



IHS Energy Technical Global

IHS Kingdom® 2016.1

Installation Guide

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Table of Contents

Installation Guide

Overview	1
Contacting Customer Care.	3

Planning your Installation or Upgrade

Installation checklist	5
Hardware, system, and database requirements	6
Required database permissions.	8
Choosing a database	9
Understanding SQL Server Express	11
Installation requirements	12
How is Auto SSE different from Manual SSE?	13
Managing Manual and Auto SSE Projects	14
Auto SSE and backward compatibility	15
Upgrading projects to Kingdom 2016.1	16
Upgrading multiple projects	18
Troubleshooting failed upgrades	21
Upgrading Access or SQL Server Express 2005 Projects	21
Custom Coordinate Reference System (CRS).	22

Downloading and Installing the Latest Release

Before you begin	23
Downloading software from My Account	24
Downloading and installing related apps	25
Downloading additional resources	27

Installing IHS Kingdom Software from a DVD

Kingdom software DVD contents	30
Kingdom Installation Manager	32
Install Kingdom.	32
Install Kingdom Data Management (DM)	33
View resources.	33
Install third party software	34
Applications	34

Performing Silent Installations

Using the MSI File for installations.	38
Extracting the MSI file	39
Installing prerequisites	40

Installing the Kingdom Demo Projects

Installing IHS GeoSyn

Installing the application	45
Workstation setup	46
Installing the GeoSyn workstation	46
Licensing for GeoSyn 32-bit.	47
Requesting a GeoSyn License.	49
Contacting Customer Care	50

Installing Third Party Software

Third party software	51
Installing Microsoft SQL Server Express	52
Downloading and installing	52
Creating and configuring an SMTKINGDOM instance.	53
Network database Instance	54
Troubleshooting	55
Installing AppSight	59

SQL Server Express Service Configuration

What is your Working Environment?	61
Unable to start the service	66

The Administrator Console

Installing the Administrator Console.	69
Installing the Administrator Console Database	70
Installing the Kingdom Enterprise Service	71
Testing the Installation	72
Configuring the Enterprise Project Selector.	73

Installing the Network License Server

License Requirements and Management

Standalone	77
Network	77
Retrieving feature keys for a standalone license	78
Retrieving your network license feature keys.	81
Initial Startup of Kingdom Using a Network License	87
Initial Startup of GeoSyn Using a Network License	88
Obtain and Install Feature Keys.	89
Web Feature Key	90
Browse Feature Key File	91
Web	91
Email	91
License Server Usage Log.	93

Updating the Kingdom Software

Obtaining software updates from the web	97
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IHS™ Kingdom® 2016.1

Installation Guide

Overview

This manual contains the information you need to install and configure the Kingdom software and other applications available from the IHS Kingdom website at kingdom.ihs.com. and IHS Installation DVD.

This installation guide includes the chapters listed below. It is recommended that you read the chapter [Planning your Installation or Upgrade](#) before you begin your installation.

If you need help installing or configuring the software, or if you want the installation DVD shipped to you, please contact [Customer Care](#).

Planning your Installation or Upgrade	This chapter provides helpful guidance about the different Kingdom software and database installations and configurations available to you so you can prepare for and implement the best solution for your particular requirements.
Downloading and Installing the Latest Release	The easiest and fastest way to obtain the latest release is from the IHS Kingdom website at kingdom.ihs.com
Installing IHS Kingdom Software from a DVD	If you do not have internet connectivity and have received the physical media, you can install from the Installation Manager on the Kingdom Software DVD.
Installing Third Party Software	The four third-party applications are optional installations: Adobe Reader, AppSight, SQL Server Express, and SQL Management Studio. Adobe Reader is available for download from Adobe and from the DVD.
SQL Server Express Service Configuration	If you install the Kingdom version of SQL Server Express, you need to define how to configure the service according to your working environment.

Installing the Administrator Console	<p>The Administrator Console is intended for use by system administrators responsible for defining access permissions to Kingdom projects on an enterprise-wide scale. Used in conjunction with the Enterprise Project Selector, the Administrator Console provides system administrators with a single means of defining and communicating access to Kingdom projects for all Kingdom users.</p>
Downloading and Installing GeoSyn	<p>GeoSyn is a separate installation but workflows are integrated with Kingdom. The 64-bit version of GeoSyn uses the Kingdom license manager.</p>
Installing the Network License Server	<p>If you have a new or an existing network license, install the Network License Server. This ensures you have the latest version installed.</p>
License Requirements and Management	<p>Before using the Kingdom software, you must obtain and install the sentinel (dongle) for your computer or network license server, and enter the feature key codes into the standalone or network license control pane.</p>
Updating the Kingdom Software	<p>Service Packs and Hot Fixes are available for download from the IHS Kingdom website at kingdom.ihs.com.</p>

The following links provide more detailed information about installing the SQL Server and Oracle clients and the data transfer tool OpenSpirit:

- [Installing and Configuring a SQL Server Database](#)
- [Installing and Configuring the Oracle Host and Client](#)
- [Installing OpenSpirit Client on Kingdom Workstation](#)

Contacting Customer Care

If you have any questions or need to obtain your software on physical media, contact one of our Customer Care Centers of Excellence at kingdom_support@ihsmarkit.com or by phone. Regional numbers are listed below.

Region	Phone
Americas	+1 800 IHS-CARE +1 800 447-2273 +1 303 736-3001
Latin & South America	+54 11 43438635 +55 21 2588-8145 (Brazil)
EMEA	+44 (0)1344 328 220
APAC	+604 291 3600

Planning your Installation or Upgrade

If you are performing a new installation of Kingdom, prepare for the installation by reviewing the [Hardware, system, and database requirements](#). If you are upgrading a previous version of Kingdom to Kingdom 2016.1, be sure to read [Upgrading projects to Kingdom 2016.1](#) to understand the requirements and consequences of the upgrade before you continue.

Kingdom 2016.1 is only backward-compatible with Kingdom 2016 and Kingdom 2015 Service Pack 4. It is not compatible with earlier versions of Kingdom, which will affect your ability to work in and share projects still in versions earlier than Kingdom 2015 Service Pack 4.

Installation checklist

The following checklist provides a summary of the steps and decisions required to successfully install Kingdom and any related software, such as the project database, license server, and Administrator Console. You can use this checklist as a way to plan, organize, and keep track of your installation. The steps you need to complete vary depending upon your requirements and any previous installation of Kingdom you may have.

<input type="checkbox"/>	1. Define hardware, system, and database requirements
<input type="checkbox"/>	2. Choose a database
<input type="checkbox"/>	3. Download the latest software
<input type="checkbox"/>	4. Install the downloaded software or install software from DVD (you can also perform a silent installation)
<input type="checkbox"/>	5. Install and configure database <ul style="list-style-type: none">• SQL Server Express• SQL Server or Oracle
<input type="checkbox"/>	6. Install Administrator Console (optional)
<input type="checkbox"/>	7. Install License Server (optional)

Hardware, system, and database requirements

The Kingdom client software has the following hardware, system and database requirements:

Hardware
<ul style="list-style-type: none"> • Minimum: 64-bit quad-core machine with 8 GB of physical RAM • Recommended: 64-bit processor with 8 CPU cores and 16 GB of physical RAM or higher • Recommended: Graphics card: Video cards that support CUDA 4.x have at least 1 GB of graphic card memory

Operating Systems	Install	Support
Windows 7 SP 1 (64-bit)	Yes	Yes
Windows 8	Yes, 1	Yes, 1
Windows 10	Yes	Yes
Windows 2008 R2 Server (Citrix based applications)	Yes, 1	Yes, 1
Windows 2012 Server (Citrix based applications)	Yes, 1	Yes, 1
Databases	Install	Support
Oracle (User Installation) 10G and 11G (The client and server should be the same version.)	3	Yes
Oracle (User Installation) 12C	3	Yes, 2
SQL Server (User Installation) 2008 R2	3	Yes
SQL Server (User Installation) 2012	3	Yes
SQL Server Express 2008 R2 SP1	Yes	Yes
SQL Server Express 2012 SP2 (Kingdom is not compatible with SP3)	Yes	Yes
Access	No	No

Third Party Software
TIBCO OpenSpirit 4.0.3 (Required for Tunnel O and Kingdom Connect)

Install Kingdom can only be installed on systems with supported operating systems.

Support	Full release testing completed for major releases, standard level of testing for service pack and hot fixes
Notes	<ol style="list-style-type: none">1 IHS provides basic support; we do not certify on these operating systems or databases but will provide Customer Care support and consider bugs found during installation.2 IHS is currently testing; we do not certify or currently support3 IHS provides SQL Server Express 2012 SP2 executable as a download from the Kingdom product website, and on the DVD. other database servers are provided, installed, and maintained by the client.

Hardware Requirements for Fault Attributes

Fault Attributes utilizes algorithms to generate 3D seismic attributes that are specifically tuned for fault and fracture interpretation. These attributes further extend the existing Kingdom Illuminator technology and involve intense computations. For faster computation, these algorithms take advantage of NVIDIA CUDA technology and utilize available graphics processing unit (GPU) power on video cards.

At a minimum, video cards need to support CUDA 4.x, have at least 1GB of graphic card memory, and be updated with the latest video driver supporting Open GL 2.0+.

The new Fault Attributes algorithms will still run on the regular central processing unit (CPU) on computers with graphics cards that do not satisfy the minimum requirements, but performance might not be optimal depending on the available CPU power.

License Server

If you want to use a network license server, you need to install or upgrade the license server to version 8.5.5. Version 8.5.5 of the license server is a 64-bit application and requires a 64-bit computer. If you are upgrading your license server, be sure you upgrade on a 64-bit computer. For more information about installing or upgrading the license server, see [Installing the Network License Server](#).

Related topics

[Installation checklist](#)

[Required database permissions](#)

Required database permissions

The permissions required to upgrade differ depending on the Kingdom database you are using. For projects in SQL Server and Oracle databases, you must enter your database log in credentials before upgrading a project.

Database	Required Permissions
SQL Server Express (Kingdom-specific version)	No special permissions required
SQL Server	Db_Owner Or Db_Ddladmin + Db_Datareader + Db_Datawriter For more information, refer to the available Microsoft documentation.
Oracle	<u>Default roles:</u> <ul style="list-style-type: none">• Connect + DBA <u>Customized roles:</u> <ul style="list-style-type: none">• Read/write data for all project tables• Make DDL statements for schema• Execute PL/SQL statements For more information, refer to the available Oracle documentation.

Related topics

[Installation checklist](#)

[Hardware, system, and database requirements](#)

Choosing a database

All Kingdom software features and modules support MS SQL Server Express, MS SQL Server, and Oracle databases.

<p>SQL Server Express</p>	<p>This is Microsoft's free replacement of Access with a database size limit of 10 GB for SQL Server Express 2008 R2 and 2012 SP2. There is also a 1 GB limit for the memory cache, which limits database efficiency with more than three or four users, especially when accessing projects with large amounts of well data. For more information, see Understanding SQL Server Express.</p> <p>Kingdom 8.8, Kingdom 2015, Kingdom 2016, and Kingdom 2016.1 can run on SQL Server Express version 2008 R2 and 2012 SP2.</p> <hr/> <p>Important: Once you open a project using SQL Server Express 2012 SP2, that project can no longer be opened in earlier versions of SQL Server Express.</p> <hr/>
<p>SQL Server</p>	<p>The SQL Server client and server need to be purchased and installed separately and works only on Windows operating systems. Theoretically, there are no limitations to the size of the database. SQL Server has multiprocessor support capability. For more information about using SQL Server for your Kingdom database, see the Database Administration Guide.</p>
<p>Oracle</p>	<p>The Oracle client and server Need to be purchased and installed separately and can operate on Windows or Unix / Linux operating systems. Theoretically, there are no limitations to the size of the database. Oracle has multiprocessor support capability. For more information about using Oracle for your Kingdom database, see the Database Administration Guide.</p>

Note: he Kingdom software is not certified on Oracle Express

Choosing a database

Database Comparison

Database	Concurrent Users	RAM Buffer (cached records)	No. of CPUs	Database Size	Database Location
SQL Server Express (Manual)	~ 4	1 GB	1	10 GB	Program Files\IHS\KingdomSuite folder of SQL Server Express computer
SQL Server Express (Auto)	~ 4	1 GB	1	10 GB	ProjectDatabase folder inside project folder
SQL Server (Single Project)	~ 80	Limited by system RAM	Limited by system	Limited by system	SQL Server computer
SQL Server (Multiple Project)	~ 80	Limited by system RAM	Limited by system	Limited by system	SQL Server computer
ORACLE	~ 300	Limited by system RAM	Limited by system	Limited by system	ORACLE server

Related topics

[Installation checklist](#)

[Hardware, system, and database requirements](#)

[Required database permissions](#)

Understanding SQL Server Express

SQL Server Express (SSE) is provided free of charge and it is available from the DVD or as an optional download from the IHS website at kingdom.ihs.com.

The Kingdom version of SQL Server Express available on the DVD and from the IHS website has a dedicated SMTKINGDOM instance with a pre-configured user name and password to simplify installation and integration with Kingdom. If you download and install SQL Server Express from Microsoft, you need to configure an SMTKINGDOM instance and create the required Kingdom user account. For more information, see [Creating and configuring an SMTKINGDOM instance](#).

SQL Server Express is a good database choice for small offices and individual users with no database administration experience and no database administrator on staff. It is easy to administer and automatically creates the Kingdom project database. The Kingdom version of SQL Server Express is simple to implement because it creates a default SMTKINGDOM instance with an SMTKINGDOM login (with sysadmin (sa) permissions) and the password \$ei\$micMicro. However, this standard configuration may not meet your internal security policies.

SQL Server Express can only run on Microsoft operating systems. For Linux/Unix servers, you need to install Oracle.

There are two database options available when you create a new Kingdom SQL Server Express project database:

Auto SSE	Configured to be easily portable by automatically attaching and detaching the project database when you open and close Kingdom. As long as all data is contained in the project folder, when all authors are out of the project, you can copy or move the project without any tools or special operations.
Manual SSE	Management of Manual SSE projects, including attaching/detaching and moving the database, is done through the SSE Management Tool available from the Kingdom Start Page. With this option you must use the SSE Management Tool to copy or move projects.

This section contains the following topics:

- [Installation requirements](#)
- [Connection requirements for Auto SSE](#)
- [How is Auto SSE different from Manual SSE?](#)
- [Managing Manual and Auto SSE Projects](#)
- [Auto SSE and backward compatibility](#)

Installation requirements

You must either install the IHS version of SQL Server Express or configure your existing installation of SQL Server Express to work with Kingdom. The IHS version creates an SMTKINGDOM instance with a pre-configured user name and password that Kingdom uses to connect to the SQL Server Express database. Installation of this instance should not affect existing instances of SQL Server Express installed by other programs. If you choose to configure an existing installation of SQL Server Express, see [Creating and configuring an SMTKINGDOM instance](#).

If multiple users are going to access your Kingdom projects, you should install SQL Server Express on a shared network computer. You must be logged onto the computer where you want to install SQL Server Express.

For optimal Kingdom performance, run SQL Server Express on a dedicated computer with at least 8 GB of physical memory.

SQL Server Express is available from the following locations:

- IHS Kingdom website at kingdom.ihs.com
- DVD

Note: You only need to install SQL Server Express once. Reinstalling or updating Kingdom will not affect SQL Server Express.

Related topics

[Understanding SQL Server Express](#)

Connection requirements for Auto SSE

When using the Auto SSE option, successful connectivity depends on the configuration of your working environment. The following combinations are supported:

Working Environment	Recommended Database Configuration
<ul style="list-style-type: none">• Kingdom projects are on your computer or on a colleague's computer• You are a single user or have a small work group	Install SQL Server Express on the same computer as the Kingdom project. Use a Local Project—Local database Instance configuration.
<ul style="list-style-type: none">• Kingdom projects are on a shared resource on the network• The Kingdom project and SQL Server Express instance are on different computers	Install SQL Server Express on a network computer, not on your own computer. Use a Network Project—Network database instance configuration

Note: When using Auto SSE, projects on the network cannot connect to a local SSE instance. Similarly, local projects cannot connect to an SSE instance on the network.

Local Project—Local database Instance

Your project and your SQL Server Express (SMTKINGDOM) instance are both on your local computer or another computer in your work group.

This is the simplest configuration. When you close a project, it is portable.

Network Project—Network database instance

Your project and your SQL Server Express (SMTKINGDOM) instance are both on your network - not on your computer. This configuration supports multiple projects on multiple computers connecting to a central SQL Server Express instance. Your network administrator needs to create a service account for SQL Server Express to use to access your Kingdom projects. For more information about installing SQL Server Express and creating the service account, see [Installing Microsoft SQL Server Express](#).

Related topics

[Understanding SQL Server Express](#)

How is Auto SSE different from Manual SSE?

You have two options available to you when creating a new project database with SQL Server Express: Auto SSE and Manual SSE. Auto SSE is designed for easy project portability and Manual SSE maintains backwards compatibility with earlier versions of Kingdom. Auto SSE differs from Manual SSE in the following ways:

Auto SSE	Manual SSE
<ul style="list-style-type: none"> Places the project database in the Kingdom project directory. 	<ul style="list-style-type: none"> Places the project database in the IHS\KingdomSuite directory under Program Files on the computer where the SQL Server Express instance is installed. Requires a computer that is designated as the database server.
<ul style="list-style-type: none"> Automatically attaches the database when the first user opens the project. Automatically detaches the database when the last user exits the project. 	<ul style="list-style-type: none"> Does not automatically detach or attach the project database. Requires the SSE Management tool to detach or attach the project database.
<ul style="list-style-type: none"> Automatically attaches to any available SQL Server Express server if the original server is unavailable. 	<ul style="list-style-type: none"> Kingdom database is unavailable if the SQL Server database computer is unavailable.
<ul style="list-style-type: none"> After all users exit the project, you can copy or move the project directory, including the database, with Windows Explorer. 	<ul style="list-style-type: none"> After all users exit the project, you must use the SSE Management tool to copy or move the project directory and database.

<ul style="list-style-type: none">• Cannot connect to Kingdom versions 8.5 or earlier.	<ul style="list-style-type: none">• Is backward compatible with Kingdom versions 8.2 or later. You can attach the database using the SSE Management tool.
<ul style="list-style-type: none">• Supports the following location combinations:<ul style="list-style-type: none">- Local Project—Local database Instance- Network Project—Local Instance- Network Project—Network database instance	<ul style="list-style-type: none">• Supports mixed mode location combinations for your project folder and SSE instance. Your project on the network can connect to a local instance and vice versa.

Note: Only data stored inside the project folder is included in any move or copy. Data stored outside of the project folder such as seismic files, author files, or tiff images of your raster logs, you need to copy separately.

Related topics

[Understanding SQL Server Express](#)

Managing Manual and Auto SSE Projects

Kingdom Auto SSE projects are the easiest to manage. The database files are stored in the project folder and you can perform file management tasks such as copy, move, backup, and delete using Windows Explorer.

The project database for Manual SSE projects is not located in the project folder. To perform file management tasks for Manual SSE projects you need to manage both the project database and the project files.

You can manage your Manual SSE projects with two tools:

- **Manual SQL Server Express Project Management**—available from the Kingdom Start Page, this [utility](#) provides a number of file management options for your Manual SSE projects, such as:
 - making a project portable
 - copying, moving, or deleting a project
 - backing up and restoring a project.
- **Kingdom Data Management** —a data management application with a wide range of project inventory and management tools. Kingdom Data Management requires a separate license.

The [Manual SQL Server Express Project Management tool](#) manages only the SQL Server Express database and the files in the Kingdom project folder. By default, Kingdom files are saved in the project folder, but if files such as seismic data, author folders, or raster logs have been saved in locations outside of the project folder, these files are not included. Before using

the Manual SQL Server Express Project Management tool to manage your project data, move all external files into the Kingdom project folder.

Caution: Applying any of the Manual SQL Server Express Project Management tool options to an Auto SSE project changes the project to Manual SSE. The project will no longer be automatically portable, but will be compatible with Kingdom versions 8.2 and later.

Related topics

[Understanding SQL Server Express](#)

Auto SSE and backward compatibility

If you want to open an Auto SSE project in Kingdom 8.5 SP1 or earlier, you need to change the project to a Manual SSE project using the Manual SQL Server Express Project Management tool. Applying any of the Manual SQL Server Express Project Management tool options to an Auto SSE project changes the project to Manual SSE. The project will no longer be automatically portable, but will be compatible with Kingdom versions 8.2 and later. For specific instructions, see [Auto SSE and Backward Compatibility](#) in the Database Administration User Manual.

Related topics

[Understanding SQL Server Express](#)
[Kingdom Project Database Conversions](#)

Upgrading projects to Kingdom 2016.1

Kingdom 2016.1 is only backwards compatible with Kingdom 2016 and Kingdom 2015 Hot Fix 4. Once you upgrade to Kingdom 2016.1, any existing projects you try to open with Kingdom 2016.1 must be upgraded, and once upgraded, projects are no longer usable by any previous versions of Kingdom except Kingdom 2016 and Kingdom 2015 Hot Fix 4.

You can upgrade individual Kingdom projects or you can upgrade multiple projects at the same time. We recommend that you create a full backup of any Kingdom project you plan to upgrade. The project backup needs to include a database backup as well as any other project files (for example, seismic files, grids, horizons, and faults).

Single Project	To upgrade a single project to Kingdom 2016.1, simply open the project with Kingdom 2016.1. Kingdom prompts you to upgrade, and performs the upgrade for you automatically if you choose to upgrade. If you attempt to open an Access-based project, Kingdom 2016.1 prompts you to first convert the database and then upgrade the project, and does so automatically if you choose to upgrade. If you are unsure of which database to choose, see Choosing a database .
Multiple Projects	To upgrade multiple Kingdom projects to Kingdom 2016.1 at the same time, use the Kingdom Project Upgrade Tool. For more information, see Upgrading multiple projects..

SQL Server Express 2005 support

Kingdom versions 2015 and later do not support SQL Server Express 2005. To use Kingdom 2016.1 you must upgrade any projects to SQL Server Express 2008 R2 SP1 or 2012 SP2. You can download the Kingdom version of SQL Server Express from the IHS web site at no cost.

Previous version support

Kingdom 2016.1 cannot automatically upgrade projects from version 8.6 or earlier. You must first upgrade any 8.6 or earlier versions of Kingdom projects to a minimum of version 8.7 before you can upgrade them to Kingdom 2016.1.

Multi-Project databases

If you are upgrading from a version of Kingdom prior to Kingdom 2016, there are some special considerations for Kingdom projects in a multi-project database (one database with multiple Kingdom projects) rather than a single project database (a separate database for each Kingdom project):

- Once you upgrade at least one project in a multi-project database, you can no longer create new projects in that database with prior versions of Kingdom.
- You cannot create any new projects in a multi-project database until at least one project in that database has been upgraded to the current version. However, you can open earlier versions of projects with earlier versions of Kingdom.

For more information about single and multiple project databases, see [Choosing a Database](#) in the Database Administrator Guide.

If you are using Kingdom Data Management (KDM) to copy a project, you cannot copy the project into a multi-project database unless at least one project in that database has been upgraded to the current version.

Kingdom 2016.1 and Access

Kingdom 2016.1 does not support Access as a project database. If you want to continue using projects that are currently in Access, you must convert the project database to SQL Server Express, SQL Server, or Oracle, and then upgrade the projects to Kingdom 2016.1. You can perform both the conversion and the upgrade simply by opening Access-based projects with Kingdom 2016.1. If you must convert an Access project to a different database and you are unsure which one to choose, see [Choosing a database](#).

Related topics

- [Troubleshooting failed upgrades](#)
- [Custom Coordinate Reference System \(CRS\)](#)

Upgrading multiple projects

Kingdom provides the Project Upgrade Tool so you can upgrade multiple Kingdom projects to the latest version at the same time. This tool can expedite the upgrade process in environments with large numbers of Kingdom projects. See [Using the project upgrade tool](#) for step by step instructions.

If you are upgrading Kingdom projects with Access or SQL Server Express 2005 databases, you cannot use the upgrade tool. For more information see [Upgrading Access or SQL Server Express 2005 Projects](#)

The illustration below shows the main components of the Project Upgrade Tool window:

The screenshot shows the Project Upgrade Tool interface. At the top left, there is a 'Directories' section with a plus icon and a list of selected directories: 'C:\Kingdom Demo Projects (3)' and 'D:\ (90)'. A box labeled 'List of Directories' points to this list. Below the directories is a 'Status Filters' section with a plus icon and a 'Required' icon. The main area is a table with columns for Status, Project, Database, and Directory. The table is filtered by status: 'Ready for Upgrade (30)', 'Ineligible (52)', 'Complete (10)', and 'Failed (1)'. A box labeled 'List of Projects' points to the project list. A box labeled 'Database Credentials Required' points to a key icon in the 'Ready' row for the 'JWL_One' project.

Status	Project	Database	Directory
Complete	Teapot-Dome-2007	Auto SSE	D:\SMT Projects\99-Teapot-Dome-2007_ASSE\Teapot-Dome-2007.tks
Failed	DC_International	Auto SSE	D:\SMT Projects\DC International\DC International.tks
Ready	DirectConnectTesting	Auto SSE	D:\SMT Projects\DirectConnectTesting\DirectConnectTesting.tks
Ineligible	Fairfield4	Access	D:\SMT Projects\Fairfield4\Fairfield4.tks
Ready	GOLDEN	Auto SSE	D:\SMT Projects\Golden test\GOLDEN.tks
Ready	JR76_Conversion	Auto SSE	D:\SMT Projects\JR76_Conversion_RSA_SQL\JR76_Conversion.tks
Ready	JWL_One	SQL Server	D:\SMT Projects\JWL_One\JWL_One.tks
Complete	Salt Dome	Auto SSE	D:\SMT Projects\CFM Testing\Salt Dome.tks
Complete	SMSTRAT_SQL	Auto SSE	D:\SMT Projects\SQL\SMSTRAT_SQL.tks
Complete	Strat_SQL	Auto SSE	D:\SMT Projects\Strat_SQL\Strat_SQL.tks

List of directories

The list of directories shows any directories containing Kingdom projects that you have added to the Project Upgrade Tool. Any projects in these directories display in the list of projects below the directory list. You can filter the list of projects by selecting or clearing the check boxes next to the directories you want to include or exclude. Click **+** to add directories to the list or **-** to remove them from the list.

Status Types and Filters

Project databases have four possible statuses:

Ready for Upgrade	these databases satisfy the requirements of the Project Upgrade Tool and can be upgraded whenever you are ready.
-------------------	--

Ineligible	these databases do not meet the requirements of the Project Upgrade Tool and cannot be upgraded by the tool (usually Access-based project databases, which can be upgraded individually).
Complete	these projects have already been upgraded to Kingdom 2016.1.
Failed	these projects have failed a previous upgrade attempt (you can learn more about the upgrade failure by clicking Open Log Folder and then opening the log file for the specific database).



You can filter the list of projects by selecting or clearing the check boxes next to the different database statuses. Clearing a check box hides any databases with that status from the list.

List of projects

The list of projects shows the Kingdom project databases available in the directories selected in the [list of directories](#). You can filter the project databases shown in this list by selecting or clearing the check boxes for individual directories or for the different database statuses.

The project database list shows the following information:

- **Status**—Ready for Upgrade, Ineligible, Complete, or Failed
- **Project**—The name of the Kingdom project
- **Database**—The project database type (Auto SSE, Manual SSE, SQL Server, Oracle)
- **Directory**—The location of the project database (click the directory link to open the project)

Project databases that require you to provide logon credentials have a key icon  next to the project name. Click  and then enter the user name and password of an account that has sufficient permissions to update the project database. You have the option to apply these credentials to one database or to all selected databases.



Related topics

- [Using the project upgrade tool](#)
- [Upgrading multiple projects](#)
- [Upgrading projects to Kingdom 2016.1](#)

Using the project upgrade tool

The Project Upgrade tool is a separate utility that runs independently of Kingdom. We recommend that you back up any projects before you upgrade them.

To upgrade multiple projects:

1. From the Start menu, click **All Programs > IHS Kingdom [version] > Project Upgrade Tool**.
2. Read and acknowledge the information on the startup window, and then click **Next**.
3. Click **Add a directory to get started** to browse to a directory containing Kingdom projects that you want to upgrade. Any Kingdom projects in the directory display in the list.
4. If you want to add additional directories with Kingdom projects, click  and browse to the directory you want.
5. Select the projects you want to upgrade by selecting the check box next to each project in the list. By default all projects are already selected.
6. If you want, you can filter the list of projects by selecting or clearing the check box next to the various project status types. If you have added multiple directories, you can also filter the list by selecting or clearing directories.
7. If a project name displays a , click the key and enter the user name and password for the project database. The **Upgrade** button remains unavailable until you have provided any required database credentials.
8. Click **Upgrade**. A progress bar displays next to each project as it is being upgraded, and the status changes from Ready to Complete for successful upgrades or Failed for any failed upgrades.
9. If you want to view the error log for any failed database upgrades, click **Open Log Folder**. Each database has its own log file in the log folder.

Related topics

[Upgrading projects to Kingdom 2016.1](#)

Troubleshooting failed upgrades

The most common reasons for a failed project upgrade include the following:

- An unsupported version of Kingdom—You cannot upgrade projects older than Kingdom 8.6.
- An unsupported version of SQL Server or SQL Server Express—You cannot upgrade projects that use SQL Server 2005 or SQL Server Express 2005.
- The project is still attached to SQL Server Express—The project may be in use by another Kingdom user or the project did not close properly.
- Invalid credentials—the database user name and password you provided during the upgrade were incorrect or did not have sufficient permissions on the database to complete the upgrade.

Other, less common errors include a missing or invalid `geocalc.dat` file, a corrupted project database, or a missing coordinate reference system.

Most common issues are easy to resolve and the error message you receive provides resolution instructions (if you are using the Project Upgrade Tool, this information is available in the log file). In those cases where an upgrade issue is not easily resolved, you can contact Customer Care. Be sure to have the upgrade log file available before you call. To locate the log file, click **Show Log File** in the Upgrade Failed error message or **Open Log Folder** in the Project Upgrade Tool.

Related topics

[Upgrading projects to Kingdom 2016.1](#)
[Custom Coordinate Reference System \(CRS\)](#)

Upgrading Access or SQL Server Express 2005 Projects

The Project Upgrade Tool cannot upgrade Kingdom projects using an Access, SQL Server 2005, or SQL Server Express 2005 database. You can upgrade Access projects individually, or you can migrate your Access projects to another database such as SQL Server Express or SQL Server, and then use the Project Upgrade Utility to upgrade them. You must upgrade any SQL Server 2005 or SQL Server Express 2005 project databases to SQL Server 2008 R2, SQL Server Express 2008 R2 SP1, or SQL Server Express 2012 SP2 before you can upgrade the projects to Kingdom 2016.1. Projects using Access, SQL Server 2005, or SQL Server Express 2005 have a status of Ineligible in the Project Upgrade Tool.

Custom Coordinate Reference System (CRS)

Project > Projection

Previous versions of Kingdom did not provide the complete list of EPSG coordinate reference codes, which often required users to create their own custom versions. Kingdom 2015 and later versions provide the complete list and we recommend that you select a standard CRS before using a custom one. If your project still requires a custom CRS, go to Project > Projection > [Create Custom Coordinate System](#).

Note: The upgrade tool does not convert a custom CRS to Kingdom 2016 format.

Related topics

[Upgrading projects to Kingdom 2016.1](#)

[Troubleshooting failed upgrades](#)

Downloading and Installing the Latest Release

This chapter explains how to download Kingdom software from the IHS website and install the software on your computer.

Before you begin

Before you begin your installation, be sure to review the following:

Planning Guide	This topic includes valuable information to help you choose the correct version of Kingdom and the correct database to suit your business requirements.
Hardware, system, and database requirements	Review the required system specifications.

We recommend that you close all Windows programs before running the Kingdom setup program and that you disable any anti-virus software until the installation is complete.

If you are installing Kingdom from a DVD, see [Installing IHS Kingdom Software from a DVD](#).

Note: If you are using a network license, for the best performance do not install the license server and the Kingdom application on the same computer.

Related topics

- [Downloading software from My Account](#)
- [Downloading and installing related apps](#)
- [Downloading additional resources](#)

Downloading software from My Account

Kingdom, Kingdom Data Management, and GeoSyn releases and updates are available for download from the IHS Kingdom website at kingdom.ihs.com. You need your user name and password for My Account to access software downloads. If you do not have your account information, contact [Customer Care](#).

The [Related Apps](#) for each product are also available on the Downloads page. Select the **Related Apps** tab below the list of products to view the list of available related applications.

Note: For network licenses, you must install the [Kingdom Network License Server](#) on the computer designated as the license server and obtain the feature keys before you can successfully start the Kingdom software.

To download and install the software:

1. Log on to the computer where you want to install the software as an administrator.
2. Verify the date and time on the computer. If the date and time on the network license server or the Kingdom computer are incorrect, you may not be able to check out a license.
3. Using a web browser, log on to My Account on the IHS Kingdom website at kingdom.ihs.com.
4. Click **Downloads**.
5. Select the product you want to download and the version and click **Download**.
6. When the download is complete, go to the download directory at
`C:\Users\UserName\Downloads`
7. Double-click the installation file and then follow the instructions in the installation wizard to complete the installation.

The default installation directory for all products is `C:\Program Files\IHS\KingdomSuite`. Each product has its own subfolder within the KingdomSuite folder.

Related topics

- [Installing Kingdom from the DVD](#)
- [Downloading and installing related apps](#)

Downloading and installing related apps

The Downloads page on the IHS Kingdom website at kingdom.ihs.com contains optional applications and resources for download.

Note: You need your user name and password information for My Account to access the downloads. If you do not have your account information, you can contact your Kingdom sales representative.

To download and install related apps:

1. Using a web browser, log on to **My Account** on the IHS website.
2. Click **Downloads**.
3. Select the product that you want related apps for.
4. Below the list of products select the **Related Apps** tab.
5. When your cursor hovers over the related app, the blue **Download** button displays:
6. Select the application you want to download to your computer and click **Download**. You have the following options:

Run	Automatically starts the Install Wizard for the selected product. Follow the wizard to install the product.
Save	Saves the download package to the default download folder: C:\Users\username\Downloads
Save as	Allows you to select the location to save the download package.

7. If you used a **Save** option, browse to the location where you saved the file, double-click the installation file and then follow the instructions in the installation wizard to complete the installation.

The following related applications are available from the IHS Kingdom website at kingdom.ihs.com:

SQL Server Express	SQL Server Express is a free, lightweight version of SQL Server with an IHS-specific configuration to work with Kingdom.
Network License Server	the Network License Server is required if you have acquired a new Kingdom network license. If you already have a network license, we recommend you download and install the latest version of the server.

Downloading and installing related apps

Demo Projects	<p>The default installation directory for the demo projects is C:\Kingdom Demo Projects.</p> <p>This folder contains demo projects and two data folders. The demo projects require approximately 700 MB of space and use SQL Server Express for the project database, so you also need to install SQL Server Express to open the demo projects.</p>
Kingdom Gateway [version] for Petrel [version]	<p>Provides direct connectivity between IHS Kingdom and Petrel software.</p>
Administrator Console	<p>Allows an administrator to specify access to Kingdom projects based on Active Directory permissions.</p>
AppSight for [version]	<p>AppSight is a tool for resolving problems in Windows and .NET applications.</p>
LSinit for [version]	<p>Provides a fix for clock-tampering issues when starting Kingdom.</p>

The following additional related apps are available if you click **All** immediately below the Related Apps tab name:

Sentinel Drivers and Utilities	<p>Links to the SafeNet website where you can download the latest drivers for your Kingdom sentinels used to monitor Kingdom standalone and network licenses.</p>
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Related topics

- [Downloading additional resources](#)
- [Downloading software from My Account](#)
- [Installing Kingdom from the DVD](#)

Downloading additional resources

For all products, the Release Notes and additional resources for the selected release are available by clicking on the links in the Resources list.

The following resources, in PDF format, are available from the IHS Kingdom website at kingdom.ihs.com with Kingdom Software or Kingdom Data Management selected:

Installation Guide	Guidance for what database to select and detailed instructions for installing and updating Kingdom and Kingdom applications. It also includes information about licensing requirements and management.
What's New	Details about the new features and enhancements in the latest version.
Planning Guide	This topic includes valuable information to help you choose the correct version of Kingdom and the correct database to suit your business requirements.
Feature Key Instructions	Brief instructions on how to obtain and install your feature keys for the latest version. A full version of the same instructions is available in the Kingdom Installation Guide.
Documentation (PDF versions)	Printable versions of all available Kingdom software user guides. This information is also available through the Help menu of each application.
Installing AppSight	Instructions on installing and running AppSight.

With GeoSyn selected, the Installation Guide is available which includes both installation and licensing information.

Related topics

- [Downloading software from My Account](#)
- [Downloading and installing related apps](#)
- [Installing Kingdom from the DVD](#)

Downloading and Installing GeoSyn

Before downloading, please see [Version Compatibility and System Requirements](#) for information on the GeoSyn <> Kingdom version requirements and required system specifications.

Downloading GeoSyn

1. Log in to My Account on the IHS Markit website at kingdom.ihs.com. If you do not have My Account credentials please contact [Customer Care](#).
2. Click **Downloads**.
3. Under **Product** select **GeoSyn** and under **Version** select **2016.1**
4. Click **Download**.
5. When the download is finished, click **Open** to view the GeoSyn folder.
6. The folder contains two subfolders:

StandAlone	Most users install this version, which can be licensed as a standalone product (single user) or as a network license (multi-user).
ClientServer	<p>The ClientServer version provides the ability to update multiple instances of the software from a central server. This version includes a client and a server installation. Each user needs to install the client on their computer.</p> <p>Instead of the ClientServer version, we recommend that you use the Microsoft Installer (MSI) described below which utilizes more advanced technology.</p> <p>If you want to install the ClientServer version, please contact Customer Care for details.</p>

MSI Installation (silent installation)	<p>Silent installations using the Microsoft Installer (MSI) installation file are useful for companies with controlled IT environments that centrally manage and deploy software to user computers. Using the MSI file for installations must be silent since the MSI does not provide a user interface. See Performing Silent Installations for more information.</p> <p>Unlike the standard installers, using the MSI does not install any of the GeoSyn software prerequisites. You must install these items separately. See Installing Prerequisites for details.</p>
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Before you can run the application, you must request a GeoSyn license through the IHS license manager. Both standalone and network licenses are available for GeoSyn StandAlone. See [License Requirements and Management](#) for more information.

Installing GeoSyn StandAlone

The GeoSyn installer includes both GeoSyn 1D and GeoSyn 2D. However, each requires a separate license.

Before installing the application ensure that the following requirements are met:

The user account used to install the product has administrative privileges on the computer.

All GeoSyn users have read/write permissions to the GeoSyn folder.
--

To install GeoSyn StandAlone:

1. After downloading the GeoSyn installation file, open the zip file. The default download directory is `C:\Users\UserName\Downloads`
2. Open the GeoSyn Release folder and select the **StandAlone** folder.
3. Right click on the **setup.exe** file and select **Run as administrator**. This opens the GeoSyn InstallShield Wizard. Follow the Wizard.
 - a. On the Welcome window click **Next**.
 - b. Select **I accept the terms of the license agreement** and click **Next**.
 - c. Enter both your **User Name** and **Company Name** and click **Next**.
 - d. Accept the default installation location or select a different location and click **Next**.
 - e. On the **Ready to Install the Program** window click **Install**.
4. When installation is complete click **Finish** to exit the wizard. The installation creates GeoSyn shortcuts on the desktop.



Before you can run the application, you must request a GeoSyn license through the GeoSyn license manager. Both standalone and network licenses are available for GeoSyn StandAlone. See [License Requirements and Management](#) for more information.

Version Compatibility and System Requirements

The following table outlines Kingdom<->GeoSyn version compatibility and supported operating systems. Due to Kingdom data model changes, only the product versions paired in the table below are compatible.

Kingdom Release	GeoSyn Release (Version)	Supported Operating Systems License Manager
2016.1	7.1 (64-bit)	<ul style="list-style-type: none"> 64-bit version only of Windows 7 and Windows 10 Kingdom license manager. If you have Kingdom and GeoSyn versions 2016.0 installed, you do not require new feature keys for version 2016.1.
2016	7.0 (64-bit)	<ul style="list-style-type: none"> 64-bit version only of Vista and Windows 7 Kingdom license manager
2015 FP1	6.11 (64-bit)	<ul style="list-style-type: none"> 64-bit version only of Vista and Windows 7 Kingdom license manager
2015	6.10 (32-bit)	<ul style="list-style-type: none"> 32-bit and 64-bit versions of Windows 7, Vista, Windows XP AccuMap license manager
8.8	6.9 (32-bit)	<ul style="list-style-type: none"> 32-bit and 64-bit versions of Windows 7, Vista, Windows XP AccuMap license manager

The GeoSyn 64-bit client software has the following recommended and minimum hardware and software requirements:

Recommended	<ul style="list-style-type: none"> Windows 7 64-bit OS or later 64-bit quad-core machine with 8 GB of physical RAM or higher 512 MB video system with OPENGL acceleration Dual monitor video system
Minimum	<ul style="list-style-type: none"> 8GB RAM for Vista 64-bit OS or Windows 7 64-bit OS 512 MB video system with OPENGL acceleration 1280 x 1024 or greater resolution monitor
Supported OS	<ul style="list-style-type: none"> Windows 10 and Windows 7 64-bit.

Contacting Customer Care

If you have any questions or need to obtain your software on physical media, contact one of Customer Care at Kingdom_support@ihsmarkit.com or by phone. Regional numbers are listed below.

Region	Phone
Americas	+1 800 IHS-CARE +1 800 447-2273 +1 303 736-3001
Latin & South America	+54 11 43438635 +55 21 2588-8145 (Brazil)
EMEA	+44 0 1344 328 220
APAC	+604 291 3600
Non-Kingdom GeoSyn customers can also contact support.cdn@ihsmarkit.com	

Installing IHS Kingdom Software from a DVD

The information in this chapter applies if you plan to install Kingdom or Kingdom Data Management from the Kingdom Software DVD. This chapter provides information necessary for the installation and initial start-up of the Kingdom an Kingdom Data Management software, and covers the following:

- [Kingdom software DVD contents](#)
- [Kingdom Installation Manager](#)

The default installation directory for Kingdom, Kingdom Data Management, and GeoSyn is `C:\Program Files\IHS\KingdomSuite`. Each product has its own sub-folder within the KingdomSuite folder.

Please note that the fastest and easiest method to obtain and install the latest Kingdom update is to download it from IHS Kingdom website at kingdom.ihs.com.

Kingdom software DVD contents

The Kingdom Software DVD contains the installation files for the following applications:
the following folders and files:

AdministratorConsole	The installation files for the Kingdom Administrator Console.
GeoSyn	The installation files for the standalone and network versions of GeoSyn.
InstallPages	Files and images used by the Kingdom Installation Manager
KingdomDM	The installation files for Kingdom Data Management
KINGDOMSoftware	The installation files, installation documentation, and demo projects for the Kingdom software.
LServer	The installation files for the Kingdom License Server.
SMT Product Documentation	PDF files of the user manuals for all products. These files are copied to your computer during the Kingdom installation.
SupportFiles	<p>Contains the installation and supporting files for the following applications:</p> <ul style="list-style-type: none"> • Adobe—Acrobat Reader. • AppSight—AppSight Black Box captures the root cause of application problems. • GL View—an Open GL shader viewer. This stand alone utility helps determine the cause of shader problems. • Microsoft—includes .NET, Report Viewer, and Microsoft SQL Server - Express edition. • Sentinel—the driver for the Sentinel plug, which is a hardware device required to run Kingdom software. You cannot use Kingdom without a Sentinel plug. • SQLExpress—The Kingdom installer for Microsoft SQL Server - Express edition.
AUTORUN.INF	Contains setup information for the installer.

Release Documents	Contains the following product documentation: <ul style="list-style-type: none">• Feature_Key_Instructions.pdf—a brief version of how to obtain and install your feature keys for the latest version.• PlanningGuide.pdf—helpful information concerning Kingdom installation options and database choices.• ReleaseNotes.pdf—important information about installation, compatibility, configuration, enhancements, fixed bugs, and known problems.• WhatsNew.pdf—an introduction to the new features and functionality in Kingdom and Kingdom Data Management.
Setup.exe	The application executable. Double-click to start the Kingdom Installation Manager.
TKS.config	Configuration file for the installation.

Related topics

[Kingdom Installation Manager](#)
[Installing IHS Kingdom Software from a DVD](#)

Kingdom Installation Manager

Use the Kingdom Installation Manager to install Kingdom, Kingdom Data Management, Kingdom applications, and all third party software from the Kingdom DVD. To start the Kingdom Installation Manager, place the Kingdom Software DVD into your DVD drive. The Installation Manager starts automatically.

The Kingdom Installation Manager contains the following tabs:

Install Kingdom	Install Kingdom and the Kingdom Demo Projects, view the Kingdom Installation Guide, or request a trial license.
Install Kingdom DM	Install Kingdom Data Management or request a trial license.
View resources	View product release and Help documentation
Install third party software	Install AppSight, Adobe Reader, SQL Server Express, and SQL Management Studio.
Applications	Install any of the following related applications: <ul style="list-style-type: none"> • Network license server (The license server is required for network license environments and hosts the network sentinel) • Administrator Console • GeoSyn Standalone • GeoSyn Network

Related topics

- [Kingdom software DVD contents](#)
- [Installing IHS Kingdom Software from a DVD](#)
- [Downloading software from My Account](#)

Install Kingdom

The **Install Kingdom** tab includes the following items:

Install Kingdom Software	Click to start the installation wizard and follow the wizard. The default installation directory is <code>C:\Program Files\IHS\KingdomSuite</code> . Before you can run Kingdom, you need to obtain and install the feature keys that control the licensing. See Obtain and Install Feature Keys for details.
Install Demo Projects	Click to start the installation wizard for the demo projects included with the Kingdom Software.
View Installation Guide	The installation guide is in PDF format and requires Adobe Reader.

Request a Trial License	Click to connect to the Product Evaluation page. Enter the required information and send the form to us.
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Related Topics

[Kingdom Installation Manager](#)

Install Kingdom Data Management (DM)

Kingdom Data Management (DM) is a data management and data transfer tool that allows you to work more efficiently when managing data.

Your Kingdom and Kingdom DM versions must match. For example, if you have installed Kingdom 2015 64-bit, you must install Kingdom DM 2015 64-bit.

The **Install Kingdom DM** tab includes the following items:

Install Kingdom DM	Click to start the installation wizard and follow the wizard. The default installation directory is C:\Program Files\IHS\KingdomSuite. Before you can run Kingdom, you need to obtain and install the feature keys that control the licensing. See Obtain and Install Feature Keys for details.
View Installation Guide	The installation guide is in PDF format and requires Adobe Reader.
Request a Trial License	click to connect to the Product Evaluation page. Enter the required information and send the form to us.

Related topics

[Kingdom Installation Manager](#)

View resources

The **View Resources** tab provides quick access to release documents and the full product documentation, all in PDF format.

Release Notes	Provides important information about the current version including fixed bugs, known issues, and installation information. Please read this document before installing or reinstalling the software.
Feature Key Instructions	Provides a brief version of how to obtain and install your feature keys for the latest version. More detailed instructions are available in the chapter License Requirements and Management . Point releases do not require new feature keys.
What's New	Includes details the new features and enhancements in the latest version.

My Account	Links to the many resources available to you on the IHS web site , such as the Knowledge Base, software releases and updates, and upcoming training classes.
Product Documentation	Provides PDF versions of all available Kingdom Software user manuals. This information is also available through the Help menu of each application: Help > Help Center .

Related topics

[Kingdom Installation Manager](#)

Install third party software

Three third party applications are available from the **Install Third Party Software** tab.

Adobe Acrobat Reader	Adobe Reader is required to read and print the PDF user manuals and tutorials. If you already have Adobe Reader on your computer, the installer identifies the existing application version and does not start the installation unless the Adobe Reader version on the Kingdom Software DVD is a newer version.
AppSight Black Box	AppSight Black Box is an effective diagnostic tool for diagnosing application problems. See Installing AppSight .
Microsoft SQL Express	Installs Kingdom's customized version of SQL Server - Express edition.
SQL Management Studio	The Management Studio provides tools to access, configure, manage, and administer SQL Server Express.

Related topics

[Kingdom Installation Manager](#)

Applications

The **Applications** tab includes the following items:

Install Network License Server	Manages site licenses by checking in and out the various combinations of license features at your site
The Administrator Console	Allows an administrator to manage access to Kingdom projects across your enterprise
Install GeoSyn Standalone	Installs the standalone version of GeoSyn 1D and GeoSyn 2D.
Install GeoSyn Network	Installs the network version of GeoSyn 1D and GeoSyn 2D.

Related topics

[Kingdom Installation Manager](#)

Performing Silent Installations

Kingdom, GeoSyn, and Kingdom Data Management offer the ability to perform silent installations using the Microsoft Installer (MSI) installation file. This is useful for companies with controlled IT environments that centrally manage and deploy software to user computers. Using the MSI file for installations must be silent since the MSI does not provide a user interface.

Unlike the standard installers, using the MSI does not install any of the software prerequisites. You must install these items separately. See [Installing prerequisites](#) for more information.

Microsoft Windows installer service

The Microsoft Windows Installer Service (`msiexec.exe`) is a service provided by Microsoft and included in most Microsoft operating systems. This is the service you use to perform software installations with MSI files.

Command Line options and properties

For a list of the command line options available to the Microsoft Windows Installer Service (`msiexec.exe`), see the following article available from Microsoft:

<http://msdn.microsoft.com/en-us/library/Aa367988>.

Properties

The Microsoft Windows Installer Service has many properties for which you can define values. An important property you are likely to use is the `INSTALLDIR` property, which defines the installation directory for the silent installation of an application. For example:

```
INSTALLDIR="C:\Program Files\IHS\KingdomSuite"
```

You use properties at the command line for silent installations. Keep in mind that property names are case sensitive.

Sample command lines

Here are some sample command lines for the silent installation of Kingdom and GeoSyn. These are provided for reference only. Your own command line requirements may differ significantly.

Kingdom

Install to default location	<code>msiexec.exe /i "<path to msi>\The Kingdom Software 2016.1 (64-bit).msi" /quiet</code>
Install to custom location	<code>msiexec.exe /i "<path to msi>\The Kingdom Software 2016.1 (64-bit).msi" INSTALLDIR="C:\MyApps\KingdomSuite" /quiet</code>

GeoSyn

Install to default location	<code>msiexec.exe /i "<path to msi>\GeoSyn 2016.1 (64-bit).msi" /quiet</code>
Install to custom location	<code>msiexec.exe /i "<path to msi>\GeoSyn 2016.1 (64-bit).msi" INSTALLDIR="C:\MyApps\KingdomSuite" /quiet</code>

Log files

The Microsoft Windows Installer creates log files for each installation in the installing user's Temp directory: `C:\Users\<UserID>\AppData\Local\Temp\nnnnnnnn.log`. The log file name is automatically generated and is different for each installation.

Using the MSI File for installations

The Kingdom Software 2016.1 (64-bit).msi file and the GeoSyn 2016.1 (64-bit).msi file are standard MSI files. You can use this file with the Microsoft Windows Installer application (`msiexec.exe`), including all the available command line options available to the installer. For more information about the Microsoft Windows Installer and its command line options, refer to the available Microsoft documentation. Before installing Kingdom 2016.1 using the MSI file, you must first install the software prerequisites. For more information, see [Installing prerequisites](#).

Extracting the MSI file

The MSI files are contained in the standard installation executables and must be extracted before you can use them for silent installations. The standard installation executables are available for download from the IHS Markit Kingdom website at kingdom.ihs.com as well as on the installation DVD:

Kingdom	<DVDRoot>\KingdomSoftware\Kingdom\x64\The Kingdom Software 2016.1 (64-bit).exe
GeoSyn	<DVDRoot>\KingdomSoftware\GeoSyn\x64\GeoSyn 2016.1 (64-bit).exe
KDM	<DVDRoot>\KingdomDM\x64\Kingdom Data Management 2016.1 (64-bit).exe

To extract the Kingdom or Kingdom Data Management MSI file:

1. Download the installation executable from the IHS website or copy the installation executable from the installation DVD.
1. At a command prompt, change directories to the location of the application executable (.exe) file.
2. Type one of the following, depending on the program you want to extract:
 - "The Kingdom Software 2016.1(64-bit).exe" /stage_only
 - "GeoSyn 2016.1(64-bit).exe" /stage_only
 - "Kingdom Data Management 2016.1(64-bit).exe" /stage_only
3. Press **Enter**.
4. When prompted, select a destination folder where you want to extract the MSI file.
5. Click **Finish** to complete the extraction.

The MSI extraction creates several folders with different GUIDs. These folders contain the Kingdom or Kingdom Data Management MSI as well as MSI and .exe files for all the prerequisite software.

You can move these files to any location you need to perform silent installations.

Note: You can also extract the MSI file directly from the installation DVD without needing to copy the installation executable to a computer. Here is a sample command line for extracting the Kingdom MSI file from the DVD:

```
"<DVDRoot>\KingdomSoftware\Kingdom\x64\The Kingdom Software 2016.1  
(64-bit).exe" /stage only
```

If you need more information about extracting content from the installation executable, refer to the [InstallShield support documentation](#).

Installing prerequisites

Kingdom, GeoSyn, and Kingdom Data Management have several software prerequisites that must be in place to successfully install either application. The standard Kingdom and Kingdom Data Management installation executables include these prerequisites, but they are not installed if you perform a silent installation with an MSI file. You must install each prerequisite prior to installing Kingdom or Kingdom Data Management. When you extract the Kingdom or Kingdom Data Management MSI file from the standard installation executable, the prerequisite software is also extracted. For more information, see [Extracting the MSI file](#).

These prerequisites apply to Windows 7 and Windows 10.

Prerequisite	Sample Command Line
Microsoft .NET Framework 3.5 SP1 or greater (dotnetfx35SP1.exe)	dotnetfx35SP1.exe "/q:a /C:\"install /q /norestart\" /norestart"
Microsoft .NET Framework 4.5.2 (NDP452-KB2901907-x86-x64-AllOS-ENU.exe)	NDP452-KB2901907-x86-x64-AllOS-ENU.exe "/q:a /C:\"install /q /norestart\" /norestart"
Microsoft SQL Server 2008 R2 Native Client 10.50.1600.1 (x64) (sqlncli_x64.msi)	msiexec.exe /i SQLncl_x64i.msi /qb
Microsoft SQL Server Management Objects 10.00.2531 (x64) SharedManagementObjects_amd64.msi	msiexec.exe /i SharedManagementObjects_amd64.msi /qn /passive
Microsoft SQL Server System CLR Types 10.00.2531 (x64) or greater SQLSysClrTypes_amd64.msi	msiexec.exe /i SQLSysClrTypes_amd64.msi /qn /passive
Sentinel System Driver 7.5.1 sentinel.exe	Sentinel.exe /S /v /qb-! REBOOT=ReallySuppress

Installing the Kingdom Demo Projects

You can download the demo projects from IHS Kingdom website at kingdom.ihs.com or install them from the Kingdom DVD. The demo projects require approximately 700 MB of space. The demo projects use SQL Server Express for the project database, so you need to install SQL Server Express 2008 R2 SP1 or later to open the demo projects.

Note: You need your user name and password information for My Account to access the downloads. If you do not have your account information, you can contact your Kingdom sales representative.

To download the Demo Projects:

1. Using a web browser, log on to My Account on the IHS website.
2. Click **Downloads**.
3. Select **The Kingdom Software**.
4. Below the list of products select the **Related Apps** tab.
5. Move your mouse over Demo Projects and click **Download**.
6. You have the following options:

Run	Automatically starts the Install Wizard for the selected product. Follow the wizard to install the product.
Save	Saves the download package to the default download folder: C:\Users\username\Downloads
Save as	Allows you to select the location to save the download package.

7. If you saved the download package, you can click **Run** to start the InstallShield Wizard, or you can browse to the location at a later time and double-click the executable `Web_DemoProjects.exe` to start the InstallShield Wizard and then follow the wizard to complete the installation.

To install the Demo Projects:

1. On the **Welcome** screen click **Next**.
2. On the **Setup Type**, choose whether to perform a complete or custom installation:
 - **Complete**—installs all available projects and data. The total space required for a complete installation of the Demo Projects is approximately 700 MB.
 - **Custom**—after you specify the installation directory, select the Kingdom demo projects and data you wish to install on your computer.
3. On the **Choose Destination Location**, click **Change** to specify a different installation directory or click **Next** to accept the default directory. The default location is C:\Kingdom Demo Projects.

-
- If you selected **Custom** as the installation type, select which projects and data you want to install.

The following projects and data are available:

BEG	This Bureau of Economic Geology project contains the Stratton Field 3D seismic survey with wells and requires approximately 142 MB.
Golden	This Golden Geophysical project contains one 3D survey and four 2D line and requires 160 MB.
Sooner	This US Department of Energy and Diversified Operating Corporation reservoir management project contains one 3D survey with wells and requires 220 MB.
Data	This folder contains the various data items that can be used with the data loading tutorials and for general data loading practice and requires 183 MB.
Shape Files	This folder contains culture layers for the Sooner Project and requires 142 MB of space.

Make your selections and click **Next** to continue.

- Click **Install** to continue with the installation.
- After the files are installed, click **Finish**.

Note: The demo projects have SQL Server Express databases. You need to install SQL Server Express on your machine before you can open the Demo Projects. See [Installing Microsoft SQL Server Express](#) for details.

Installing Third Party Software

Third party software

Four third-party applications are available from the Kingdom Software DVD: Adobe Reader, AppSight, SQL Server Express, and SQL Management Studio. All except Adobe Reader are also available from the IHS Kingdom website at kingdom.ihs.com. You can download the reader from [Adobe](http://adobe.com).

See the following topics for detailed installation instructions:

[Installing Microsoft SQL Server Express](#)

[Installing AppSight](#)

Installing Microsoft SQL Server Express

The Kingdom version of SQL Server Express includes an SMTKINGDOM instance which is pre-configured with a user name and password that Kingdom uses to access the database.

You must either:

- [download and install](#) the IHS version of SQL Server Express,
- or

- [configure your existing installation](#) of SQL Server Express to work with Kingdom.

Installation of this instance should not affect existing instances of SQL Server Express installed by other programs.

The Default installation location is:

```
C:\Program Files(x86)\Microsoft SQL Server\MSSQL10_50.SMTKINGDOM
```

If you select an alternate destination location, the folder SMTKINGDOM_DATA is not automatically created. First create this folder in the desired location and then direct the InstallShield Wizard to this folder.

Note: Shared SQL Server components are also installed in C:\Program Files\Microsoft SQL Server\MSSQL10_50.SMTKINGDOM. You cannot change the location of these shared files.

Upgrading From SQL Server Express 2005

Kingdom version 2015 was compatible with SQL Server Express 2005. Later versions of Kingdom are not compatible with this version of SQL Server. Installing the newer version of SQL Server Express upgrades the database for you..

Downloading and installing

The Kingdom version is available from the following locations:

Location	Download and Installation Steps
IHS Kingdom Website	<ol style="list-style-type: none">1. Log in to MyAccount at kingdom.ihs.com.2. Click Downloads.3. On the Latest Releases page, select Kingdom.4. On the Related Apps tab select SQL Server Express.5. Click Download.6. Select Save or Run and follow the SQL Server Express InstallShield Wizard when the download is complete.

Kingdom Software DVD	<ol style="list-style-type: none"> 1. Insert the Kingdom Software DVD. The Installation Manager should open. If not, click setup.exe on the DVD. 2. Select the Install Third Party Software tab. 3. Click Install Microsoft SQL Express. <p>The SQL Server Express installation wizard starts. Follow the instructions in the installation wizard.</p>
----------------------	---

When installation of the instance is complete, the SQL Server Express Service Configuration dialog box opens. Read the contents of this dialog box carefully to determine whether you want a local or a network configuration. You can also refer to [SQL Server Express Service Configuration](#) for more information.

Creating and configuring an SMTKINGDOM instance

If you want to install SQL Server Express from Microsoft rather than installing the version available from IHS, you need to create and configure a separate SMTKINGDOM instance if you want to use SQL Server Express as a project database. The steps for creating a new database instance are similar to those for a new installation of SQL Server Express.

To install a new instance of SQL Server Express and create an SMTKINGDOM instance:

1. Download the SQL Server Express installer from Microsoft.
2. Run the installer.
3. Click the **Installation** link on the left and select the **New SQL Server** installation option.
4. Confirm the **New installation or add shared features** option is selected and then click **Next**.
5. Accept the license terms, and then click **Next**.
6. Accept the default selection of features, and then click **Next**.
7. Confirm the **Named instance** option is selected, and then type SMTKINGDOM as the instance name.
8. Change the **Instance root directory** to C:\Program Files\IHS\KindgomSuite, and then click **Next**.
9. Select NT AUTHORITY\SYSTEM as the account name for the SQL Server Database Engine Service, and then click **Next**.
10. Select the **Mixed Mode** option.
11. Enter and confirm the password you want to use for the system administrator (sa) account for the SQL Server Express database. By default the currently logged on user is set up as a system administrator account, but you can add and remove accounts as necessary.
12. Click **Next**, and then click **Next** again.
13. Once the new instance is created, click **Close**.

To configure the new SMTKINGDOM instance:

You need to enable TCP/IP on the new SMTKINGDOM instance.

1. From the Start menu, start the SQL Server Configuration Manager.
2. In the left pane of the SQL Server Configuration Manager, expand **SQL Server Network Configuration**.
3. In the left pane, select **Protocols for SMTKINGDOM**.
4. In the right pane, right-click **TCP/IP**, and click **Enabled** on the context menu.
5. Click **OK** on the warning message.
6. Click **SQL Server Services** in the left pane.
7. In the right pane, right-click the SQL Server service for the SMTKINGDOM instance and click **Restart** on the context menu.
8. Close the SQL Server Configuration Manager.

To create the SMTKINGDOM user:

Once you create and configure the SMTKINGDOM instance, you need to create the user account that Kingdom uses to access databases on the SMTKINGDOM instance.

1. From the Start menu, start SQL Server Management studio.
2. In the Connect to Server window, select the SMTKINGDOM instance, and then click **Connect**.
3. In the Object Explorer, expand **Security**.
4. Right-click **Logins**, and then click **New Login**.
5. In the **Login name** field, type SMTKINGDOM.
6. Select the **SQL Server authentication** option.
7. In the **Password** field, type \$ei\$micMicro, and then type the same password in the **Confirm password** field.
8. Clear the check box for the **Enforce password expiration** option.
9. In the left pane, click **Server Roles**.
10. Select the **sysadmin** role.
11. Click **OK**.
12. Close SQL Server Management Studio.

Network database Instance

If you decide to locate your SMTKINGDOM instance of SQL Server Express on your network to support access for multiple Kingdom users to a single instance, you or your network administrator need to create a service account for SQL Server Express to use to access the Kingdom projects on network computers. This is not necessary if you plan to install SQL Server Express on the same computer where you have your Kingdom projects. For detailed

instructions on configuring SQL Server Express on your network, see [Network Project—Network Database Instance](#).

Troubleshooting

This section addresses common problems you may encounter when connecting to the SQL Server Express database or starting the SQL Server Express service:

- [Connecting to your SQL Server Express database](#)
- [Unable to start the SQL Server Express service](#)

Connecting to your SQL Server Express database

The following information gives troubleshooting tips for a database migration to SQL Server Express. These tips also apply to problems opening an existing SQL Server Express Kingdom project.

[My Kingdom SSE instance is not listed](#)—when creating a project, you cannot see your SQL Server Express instance in the list of available instances.

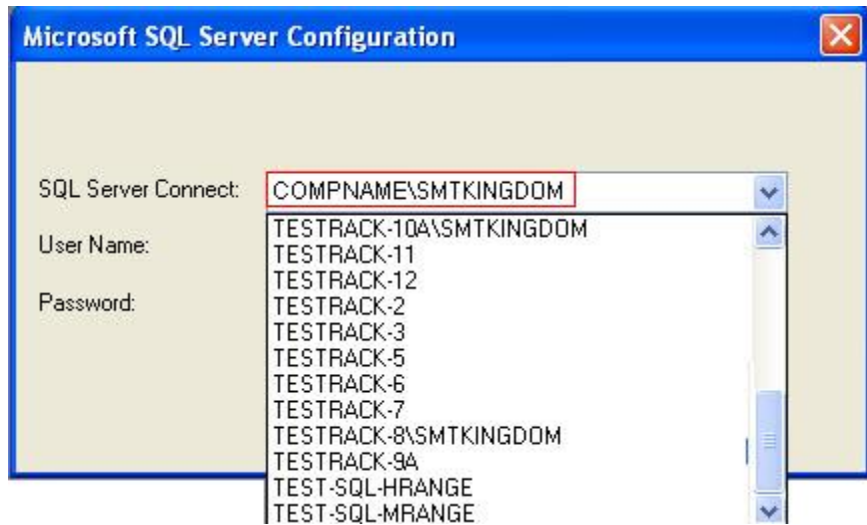
[Error occurred connecting to the database](#)—a general error message when trying to create or open a SQL Server Express project could be caused by a number of reasons.

[Connection requirements for Auto SSE](#)—if you received an error message when creating an Auto SSE project stating that the instance did not have adequate permission to read/write to the project database file, you may need to change permissions on the project directory or change the log on account of the SQL Server (SMTKINGDOM) service.

My Kingdom SSE instance is not listed

If you have already installed the SMTKINGDOM instance of SQL Server Express, either from the IHS web, from the Kingdom Software DVD, or by creating your own instance, and you still cannot see your instance in the drop down list as in the figure below, there are several possible causes.

Before troubleshooting, try typing the installed SQL Server Express instance into the **SQL Server Connect** field. Remember, the instance have \SMTKINGDOM at the end.



Click **OK** to continue.

If you receive an error message see [Error occurred connecting to the database](#)

[Error occurred connecting to the database](#)

If you get “**An error occurred connecting to the database. Would you like to try again?**”, Click **No** and try the following solutions:

Problem 1: One of the SQL Server services is not running.

Solution 1: Open the Administrative Tools on the computer where SQL Server Express is installed and start the SQL Server service(s). The steps below are for a computer running Windows 7. There may be slight differences for different Windows operating systems.

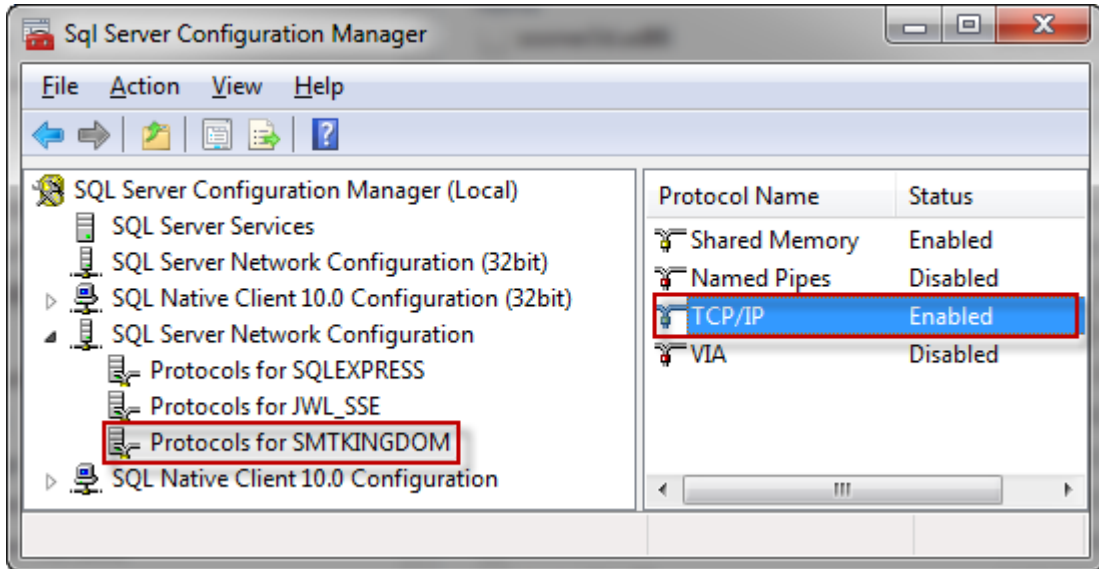
1. Click **Start > Control Panel > Administrative Tools**.
2. Double-click **Services**.
3. Scroll down to locate the SQL Server services. Check that SQL Server (SMTKINGDOM) and the SQL Server Browser services are started.
4. To start a service, right-click the service in the Status column and select **Start**.
5. Try opening the Kingdom project again.

Problem 2: The TCP/IP protocols is not enabled.

If the SQL Server Express instance is not local (on your computer), the TCP/IP protocol on the remote database instance must be **enabled**. If the SQL Server Express instance is on your machine, this is not an issue.

Solution 2: On the computer where SQL Server Express is installed, open the SQL Server Configuration Manager and enable the TCP/IP protocol:

1. Click **Start > Programs > Microsoft SQL Server 2008 R2 > Configuration Tools > SQL Server Configuration Manager**.



2. Under SQL Server Network Configuration, select **Protocols for SMTKINGDOM**.
3. In the right panel, check if the TCP/IP protocol is enabled. If it is disabled as in the figure above, right click Disabled and select **Enable**.
4. Restart the database service:
 - a. In the same Configuration Manager, select **SQL Server Services** in the left panel.
 - b. In the right panel right click **SQL Server (SMTKINGDOM)** and select **Restart**.

Note: The default status for this protocol is enabled.

Related topics

[Troubleshooting](#)

Unable to start the SQL Server Express service

There are a number of reasons why the SQL Server Express service is unable to start. Microsoft returns 24 possible reasons. However, the following are the most common:

The user password is not valid	Re-enter the password in the Server Configuration dialog box and retry.
The user has not been granted local "logon as a service" rights	If prompted that the user be added to the local "logon as a service" group, click OK .

The domain user is not a member of a Group that has “logon as a service” rights.	Contact your domain administrator. See Network Project—Network Database Instance for detailed steps.
The user is not in the Administrator group on the local computer	Add the service account user to the computer where the SQL Server Express instance is installed and add to Administrator Group
The user logged in to the computer is not a local administrator	You must be a member of the Administrator group on the computer. Contact your domain administrator for assistance.

Related topics

[Troubleshooting](#)

Installing AppSight

AppSight is an optional feature that you can install when you install Kingdom and Kingdom Data Management. AppSight BlackBox records logs for troubleshooting Kingdom software issues.

Once you have installed AppSight you can record AppSight logs from within Kingdom. Select **Help > Start Recording**.

Download and Install AppSight

Note: If you do not have access to the internet or if you have been sent a DVD, you install AppSight from the Kingdom Installation Manager. Select the **Install Third Party Software** tab and click **Install AppSight**.

To download and install AppSight, follow these steps:

1. Log in to [My Account](#).
2. Click **Downloads**.
3. On the Latest Releases page, select **Kingdom**.
4. On the **Related Apps** tab select **AppSight**.
5. Click **Download**.
6. Select **Save** or **Run** and follow the AppSight **InstallShield Wizard** when the download is complete.
7. A command window opens and remains open until the installation is complete. Wait until the installation is complete. No further action is necessary.

After you have installed AppSight you can record AppSight logs from within Kingdom. Select **Help > Start Recording**.

Related topics

[Recording with AppSight](#)

SQL Server Express Service Configuration

What is your Working Environment?

Note: You must be an **administrator** on your computer to run the service configuration application.

One of the following configuration options is **required** for the Auto SQL Server Express configuration and highly recommended for the Manual configuration:

Local

Projects	Kingdom projects are on your workstation or on a colleague's workstation.
Users	You are a single user or have a small work group.
SQL Server Express Service	Install SQL Server Express on the same computer as the Kingdom projects. Accept Local as the configuration. Click OK in the SQL Server Express Service Configuration dialog box to exit.

Other users in a work group or network that have permissions to access this computer also be able to work in the Kingdom projects.

Network

Projects	Kingdom projects are on a shared resource on the network.
Users	The Kingdom projects and SQL Server Express instance may be on different machines. Multiple users may connect to the same SQL Server Express instance.
SQL Server Express Service	Install SQL Server Express on a network computer - not on your workstation. This configuration requires a Network Project—Network Database Instance solution.

You need to get service credentials from your domain administrator before continuing.

See [Unable to start the service](#) for troubleshooting tips if you get an error message after trying to start the service with the entered log on credentials.

Network Project—Network Database Instance

You are in a network environment when your project and your SQL Server Express (SMTKINGDOM) instance are both on your network - not on your workstation. This configuration supports multiple projects on multiple computers connecting to a central SQL Server Express instance.

See [What is your Working Environment?](#) for local and network criteria.

Your network administrator needs to do the following:

1. [Create user \(service account\)](#).
2. [Add the “Log on as a service right” to the user account](#).
3. [Grant the service account Full Control privileges to Kingdom project directories](#).
4. [Add the service account user to the computer where the SQL Server Express instance is installed and add to Administrator Group](#).
5. [Set the service account as the Log On account for the SQL Server \(SMTKINGDOM\) service](#).

[Create user \(service account\)](#)

Prerequisites:

- Microsoft Administrative Tool Pack is installed on a machine in the domain or you have access to the domain controller.
- You have a domain administrator account or service account with permissions to create users and modify the default domain policy to create the service account.

Create the user (service account)

1. On a [Windows Domain Controller](#), open Administrative Tools and click **Computer Management**.
2. Expand **Your Domain**.
3. Right click **Users** and select **New User**.
4. Enter the user account information and click **Next**.
5. Enter a password and confirm the password.
6. Select **Password never expires**.
7. Click **Create** and then **Close**.

[Add the “Log on as a service right” to the user account](#)

1. On a Windows Domain Controller, open Administrative Tools and select **Domain Security Policy**.
2. In the console tree, expand **Local Policies** and then **User Rights Assignment**.
3. In the details pane, double-click **Log on as a service**.
4. If this security setting has not yet been defined, select the **Define these policy settings** check box.

-
5. Click **Add User or Group** and then add the user (service) account you created.

[Grant the service account Full Control privileges to Kingdom project directories](#)

Add the service account to the group(s) that have Full Control access to the Kingdom project directories—or—share the Kingdom project directories to the user account and give Full Control access. For the second option, see [How do I share my project directories?](#)

Add the service account to the group(s) that have Full Control access

1. On the Windows Domain Controller, select **Start > Programs > Administrative Tools > Active Directory Users and Computers**.
2. Click **Groups** to display existing groups.
3. Right click the selected group and select **Add to Group**.
4. Click **Add**.
5. Make sure **Service Accounts** is displayed under **Select this object type** and that your Domain is displayed under **From this location**.
6. Enter the name of the service account that you created and click **Check Names**.
7. When the account is returned, select **OK** and **OK** again.

[Add the service account user to the computer where the SQL Server Express instance is installed and add to Administrator Group](#)

This step can be done by the domain administrator remotely or by any user that is an administrator on the computer where SQL Server Express is installed.

Tip: You can use the same service account for other instances of SQL Server Express.

The following procedure is for adding the service account on the computer where SQL Server Express is installed

1. From the Start menu, select **Control Panel > Administrative Tools**.
2. Double-click **Computer Management** to open the Computer Management MMC console.
3. Expand **Local Users and Groups**.
4. Right click on **Users** and select **New User**.
5. Type the user name and password for the service account you created. These must match the service account exactly.
6. Clear the option **User must change password at next logon**.
7. Select the option **Password never expires**.
8. Click **Create**, and then click **Close**.
9. In the left pane, click **Groups**
10. In the right pane, double-click **Administrators**.
11. In the Administrator Properties dialog box, click **Add**.

-
12. In the **From this location** field, confirm that the location is the local computer, not the domain.
 13. Type the name of the service account and click **Check Names** to confirm you have selected the correct account.
 14. Click **OK**.
 15. If successful, the service account user name displays in the **Members** list. Click **OK**.

Set the service account as the Log On account for the SQL Server (SMTKINGDOM) service

Note: This step can be done by the SQL Server Express Service Configuration tool installed with the instance. The user installing the instance only need the user name and password of the service account.

You must be a local administrator on the computer to set the Log On account.

1. Log in to the network computer where SQL Server Express is installed.
2. From the Start menu, select **Control Panel > Administrative Tools**.
3. Double-click **Services**.
4. Right click the **SQL Server (SMTKINGDOM)** service and select **Properties**.
5. Click the **Log On** tab.
6. Select **This account** and then click **Browse**.
7. In the **Select User** dialog box, click **Locations**.
8. Expand **Entire Directory** and select the company domain (network) name. Click **OK**.
9. Type the name of the service account and click **Check Names** to confirm you typed the correct name.
10. Click **OK** to return to the **Log On** tab.
11. Enter and confirm the service account password and click **OK**.
12. Click **Yes** in the two messages and **OK** again in the Log On tab.
13. Restart the service. In the Services list, right click the SQL Server (SMTKINGDOM) service and click **Restart**.

The SQL Server (SMTKINGDOM) service now be able to access the database files located in the Kingdom project folders.

The Kingdom project directories must be shared to the SQL Server (SMTKINGDOM) service Log On account (service account). The Log On account must have Full Control permissions to the project directories.

How do I share my project directories?

You must share your project folder on your computer to the Log On account for the SQL Server (SMTKINGDOM) service and give this account Full Control permissions.

-
1. Contact your network administrator and request the name of the service account that was created for the SQL Server (SMTKINGDOM) service.
 2. Share your project folder to this service account and give it Full Control permissions.
 - a. Right click the project folder on your computer and select **Properties**.
 - b. Click the **Sharing** tab and click **Share**.
 - c. Type the service account name and click **Add**. If a matching domain account is found, the domain\service account name appear in the list.
 - d. Under **Permission level**, click the down arrow and select **Read/Write**. Click **Share**.

Your folder is now shared to the service account. Click **Done** to exit.

Windows Domain Controller

On Windows Server Systems, a domain controller (DC) is a server that responds to security authentication requests (logging in, checking permissions, etc) within the Windows Server domain. Windows 2000 and later versions introduced **Active Directory**.

Unable to start the service

There are a number of reasons why the service is unable to start. Microsoft returns 24 possible reasons. However, the following are the most common:

The user password is not valid	Re-enter the password in the Server Configuration dialog box and retry.
The user has not been granted local “logon as a service” rights	If prompted that the user be added to the local “logon as a service” group, click OK.
The domain user is not a member of a Group that has “logon as a service” rights.	Contact your domain administrator. See Network Project—Network Database Instance for detailed steps.
The user is not in the Administrator group on the local machine	Add the service account user to the computer where the SQL Server Express instance is installed and add to Administrator Group
The user logged in to the computer is not a local administrator	You must be a member of the Administrator group on the computer. Contact your domain administrator for assistance.

The Administrator Console

This chapter explains how to install the Administrator Console, including the Kingdom Enterprise Service and Administrator Console database. If you are using only the SeismicDirect Access utility, you only need to install the Administrator Console. You do not need to install the Kingdom Enterprise service or the Administrator Console database. These components are only required for the Project Access utility.

If you are using the Project Access utility, there is a recommended installation order for all the required components. Although you can install the various components of the Administrator Console in any order, following the recommended installation sequence will simplify the installation process.

If you are installing the components required by the Project Access utility, these installation instructions assume you are familiar with the following:

- Microsoft Internet Information Services (IIS) version 6 or greater
- Microsoft SQL Server 2005 or greater
- Creation and configuration of service accounts
- Active Directory users and groups

System Requirements

The following table shows the minimum software and permissions required by the various components of the Kingdom Administrator Console.

Component	Requirement
Console	.NET Framework 4.0
Database	SQL Server 2005 (SP3 required) or SQL Server 2008
Kingdom Enterprise Service	<ul style="list-style-type: none">• IIS 6.0 or greater• .NET Framework 4.0
Service Account	<ul style="list-style-type: none">• Read-only permissions to Active Directory• Read-only permissions to all Kingdom project directories• Read/write permissions to the root folder of web site• Member of Windows Authorization Access group

Installation Sequence

Install the components of the Kingdom Administrator Console in the following order:

1. Administrator Console
2. Administrator Console Database
3. Kingdom Enterprise Service

If you are using only the SeismicDirect Access utility, you do not need to install the Administrator Console database or the Kingdom Enterprise Service. You can always install these components later if you choose to use the Project Access utility at a later time.

Related topics

[Configuring the Enterprise Project Selector](#)

Installing the Administrator Console

Whether you are using the Project Access utility, the SeismicDirect Security utility, or both, the first component you need to install is the Administrator Console. For the SeismicDirect Security utility, this is the only component you need to install. You do not need to install the Kingdom Administrator Console on a computer where Kingdom is installed.

The Project Access utility will not work until you install the Kingdom Enterprise Service and console database. However, you install the Administrator Console first so it is available to test connectivity to the database and proper access to Active Directory with the service account.

To install the Kingdom Administrator Console:

1. If you are installing from the web, download the Kingdom Administrator Console from the IHS Kingdom website at kingdom.ihs.com.

If you are installing from the DVD, insert the installation DVD, click the Applications tab in the Installation Manager, and then click Kingdom Administrator Console.

2. Follow the instructions in the installer to complete the installation.

Related topics

[Installing the Administrator Console Database](#)
[Installing the Kingdom Enterprise Service](#)

Installing the Administrator Console Database

Follow these steps to install the Administrator Console Database. You only need to perform the database installation one time. The Administrator Console database requires SQL Server 2008 or later.

1. Start SQL Server Management Studio.
2. If it is not already connected, connect to the SQL Server database where you want to install the Administrator Console database.
3. From the menu, select **File > Open > File**, and then browse to the `\install\SQL` folder in the Kingdom Administrator Console installation directory (by default, `C:\Program Files (x86)\KINGDOMSuite\KingdomAdminConsole\`).
4. Open the `install` folder and then the `SQL` folder.
5. Open the `EpsDataModel.sql` file.
6. Execute the query. This creates the KingdomEnterprise database in SQL Server.

Related topics

[The Administrator Console](#)

[Installing the Kingdom Enterprise Service](#)

Installing the Kingdom Enterprise Service

The Administrator Console uses the Kingdom Enterprise Service to browse Active Directory for users and groups and to store permissions information in the SQL database. The Kingdom Project Selector uses the service to query the database for information about access to Kingdom projects based on the credentials of the logged on user where the Kingdom Project Selector is running.

Creating the Service Account

The Kingdom Enterprise Service requires a service account that has read-only access to any directories where you have Kingdom projects and that also has read-only access to Active Directory. This service account also requires read/write access to the root folder of the web server where you are installing the service. You can either create a new service account with these permissions or use an existing service account that has the needed permissions.

Creating the Application

Follow these steps to create the Kingdom Enterprise Service application on your web server. These steps are specific to Internet Information Services (IIS) version 7. There may be slight differences in this process if you are using a different version of IIS.

1. Browse to the `\install\Web\KingdomEnterpriseService` folder in the Kingdom Administrator Console installation directory (by default, `C:\Program Files (x86)\KingdomSuite\KingdomAdminConsole\`).
2. Copy this folder to the root directory of your web server (for example, `C:\inetpub\wwwroot\`).
3. Start Internet Information Services Manager.
4. In the Connections pane, click **Application Pools**.
5. In the Actions Pane, click **Add Application Pool**.
6. In the **Name** field, type the name of the application pool you want to add (for example, `KingdomEnterpriseService`).
7. In the .NET Framework version list, select .NET version 4.0.
8. Click **OK**.
9. In the list of application pools, click the application pool you just created (for example, `KingdomEnterpriseService`).
10. In the Actions pane, click **Advanced Settings**.
11. In the Process Model group, select the **Identity** property and click [...] to open the Application Pool identity dialog box and browse for a service account to use for the application pool.
12. On the Application Pool Identity dialog box, select **Custom account**, and then click **Set**.
13. Enter the user name and password of the service account you want the Kingdom Enterprise Service to use, and then click **OK**.
14. Click **OK** twice to close the open dialog boxes.

15. In the Connections pane, right-click the KingdomEnterpriseService folder (in the Sites\Default Web Site folder) and click **Convert to Application**.
16. In the Add Application dialog box, click **Select**.
17. From the list, select the application pool you just created (for example, KingdomEnterpriseService), and then click **OK** twice.

Configuring the Database Location and Credentials

In the `KingdomEnterpriseService` folder you copied to the root directory of your web server, open the `web.config` file in a text editor. Update the `ConnectionStrings` element to include the server name, database name, user ID, and password for the Administrator Console database you created previously.

Testing the Installation

To test whether the Kingdom Enterprise Service is installed and running, open up a web browser and type in the following URL:

`http://localhost/KingdomEnterpriseService/ProjectSelector/ProjectDiscoveryService.svc`

If you are not testing the service on the web server itself, you will need to provide the name of the web server in the URL listed above rather than using `localhost`.

If the service is running, you will see a page with instructions about how to configure metadata publishing. Otherwise check to see that you performed the installation correctly. In some cases, you may see a 404.3 error, "The page you are requesting cannot be served because of the extension configuration." Refer [Troubleshooting](#) for more information about how to resolve this issue.

Related topics

[The Administrator Console](#)

[Installing the Administrator Console Database](#)

Configuring the Enterprise Project Selector

As a system administrator, you may want to pre-configure the Enterprise Project Selector for your users so they do not have to specify the location of the Kingdom Enterprise Service. To do this, you can modify the `Kingdom Administrator Console.exe.config` file and distribute this modified file to each user installation of the Enterprise Project Selector.

To modify the `Kingdom Project Selector.exe.config` file, follow the steps below:

1. Open a copy of the `Kingdom Project Selector.exe.config` file in a text editor (this file is located in the root Kingdom installation folder (for example, `C:\Program Files\KingdomSuite\TKS88\`)).

2. Make the following changes:

Replace

```
<appSettings>
  <add key="ServiceLocation" value="" />
</appSettings>
```

With

```
<appSettings>
  <add key="ServiceLocation" value="http://companyServerHere/
  KingdomEnterpriseService" />
</appSettings>
```

Where the value is the URL where you installed the Kingdom Enterprise Service.

3. Save your changes in the copied file.
4. Replace users' copies of the `Kingdom Project Selector.exe.config` file with the modified version of the file.

Related topics

[The Administrator Console](#)
[Defining Project Access](#)

Installing the Network License Server

A network license allows projects to be accessed and manipulated simultaneously by multiple interpreters under individual authorship. A network license requires installation of the Network License Server. A physical sentinel (dongle) must be connected to the computer on which the network license server is installed.

Recommended configuration

- Identify a Windows-based computer on your network as the designated Kingdom network license server and install the server components on this computer. The license server is a 64-bit application and requires a 64-bit computer for installation.
- As a best practice, do not install any other Kingdom applications or software on the license server.
- Standard TCP/IP network access must be available on the license server.
- The license server must be up and running for users to access the license; the server should be running at all times.

Default installation directory

The default installation directory for the Kingdom network license server is:

```
C:\Program Files\IHS\KingdomSuite
```

Installing the License Server

The latest version of the license server, 8.5.5, requires a 64-bit operating system. If you are upgrading an existing license server and it is installed on a 32-bit computer, you need to install the new license server on a 64-bit computer. After installation you can download new feature keys.

If your current license server is already installed on a 64-bit computer, you need to uninstall the current license server before installing the new one.

If you are upgrading on an existing computer, you can save a copy of the feature key file - `lserverc` - from the existing installation directory. After installing version 8.5.5, copy this file into the new installation directory. You can also download new feature keys from the IHS Kingdom website.

To download the Kingdom network license server:

1. Log on to the computer where you want to install the Kingdom license server as an Administrator.
2. Verify the date and time on this computer. If the date and time on the network license server or any computer where Kingdom is installed are incorrect, you may not be able to check out a license.
3. Using a web browser, log on to My Account at kingdom.ihs.com.
4. Click **Downloads**.
5. Select **The Kingdom Software**.

-
- Below the list of products select the **Related Apps** tab.
 - Move your mouse over **Network License Server** and click **Download**. You have three options:

Run	Automatically starts the Install Wizard. Follow the wizard to install the product.
Save	Saves the download package to the default download folder: C:\Users\username\Downloads
Save as	Allows you to select the location to save the download package.

- If you saved the download package, you can click **Run** to start the InstallShield Wizard, or you can browse to the location at a later time and double-click the executable `web_LServer.exe` to start the InstallShield Wizard and then follow the wizard to complete the installation.

To install the network license server from the DVD:

If you are installing the license server from the Kingdom software DVD, follow these steps:

- Insert the Kingdom software DVD in the DVD drive. The Installation Manager starts.
- On the **Applications** tab, click **Install Network License Server**.
- Follow the installation wizard instructions to complete the installation. You may be prompted to restart the computer.

Before you can use the Kingdom software, you must:

- Install the Kingdom software on a computer for each Kingdom user.
- Insert the network sentinel (dongle) on the license server computer.
- [Obtain and Install Feature Keys](#).

License Requirements and Management

The Kingdom License Server provides licenses for all Kingdom modules as well as the 64-bit version of GeoSyn. There are two versions of the Kingdom License Server:

Standalone

The Standalone license allows users to establish multiple authors within a project to differentiate between interpretations; however, a standalone license only allows a single author to work in a project at any one time. Users having multiple standalone licenses cannot access the same project simultaneously even if the two workstations are networked.

A standalone license allows for the installation of Kingdom software on multiple workstations within your company; however, two systems cannot run the software at the same time because the Sentinel hardware device must be attached to the system running Kingdom. Also note, each computer has a different computer code. A unique feature key code must be issued for each system the software is installed on before it can be started.

Network

The Kingdom Network License Server provides licensing for multiple users for Kingdom and the 64-bit version of GeoSyn.

The Network Edition license of Kingdom allows users to:

- Access single or multiple projects, thereby enabling a single project to be viewed and manipulated simultaneously by multiple interpreters under individual authorship.
- Dynamically check in and out floating licenses for any number of individual product features based on the availability at your site. These licenses are subtracted from the pool available at your site.
- Minimize data import/export time by allowing the one-time project configuration to be accessible to any of the networked licenses.

Employ CITRIX and Terminal server capabilities. Through these applications users can remotely, via a high-speed Internet connection, access Kingdom software

Both license options require a sentinel (dongle). For standalone licenses, the sentinel must be plugged in to the computer running Kingdom. For a network licenses, the sentinel must be plugged in to the computer running the Network License Server.

After the sentinel is plugged in, you need to retrieve the feature keys for the products you have licenses to. See the following topics for details:

[Retrieving feature keys for a standalone license](#)

[Retrieving feature keys for a network license](#)

Retrieving feature keys for a standalone license

Note: If you have Kingdom and GeoSyn versions 2016.0 installed, you do not require new feature keys for version 2016.1.

After you have installed the software, (Kingdom, Kingdom Data Management, or GeoSyn) and plugged in the sentinel to the computer that you installed the software on, start the application to open the **Standalone License Control Panel** where you can install the feature keys and view the feature information.

The following instructions are for Kingdom. For GeoSyn and Kingdom Data Management, simply replace the application name. The steps are the same.

To retrieve your standalone license feature keys:

1. Click **Start > All Programs > IHS Kingdom [version]> Kingdom [version]**.

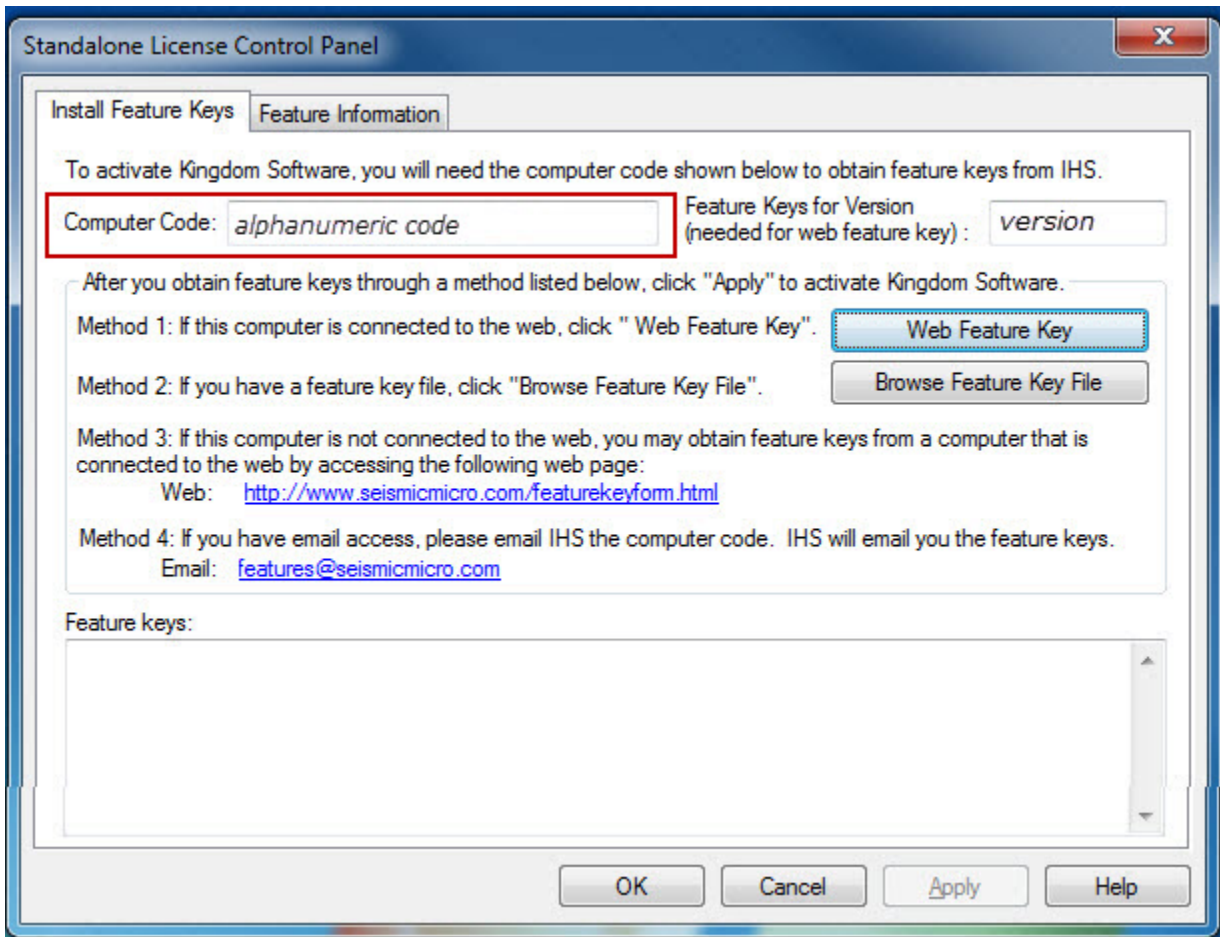
The first time you start the new version of the software, a **Feature Key Error** dialog box opens displaying the message shown below:

```
The current license does not support The Kingdom Software base
features. Do you wish to update the license file at this time?
```

2. Click **Yes** to continue.
3. In the Install Feature Keys tab of the Standalone License Control Panel, you have 4 methods to obtain your feature keys:

Web Feature Key	If your workstation has Internet access, this is the simplest way to obtain your feature keys. Just click the button and the application does the rest.
Browse Feature Key File	Use this option in the following situations: <ul style="list-style-type: none">• The feature key code has been sent via email and saved in a file on your computer.• Your computer does not have internet access, and the keys have been obtained from a different computer through the IHS Kingdom website at kingdom.ihs.com.
Web	Copy your computer code. Then go to the Kingdom website to get your feature keys.
Email	Copy your computer code. Then click the email link to open an email. Paste the computer code into the subject field and send.

For the Web and Email methods, you need your Computer Code outlined in red in the figure below.



Note: If your **Computer Code** field is blank, make sure your sentinel hardware device is attached to your computer.

Feature Information Tab

After you have installed your feature keys, click the **Feature Information** tab of the Standalone License Control Panel to verify the features licensed as well as the start and expiration dates of each feature.

The dialog box includes:

- **Feature**—the licensed stand-alone features on the system.
- **Start Date**—the day the license was issued.
- **Expiration Date**—the day the license expires.

Retrieving your network license feature keys

Note: If you have Kingdom and GeoSyn versions 2016.0 installed, you do not require new feature keys for version 2016.1.

After you have installed the software, (Kingdom, Kingdom Data Management, or GeoSyn) and plugged in the sentinel to the license server computer, start the Network License Server application to open the **Network License Control Panel** where you can install the feature keys and view the feature information.

Requirements and Recommendations

- Identify one computer on your network as the Network License Server. For performance reasons, we do not recommend installing the Network License Server and the Kingdom Software on the same computer.
- The server can be located on any Windows based PC computer. Supported operating systems are 64-bit versions of Windows. See [Hardware, system, and database requirements](#) for supported operating systems.
- Standard TCP/IP Network must be installed on the system.
- The server must be up and running for users to access the license.
- The client software for Kingdom, Kingdom Data Management, and GeoSyn must be loaded locally on each user's computer.

The following instructions are for Kingdom. For GeoSyn and Kingdom Data Management, simply replace the application name. The steps are the same.

To retrieve your network license feature keys:

1. Click **Start > All Programs > IHS Kingdom > IHS Network License Server**. The License Server Control Panel opens to the Configure License Service tab. The License Server is registered as a system service the first time this control panel runs.
2. Select the **Install Feature Keys** tab.
3. Click the down arrow beside **Feature Keys for Version** to select the version you want to license.

If the latest version is not in the list, click the **Add Versions** button and add the version. The version number must include a decimal. For example, for version 2016 you must enter 2016.0.

4. In the **Install Feature Keys** tab you have 4 methods to obtain your feature keys:

Web Feature Key	If your workstation has Internet access, this is the simplest way to obtain your feature keys. Just click the button and the application does the rest.
---------------------------------	---

Browse Feature Key File	Use this option in the following situations: <ul style="list-style-type: none"> The feature key code has been sent via email and saved in a file on your computer. Your computer does not have internet access, and the keys have been obtained from a different computer through the IHS Kingdom website at kingdom.ihs.com.
Web	Copy your computer code. Then go to the Kingdom website at kingdom.ihs.com/SUPPORT/Resources/KingdomLicensing to get your feature keys. After you have copied the feature keys, paste them into Feature Keys panel.
Email	Copy your computer code. Then click the email link to open an email. Paste the computer code into the subject field and send.

For the Web and Email methods, you need the Computer Code of the license server computer. It is outlined in red in the figure below.

Configure License Service | **Install Feature Keys** | Start/Stop License Server | License Status

To activate SMT Software, you will need the computer code shown below to obtain feature keys from SMT.

Computer Code: Feature Keys for Version: (needed for web feature key)

SMT Products:

After you obtain feature keys through a method listed below, click "Install" to activate SMT Software.

Method 1: If this computer is connected to the web, click "Web Feature Key".

Method 2: If you have a feature key file, click "Browse Feature Key File".

Method 3: If this computer is not connected to the web, you may obtain feature keys from a computer that is connected to the web by accessing the following web page:
Web: <http://www.seismicmicro.com/featurekeyform.html>

Method 4: If you have e-mail access, please e-mail SMT the computer code. SMT will e-mail you the feature keys.
E-mail: features@seismicmicro.com

Feature keys:

In addition to the Install Feature Key tab, the **License Server Control Panel** contains the following 3 tabs:

-
- [Configure License Service](#)
 - [Start/Stop the License Server](#)
 - [Monitor License Status](#)

Note: If your server has two network cards, then when you configure your server you must set up adaptive teaming, or use one network card only.

Related topics

[License Requirements and Management](#)

[License Server Usage Log File](#)

[Initial Startup of Kingdom Using a Network License](#)

[Initial Startup of GeoSyn Using a Network License](#)

Configure License Service

The **Configure License Service** tab displays the paths to the license server executable and the site license files, and provides license server startup and disable options.

Note: If your server has two network cards, then when you configure your server you must set up adaptive teaming, or use one network card only.

The screenshot shows the 'Configure License Service' control panel window. It has four tabs: 'Configure License Service' (selected), 'Install Feature Keys', 'Start/Stop License Server', and 'License Status'. The 'Start Up' section has two radio buttons: 'Start Service at Power Up' (selected) and 'Disable Service'. Below this are two text boxes for file paths: 'Path to License Server File' (C:\Program Files\IHS\KingdomSuite\IHS Network License Server\servnt.exe) and 'Path to License File' (C:\Program Files\IHS\KingdomSuite\IHS Network License Server\servc). To the right of the server file path is a 'File Version' field showing 'version'. Below the license file path is a 'View File' button. The 'Service Remove' section has a 'Remove License Server Service' button and a text box explaining that removing the service will shut down the license server and affect SMT software users. A lightbulb icon indicates that to re-install, one should click 'Install License Server Service' or re-start the application. The 'Service Install' section has an 'Install License Server Service' button and a text box explaining that installation will add the service to the registry and start it. A lightbulb icon indicates that to start/stop an already installed service, one should go to the 'Start/Stop License Server' page. The 'Server Status' section has a text box showing: 'SMT license server is located at "C:\Program Files\IHS\KingdomSuite\IHS Network License Server\servnt.exe"', 'Startup option: Start service at power up', and 'Current state: The service is running'. A 'Refresh' button is located to the right of the status text box.

Start Up options

- **Start Service at Power Up**

The License Server is registered as a system service the first time this control panel runs. Setting the **Start Service at power up** parameter starts the License Service automatically at computer start up. This is the default setting and is recommended if you wish to continuously run the license server.

- **Disable Service:**

If the License Service is running, selecting the option **Disable Service** does not automatically stop the service; it marks the service to be disabled. After selecting this option you will be able to select Yes to stop the service immediately or No to stop the

service when you shut down. When you start your computer again, you will have to select Start Service at Power Up to start the server again.

Service Remove / Install.

- **Service Remove**—removes the License Server as an entry in the system registry. The License Server service is stopped and the link to the License Server executable is removed from the Windows operating system.

The License Server executable is not removed from the License Server install directory. Once a service is removed from the system registry, the service cannot be started on a system boot; it is started when the system restarted.

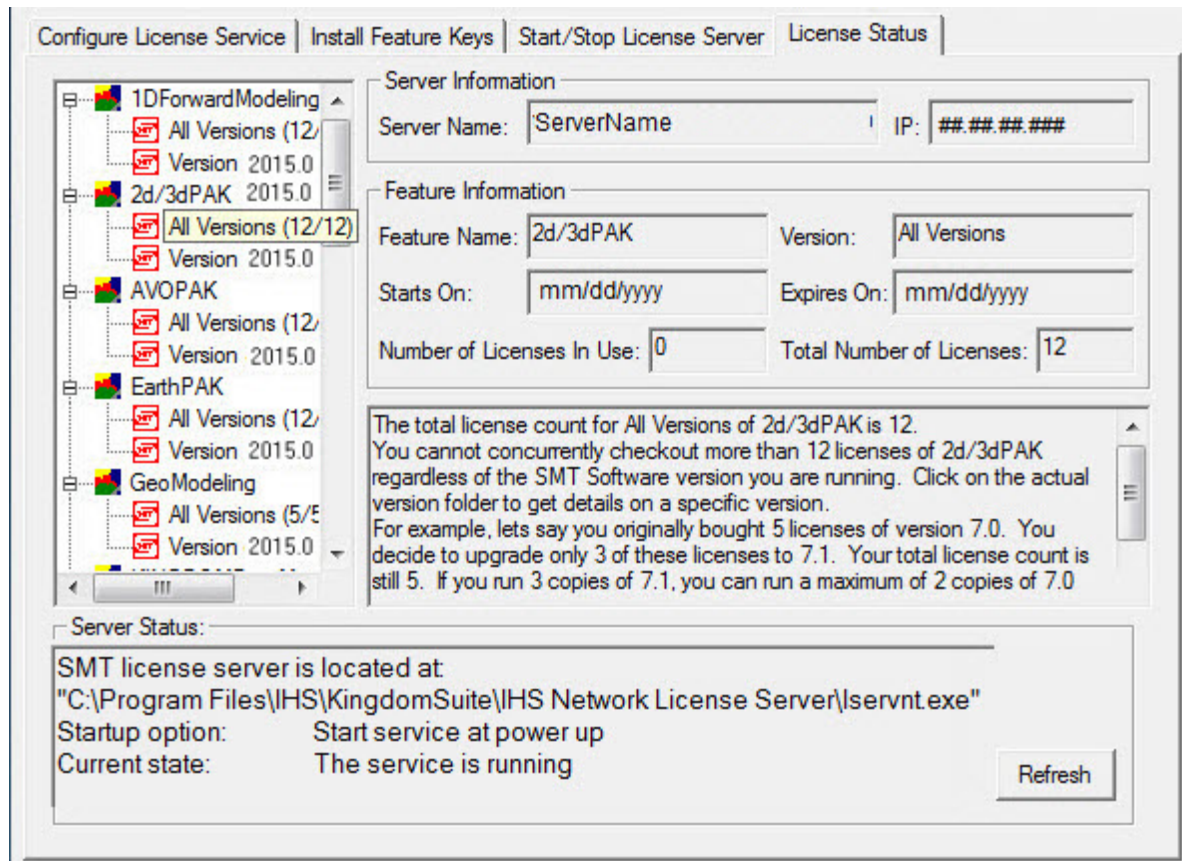
- **Service Install**—restores the License Server Service to the system registry and then

Start/Stop the License Server

Select the **Start/Stop License Server** tab to initiate, restart or end the License Server system service. You may want to stop and re-start the server to apply patches, or for system maintenance.

Monitor License Status

The **License Status** tab displays the available features, available versions (in the left panel) and check out users. Click a particular base product, feature of that product or a user ID to fill the information fields displayed on the right side of the panel.



Note: The License Status tab can also be reached from the Kingdom Software Start Page once the Kingdom software has been installed. Click the **License Status/Feature Key Maintenance** link.

The **License Status** tab in the Network License Server contains the following elements:

- **License tree:** Displays the available features, available versions, checked out version(s) and name(s) of the user(s) of the checked out version(s).

Use the scroll bar to navigate the informational window. Click a particular product, a user ID, and a feature of that product. The **Feature Information** and **User information** are displayed on the right of the panel.

- Base features—all the Kingdom modules require a base feature license.
 - **Feature Name**—lists all the available base feature combinations. Features listed in this area are base modules of the Kingdom interpretation system.
Click to select the base feature for which you have a license and start Kingdom with that feature.
 - **Available Licenses**—the number of licenses not in use on the network at this time.
 - **Total Licenses**—the total number of licenses on the network for each base feature. The number reflects the total count for all versions of the base product.

-
- **Server Information**
 - **Server Name**—the logical name of the computer where the license server resides.
 - **IP**—the **Internet Protocol** address of the computer displayed in the **Server Name** text field. The IP is part of the **TCP/IP (Transmission Control Protocol/Internet Protocol)** system or protocol for identifying computers on an internet system.
 - **Feature Information**—the information in these fields is relative to the feature highlighted in the **Feature Tree** located on the left side of the **License Status** dialog box.
 - **User Information** (information displayed if a user is selected in the **License Tree**.
 - **User/computer Name**—displays the User ID and Computer of the user selected in the License Tree.
 - **Check out time**—displays the time the selected user checked out the license for the feature selected in the **License Tree**.

Note: The status of the feature selected in the License Tree does not update automatically. Click **Refresh** to update the status of a selected feature.

Initial Startup of Kingdom Using a Network License

After the License Server has been installed and the feature keys obtained (see [Obtain and Install Feature Keys](#)), each workstation should automatically see the server when Kingdom is started.

1. On the workstation computer, click **Start > All Programs > IHS Kingdom > The Kingdom Software [version]** to start Kingdom.

Tip: On installation a shortcut for Kingdom Software is created on your desktop. Double click the icon to start Kingdom.

The first time you start the version of Kingdom, the following message is displayed.

```
A standalone version of IHS Kingdom software requires a sentinel. Install the sentinel provided to you by IHS Inc, on a USB port and try again. If you have the network version of Kingdom, you can run the software using the network license.
```

```
Do you want to connect to a network license server?
```

2. Click **Yes**.

Kingdom polls the system for the network server and automatically connects to that server to start the application.

3. On the [License Status](#) tab select the base feature you want Kingdom to run from.

A base feature or combination of base features is required to run Kingdom. (ADV) is Kingdom Advanced. All licensed base features are listed on the right of the License Status dialog box.

4. Click **Refresh** to poll the system for the new license count and update the display in the dialog box.

Features such as VuPAK, SynPAK and RockSolid are available with the Kingdom base product and are added to the feature tree on left of the dialog box as licenses for these features are purchased for your site.

Each time one of these dynamic features are selected in a Kingdom session, the license server checks out a license of that type. For example, opening SynPAK in the Kingdom session checks out one license of SynPAK.

Specifying the Network License Server

If the defined network license server is not available, and if Kingdom cannot find another license server, after starting the Kingdom software you are prompted to **Specify the Network License Server**.

Kingdom does not detect the license server if:

- the license server computer is not running,
- the network is down
- your computer is not connected to the network
- the computer housing the license server is on a different subnet.

If the computer housing the license server is on a different subnet, enter the full computer name: MyLicenseServer.<domain name> in the space provided and click **OK**. If the license server computer is running, and the requested licenses are available, then the [License Status](#) dialog box opens. Select the licensed base feature and click OK to start the Kingdom application.

Initial Startup of GeoSyn Using a Network License

After the License Server has been installed and the feature keys obtained (see [Obtain and Install Feature Keys](#)), each workstation should automatically see the server once the GeoSyn software is started.

1. On the workstation computer, double-click on the desktop icon or click **Start > All Programs > IHS GeoSyn** and select 1D or 2D.
2. If the application detects one or more Kingdom Network License Servers on the network, the **Select License Server** dialog box opens with a list of detected servers. Select the server and click **OK**.

If a license server is not detected, a message box opens prompting you to change the server name with the Kingdom Network License Server. Click **Yes** to open the **Reset Kingdom License Server Name** dialog box. Type the server name in the input field and click **OK**.

Obtain and Install Feature Keys

For a standalone license, you obtain the feature keys from the **Standalone License Control Panel** accessed when you start Kingdom for the first time.

For network licenses, you obtain the feature keys from the **License Server Control Panel** accessed through the Network License Server application installed on the computer to serve as the license server for the networked Kingdom workstations.

Both the Standalone License Control Panel and the License Server Control Panel provide four methods to obtain your feature keys:

[Web Feature Key](#)

[Web](#)

[Browse Feature Key File](#)

[Email](#)

Web Feature Key

If your workstation has Internet access the simplest way to obtain your feature keys is through the Web Feature Key option.

1. Click the **Web Feature Key** button.

After the authorization is complete, the feature key codes automatically populate the **Feature keys** box. The figure below shows the Feature keys box populated for a network license.

The screenshot shows the 'Install Feature Keys' tab of the License Server Control Panel. It contains instructions for activating Kingdom Software and four methods to obtain feature keys. Method 1, 'Web Feature Key', is highlighted with a blue border. Below the instructions, a text area labeled 'Feature keys:' contains a long alphanumeric string.

Configure License Service | **Install Feature Keys** | Start/Stop License Server | License Status

To activate Kingdom Software, you will need the computer code shown below to obtain feature keys from IHS.

Computer Code: Feature Keys for Version (needed for web feature key):

After you obtain feature keys through a method listed below, click "Apply" to activate Kingdom Software.

Method 1: If this computer is connected to the web, click "Web Feature Key".

Method 2: If you have a feature key file, click "Browse Feature Key File".

Method 3: If this computer is not connected to the web, you may obtain feature keys from a computer that is connected to the web by accessing the following web page:
Web: <http://www.seismicmicro.com/featurekeyform.html>

Method 4: If you have email access, please email IHS the computer code. IHS will email you the feature keys.
Email: features@seismicmicro.com

Feature keys:
GJ78ZMI227XG5QODUZKMQ8BYT5CZUPPWYCL8TRUX3FHDR49WY4OECTQBTO70WY6HAH
8TI75JMY3AHWVVSQM9CJQNC9ZWNSRWRYBBBP5XPV2LV9FTDMTA8RMAUTT8G9Q7DHGEE
RWU8WMUKQDAZPVRDQOKJQKTOZGVLZSPNCI87BK5EY3IUZCLYZOQUJWMEACRWUTH7H
J8TI4Q4NX06HPOND6NUPUSWVCCDLSOP8MMOCFERGAG3BQZQ6L7Y4XQ9IUA5NWA5RDL
RDVFWMZGSEVDNAMB9PLCJJ2KZJY8AKMDSJ3347U6XUUV3V433Z6FF2AM88KQZQK7VH
8H9G4HJOXYVBYUISA3MIE3APL3EJUG5E6K9WMFZQHA7HXE4ZE763N7U6MJ6MIRW83C
YBHSUIT4V2THZCQ9RB6HMJD TOZDVGRILTAWG46TPSXGDXTYY8KXKPEOL7UKRQSVG34D
QKQ TVMUS3OAY8SQNKK7IQK3ZCGU4WRZMJXH87JVGEXKFTER3WYUU4U9MDR9Q8OP45H
FZURXOKGP9GGGOZH6OXDL42HUMJZOXSARV45N7RZ2FNBG332F28YFX5PRZY57NJJVJ
U5LK97WR3WSZZRWF3FQN4GDTJY4KRUQ7IOEMZI50EY8EDZXDICUGQBS3CK325KAC72

2. Click **Install** to apply the feature keys.
3. Verify the information in the **Feature Information** tab (Standalone) or **License Status** tab (Network) and click **OK** to close the License Server Control Panel.

You are ready to begin using Kingdom.

Note: Kingdom Data Management has only one line of text in the Feature keys box as it is a single license.

Browse Feature Key File

Use this option in the following situations:

- The feature key code has been sent via email and saved in a file on your computer.
- Your computer does not have internet access, and the keys have been obtained from a different computer through the IHS Kingdom website at kingdom.ihs.com. Note that you must obtain the computer code from your computer.

After you have browsed to the file containing the feature keys, open the file, copy the contents and then paste them into the Feature key box on the Install Feature Keys tab of the License Server Control Panel, or if the file is a *.txt file, you can simply double click the file.

Web

If your workstation does not have Internet access but you have access to a computer that does have Internet access, go to IHS Kingdom website at kingdom.ihs.com to request a feature key.

Under REQUEST FEATURE KEY enter the required information:

1. **Computer Code**—copy your computer code from The Install Feature keys tab of the License Server Control Panel. For standalone licenses, the computer code can also be found in Kingdom under **Project > License Status** and from the **Tools** panel on **The Kingdom Software [Start Page]**.
2. **Version**—scroll down and select the version of Kingdom.
3. Click **Get Feature Key**.
4. Once your keys are returned, copy them and paste into the **Feature Keys** field on the Install Feature Keys tab of the License Server Control Panel.
5. Click **Install** to apply the feature keys.
6. Verify the information in the **Feature Information** tab (Standalone) or **License Status** tab (Network) and click **OK** to close the License Server Control Panel.

Email

1. Beside **Email** click the link **features@seismicmicro.com** to start your Microsoft Outlook email with the proper e-mail address and your computer code entered in the subject line.
2. Click **Send**. When we receive the e-mail, your feature key code is generated and returned to you by e-mail.
3. When you have the feature keys, copy and paste them into a text file, and save. You can then return to the License Server Control Panel and select the [Browse Feature Key File](#) option.

Note: You can also paste the feature keys from the email directly into the **Feature keys** text area in the License or License Server Control Panel.

4. Click **Install** to apply the feature keys.

5. Verify the information in the **Feature Information** tab (Standalone) or **License Status** tab (Network) and click **OK** to close the License [Server] Control Panel.

You are ready to begin using Kingdom.

License Server Usage Log

A License Server Log File tracks and records all activity against the license server.

Create License Server Usage Log File

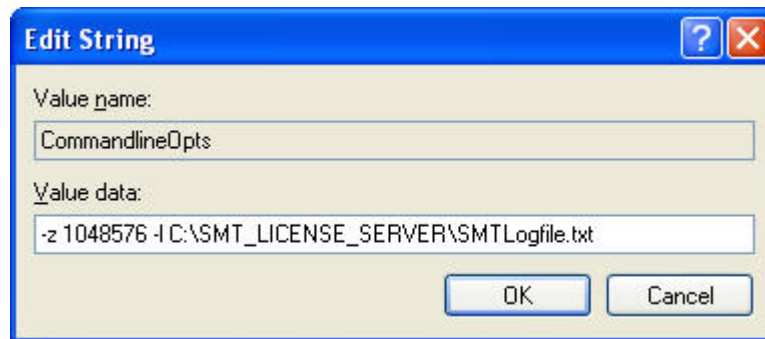
1. Before proceeding, create the following directory on the license server computer:

C:\SMT_LICENSE_SERVER

Caution: Make sure there are no blank spaces in the path name.

2. On the license server computer, choose **Start > Run**. Enter **regedit** and click **OK** to open the **Registry Editor** window.
3. Find the following folder:
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\RainbowTechnologies\Sentinel System Driver\CurrentVersion
4. Highlight and select the **CurrentVersion** folder to display a list in the right side of the **Registry Editor** window.
5. Double-click **CommandlineOpts** to open the **Edit String** dialog box.
6. In the **Value data** text field of the **Edit String** dialog box, type the string **-z 1048576 -l C:\SMT_LICENSE_SERVER\SMTLogfile.txt** as shown in the figure below:

Note: The alphabetic character before C:\SMT is a lower case L preceded by a hyphen.



7. Click **OK** to close the Edit String dialog box. In the **Registry Editor** window choose **File > Exit** to close the Registry Editor window and return to the SMT License Server Control Panel dialog box.
8. You must restart the license server to start the logging process. You can restart the license server from **SMT License Server Control Panel** dialog box. Logging is written to the **C:\SMT_LICENSE_SERVER** directory.

License Server Usage Log File variable—Option Descriptions

- **-l usage-log-file**—specifies the name and location of the license server's usage log file.

Creating the CommandLineOpts registry entry and setting its value enables usage logging from the License Server. The specified file path should not contain white spaces. By default, usage logging is disabled.

- **-z usage-log-file-size**—specifies the maximum size of the usage log file.

The size can be specified in bytes, kilobytes, or megabytes. For instance, -z 2000 means 2000 bytes, -z 2k means 2 kilobytes, -z 2m means 2 megabytes. The default value is 1 megabyte. When the maximum size of the file is reached, the license server creates a backup log file unless the option to eliminate backup (-x) has been used.

If log file backups are **not** disabled by specifying **-x**, when the log file reaches its maximum size the contents of the log file are moved into a new file that has the same name as the original log file but which has two numeric digits appended to its name. For example, if the original log file is named lserv.log, the first backup file is named lserv.log.00. The next time a backup file is created, the new file uses the next available backup number (e.g., lserv.log.01).

The maximum number of backup files is 99; you can move existing backup log files to another directory and the license server starts again with 00. If clients are connected to the license server when the backup file is created, dummy records are created for any pending transactions in the backup file; corresponding dummy records are created in the new file. The dummy records are identified by the user name LM_SERVER.

- **-x**—specifies no backup of log file. When the log file reaches the maximum file size limit, a new log file is not generated and logging of Kingdom license usage stops.

By default, on overflow of the usage log file, the file contents are moved into a backup file. New usage records are then written to the original file until it overflows again. If the -x option is specified, the file is not backed up on overflow; instead the license server simply stops writing further records to the file.

To view the license server log file:

1. Copy the usage log file **SMTLogfile.txt** from C:\SMT_LICENSE_SERVER to the directory where the license server is installed.

The default folder location for the license server directory is

C:\Program Files\IHS\KingdomSuite\IHS Network License Server

2. Double-click the file **ShowUsage.bat**.

The usage report file **UsageReport.csv** is generated and opens automatically.

A	B	C	D	E	F	G	H	I	J	K
24	vsmt	Mon	11/26/08	10:41:57	2	4	1417	user1	computer1	8.0.2.0
24	v2016	Mon	11/26/08	10:41:57	2	4	1233	user1	computer1	8.0.2.0
31	vsmt	Mon	11/26/08	10:55:51	2	5	23111	user2	computer1	8.0.2.0
31	v2016	Mon	11/26/08	10:56:57	2	5	2285	user2	computer1	8.0.2.0

License Server Usage Log

A	B	C	D	E	F	G	H	I	J	K
21	v2016	Mon	11/26/08	11:42:57	0	1	1479	user1	computer1	8.0.2.0
36	v2016	Mon	11/26/08	12:11:07	0	1	5561	user8	computer1	8.0.2.0
34	v2016	Mon	11/26/08	13:22:46	1	1	2369	user8	computer1	8.0.2.0
37	v2016	Mon	11/26/08	14:41:57	1	2	566	user8	computer1	8.0.2.0

The Usage Report consists of the following key columns:

A—Product Code. See Table 2.1 below:

Product/Module	Code	Products without a code (Listed by name)
Geophysics (2d)	22	1DForwardModeling
Geophysics (3d)	23	ColoredInversion
Geophysics (2d and 3d)	21	ColoredInversionEval
Geology	31	FeatureSelector
SynPAK	26	Geosteering
VuPAK	27	GeoSyn1D
Terminal Services	32	GeoSyn2D
Tunnel L+	33	KingdomConnect
Tunnel O	34	KingdomAdvanced
Rock Solid Attributes	35	KingdomDataManagement
LoadPAK	28	Security
AVOPAK	36	VelPAK
OpenKingdom	37	
OpenSpiritOption	39	

B—Version—Version SMT (vsmt) controls the total number of licenses that users can check out, regardless of version. Version 2016 (**v2016**) controls the total number of, in this case, 2016 licenses that can be checked out. For a detailed description, go to the License Server

Control Panel > License Status tab. Click All Versions and read the explanation in the right panel:

The total license count for All Versions of Geophysics is 12. You cannot concurrently checkout more than 12 licenses of Geophysics regardless of the Kingdom Software version you are running. Click the actual version folder to get details on a specific version.

For example, lets say you originally bought 5 licenses of version 7.0. You decide to upgrade only 3 of these licenses to 7.1. Your total license count is still 5. If you run 3 copies of 7.1, you can run a maximum of 2 copies of 7.0 concurrently giving you a total of 5. If you are not running 7.1, you can run 5 copies of 7.0 concurrently still giving you a total of 5.

C—Day of the Week the license server was contacted.

D—Date the license server was contacted.

E—Military Time the license server was contacted.

F—Trans—Transaction Type where 0= issue; 1 = denial; 2 = release.

G—NumKeys—the number of licenses in use after the current request/release.

H—Keylife—how long, in seconds, the license was issued. This value may be 0 or 1 if the license server was contacted, but not selected to issue the license.

I—Windows login of user. requesting license.

J—Computer name contacting license server.

K— License Server version.

Updating the Kingdom Software

There are two ways to obtain updates for your Kingdom software. You can download updates from the IHS Kingdom website or you can request physical media.

Obtaining software updates from the web

Kingdom releases and updates are available for download from the IHS Kingdom website at kingdom.ihs.com. This is the fastest and easiest way to obtain service packs and hot fixes for your Kingdom software. If you do not have an internet connection, contact [Customer Care](#) to request the physical media.

Note: You need your user name and password information for My Account to access the downloads. If you do not have your account information, contact your Kingdom sales representative.

To download software updates:

1. Log on to the computer where you want to install the software as an administrator.
1. Using a Web browser, log on to My Account at the IHS Kingdom website.
2. Click **Downloads** to open the **Latest Releases** page.
3. Select the product and version that you want to update.
4. Select the **Updates** tab below the list of products. Available updates are listed. Select the update you want to install and click the **Download** button.
5. In the **View Downloads** window, select from the following options:

Run	Automatically starts the Install Wizard for the selected product. Follow the wizard to install the product.
Save	Saves the download package to the default download folder: C:\Users\username\Downloads
Save as	Allows you to select the location to save the download package.

6. If you saved the download package, you can click **Open** to start the Update Wizard, or browse to the location at a later time and double-click the update file (*.msp) to start the Update Wizard and then follow the wizard to complete the installation.

