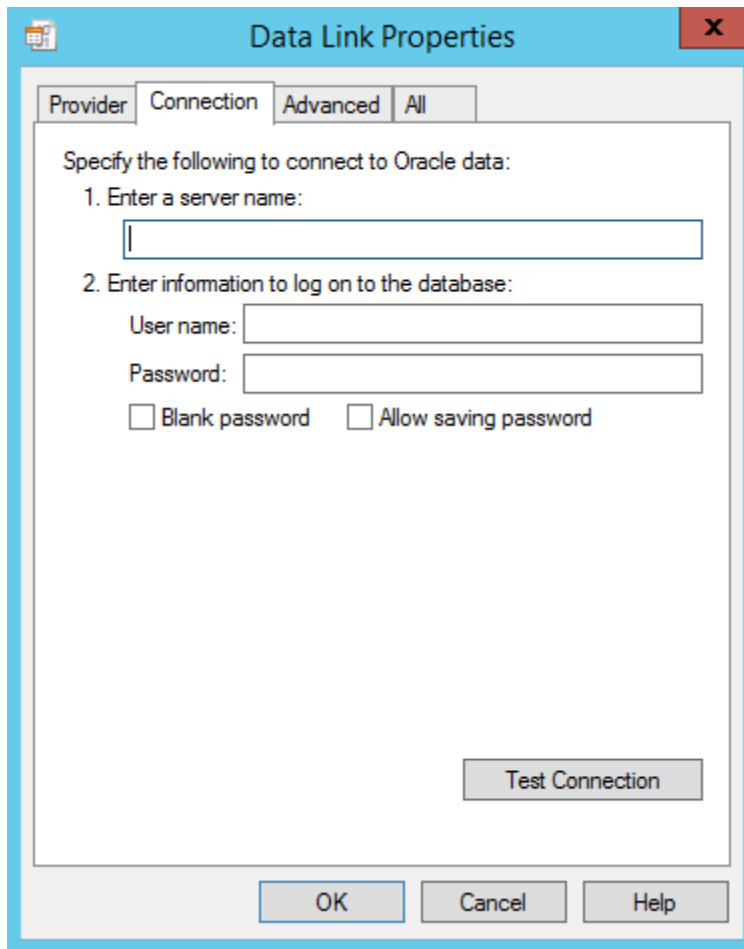
5. Click **Test Connection** to confirm that the connection to your database works. The Data Tool displays the **Microsoft Data Link** message box that confirms the database connection. Click **OK** to close the message box.

    If the Data Link Properties dialog box fails to establish a connection, go back to the Connection tab and check your settings or consult your database administrator.

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

    The Edit Data Source dialog box displays.

7. Enter a descriptive name in the **Name** field and make sure that the **Database Is Unicode** option is selected if you run Oracle scripts with Unicode support.

> **Note:** If you are installing Cobra to a database which already contains another Deltek PPM application that is not configured to use Unicode, you must update the existing database tables to use Unicode structures before installing Cobra. Contact Customer Care if you require assistance.

8. Click **OK** to close the Edit Data Source dialog box and return to the Data Sources dialog box.

    The data source you defined is displayed in the **Data Sources** field. To add more data sources, repeat steps 1 to 8.

9. Select a data source to work on and click **OK**.

The Deltek EPM Security Administrator dialog box displays.

Edit an Existing Data Source

To edit an existing data source:

1. Launch the EPM SA tool.

2. Click **Tools » Change data source**. The Data Source dialog box displays.

3. Select an existing data source from the **Data Sources** field and click **Edit**. The Edit Data Source dialog box displays.

> **Note:** If you are using .NET Data Provider, use the Cobra Data Tool to add or edit the data source connection information.

4. Click **Data Link Properties** to display the Data Link Properties dialog box.

5. Use the tabs in the Data Link Properties dialog box to enter or select your new preferences.

6. Click **OK** to save your modifications and close the Data Link Properties dialog box.

7. Click **OK** to close the Edit Data Source dialog box.

8. Click **OK** to close the Data Sources dialog box and go back to the EPM Security Administrator dialog box.

Switch to another Data Source

To switch to another data source:

1. Click **Tools » Change data source** to display the Data Sources dialog box.

2. Select a different data source from the **Data Sources** field or click **Add** to define a new data source

> **Note:** See Add a New Data Source for more information about adding a new data source.

Add, Delete, and Rename Users

Users are individuals who are given rights to log in to the application's system. Initially, there are two default users that can access Cobra: SYSADMIN and GUEST. By default, their primary roles are not defined. Make sure that you define the roles for these user IDs (see Define User and Group Roles).

Use the EPM Security Administrator to add more users and grant them access to Cobra. You can also delete or rename a user ID.

> **Note:** Make sure that each user is associated with Cobra on the Products tab to indicate that the user is permitted to access the Cobra database.

To add a user ID:

1. Select the **Users** folder on the Explorer pane and click **Edit » Add**.

2. Enter a user ID (up to 20 alphanumeric characters) in the Explorer pane and press **Enter**.

3. On the General tab, enter the user's **First Name** and **Last Name** (up to 50 alphanumeric characters each filed).

4. Select a role ID from the **Primary Role** field.

> **Note:** For more information about these roles, see Create, Delete, and Rename Roles.

5. Click **Password** to open the Change Password dialog box.

6. Enter a password (up to 128 alphanumeric and special characters) in the **New Password** field.

7. Re-enter the password in the **Confirm New Password** field.

8. Click **OK** to save the password and close the Change Password dialog box.

9. Click the Products tab and click **Add** to display the Add Product dialog box.

10. Select **Cobra** from the **Select Product** field and click **OK** to close the Add Product dialog box.

    The selected product is displayed in the **Accessible Products** field.

11. Use the other tabs in the **User Details** group box to add more optional information for this user.
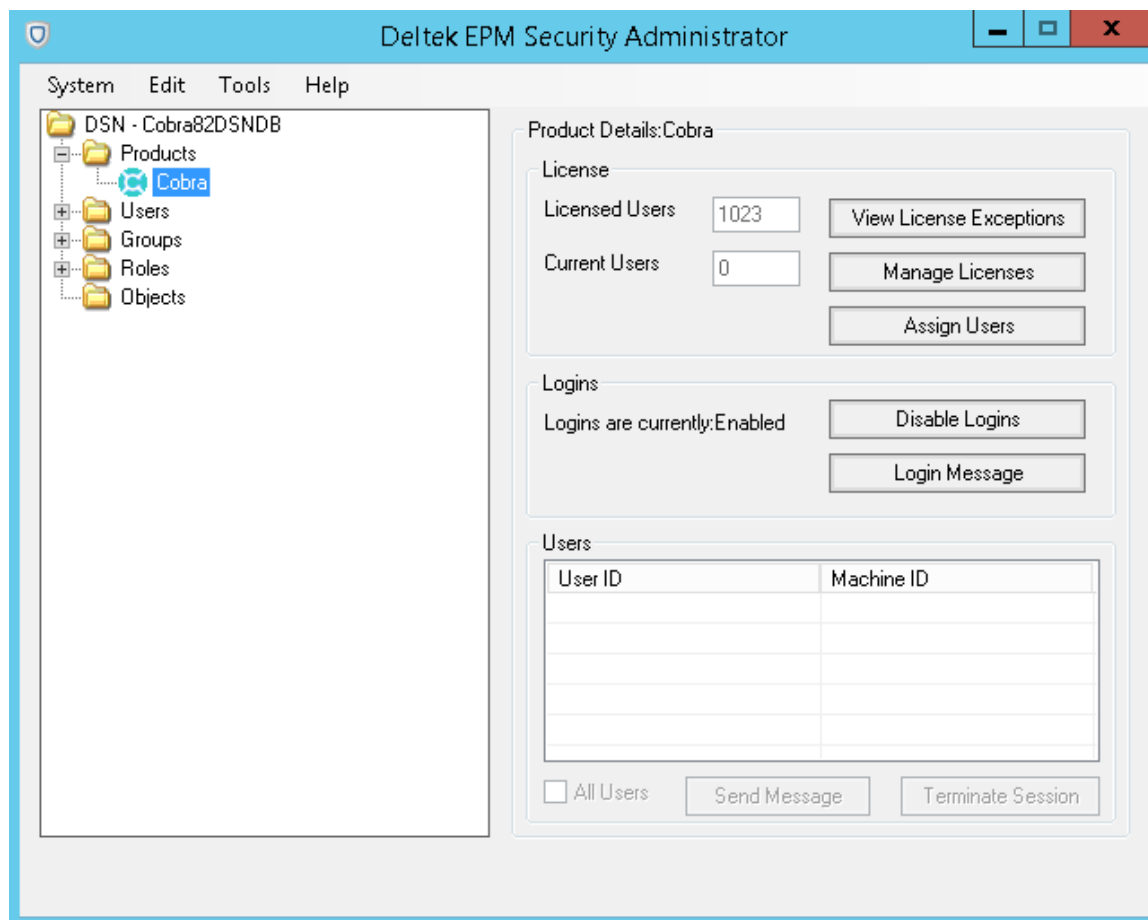
> **Note:** For more information about these tabs, see the EPM Security Administrator Online Help

To delete an existing user ID:

1. Expand the **Users** folder on the Explorer pane and select a user ID to delete.

2. Click **Edit » Delete** to remove the selected user ID from the list.

To rename an existing user ID:

1. Expand the **Users** folder on the Explorer pane and select a user ID to rename.

2. Click the highlighted user ID again and enter a new user ID.

3. Press **Enter** to apply the new user ID.

Change User Passwords

If users forget their password, as a system administrator, you can use the EPM Security Administrator to reset user passwords. You can then send the new password to the Cobra user. For security purposes, advise the user to change the password as soon as possible.

To change a user's password:

1. Expand the **Users** folder on the Explorer pane and select a user ID from the list.

2. On the General tab, click **Password** to display the Change Password dialog box.

3. Enter a new password (up to 8 alphanumeric characters) for this user in the **New Password** field.

4. Re-enter the new password in the **Confirm New Password** field.

5. Click **OK** to save the new password and close the Change Password dialog box.

Create, Delete, and Rename Roles

Roles define the operations a user can perform, such as update baselines, set budget equal to actual costs, and update data. You can define access permissions for each role and assign each user to a primary role.

To create a new role:

1. Select the **Roles** folder in the Explorer pane and click **Edit » Add**.

2. Enter a role ID (up to 20 alphanumeric characters) in the Explorer pane and press **Enter**.

3. On the General tab, enter a descriptive name (up to 60 alphanumeric characters) in the **Description** field.

4. Select a user to act as the manager for this role in the **Manager** field.

5. Click the Cobra tab.

6. Right-click a menu item in the list and select or clear the **Visible** and **Enabled** options for that function. Use the table below as a reference:

Icon	Visible	Enabled	Effect
	Yes	Yes	Users and groups assigned this role can both see and use the menu item on the menus and toolbars.

Icon	Visible	Enabled	Effect
✓✗	Yes	No	Users and groups assigned this role can see the menu item but cannot use it. A menu item with this setting is shaded.
✗✓	No	Yes	Users and groups assigned this role cannot see the menu item on the menus and toolbars. Because this menu item is invisible, users and groups cannot use them even if they are enabled.
✗✗	No	No	Users and groups assigned this role can neither see nor use the menu item on the menus and toolbars

To delete an existing role ID:

1. Expand the **Roles** folder on the Explorer pane and select a role ID to delete.

2. Click **Edit » Delete** to remove the selected role ID from the list.

To rename an existing role ID:

1. Expand the **Roles** folder on the Explorer pane and select a role ID to rename.

2. Click the highlighted role ID again and enter a new role ID.

3. Press **Enter** to apply the new role ID.

Create, Delete, and Rename Groups

Groups represent major programs or projects within an organization, or functional groups, such as the project management office. You assign users to groups, which you then assign to data objects (such as projects) within the applications. Users can have different roles within a group.

To create a new group:

1. Select the **Groups** folder in the Explorer pane and click **Edit » Add**.

2. Enter a group ID (up to 20 alphanumeric characters) in the Explorer pane and press **Enter**.

3. On the General tab, enter a descriptive name (up to 60 alphanumeric and special characters) in the Description field.

4. Select a role ID in the **Primary Role** field. For more information about roles, see Create, Delete, and Rename Roles.

5. Select a user that will act as the manager for this group in the **Manager** field.

To delete an existing group ID:

1. Expand the **Groups** folder on the Explorer pane and select a group ID to delete.

2. Click **Edit » Delete** to remove the selected group ID from the list.

To rename an existing role ID:

1. Expand the **Groups** folder on the Explorer pane and select a group ID to rename.

2. Click the highlighted group ID again and enter a new group ID.

3. Press **Enter** to apply the new group ID.

Add and Remove Users to/from a Group

Follow one of the procedures below to add or remove users from a group.

To add users to a group using the Groups folder:

1. Expand the **Groups** folder on the Explorer pane and select a group ID.

2. On the General tab, click **Add** to display the Add Users dialog box.

3. Select the user IDs to include in the group. You can hold down **Shift** while you click to select multiple user IDs.

4. Click **OK** to add the selected user IDs to the group.

To add users to a group using the Users folder:

1. Expand the **Users** folder on the Explorer pane and select a user ID.

2. Click the Groups tab and click **Add** to display the Add Group dialog box.

3. Select the group IDs to which to associate this user ID. You can hold down **Shift** while you click to select multiple group IDs.

4. Click **OK** to associate this user ID to the selected group IDs.

To remove users from a group using the Groups folder:

1. Expand the **Users** folder on the Explorer pane and select a group ID.

2. On the General tab, select a user ID from the table window and click **Remove**. A confirmation dialog box displays.

3. Click **OK** to delete the selected user ID from this group.

To remove users from a group using the Users folder:

1. Expand the **Users** folder on the Explorer pane and select a user ID.

2. Click the Groups tab and select a group ID from the table window.

3. Click **Remove**. A confirmation dialog box appears.

4. Click **OK** to delete the group ID from the table window.

Define User and Group Roles

Follow one of the procedures below to assign a role to a user or group.

To define a role for a user:

1. Expand the **Users** folder on the Explorer pane and select a user ID.

2. On the General tab, select a role ID from the **Primary Role** field.

To define a role for group:

1. Expand the **Groups** folder on the Explorer pane and select a group ID.

2. On the General tab, select a role ID from the **Primary Role** field.

Uninstall Cobra

Cobra Web Service, if deployed, shares the same set of files with Cobra. This means in order to uninstall Cobra, you also need to uninstall the Cobra Web Service. To uninstall Cobra if the Cobra Web Service is also installed on the same machine, you can perform any of the following:

- Uninstall the Cobra Web Service manually before you uninstall Cobra.
- Allow the Cobra-InstallShield wizard to automatically uninstall the Cobra Web Service.

These steps are discussed in this section.

> **Note:** If PM Compass WebApp tier is installed on the same machine as Cobra, the Cobra-InstallShield wizard will not prompt to uninstall the Cobra Web Service. This is because the PM Compass WebApp tier deploys its own Cobra Web Service and does not share files with the Cobra deployment.

To uninstall Cobra:

1. Launch the Windows Control Panel.
2. Click **Programs and Features**.
3. On the program list, right-click **Deltek Cobra 8.3**, and click **Uninstall**. The Cobra-InstallShield wizard displays asking if you want to remove Cobra and its features.
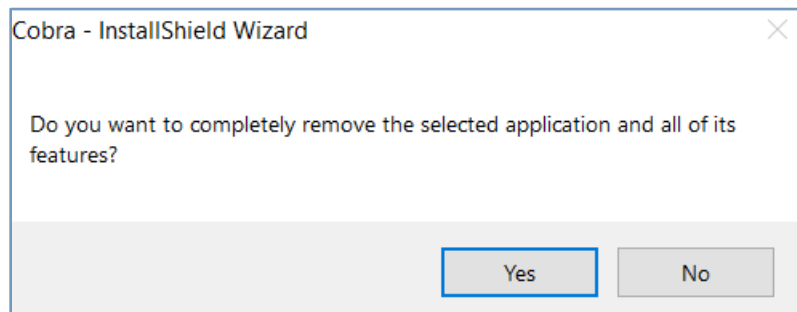
- If you select **Yes**, the Cobra-InstallShield wizard checks if the Cobra Web Service is deployed on the same machine.
- If you select **No**, the Cobra-InstallShield wizard aborts.

4. If the Cobra-InstallShield wizard detects that the Cobra Web Service is deployed on the same machine, it displays a message asking if you would also like to automatically uninstall the Cobra Web Service.
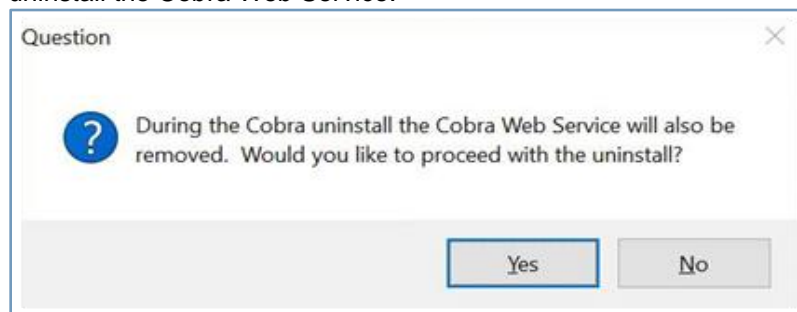
- If you select **Yes**, the Cobra-InstallShield wizard uninstalls the Cobra Web Service first, and then uninstalls Cobra.

- If you select **No**, the Cobra-InstallShield wizard aborts since Cobra and Cobra Web Service share the same set of files.

To proceed with uninstalling Cobra, you need to uninstall the Cobra Web Service manually. See Uninstall Cobra Web Service.

Performance Tips

Cobra data is stored in either an SQL Server or Oracle database. Cobra's performance greatly depends on the efficiency of the database and the connection to that database. Refer to the following guidelines on how to optimize Cobra's performance:

- Make sure that the database tier has adequate hardware.

- Make sure that the database is configured for optimum performance.

- Make sure that the connection between the database tier and the application tier has adequate bandwidth.

- Remove routers or firewalls that may hinder performance.

- Make sure that the latest ODBC DSN drivers are installed in the application tier.

Optimize Performance with Oracle

If Cobra is going to store a lot of project data on an Oracle database, you must monitor the database to ensure that it is running in optimum performance. For example:

- Statistics are turned on and working correctly.

- Indexes are used.

- The extent percentage is high.

- The rollback segments are large.

The time-phased table in Cobra can expand to millions or even billions of records in a large implementation. When a report is produced, all time-phased data for a particular project are retrieved from the database. Over time, the records for each project can be spread across the entire table. Deltek's performance lab and customers have provided the following performance tips:

- Reorder the database: Extracting the data in the primary index order, truncating the table, and reloading the records so that the database is ordered in the primary index improves performance.

- Delete and recreate the indexes: An index can become fragmented. Dropping and recreating the index resolves this problem.

Delete Temporary Report Data

When you run a report, tables in the database are used to optimize queries. If a user abnormally aborts a report, the temporary contents may not be deleted in these tables. This can result to slow performance when reporting records.

You can use the SQL Command Utility to access the DeleteReportQueryTables.sql script file to delete the contents of these temporary report tables. All currently running reports will fail during this process.

To run the delete script:

1. Start Cobra.

2. Click **Tools » SQL Command Utility** to open the SQL Command Utility dialog box.

3. Click **Open**, navigate to the Cobra Installation Directory, and drill down to the **Samples\Scripts** folder.

4. Select **DeleteReportQueryTables.sql** and click **Open**.

5. Click **Execute** to run the delete script.

Log SQL Calls

There is the **Debug Log** option on the Data Access tab of the Application Preferences dialog box that allows you to log the SQL calls in the ProcessLog.xml file located in the \\My Documents\Deltek\Cobra\Logs folder. If this option is left enabled, this file becomes larger and may affect Cobra's performance.

Restart the Service in an N-Tier Environment

If your Cobra installation is in n-tier application server mode, periodically restarting the service can improve the performance. The frequency of restarting the service varies based on user utilization. Restarting the service terminates active Cobra sessions so we recommend scheduling this task when users are not connected to the system. To restart the service, set up a scheduled task to run the following command lines:

```
net stop "Ideablade PersistenceServer Service"
net start "Ideablade PersistenceServer Service".
```

Appendix A: Create the CobraWorkstation Share Manually

To manually create the CobraWorkstation share:

1. On the Cobra deployment or n-tier server, browse to the **Workstation** folder in Windows Explorer. The default installation location is C:\Program Files\Deltek\Cobra\Workstation.

2. Right-click the **Workstation** folder and choose **Properties**.

3. Select the Sharing tab and click **Advanced Sharing**. Confirm that the **Share name** is **CobraWorkstation**.

> **Note:** By default, the folder is shared with same name as the folder name. For example, the **Workstation** folder, by default, uses the **Share name** of **Workstation**. This causes errors for Cobra users.
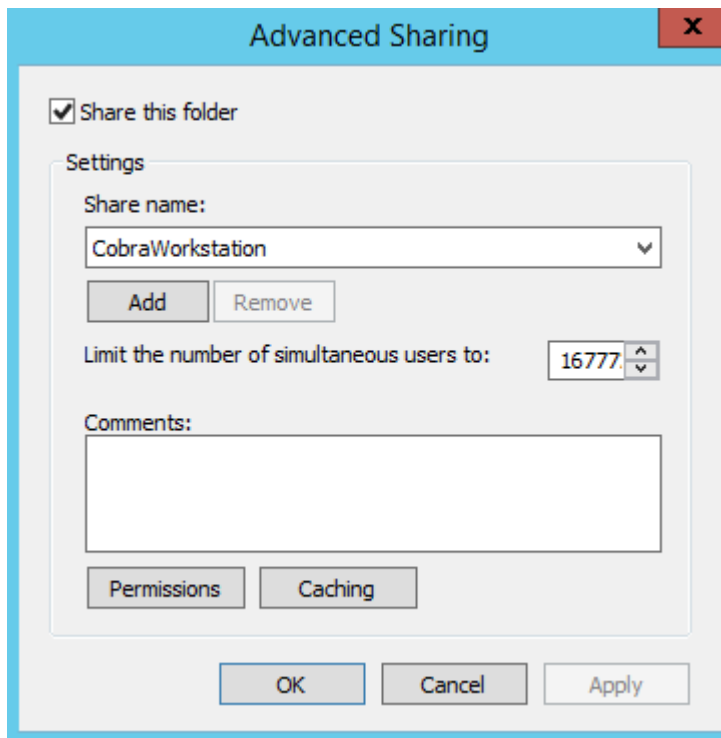
4. On the Advanced Sharing dialog box, click **Permissions**.

5. Use the Permissions for CobraWorkstation dialog box to find and select Cobra users.

> **Note:** Click **Add** to display the Select users, Computers, or Groups dialog box, where you can search for and add Cobra users.

6. Give the selected Cobra users **Read** permissions. By default, the **Everyone** group on the server has **Read** permissions to the share.
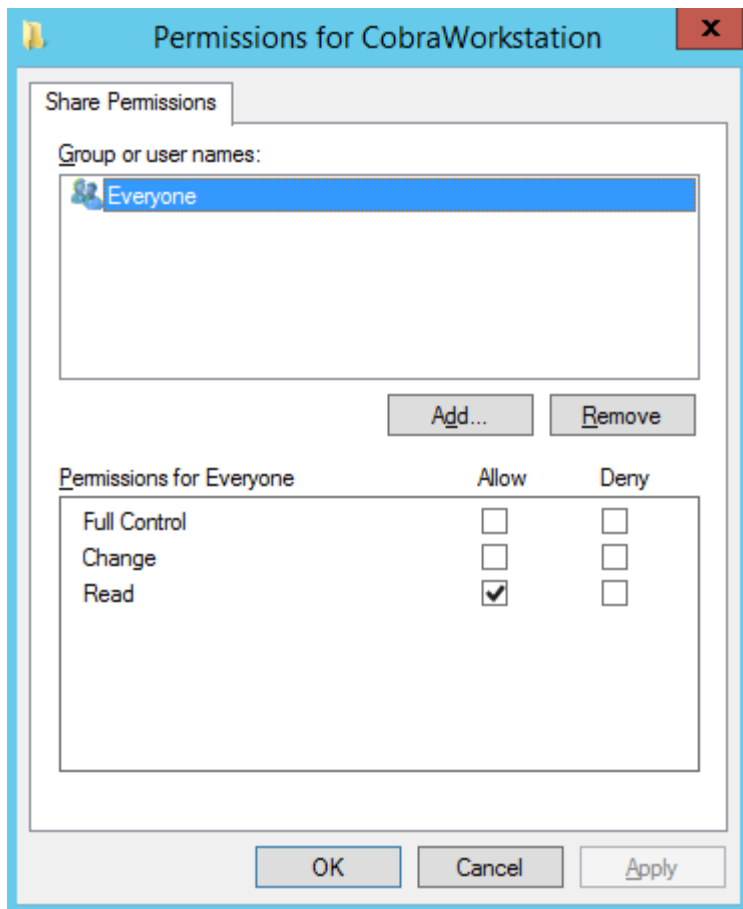
7. Click **OK** to close the Permissions for CobraWorkstation dialog box.

8. On the Advanced Sharing dialog box, click **OK** save the changes.

> **Note:** Aside from the Workstation folder, users should also have access to the Report Templates and Import Files folders. The Report Template folder is created as part of the installation; you need to manually create the Import Files folder. While the Integration Wizard can automatically import a file selected on the client, the performance is noticeably faster if you copy the file to the application server using Windows Explorer. The Import Files folder provides a location for the user to copy the file to import onto the application server and then, from the Integration Wizard, select the file from the Import Files folder.

Appendix B: Configure Cobra to Work with Microsoft Project Server

Cobra supports direct integration with Microsoft Project (MSP) server. The procedure below requires access to SQL Server Studio and MSP server database. When you complete the steps, the Integration Wizard displays the necessary pages where you can define the connection information for an easy and direct integration with the MSP server.

> **Note:** Refer to the release notes for the supported versions of Microsoft Project Server.

Configure Cobra to Work with Microsoft Project Server

Use this procedure to configure Cobra to work with Microsoft Project (MSP) server database.

To configure the MSP server database in order to support integration with Cobra:

1. Using the Microsoft SQL Server Management Studio, connect to the SQL server with MSP server setup.

2. Once connected, expand the Databases folder.

- If you are configuring MSP 2013, 2016, or 2019 server, look for the PWA database.

> **Note:** The database name usually defaults to ProjectWebApp.

- If you are configuring MSP 2010 server, look for the following and take note of the names of the databases:

  - PWA_Reporting_<UID>
  - PWA_Published_<UID>

> **Note:** The database name usually contains a unique ID (UID) similar to the following: PWA_Published_33DB2809_4292_472C_BEED_9634BBB374E7.

3. Open the **MSP_Server_SQLServer.sql** script located in the Cobra application script subfolder.

> **Note:** For stand-alone deployment, the default installation folder is: C:\Program Files\Deltek\Cobra \Scripts\SQLServer\Create.
>
> For client/server and n-tier deployments, you can find the script in the Cobra folder on the server.

4. Edit the script.

- If you are configuring MSP 2016 or MSP 2019, do the following:

  - Replace all occurrences **[PWA_Reporting]** with **[<Project Web App Database Name>]** (4 occurrences).
  - Replace all occurrences **[PWA_Published]**.**[dbo]** with **[pjpub]** (103 occurrences).

- Replace all occurrences of **[PWA_Published]** with **[<Project Web App Database Name>]** (5 occurrences).

- Replace all occurrences of **[dbo]** with **[pjrep]** (48 occurrences).

■ If you are configuring MSP 2013, do the following:

- Replace all occurrences of **[PWA_Reporting]** with **[<Project Web App Database Name>]** (4 occurrences).

- Replace all occurrences of **[PWA_Published].[dbo]** with **[<Project Web App Database Name>].[pub]** (103 occurrences).

- Replace **[PWA_Published]** with **[<Project Web App Database Name>]** (5 occurrences).

■ If you are configuring MSP 2010, do the following:

- Replace all occurrences of **[PWA_Reporting]** with the full name of the Reporting database (4 occurrences).

- Replace all occurrences of **[PWA_Published]** with the full name of the Published database (108 occurrences).

> **Note:** Make sure the square brackets around the database names in the script are also replaced.

5. Run the script against the MSP server database.

6. If the scripts complete successfully, the MSP server databases are ready to run the Cobra Integration using MSP server. You can define the connection information to the MSP server on the New Connection dialog box of the Integration wizard.

Appendix C: Cobra Web Service

The Cobra Web Service allows you to create applications that can programmatically execute Cobra functionalities over the network. The Cobra Web Service consists of two parts:

- **Cobra Web Service Host**: This is a Simple Object Access Protocol (SOAP) based Windows Communication Foundation (WCF) service which exposes the Cobra functionalities over the network.

- **Cobra Web Service Client API**: This is a .NET dynamic link library which consumes the WCF service. Deltek recommends that the application developers use this library in their applications.

Deltek Products that Utilize Cobra Web Service

The following products use the Cobra Web Service:

- **Costpoint**: The Costpoint to Cobra Integration automates the loading of actual costs from Costpoint to Cobra.

> **Note:** Costpoint introduces updates to the Cobra integration which utilizes the Cobra Web Service beginning version 7.1.1.

> **Attention:** For more information, refer to *Deltek Costpoint to Cobra Integration Technical Guide*.

- **PM Compass**: The PM Compass Change Management process integrates with Cobra using the Cobra Web Services (Cobra Engine) on the PM Compass Server to execute Cobra processes. During the change management process, workflow step actions run Cobra processes such as the Integration Wizard, Reclass, Recalc, Advance Calendar, and Rolling Wave.

> **Attention:** For more information, refer to the Integrating with Cobra section of the *Deltek PM Compass Technical Installation Guide*.

Cobra Web Service Help

To access the Cobra Web Service Help, see Cobra Web Service in the Cobra Help System.

To access Web Service Client API Help, click the following link: Web Services Client API. You may also navigate to the **Help » WebServiceClientAPI** sub-folder of your Cobra installation folder.

Appendix D: Cobra Database Upgrade Wizard

In some cases, an Administrator may want to perform upgrade testing of sample and test databases when upgrading an existing Cobra installation. During installation of Cobra (new installation and upgrades), setup only allows you to upgrade one database, which is the default Cobra database. If you have more than one database listed in the Cobra Data Tool, the Deltek Cobra Database Upgrade wizard is created to allow you to select one or more of your databases to upgrade.

The Database Upgrade wizard reads the list of databases in the Datasources.dat file, which is configured using the Cobra Data Tool, and allows you to select one or more to upgrade since each database can be at different versions. At the end of the steps, depending on the option you select, a log of the steps (and conversion, if automatic) will be saved. To review the log, navigate to the Cobra installation directory and drill down to the Logs folder. You can identify the logs for the database that was converted by the Date/Time stamp of the folder

To upgrade multiple databases:

1. Launch the Deltek Cobra Database Upgrade Wizard by doing one of the following:

   ▪ Log on to your web server, navigate to the Cobra Installation Directory, drill down to the Support\Utilities folder, and double-click the **DeltekCobra83DatabaseUpgradeWizard.exe** file.

   ▪ On your desktop, click the Start menu, and locate **Deltek Cobra 8.x » Deltek Cobra Database Upgrade Wizard**.

2. On the Welcome page, click **Next** to continue.

3. The wizard detects the database sources in the Datasources.dat file. Select the data source to upgrade and click **Next**.

   > **Note:** The Cobra Database Upgrade utility does not automatically back up your database before applying any scripts.

   If you select a data source that uses a Microsoft SQL database, the InstallShield wizard checks if TLS 1.0 is enabled or disabled on the machine where Cobra is installed. If TLS 1.0 is disabled, the following message displays:
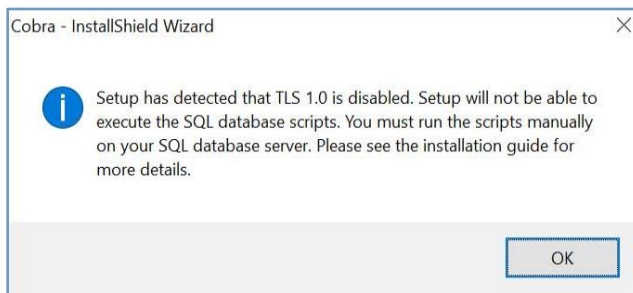
4. On the Script Options page, select your database upgrade script option.

   As part of the upgrade process, the database scripts must be applied to the Cobra database. There are three options for applying the script updates to the database.

   ▪ **Automatically run upgrade scripts during the installation:** Select this option to allow the installation to create, and run a batch file that launches the various script files to update the Cobra database tables automatically as part of the Cobra software upgrade installation routine to update the Cobra version on your machine. If you choose this option, you do not need to run any scripts manually after the upgrade process.

- **Create batch file (CreateUpgradeScripts_[datasource connection name].bat) to run scripts manually:** Select this option to allow the installation to create the batch file containing the connection information for your Cobra data source. However, the installer will not launch the batch file to update the Cobra database tables. After the installation, you must manually launch the batch file. The batch file is named CreateUpgradeScripts_[datasource connection name].bat.

  > **Note:** The **[datasource connection name]** refers to the data source you selected to upgrade on the Data Sources Available to Upgrade page.

  The file is located in the <Cobra Installation Directory>\ Scripts\Upgrade folder.

  > **Note:** If you are upgrading from 8.0 to the latest version, the batch file is located in <Cobra Installation Directory>\Scripts\<ServerType>Upgrade.

  If you select this option, setup displays the following message:
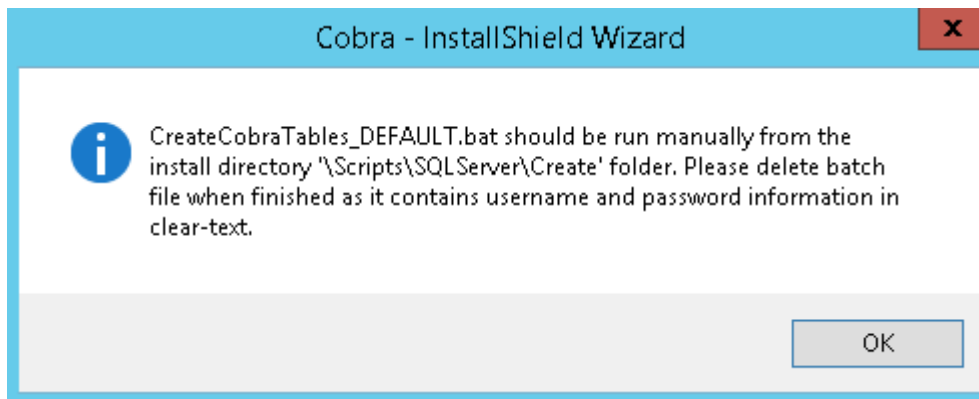
- **I will manually run the upgrade scripts. No batch file will be created.** — Select this option to manually upgrade the Cobra database tables after installation using the scripts located in the <Cobra Installation Directory>\Scripts\Upgrade folder.

> **Note:** See Run Scripts to Create or Upgrade Database Tables if you want to run the scripts manually.

  If you select this option, setup displays the following message:
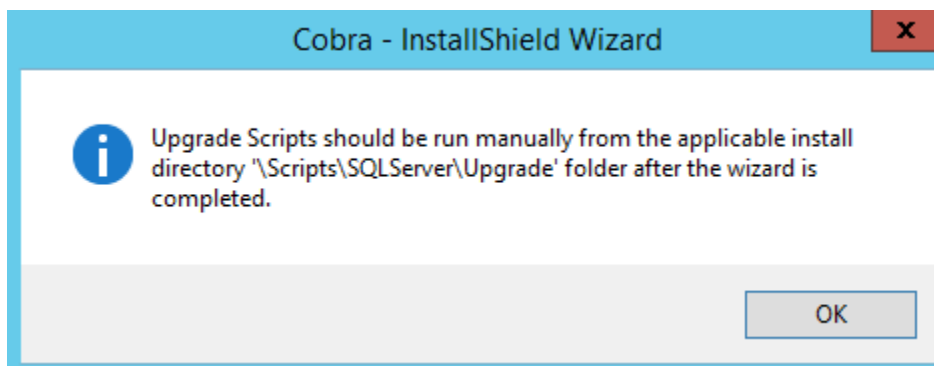
5. On the Ready to Upgrade page, click **Next**.

6. On the Deltek Cobra Database Upgrade Wizard Complete page, click **Finish**.

Using the /configfolder Parameter

You can pass the **/configfolder** parameter to launch the Cobra Database Upgrade wizard and to specify the location of the Config.dat file and IdeaBlade.Ibconfig file if Cobra is not installed in the default installation location.

> **Note:** Refer to the **Run Cobra with Command Line Parameters** topic in the Cobra Help System for more information.
>
> For more information on the Config.dat file and the IdeaBlade.Ibconfig file, see the Cobra Data Tool Help System.

Log Files

Check the database conversion and installation logs after running the Database Upgrade wizard.

Database Conversion Logs

These log files contain the output of the command processed against your database and should be sent to Deltek if you encounter any errors during the database conversion. The logs are created by the batch files for each .sql script that is processed against the database when you choose either of the first two options to apply the database changes. If you are running the database wizard for more than one database, review the log files after you upgrade each database since subsequent database upgrade scripts that are run will overwrite the previous log files.

> **Note:** The Cobra Database Upgrade utility does not automatically back up your database before applying any scripts

Installation Log

Review the installation log to check for errors in the installation. While the upgrade wizard is running, it stores the installation log in the **%localappdata%** location (C:\Users\%username%\AppData\Local\) and a shortcut to the log file is added to the desktop of the user performing the installation. The log file name is similar to the name of the executable file but with a **.txt** file extension.

When the installation is complete, it moves it into the Logs subfolder located in the Cobra installation location.

If you updated any databases after the installation using the Database Upgrade Wizard, verify there are no errors in the conversion logs created when the scripts are applied for that database.

Search for each of the words "msg","timeout","error", and "ORA-" without the quotes in the log files. If errors are found, contact Customer Care with the contents of the log file.

Appendix E: Configure Cobra to Support Additional User Fields

Cobra allows you to use additional user character, numeric, or date fields within the application. When you complete these steps, you can insert **User Character Fields [6-10]**, **User Numeric Fields [6-10]**, or **User Date Fields [6-10]** as additional columns in the Spreadsheet pane of the Project view, or select them on the pages of the Integration wizard during integration.

To configure Cobra to use additional user fields:

1. Navigate to the Cobra Installation Directory and drill down to the **Scripts\Create** folder: **<Cobra Installation Directory>\Scripts\<ServerType>Create**.

For example:

- **C:\Program Files (x86)\Deltek\Cobra\Scripts\SQLServer\Create** (if you are using a Microsoft SQL database)

- **C:\Program Files (x86)\Deltek\Cobra\Scripts\Oracle\Create** (if you are using an Oracle database)

> **Note:** For client/server and n-tier deployments, you can find the script in the Cobra folder on the server.

2. Locate the required script and run it manually.

- If you are using a SQL Server database, locate **Cobra_Enable_AdditionalUserFields_SqlServer.sql** and run it using SQL Server Management Studio.

- If you are using an Oracle database, locate **Cobra_Enable_AdditionalUserFields_Oracle.sql** and run it using the Oracle SQL Developer.

3. Modify the length of the user fields.

If you are using a SQL Server database:

```
BEGIN

    DECLARE @USERCHR_LENGTH INT = 100
    DECLARE @TYPE VARCHAR(100)

    SET @TYPE = 'NVARCHAR(' + CAST(@USERCHR_LENGTH as varchar) + ') NULL'
```

If you are using an Oracle database:

```
DECLARE

    unicode BOOLEAN := TRUE;
    DEBUG   BOOLEAN := FALSE;
    USERCHR_LENGTH  NUMBER  := 100;
```

> **Note:** This step is optional.

4. If you are running Cobra in an n-tier setup, you must restart the IdeaBlade service.

> **Note:** See Restart the Service in an N-Tier Environment.

5. Launch Cobra.

Deltek

Appendix F: Secure Transport Layer Security (TLS)

Transport Layer Security (TLS), and its predecessor, Secure Sockets Layer (SSL), are protocols that use cryptographic algorithms to provide secure communications between machines. Although there are several versions of TLS and SSL, only TLS 1.2 and TLS 1.3 are considered secure. Since TLS 1.3 is still relatively new and not fully implemented throughout the industry, best practices recommend using TLS 1.2 for secure communication between machines. Using the older protocols is considered a security risk. The industry standard is to enable TLS 1.2 and disable TLS 1.1, 1.0, and disable SSL 3.0, 2.0, 1.0.

For the Deltek application to communicate correctly between all tiers, the Operating System (OS) on all machines in the deployment must share the same TLS configuration. In addition, any components used by the application (the .NET Framework and database client drivers) must support the TLS version implemented on the OS.

Using TLS 1.2 with Microsoft SQL Server

If your company implements the secure TLS by enabling TLS 1.2 and disabling the older protocols on the machines in your environment, ensure the following are performed:

- The TLS configuration on all machines (servers and clients) must be the same.

- The Operating System must support TLS 1.2 https://docs.microsoft.com/en-us/security/solving-tls1-problem#ensuring-support-for-tls-12-across-deployed-operating-systems

- The version of Microsoft .NET Framework in use must support TLS 1.2. https://docs.microsoft.com/en-us/dotnet/framework/network-programming/tls#support-for-tls-12

- If you are using load balancing, ensure that it is configured to support the hardened TLS settings.

- If you use Oracle, TLS 1.2 is supported with Oracle client versions 12.0.1 and higher. Oracle 11.2.0.4 is supported but may require patches.

- If you use SQL Server, the default Microsoft OLE DB Provider only supports TLS 1.0. The following Microsoft drivers support TLS 1.2:

    - SQL Server Native Client 11.0

    - Microsoft OLE DB Driver (not Provider)

For more information on TLS 1.2 on Windows Operating Systems and the Microsoft .NET Framework, refer to this link: https://docs.microsoft.com/en-us/dotnet/framework/network-programming/tls#support-for-tls-12.

Modifications to the Installation Procedures

If you have implemented TLS 1.2, you must consider the following before performing the installation:

- The Cobra installation will fail and the *.rpt database log files will display SSL errors if you select either of the first two options (Automatically run scripts during the installation or Create batch file to run scripts manually) on the Setup Type — Database Script Options page.

- You will not be able to configure your data sources using the Data Tool.

Depending on your deployment model, perform the procedures as described in the sections of this guide.

1. Perform the installation but do not run any database script during the installation. Select the **I will manually run the scripts to create the Cobra tables.No batch file will be created** option on the Setup Type — Database Script Options page.

2. Run the scripts to create tables in the database. See Run Scripts to Create or Upgrade Database Tables.

3. Download and install the latest Microsoft® SQL Server® 2012 Native Client or Microsoft OLE DB Driver for SQL Server.

4. Edit data source in the Data Tool. See Add/Edit Data Source in the Data Tool.

5. Proceed with the remaining installation steps, depending on your deployment model.

> **Note:** You may perform additional steps to verify proper installation. For example, log onto EPM Security Administrator, check if the data source connection is correct, and create or edit user, group, or role. Then log onto Cobra and verify that the changes to the security rights are applied.

> **Note:** Find out more about these and other services from the Deltek Support Center.

Run the Database Scripts

Using the SQL Server Management Studio, run the scripts to create tables in the database.

For clean install, navigate to the **Scripts\SQLServer\Create** folder of the Cobra folder and run the following scripts:

- **WST_Tables_SqlServer**
- **WST_Upgrade_SQLServer**
- **WST_Data_SQLServer**
- **Cobra_Tables_SQLServer**
- **Cobra_Procedures_SQLServer**
- **Cobra_Data_SqlServer**

For upgrade install, navigate to the **Scripts\SQLServer\Upgrade** of the Cobra folder and run the **Run83UpgradeScripts_Sql** script.

Add/Edit Data Source in the Data Tool

To add or edit a data source:

1. On your desktop, click the Start menu, and locate **Deltek Cobra 8.x » Deltek Cobra Data Tool**.

2. On the Add/Edit Data Source dialog box, select **SQL Server.NET Framework, SQL Server Native Client 11.0**, or **Microsoft OLE DB Driver for SQL Server** in the **Provider** drop-down list, and click **Configure**.

3. If you select **SQL Server .NET Framework**, perform the following steps:

   - Click the General tab and provide the necessary information.

   - If you select the **Use the SQL Server Authentication** option, perform the following actions:

      - Enter your user name and password in the appropriate fields.

- Select **Save my password**.
- Click **OK**.

4. If you select **SQL Server Native Client 11.0**, perform the following steps:

- Click the Connection tab and provide the necessary information.

   - If you select the **Use a specific user name and password** option, perform the following actions:

      - Clear the **Blank password** option and select the **Allow saving password** option.

      - Enter your password in the **Password** field.

      > **Warning:** You may encounter error messages when you select the **Use a specific user name and password** option. See Troubleshoot Data Link Properties Issues.

- Click the All tab, select the property specified below, click **Edit Value**, and perform the required action on the Edit Property dialog box:

   - For **Data TypeCompatibility**, set **Property Value** to **80**.

   - For **Initial File Name**, click **Reset Value**.

   > **Note:** You must click **Reset Value** even if the **Property Value** field is blank.

   - For **Integrated Security**, click **Reset Value**.

   > **Note:** You must click **Reset Value** even if the **Property Value** field is blank.

   - For **Persist Security Info**, select **True** in the **Property Value** drop-down list.

   - For **Server SPN**, click **Reset Value**.

   > **Note:** You must click **Reset Value** even if the **Property Value** field is blank.

- Click **OK**.

5. If you select **Microsoft OLE DB Driver for SQL Server**, perform the following steps:

- Click the Connection tab and provide the necessary information.

   - If you select the **SQL Server Authentication** option, perform the following actions:

      - Clear the **Blank password** option and select the **Allow saving password** option.

      - Enter your password in the **Password** field.

   - Click the All tab, select **Data TypeCompatibility**, click **Edit Value**, and set it to **80**.

- Click **OK**.

Troubleshoot Data Link Properties Issues

This table lists the possible issues you may encounter when you select the **Use a specific user name and password** option, as well as steps to fix them.

Error/Issue	Troubleshooting Steps
"Login failed for user '<Cobra DB User Name>'"	1. On the Edit Data Source dialog box, click **Configure** to display the Data Link Properties dialog box. 2. On the Connection tab, clear the **Blank password** option, select the **Allow saving password** option, and enter your password. 3. Click the All tab. 4. Select **Persist Security Info**, click **Edit Value**, and select **True** in the **Property Value** drop-down list. 5. Click **OK**.
"Keyword not supported: 'server spn'"	1. On the Edit Data Source dialog box, click **Configure** to display the Data Link Properties dialog box. 2. Click the All tab. 3. Select **Server SPN** and click **Edit Value**. 4. On the Edit Property Value dialog box, click **Reset Value**. 5. Click **OK**.
"Invalid value for key 'integrated security'"	1. On the Edit Data Source dialog box, click **Configure** to display the Data Link Properties dialog box 2. Click the All tab. 3. Select **Integrated Security** and click **Edit Value**. 4. On the Edit Property Value dialog box, click **Reset Value**. 5. Click **OK**.
Error encountered after initializing SQL Native Client: "[Error] Illegal characters in path" **Error encountered when running .NET processes**	1. On the Edit Data Source dialog box, click **Configure** to display the Data Link Properties dialog box 2. Click the All tab, select the property specified below, click **Edit Value**, and perform the required action on the Edit Property dialog box: ▪ For **Integrated Security**, click **Reset Value**. ▪ For **Initial File Name**, click **Reset Value**.

Error/Issue	Troubleshooting Steps
	▪ For **Server SPN**, click **Reset Value**.
	▪ For **Persist Security Info**, select **True** in the **Property Value** drop-down list.
	▪ For **Data Type Compatibility**, set **Property Value** to **80**.
	3. Click **OK**.

Appendix G: Using One EPM Security Administrator for All Deltek PPM Products

Deltek PPM Products can be configured to use a shared database. This allows the Users, Groups, and Roles on the database to be shared across those products and for security information to be maintained centrally using one EPM Security Administrator. To do this, the database scripts for all products which will share security information must be run against the same database.

> **Note:** Ensure that the version of the Deltek PPM product being used are compatible with the version of Cobra being installed. See the Installation Guide of each PPM product for installation details.

Step		Topic
1	Install a Deltek PPM product.	See Cobra New Installation Steps. For the other Deltek PPM products, see the corresponding installation section of each product's installation guide.
2	Run the scripts created during installation on the same database.	See Run Scripts to Create or Upgrade Database Tables. For Open Plan, see the "Setup a Database" section of the *Deltek Open Plan Installation Guide*. For PM Compass, see the "Appendix E: Using Oracle with PM Compass" and "Appendix F: Using Microsoft SQL Server with PM Compass" sections of the *Deltek PM Compass Installation Guide*. For wInsight Analytics Administrator, see the "Set Up and Create a New Database" section of the *Deltek wInsight Analytics Administrator Installation Guide.*
3	In Data Tool, add a data source pointed to the newly created shared database.	Data Tool and Data Source
4	Launch EPM SA to add users, groups and roles, and assign users to the PPM products on the shared database.	Configure the EPM Security Administrator

Database User Accounts

- For MS SQL Server, see Store Cobra Data on Microsoft SQL Server Database.
- For Oracle, see Store Cobra Data on an Oracle Database.

Appendix H: Cobra Integration with Oracle Primavera P6 API

Cobra supports integration with Primavera P6 API.

> **Note:** Refer to the Software Requirements section of the Cobra Installation Guide for the complete list of supported Primavera versions.

> **Attention:** Refer to the Oracle website for more information on Primavera P6 installation.

Prerequisites

Before you integrate Cobra with Primavera P6, you must have the following:

- **Java Runtime Environment**: You must have the JavaTM Platform, Standard Edition Development Kit (JDK) installer. JDK 1.6.x or higher is required. To download the installer, go to the Oracle site.

- **Supported Operating Systems**: P6 Integration API works on Windows, Linux, and the following Unix operating systems: Solaris, HP, AIX.

- **Database**: You must have the connection information for the database configuration.

- **Primavera P6 API installer**: Primavera P6 Integration API for Microsoft Windows x64

Integrate Cobra with Primavera P6 API

Complete the following steps to integrate Cobra with Primavera P6 API.

Step 1: Install JDK

You need to specify the JDK Home Directory during Primavera P6 installation. You will encounter an error if JDK is not installed.

To install JDK:

1. Navigate to the location of the JDK installer and double-click it to launch the installer wizard.

2. On the Custom Setup page, select the features that you want to install.
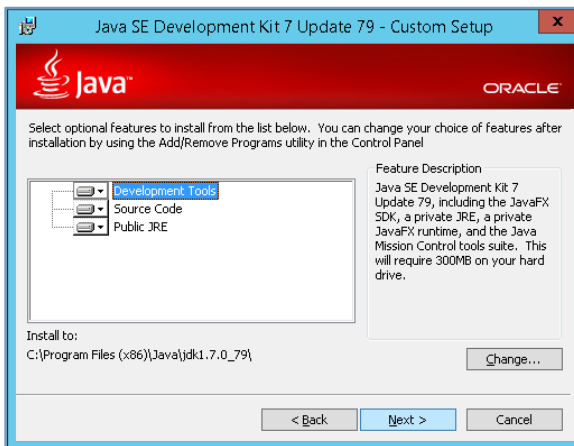
3. On the Destination Folder page, specify the folder where you want to install the JDK, or accept the default location. You must take note of the JDK installation path, as you will use this later in specifying the JDK Home Directory.
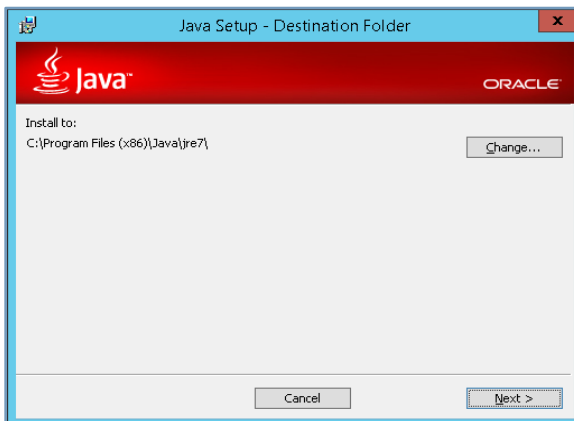
4. The installation completes.

Step 2: Set Java Home to JDK Install Directory

To set Java Home to JDK Install Directory:

1. On your operating system, right-click **My Computer** and click **Properties » Advanced System Settings**. Alternatively, click **Start » Run** and enter **sysdm.cpl**.
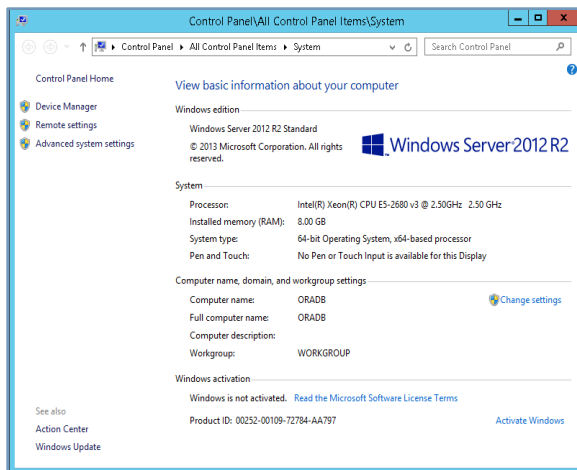
2. On the System Properties dialog box, click **Environment Variables**.
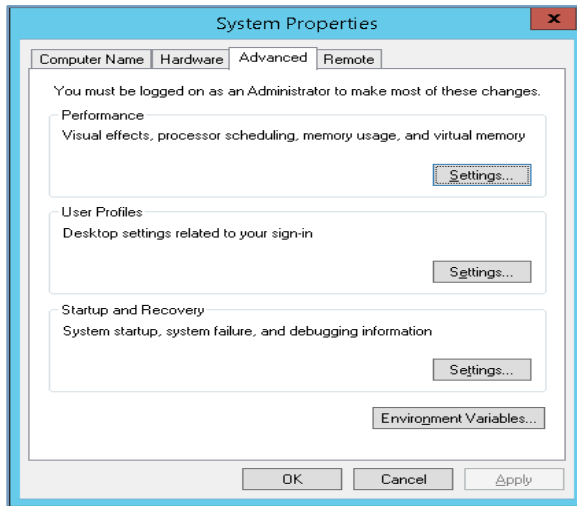
3. On the Environment Variables dialog box, select **JAVA_HOME**, and click **Edit**.
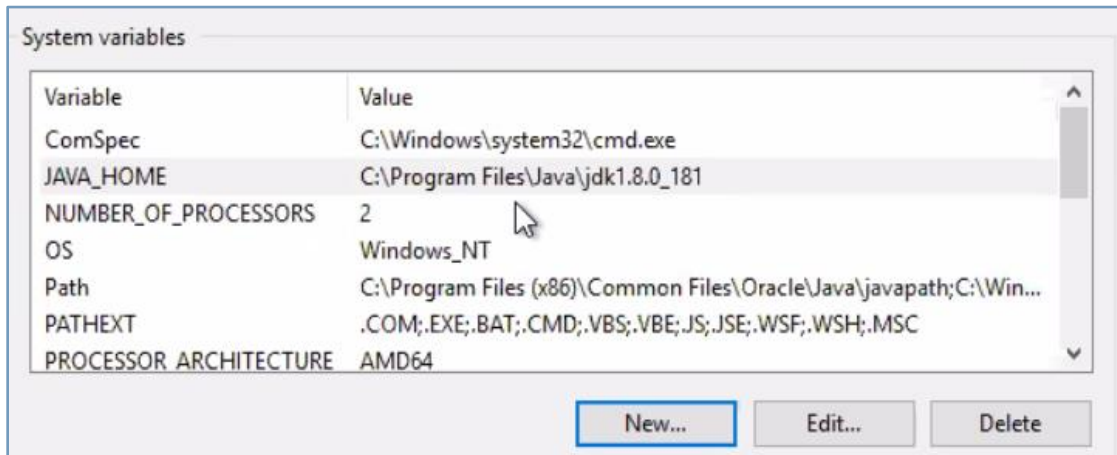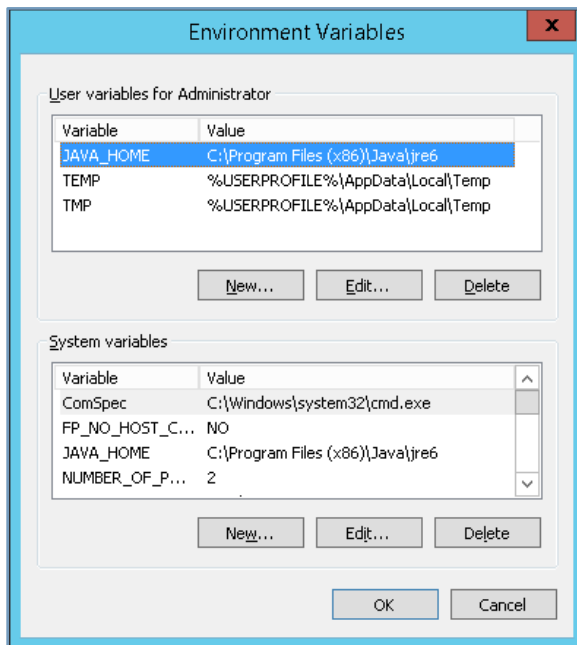
4. On the Edit User Variable dialog box, specify the JDK installation path in the **Variable value** field.
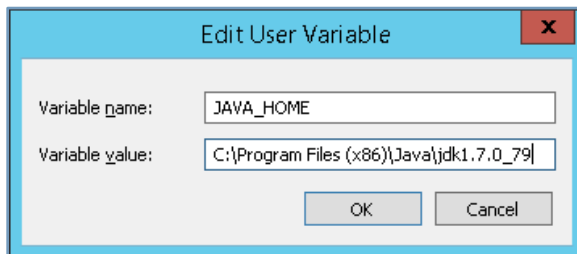
5. Click **OK**. You will use the JDK installation path in setting up the Java Home Directory later.

Step 3: Run the Primavera P6 Integration API Installer

This procedure provides steps in running the Primavera P6 installer.

To run the Primavera P6 API installer:

1. Navigate to the location of the Primavera P6 installer and run it as Administrator.
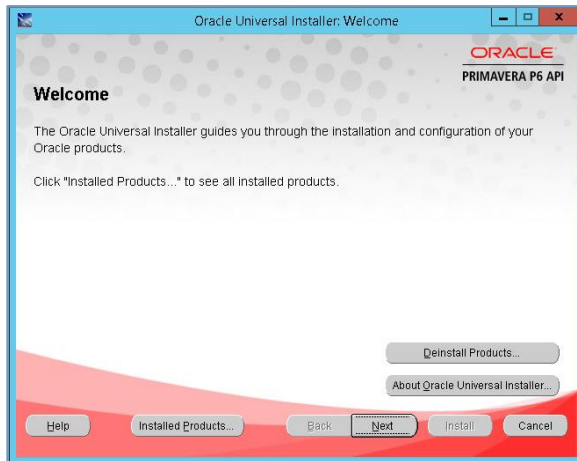
2. On the Select the Installation Type page, click **Local Mode Packages** and click **Next**.
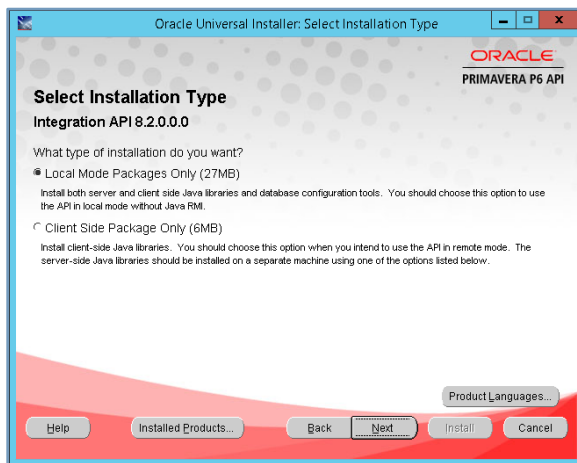
3. On the Specify Home Details page, enter or specify the installation name and full path.
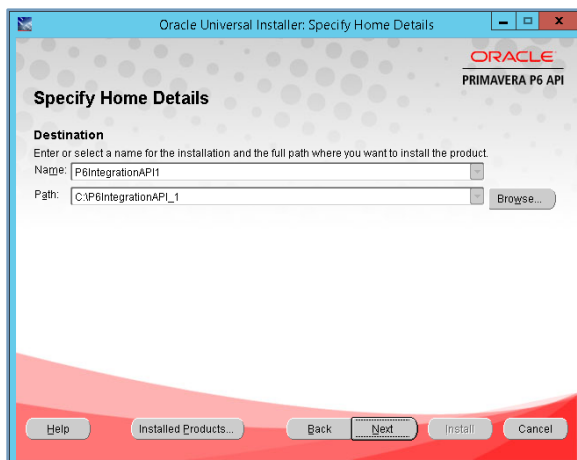
4. On the Available Product Components page, click **Integration Demo Application**.
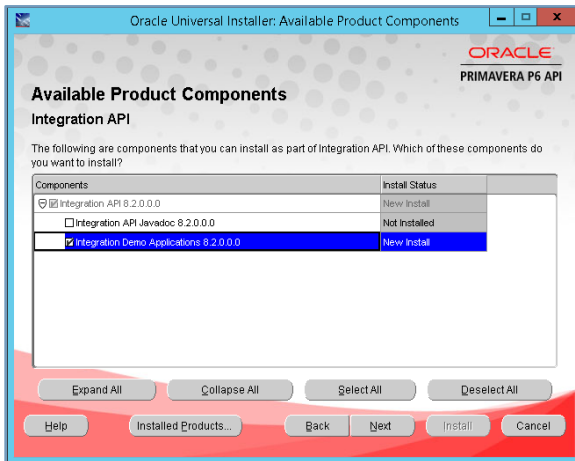
5. On the JDK Home Directory page, specify the path where JDK is installed, and click **Next**.

> **Note:** This is the path that you specified in Set Java Home to JDK Install Directory.
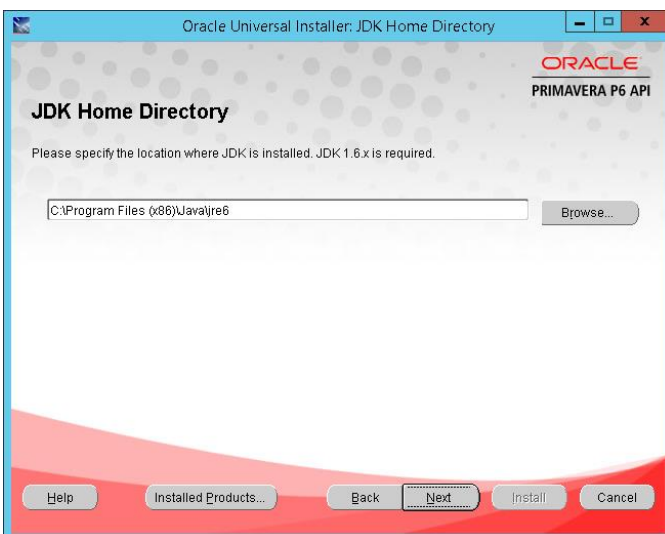
6. On the Summary page, click **Install**.
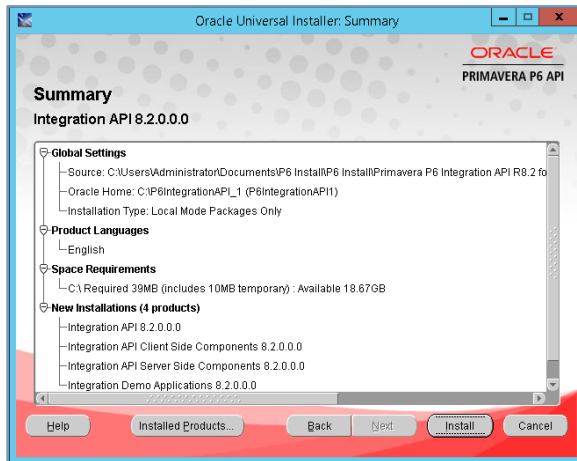
> **Note:** Minimize the Primavera P6 installer and proceed with Step 4.

Step 4: Copy Bootstrap and Keystore from the Server

This procedure provides steps on how to copy Bootstrap and Keystore from the server.

To copy Bootstrap and Keystore from the server:

1. Share the **C:\P6EPPM_1** folder on the EPPM Server for read access on the API Client.

> **Note:** If Primavera P6 is not secured, you may not have the .jks files.

2. Copy the **C:\P6EPPM_1\api\BREBootStrap.xml** and **C:\P6EPPM_1\database\p6keystore.jks** files from the E**PPM Server to the C:\P6IntegrationAPI_1** folder on the API Client.

3. Open an Administrator Command Prompt on the Client, change directory to **C:\P6IntegrationAPI_1**, and execute the following command to generate a new keystore password file in the **C :\P6IntegrationAPI_1 folder:**

    ```
    \\<eppm-server\P6EPPM_1\database\installp6keystore.bat -genpassfile

    The p6kspass.pwf file cannot be copied from the EPPM Server. A new password
    file must be generated on the API Client.
    ```

Step 5: Run the Database Configuration Utility

This procedure provides steps on how to set up and configure the Primavera P6 database.

To run the Database Configuration Utility:

1. Open the Primavera P6 installer again.

2. On the Configuration Assistants page, click **Database Configuration**.
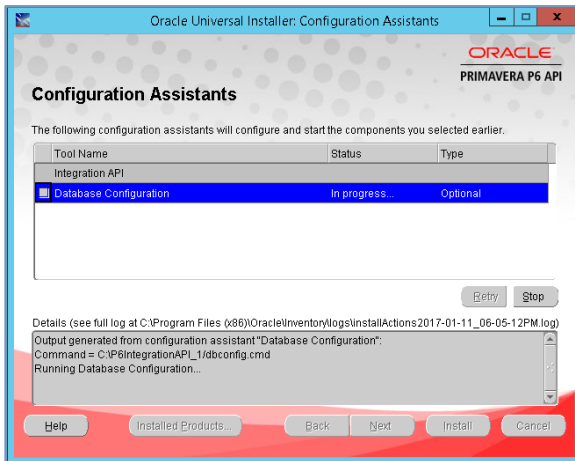
3. On the Database Configuration page, click **Oracle**, and click **Next**.
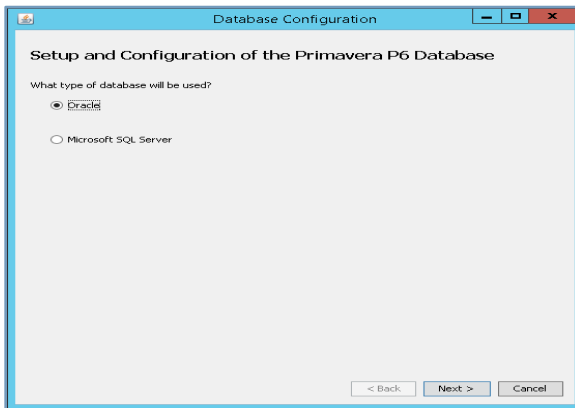
4. Enter or specify the required information to connect to the database, and click **Next**.
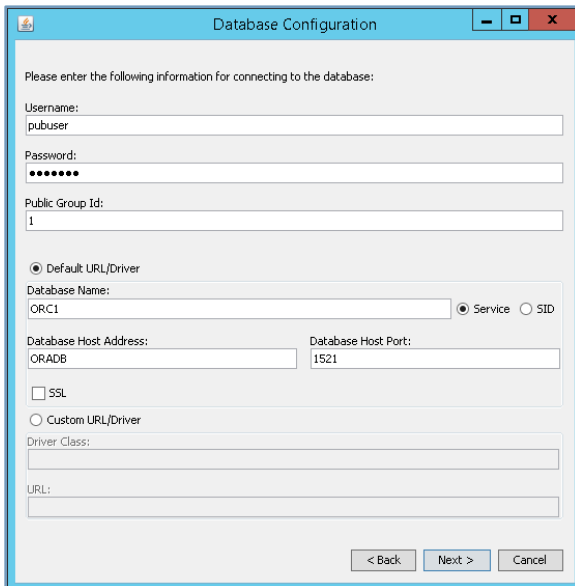
5.   Click **Yes** if the wizard prompts you to upgrade to the latest version.
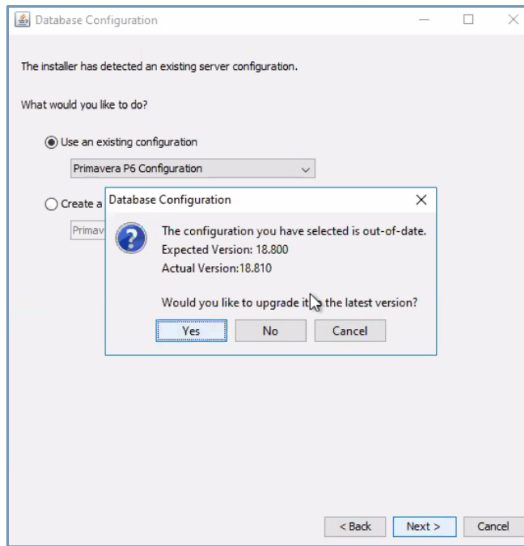
6. The API installation completes. Click **Exit**.
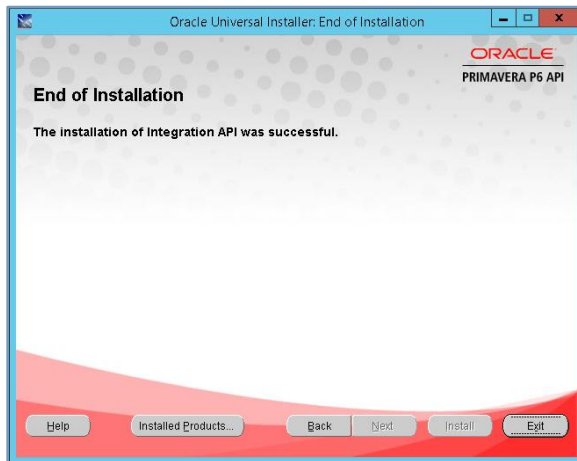
Step 6: Run the Demo Export Command

Test the API by running the Demo Export command.

To run the Demo Export command:

1. Navigate to the Primavera P6 installation folder, locate **demoexport.cmd**, and run it.
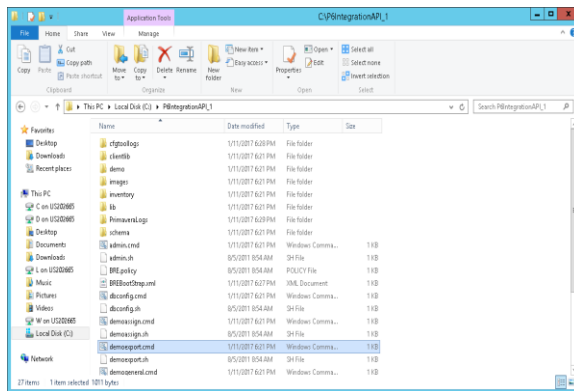
2. On the XML Export Demo dialog box, click **Local**, and click **Next**.
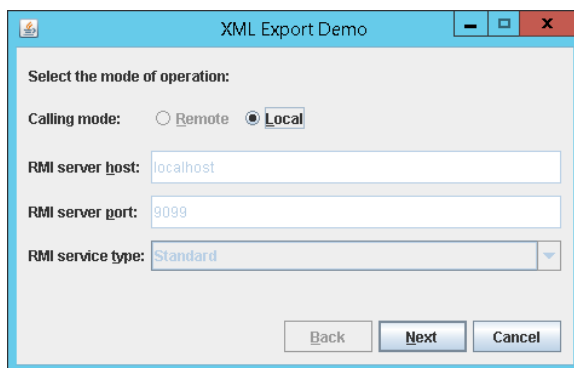
> **Note:** If Primavera P6 uses the P6 Professional format (default), you may encounter an error. See **Troubleshooting and Useful Links** for instructions on how to fix it.

3. Specify your login information, and click **Next**.
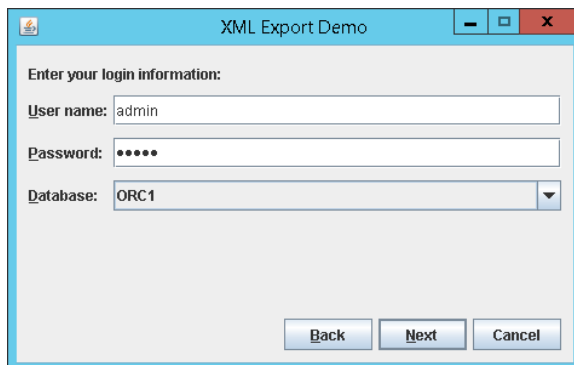
4. Specify the output directory of the XML files, and click **Next**.
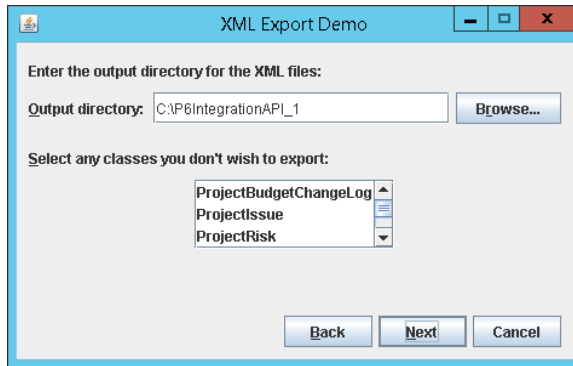
5. The command screens displays that the test is successful.
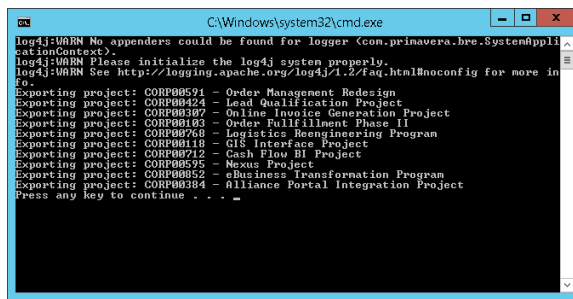
Step 7: Set the Data Date in Primavera P6

Open the project both in Cobra and in Primavera P6. In order for the API to function correctly and for the time phasing to match between the two applications, calendars on both applications must match.

To set the data date:

1. Launch Cobra and open the project.

2. Launch Primavera P6 and open the project.

3. Set the data date in Primavera.

   a. Click **Tools » Schedule**.

   b. On the Schedule dialog box, specify the required information.
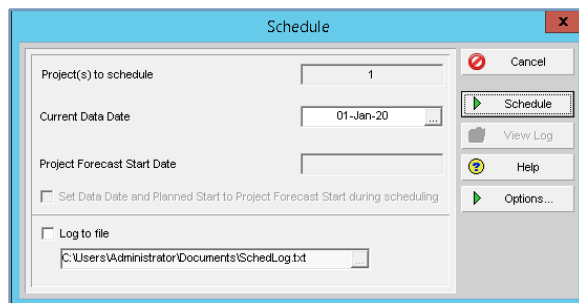
> **Note:** The date specified in the **Current Data Date** field must match the Cobra project's status date.

Step 8: Run the Integration Wizard

Run the Integration wizard and complete its pages to import Primavera data to Cobra.

> **Note:** For more information on the Integration wizard, refer to **Data Import Using Scheduling Tools** of the Cobra Help System.

To run the Integration wizard:

1. In Cobra, click the Integration tab. In the **Import group**, click **Primavera**.

2. On the Integration Configuration page, specify the required fields, and click **Next**.

3. On the New Connection dialog box, specify the required fields to create a new connection to the Primavera P6 database.

> **Note:** Refer to the **New Connection Dialog Box of the Integration Wizard — Primavera** topic in the Cobra Help System for more information on the fields.

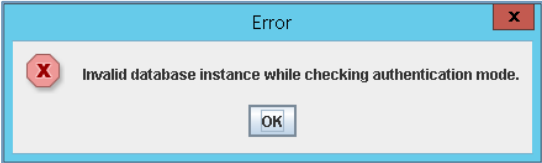4. Test the connection. The following screen displays.
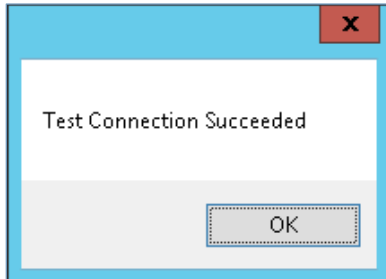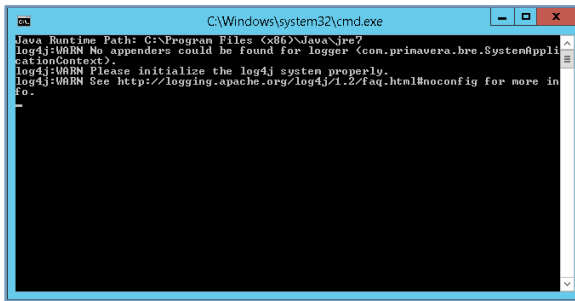
5. Complete the pages of the wizard, and check the process log.
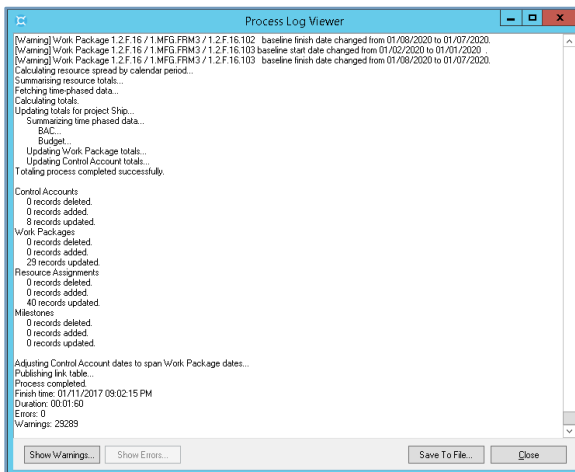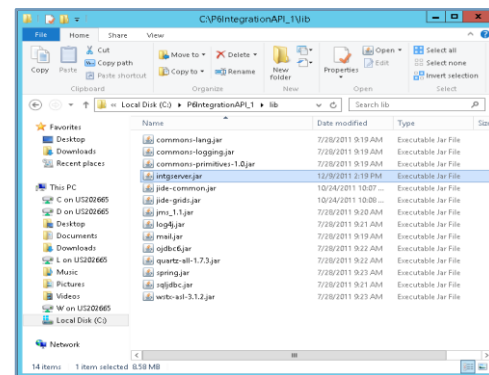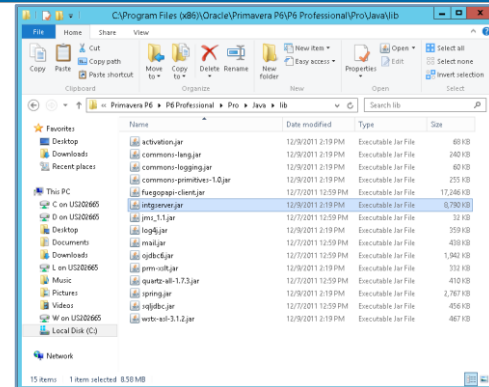

Troubleshooting and Useful Links

This table describes some errors that you may encounter when setting up the Cobra Primavera Integration, and how to fix them.

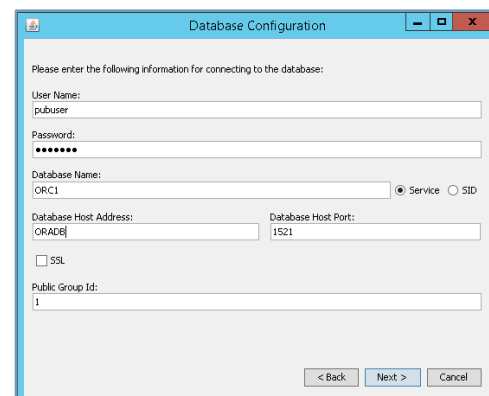| Error and Cause	Troubleshooting Steps:
Error encountered when running the Demo Export command. 	**To fix the error**: 1. Navigate to the P6 Professional directory, and locate and copy intgserver.jar to the API directory.

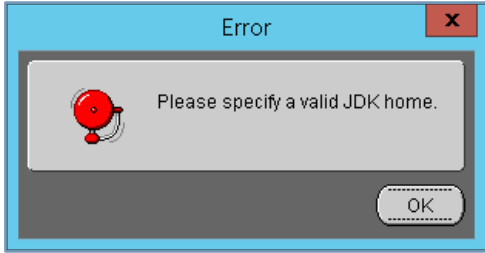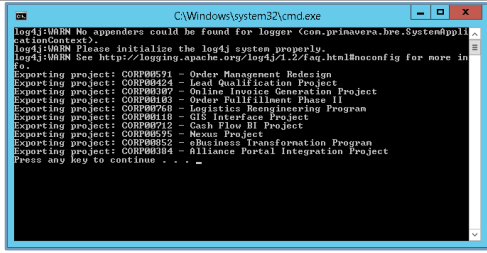| Error and Cause	Troubleshooting Steps:
Cause: Primavera P6 uses the P6 Professional format, which is the default format.	 2. Navigate to the API installation directory, locate **dbconfig.cmd**, and run it. 3. On the Database Configuration page, verify that the connection information is correct, and click **Next**. 4. Click **Use an existing configuration**, select **Primavera P6 Configuration**, and click **Nex**t.

Error and Cause	Troubleshooting Steps:
	  5. Navigate to the Primavera P6 installation folder, locate **demoexport.cmd**, and run it. 6. On the XML Export Demo dialog box, verify that the information is correct, and click **Next**. 7. The command screen displays that the test is successful.

Error and Cause	Troubleshooting Steps:
Error encountered when running the Primavera P6 installer. **Cause**: Java Development Kit is not installed.	**To fix the error**: Install JDK and Set Java Home to JDK Install Directory.
Primavera P6 R8.1 and Primavera R8.2 Integration APIs are not designed to work with Primavera P6 R8.1 and Primavera R8.2 Professional databases.	**To fix:** 1. Install Primavera P6 Professional R8.1 or Primavera P6 R8.2. 2. Download, extract, and install the Integration API but do not run the Database Configuration wizard. 3. Copy the integration jar file from the Primavera P6 Professional installed folder to the API installed folder. For example, copy **intgserver.jar** from "**C:\Program Files\Oracle\Primavera P6\P6 Professional\Pro\Java\lib**" to "**C:\P6IntegrationAPI_1\lib**." 4. Click **Start** » **Programs** » **Oracle – Primavera P6** » **Primavera P6 API** » **Database Configuration**, right-click, and select **Run as Administrator**. 5. **This step is optional**. Click **Start** » **Programs** » **Oracle – Primavera P6** » **Primavera P6 API** » **Demo** » **General Demo** to run the API Demo.

Useful Links

The following table lists some useful Oracle KBAs for reference.

Oracle Document ID and Description	Link
Doc ID 1332754.1: P6 Web Services and Integration API Errors: "Invalid database instance while checking authentication mode" and "YOUR DATABASE SCHEMA TYPE DID NOT MATCH THE SCHEMA TYPE EXPECTED BY PRIMAVERA"	https://support.oracle.com/knowledge/More%20Applications%20and%20Technologies/1332754_1.html
Doc ID 1466565.1: How to Configure the P6 R8.x Integration API to Work With a P6 Professional Database	https://support.oracle.com/knowledge/More%20Applications%20and%20Technologies/1466565_1.html
Doc ID 2268703.1: External Storage Of Encryption Keys For P6 EPPM	https://support.oracle.com/knowledge/Oracle%20Cloud/2268703_1.html

Appendix I: Configure Oracle ODP.NET in Cobra

If you opt to use Oracle ODP.NET as your database provider, you must also register it to Global Assembly Cache (GAC) in order for Cobra to run.

To configure Oracle ODP.NET on your machine:

1. To download the installer, go to the [Oracle site](#). Make sure to download the ODAC installer similar to the Oracle version you are using.

2. Launch the installer and follow the prompts to proceed with the installation.

3. On the page where the installer asks you to choose how to configure ODP.NET and/or Oracle Providers, select **Configure ODP.NET and/or Oracle Providers for ASP.NET at machine-wide level**.
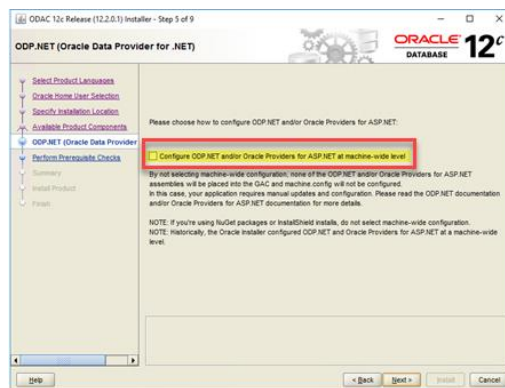
> **Note:** The option label may vary depending on the ODAC version you are installing.

4. Complete the pages of the installation wizard.

5. Verify that ODP.NET is registered in the GAC.

a. Navigate to the **<Micrososoft.NET Framework Directory>\<version>\Config** folder on your machine. For example:
    C:\Windows\Microsoft.NET\Framework\v4.0.30319\Config.

b. Locate the **machine.config** file and open it using a text editor, such as Notepad.

c. Find **<DBProviderFactories>** and verify that "ODP.NET, Unmanaged Driver" exists.

For example:

```
<system.data>
 <DbProviderFactories>
   <add name="ODP.NET, Managed Driver"
invariant="Oracle.ManagedDataAccess.Client" description="Oracle Data
Provider for .NET, Managed Driver"
type="Oracle.ManagedDataAccess.Client.OracleClientFactory,
Oracle.ManagedDataAccess, Version=4.121.2.0, Culture=neutral,
PublicKeyToken=89b483f429c47342"/>
   <add name="ODP.NET, Unmanaged Driver"
invariant="Oracle.DataAccess.Client" description="Oracle Data Provider for
.NET, Unmanaged Driver" type="Oracle.DataAccess.Client.OracleClientFactory,
Oracle.DataAccess, Version=4.121.2.0, Culture=neutral,
PublicKeyToken=89b483f429c47342"/>
```

```
      <add name="Microsoft SQL Server Compact Data Provider 4.0"
invariant="System.Data.SqlServerCe.4.0" description=".NET Framework Data
Provider for Microsoft SQL Server Compact"
type="System.Data.SqlServerCe.SqlCeProviderFactory, System.Data.SqlServerCe,
Version=4.0.0.0, Culture=neutral,
PublicKeyToken=89845dcd8080cc91"/></DbProviderFactories>

  </system.data>
```

Appendix J: Data Conversion

The Data Conversion utility is no longer included in the standard Cobra product with Version 8.0 and higher. If you need to convert your Cobra 4.7 database to a Cobra 8.x database, contact Customer Care for assistance.

Appendix J: If You Need Assistance

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

Customer Services

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

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

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

Deltek Support Center

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

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

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

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

Access Deltek Support Center

To access the Deltek Support Center:

1. Go to https://deltek.custhelp.com.

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

3. Click **Login**.

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

Additional Documentation

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

Document Name	Description
Cobra 8.3 Release Notes	This document contains important information concerning the installation and use of the product, and describes outstanding issues
Cobra 8.3 Online Help	The online help contains detailed information and instructions on how to use Cobra's various features.
EPM Security Administrator Online Help	This document is for system administrators only. It contains detailed information on how to define security rights and maintain license keys, users, groups, roles, and access to the various EPM applications.

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