
DecisionSpace®

Integration Server System Administration

5000.10.4.0

Training Manual

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3D Drill View, 3D Drill View KM, 3D Surveillance, 3DFS, 3DView, Active Field Surveillance, Adaptive Mesh Refining, ADC, Advanced Data Transfer, Analysis Model Layering, ARIES, ARIES DecisionSuite, Asset Data Mining, Asset Decision Solutions, Asset Development Center, Asset Development Centre, Asset Journal, Asset Performance, AssetConnect, AssetConnect Enterprise, AssetConnect Enterprise Express, AssetConnect Expert, AssetDirector, AssetJournal, AssetLink, AssetLink Advisor, AssetLink Director, AssetLink Observer, AssetObserver, AssetObserver Advisor, AssetOptimizer, AssetPlanner, AssetPredictor, AssetSolver, AssetSolver Online, AssetView, AssetView 2D, AssetView 3D, Barrier Assurance Monitoring, BLITZPAK, Buckle, CartoSnap, CasingLife, CasingSeat, CDS Connect, CGMage Builder, Channel Trim, COMPASS, Contract Generation, Corporate Data Archiver, Corporate Data Store, Data Analyzer, DataManager, DataServer, DataStar, DataVera, DBPlot, Decision Management System, DecisionSpace, DecisionSpace 3D Drill View, DecisionSpace 3D Drill View KM, DecisionSpace AssetLink, DecisionSpace AssetPlanner, DecisionSpace AssetSolver, DecisionSpace Atomic Meshing, DecisionSpace Base Module, DecisionSpace Data Quality, DecisionSpace Desktop, DecisionSpace Dropsite, DecisionSpace Geoscience, DecisionSpace GIS Module, DecisionSpace GRC Module, DecisionSpace Nexus, DecisionSpace Reservoir, DecisionSuite, Deeper Knowledge, Broader Understanding, Depth Team, Depth Team Explorer, Depth Team Express, Depth Team Extreme, Depth Team Interpreter, DepthTeam, DepthTeam Explorer, DepthTeam Express, DepthTeam Extreme, DepthTeam Interpreter, Desktop Navigator, DESKTOP-PVT, DESKTOP-VIP, DEX, DIMS, Discovery, Discovery 3D, Discovery Asset, Discovery Framebuilder, Discovery PowerStation, Discovery Suite, DMS, Drillability Suite, Drilling Desktop, DrillModel, DrillNET, Drill-to-the-Earth-Model, Drillworks, Drillworks ConnectML, Drillworks Predict, DSS, Dynamic Frameworks to Fill, Dynamic Reservoir Management, Dynamic Surveillance System, EDM, EDM AutoSync, EDT, eLandmark, Engineer's Data Model, Engineer's Desktop, Engineer's Link, ENGINEERING NOTES, eNotes, ESP, Event Similarity Prediction, ezFault, ezModel, ezSurface, ezTracker, ezTracker2D, ezValidator, FastTrack, Field Scenario Planner, FieldPlan, FieldPlan Express, For Production, FrameBuilder, Frameworks to Fill, FZAP!, GeoAtlas, GeoDataLoad, GeoGraphix, GeoGraphix Exploration System, Geologic Interpretation Component, Geometric Kernel, GeoProbe, GeoProbe GF DataBase, GeoSmith, GES, GES97, GesFull, GESXplorer, GMAplus, GMI Imager, Grid3D, GRIDGENR, H. Clean, Handheld Field Operator, HHFO, High Science Simplified, Horizon Generation, I² Enterprise, iDIMS, iEnergy, Infrastructure, iNotes, Iso Core, IsoMap, iWellFile, KnowledgeSource, Landmark (*as service*), Landmark (*as software*), Landmark Decision Center, LandNetX, Landscape, Large Model, Lattix, LeaseMap, Limits, LithoTect, LogEdit, LogM, LogPrep, MagicDesk, Make Great Decisions, MathPack, MDS Connect, MicroTopology, MIMIC, MIMIC+, Model Builder, NETool, Nexus (*as service*), Nexus (*as software*), Nexus View, Object MP, OneCall, OpenBooks, OpenJournal, OpenLink, OpenSGM, OpenVision, OpenWells, OpenWire, OpenWire Client, OpenWire Server, OpenWorks, OpenWorks Development Kit, OpenWorks Production, OpenWorks Well File, Operations Management Suite, PAL, Parallel-VIP, Parametric Modeling, Permedia, Petris WINDS Enterprise, PetrisWINDS, PetroBank, PetroBank Explorer, PetroBank Master Data Store, PetroWorks, PetroWorks Asset, PetroWorks Pro, PetroWorks ULTRA, PLOT EXPRESS, PlotView, Point Gridding Plus, Pointing Dispatcher, PostStack, PostStack ESP, PostStack Family, Power Interpretation, PowerCalculator, PowerExplorer, PowerExplorer Connect, PowerGrid, PowerHub, PowerModel, PowerView, PrecisionTarget, Presgraf, PressWorks, PRIZM, Production, Production Asset Manager, PROFILE, Project Administrator, ProMAGIC Connect, ProMAGIC Server, ProMAX, ProMAX 2D, ProMax 3D, ProMAX 3DPDSM, ProMAX 4D, ProMAX Family, ProMAX MVA, ProMAX VSP, pSTAx, Query Builder, Quick, Quick+, QUICKDIF, Quickwell, Quickwell+, Quiklog, QUIKRAY, QUIKSHOT, QUIKVSP, RAVE, RAYMAP, RAYMAP+, Real Freedom, Real Time Asset Management Center, Real Time Decision Center, Real Time Operations Center, Real Time Production Surveillance, Real Time Surveillance, Real-time View, Recall, Reference Data Manager, Reservoir, Reservoir Framework Builder, RESev, ResMap, Resolve, RTOC, SCAN, SeisCube, SeisMap, SeisMapX, Seismic Data Check, SeisModel, SeisSpace, SeisVision, SeisWell, SeisWorks, SeisWorks 2D, SeisWorks 3D, SeisWorks PowerCalculator, SeisWorks PowerJournal, SeisWorks PowerSection, SeisWorks PowerView, SeisXchange, Semblance Computation and Analysis, Sierra Family, SigmaView, SimConnect, SimConvert, SimDataStudio, SimResults, SimResults+, SimResults+3D, SIVA+, SLAM, Smart Change, Smart Deploy, Smart Flow, Smart Skills, Smart Start, Smart Sustain, Smart Transform, Smart Vision, SmartFlow, smartSECTION, smartSTRAT, Spatializer, SpecDecomp, StrataMap, StrataModel, StratAmp, StrataSim, StratWorks, StratWorks 3D, StreamCalc, StressCheck, STRUCT, Structure Cube, Surf & Connect, SurfNet, SynTool, System Start for Servers, SystemStart, SystemStart for Clients, SystemStart for Servers, SystemStart for Storage, Tanks & Tubes, TDQ, Team Workspace, TERAS, T-Grid, The Engineer's DeskTop, Total Drilling Performance, TOW/cs, TOW/cs Revenue Interface, TracPlanner, TracPlanner Xpress, Trend Form Gridding, Trimmed Grid, Tubular Basic, Turbo Synthetics, Unconventional Essentials, VESPA, VESPA+, VIP, VIP-COMP, VIP-CORE, VIPDataStudio, VIP-DUAL, VIP-ENCORE, VIP-EXECUTIVE, VIP-Local Grid Refinement, VIP-THERM, vSpace, vSpace Blueprint, vSpace Onsite, WavX, Web Editor, Well H. 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Chapter 1

Introduction

Welcome to the DecisionSpace Integration Server (DSIS) 5000.10.4 System Administration class. This course introduces the Integration Server and covers features, system architecture and the installation process. After taking the class, a student should be able to install and troubleshoot the Integration Server and its features.

This training course is intended for system administrators who are involved in:

- Installing and deploying the Integration Server
- Designing the system architecture including hardware environment
- Troubleshooting system issues

Course Objectives

This manual is designed to be used with the Integration Server software's System Administration. Refer to the exercises during class and use the manual for reference when you return to your workplace.

This manual covers the following topics:

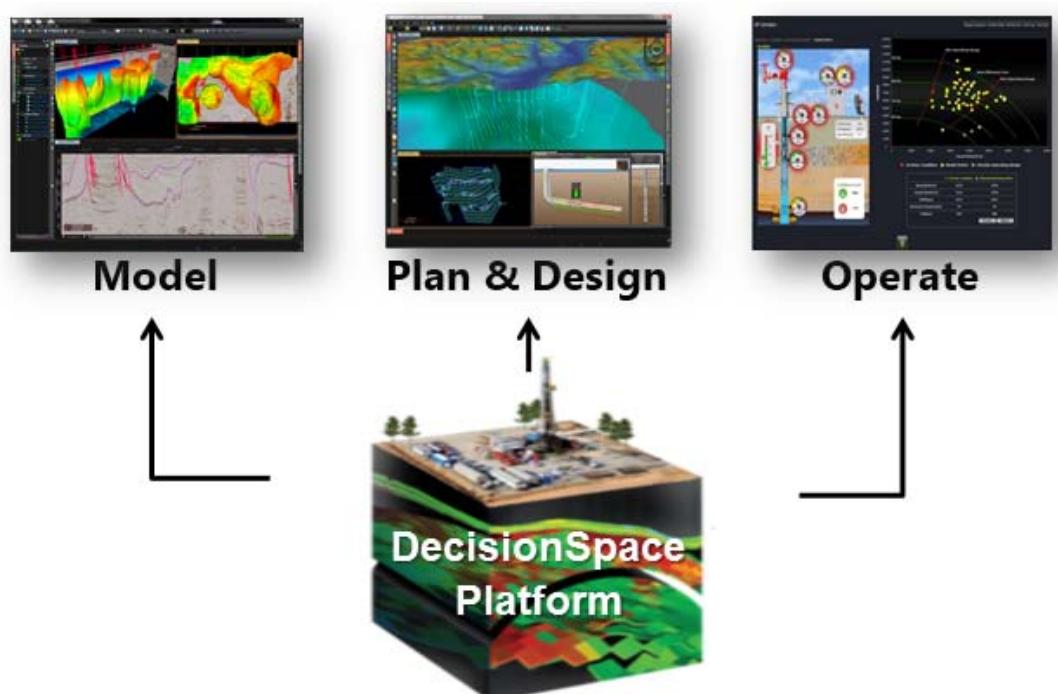
- DecisionSpace Platform Overview
- DecisionSpace Integration Server Features and System Architecture
- DecisionSpace Data Server Installation
- DecisionSpace Web Framework Installation
- DecisionSpace Search Installation
- DecisionSpace Business Process Management (BPM) Installation
- DecisionSpace Data Transfer Installation
- DecisionSpace Analytics Installation
- Troubleshooting, Uninstall Procedure, and Third-Party Licenses

DecisionSpace Platform Overview

Effective and complete end-to-end workflows often require technologies from multiple vendors combined with internally developed solutions. The challenge that companies face is linking data between these technologies quickly and efficiently.

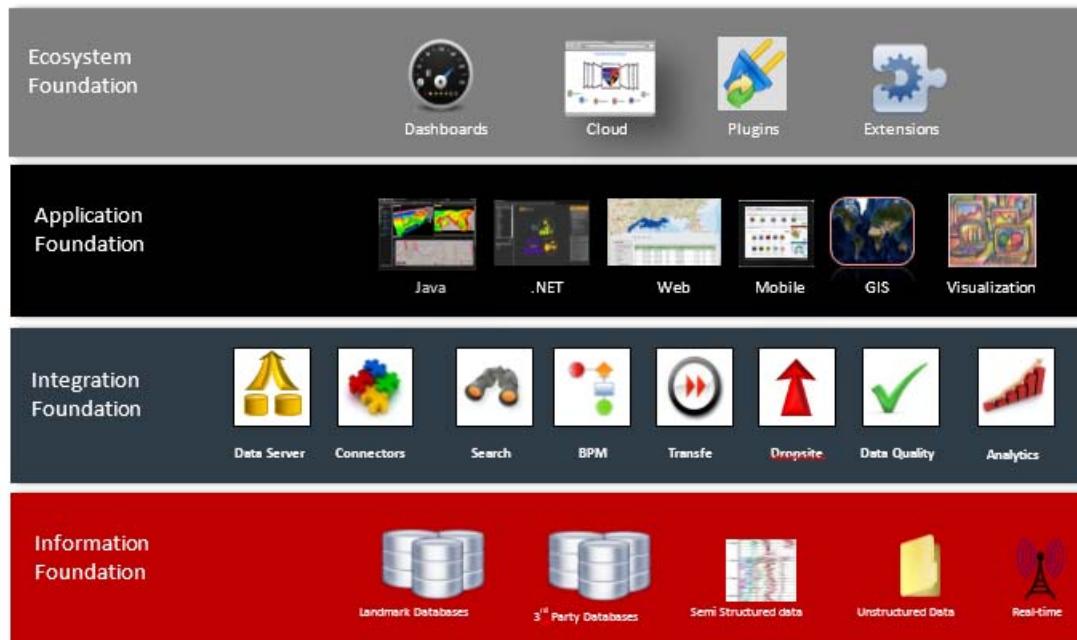
Landmark provides a single platform used by applications from seismic to production. Built on industry standard components already in use by many companies, the DecisionSpace Platform quickly integrates applications and databases across the organization.

DecisionSpace Integration Server Platform



The DecisionSpace Platform provides an enterprise-grade foundation that enables integration beyond the data level. It provides the technology needed for common data access, visualization and application development.

DecisionSpace Platform - E&P Foundation



- **The Information Foundation** includes the underlying data and information repositories for managing all E&P data, including tiered solutions for project and enterprise or master data management, operational and production data, and big data associated with analytics.
- **The Integration Foundation** includes the data management interfaces for all data repositories, published through industry standard SOA web services, powering the data management tooling for data connectors, search, quality and data movement and synchronization; all integrated with business process management-workflow orchestration and analytics engines.
- **The Application Foundation** is the launch pad for all technologies delivered on the platform, comprising DecisionSpace Base and GIS modules for the 3D collaborative canvas, alongside the engineering and web-based application frameworks including data management tools.
- **The Ecosystem Foundation** represents a set of capabilities that enable our end-users to perform their roles in the most effective manner by optimizing the mix of applications and workflows with underlying data. This foundation supports the creation of role specific dashboards, easier deployment, access to Landmark and non-Landmark applications. These capabilities will be consumed

by a broad community comprising customers using Landmark and partner-developed technologies, delivered and deployed on a common platform.

What is DecisionSpace Integration Server?

The Integration Server software provides a comprehensive solution that maintains a company's diverse application portfolio and the need to create, develop, leverage and protect intellectual property.

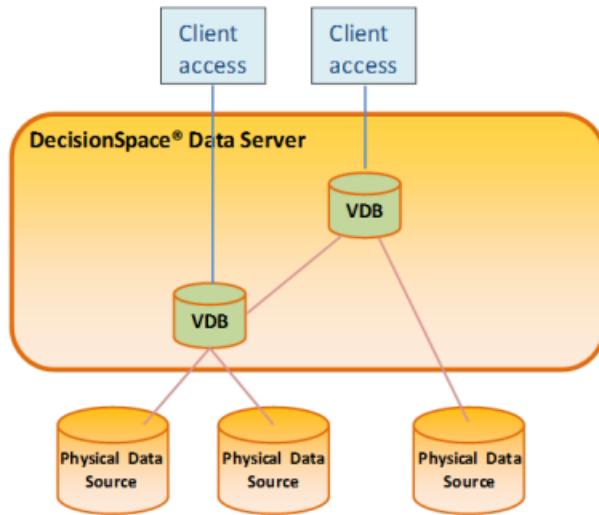
The Integration Server brings to the platform enterprise class middleware, built for E&P applications on top of a federated information management solution. It includes the data management interfaces for all data repositories, published through industry standard SOA web services. The Integration Server powers the data management tools for data connectors, search, quality, data movement and synchronization.

DecisionSpace Integration Server Features

Integration Server 5000.10.4 has the following features:

Data Server

Data Server provides applications with a common data access to Landmark and non-Landmark data sources. It enables access to data via services instead of individual development kits for different databases. Virtual Databases (VDBs) that are modeled by data managers are accessed through data adapters, passing data to the application via standard protocol web services. Data from multiple VDBs can be combined via a logical data model and served to the application as a single source.



Data Server also provides tools for developers and consultants to create connections to additional data sources and expose the data as services. The advantages of Data Server are:

- Enterprise services for E&P data
- Data integration/virtualization of data from heterogeneous models and sources
- Data interoperability
- Open standards-based web accessible data
- Integration with enterprise security for identity, authentication and authorization

Web Framework

Web Framework is a comprehensive web environment for developing web-based petro technical and business applications. It supports Microsoft SharePoint infrastructure and provides a framework and hosting environment for running new web-based business applications. It includes GIS and other web parts integrated with data and security. Applications leverage the functionality and framework provided by the Web Framework and can be independently installed, uninstalled or upgraded.

The Web Framework provides a rich set of features encompassing the following:

- Built on SharePoint framework
- Connects to Landmark and 3rd party data sources
- ESRI ArcGIS for full GIS map capabilities
- Active Directory and role-based security
- Integrates with Business Process Management tools
- Integrates with Real Time Alarm monitoring tool

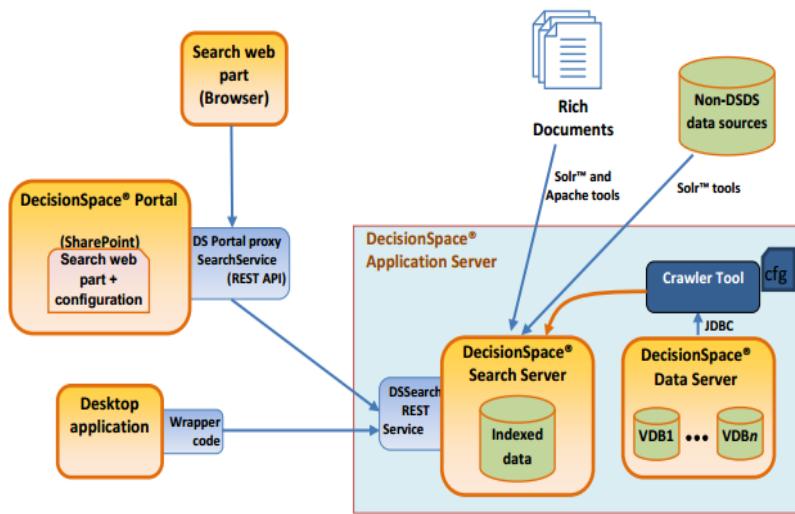
Search

Search consists of a suite of technologies that help deliver enterprise search for the Platform. Its major features include powerful full-text search, hit highlighting, faceted search, near real-time indexing, dynamic clustering, database integration, rich document (for example, Microsoft Word and Adobe PDF) handling and geospatial search. Search is powered by Apache Solr™, which is an open source enterprise search platform from the Apache Lucene™ project. The underlying technology allows searchable data to be populated from multiple sources including but not restricted to the following:

- Data sources in the Data Server
- Rich documents stored on the local file system
- Stand-alone data sources

Search provides a crawler tool that extracts data from configured data sources within the Data Server and feeds it to the search engine for indexing and storage. For all other data sources, Apache Solr™ provides out of the box tools.

The following diagram represents the functional architecture of Search modules and the technologies used from a developer perspective.



Business Process Management (BPM)

BPM allows orchestration of business processes. This process includes two steps:

- Designing business processes - a design-time activity
- Executing business processes - a runtime activity

The web-based designer allows you to model business processes in a web-based environment. A web-based console is used for administration of the business process engine. You can import business process definitions and instantiate and manage business processes. The user interface also helps to set up users and groups. The Processes which are executed under the BPM engine can also be audited. The BPM engine is responsible for executing business processes. It has a REST API exposed to import business process definitions, to instantiate business processes and to interact with users/groups present in the process.

The User Inbox is web-based and lists human tasks available for users to allow them to choose different actions like claim tasks, view task forms, and submit task forms.

Data Transfer

DecisionSpace Data Transfer is a web service that provides an interface to initiate, track and transfer data between various supported DSDS data sources. It invokes Kettle transformations to complete the data transfer.

Data Types	Source	Target				
		CDS	EDM	Recall	Petrel	OpenWorks
Well	CDS			x	x	x
	EDM					
	Recall					x
	Petrel					x
	OpenWorks					x
Wellbore	CDS			x	x	x
	EDM					
	Recall					x
	Petrel					x
	OpenWorks					x
Directional Survey	CDS				x	x
	EDM	x ^a				
	Recall					x
	Petrel	x				x
	OpenWorks					x
Markers & Picks	CDS					x
	EDM					
	Recall					
	Petrel	x				x
	OpenWorks					x
Log Curve	CDS					
	EDM					

Data Types	Source	Target			
	Recall			x	x
	Petrel		x		x
	OpenWorks				x
Check Shots	CDS			x	x
	EDM				
	Recall				x
	Petrel	x			x
	OpenWorks				x

a. Implies having the same well and wellbore.

DecisionSpace Data Transfer is integrated with DecisionSpace Integrated Server through the data transfer plugin. This plugin enables users to search, view, browse and transfer data from various data stores. Data can be viewed using the GIS tool or by performing a keyword/text search. Data from various data types can be transferred between data sources that are currently supported by DSDS through the Common Model. It provides the capability to create, view and track the transfer orders through the transfer workflow.

Products Integrating with DecisionSpace Integration Server

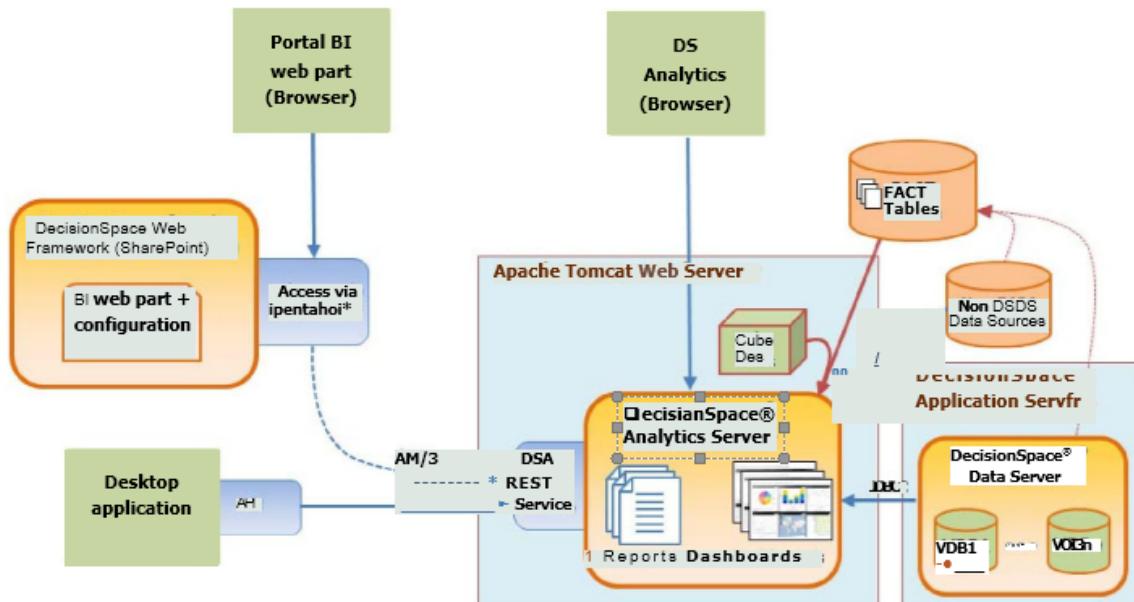
In this course we will be looking at the integration of DecisionSpace Analytics into DecisionSpace Integration Server.

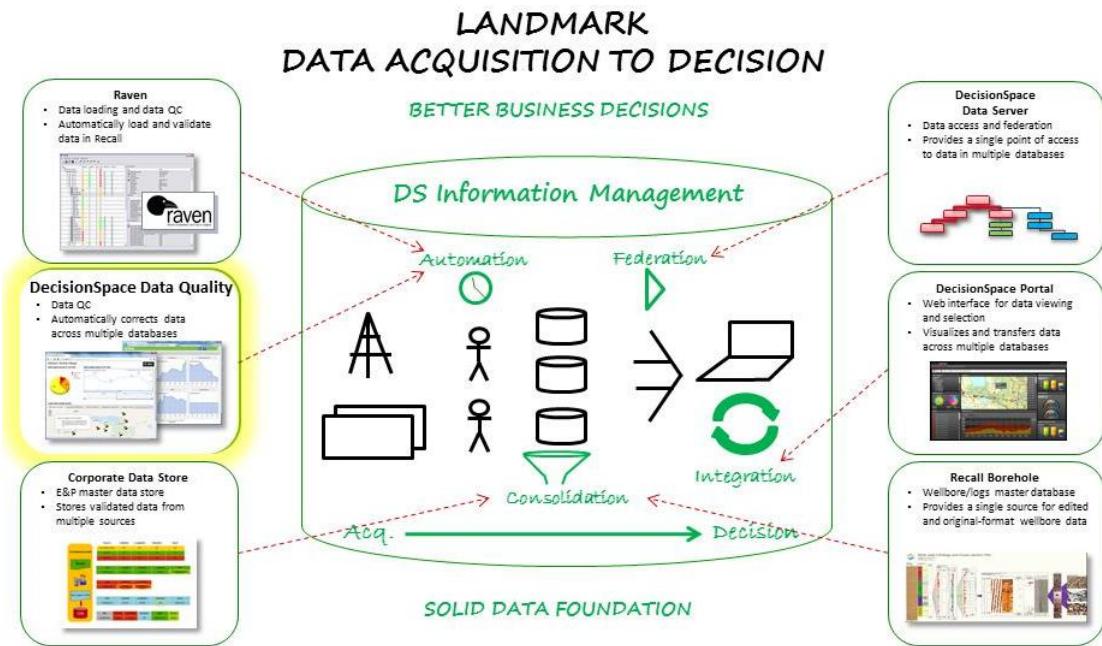
DecisionSpace Analytics

DecisionSpace Analytics is a web-based, business-intelligence tool for historical drilling data analysis and visualization.

The software gives engineers and managers instant insight into their data by providing a series of analytic models based on common drilling business decisions. These models (or analyses) allow users to quickly & easily compare and contrast any and every variable related to their investigation in graphical form, including multiple interactive filtering, without ever having to write a database query.

Analytics can appear in the Web Framework as a web part so that the user can view interactive reports, analysis reports and dashboards that are created from Analytics.





System Architecture

Platform/Hardware/Resource Specifications Software

- Windows Server 2008 R2 SP1
- Windows 7 x64
- RHEL AS 6 (Primary)
- RHEL AS 5.x (Secondary)
- CPU: 4 Core Processor
- Physical Memory 8 GB (less than 1,000 users) or 16 GB (1,000 to 10,000 users)
- Hard-disk Memory 80 GB
- Minimum Java Heap Size: 1024
- Oracle Client 11.2.0.2 Administrative version 64-bit

Prerequisites

- SharePoint 2010/2013 Foundation/Standard/Enterprise
- SQL Server (Express) 2008 R2
- Windows Server 2008 R2 (64-bit), Windows 7 (64-bit)*
- .Net Framework 3.5 (for SharePoint 2010) and .Net Framework 4.5 (for SharePoint 2013)

3rd Party Components

- Apache Solr 4.6
- JBoss Enterprise Application Platform (EAP) ver. 6.0.1 Alpha
- Teiid 8.4.0 Final
- OData 3.0
- JRE 1.6.0 64-bit
- DecisionSpace Messaging (ActiveMQ 5.7.0)
- DecisionSpace Data Server Design Studio (Teiid Designer 9.0.2)
- Microsoft SharePoint 2013
- Microsoft .Net 4.5
- Microsoft SQL Server 2008 R2

Landmark Software Dependencies

- LAM 5000.0.3 (Flex 11.7)
- Licensed using FlexLM DSDATASERVER ver. 5000.8 which is read from the system environment

Dropsite Introduction

The Dropsite Data Loader provides a web-based workflow wizard for users to upload data and track data from a central site which increases automation and speed over manual loading and enforces a standardized data loading workflow. It automates routine data loading tasks to standardize data loading workflows and ensure compliance to company data governance standards integrated with Raven Quality Checker for increased data quality.

Dropsite Features

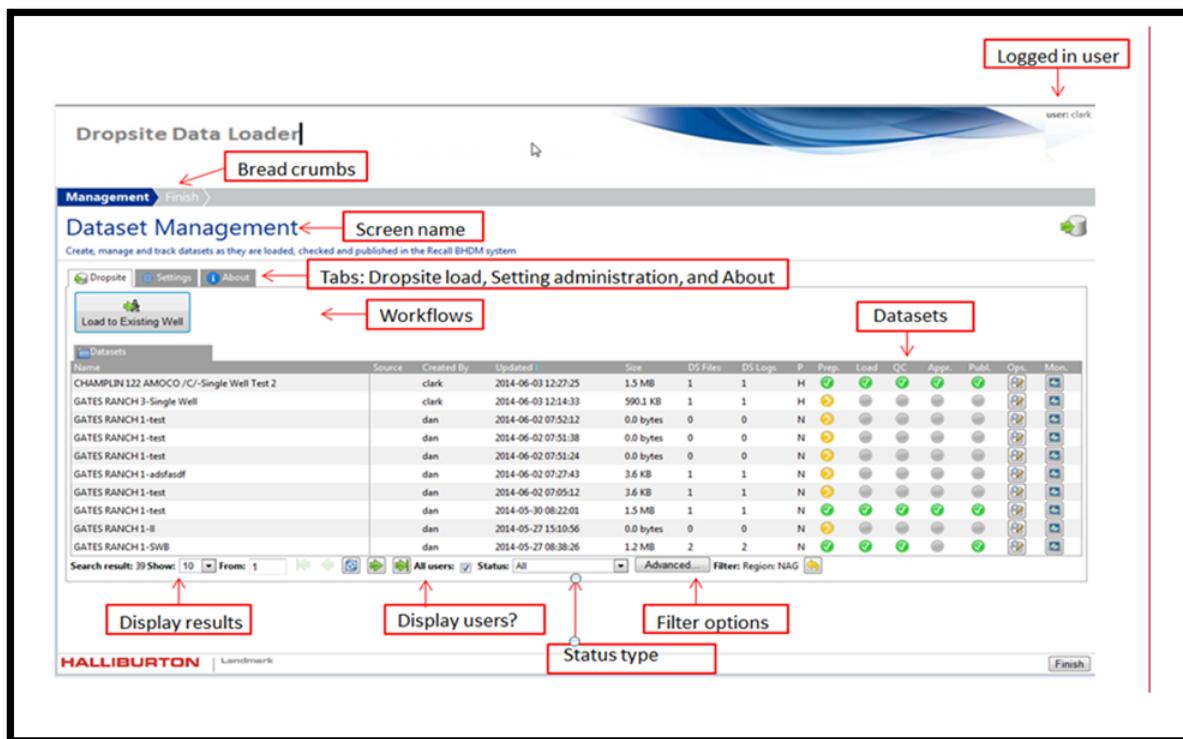
- Selection and Uploading of Local Files
- Meta Data Assignment
- Data Load Prioritization
- Load Status Feedback
- Quality Check Feedback
- Integration of Web Browser for Viewing and Plotting Data
- Data Publishing Authorization
- Email Notifications
- Raw data submission by the acquisition company
- Data loading and verification
- Publication of verified data to Corporate databases
- Tracking of submitted data sets from delivery to publication
- Distribution of data from the Corporate databases to the application and project databases
- Capture of interpreted data from the application and project databases, and the verification and publication of this data into the Corporate database
- Transfer of relevant datasets to service contractors for further processing and submission to the regulatory authorities

Dropsite Terminology

- **Single Source (SiSO)** obtains well master data PPDM, Finder, etc., and presents it to Dropsite
- **Workflow** tape (DLIS and LAS) pre-passes to generate the tape instance – OFDB and STAGING modes
- **PrePass** sequence of industrial, administrative, or other processes through which a piece of work passes from initiation to completion
- **Staging** database is used to store data during quality analysis (usually not visible to the general user community)

- **Auto-Publish** – when a dataset is ready to publish to OFDB or Online, an Auto Publisher publishes it from the staging project; if the dataset fails, Raven (and manual) QC the data is retained in staging for review and correction; the Auto Publisher purges (deletes) all data belonging to the dataset from staging after successful publication

Dropsite Data Management - View

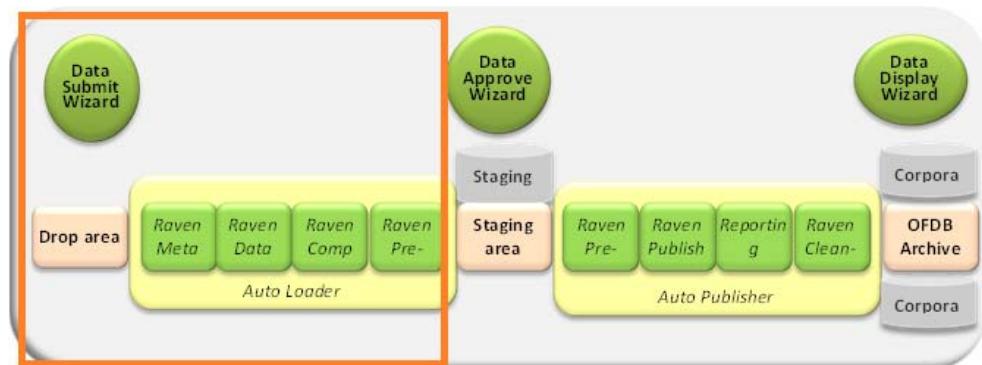
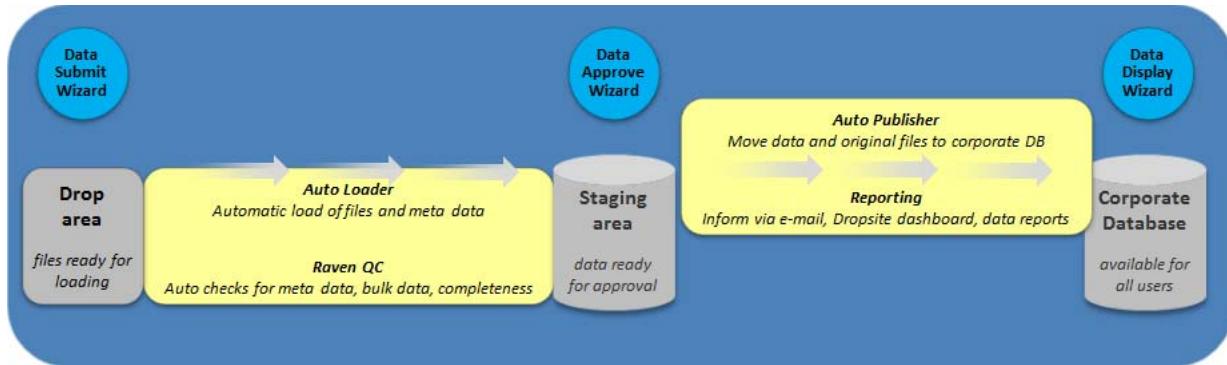


User Maintenance and Security

ROLE NAME	ROLE DISPLAY NAME	EDIT	ADMIN	READ	APPROVE	SUBMIT
ADMIN	Dropsite Administrator	Y	Y	Y	Y	Y
APPROVER	Data Approver	Y	N	Y	Y	Y
SUBMITTER	Data Submitter	Y	N	Y	N	Y
USER	Limited View Role	N	N	Y	N	N

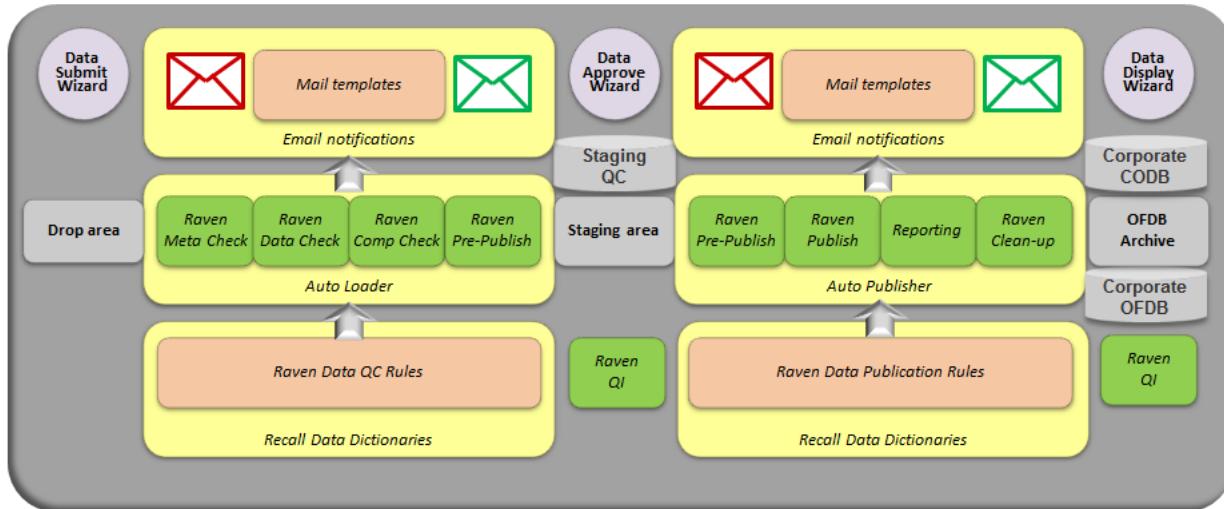
Recall Dropsite Data Delivery Workflow

- Create dataset
- Upload data files
- Categorize data
- Submit for automatic loading into Staging database and Raven QC



RECALL Dropsite - Raven QC STEPS

Raven QC Rules



- **Raven metadata check** - Applies to wells, logs, and curve headers to provide validation of the completeness and correctness of Recall attributes and parameters and applied naming conventions
- **Raven bulk data check** - Applies to curve data and performs a search for anomalies of the digital curve measurement values loaded into Recall. Such tests include the verification of data units and data ranges, searches for invalid data caused by data gaps, saturation of the recording device, flat sections, spikes, and illegal null values, etc.
- **Raven data completeness check** - Applies to curves in logs and provides verification to ensure that all required data is included in the dataset
- **Raven pre-publication** - Verifies that the well and data is ready for publication into the Recall Corporate databases
 1. The **Check Metadata** module verifies the metadata (primary and non-primary attributes and their values) of data loaded into Recall using rules defined in the Recall data dictionary. Its functions include confirming that mandatory attributes are populated and checking attribute values, numeric ranges, value formatting, and the validity of units.
 2. The **Check Bulk Data** module validates the measurements and bulk data loaded into Recall using rules defined in the Recall data

dictionary. It investigates potential problems with datasets and compares data statistics with expected settings. The functions of this module include checks on data gaps, data value ranges, unexpected tool responses such as data spikes, saturation of the data measurements, and data flat-lining.

3. The **Check Completeness & Consistency** module verifies if a dataset is complete and consistent; whether it contains all expected data subsets, and no unexpected data subsets. For example, a well contains all expected logs, or a log contains all curves necessary for a certain type of processing.
4. The **Pre-publish** module evaluates the data quality information provided by the Check Metadata, Check Bulk Data, and Completeness modules, and by the use of rules defined in the Recall data dictionary, determines:
 - a) Where data should be published in the Recall corporate online and OFDB databases
 - b) Which data is of a suitable quality to be published

This module is only deployed as part of the data loading, verification and publication workflow. All information derived from this process is stored with the associated datasets and this enables the subsequent publication phase to be run as an automatic process. This module writes information to recall relating to the proposed data publication, but does not implement the publication.

For Assistance

The Integration Server software contains a zip file that provides an overview of how to use the software. Call or e-mail the Landmark help desk to get further assistance from Landmark's support specialists.

Contacting Landmark Customer Support

Landmark Customer Support operates Technical Assistance Centers (TACs) in Australia, the United Kingdom and the United States. Additional support is also provided through regional support offices around the world:

- **Support via Web Portal**
- **Technical Assistance Centers**
- **Regional Offices**

Support via Web Portal

Support information is always available on the Landmark Customer Support web page. You can also submit a support request directly to Landmark Customer Support through the Landmark Customer Support Portal:

<http://www.landmarksoftware.com/Pages/ContactSupport.aspx>

Refer to the following steps to request support in the Landmark Customer Support Portal:

1. In the **PIN** and **Password** text boxes in the Please Sign In area, enter your registered personal identification number and password.
2. Click **Sign In**.
3. In the Case & Defect Information area, click the **Create a New Case** link.
4. In the Create Case area, enter the necessary information. Provide details about your technical concern, including any error messages, the workflow steps where the problem occurred, and attachments of

screen shots that display the problem. To help understand the concern, you can also attach other files, such as example data files.

5. Click **Submit**. A support analyst in the nearest Technical Assistance Center will respond to your request.

Technical Assistance Centers

Asia Pacific	61-8-9481-4488 (Perth, Australia)
8:00 am - 5:00 pm Local Time	Toll Free 1-800-448-488
Monday-Friday, excluding holidays	Fax: 61-8-9481-1580 Email: apsupport@lgc.com
Europe, Africa, Middle East	44-1372-868686 (Leatherhead, UK)
9:00 am - 5:30 pm Local Time	Fax: 44-1224-723260 (Aberdeen, UK)
Monday - Friday, excluding holidays	Fax: 44-1372-868601 (Leatherhead, UK) Email: support@lgc.com
Latin America	713-839-3405 (Houston, TX, USA)
(Spanish, Portuguese, English)	Fax: 713-839-3646
7:00 am - 5:00 pm Local Time	Email: soporte@lgc.com
North America	713-839-2200 (Houston, TX, USA)
7:30 am - 5:30 pm Central Standard Time	Toll Free 1-877-435-7542 (1-877-HELP-LGC)
Monday - Friday, excluding holidays	Fax: 713-839-2168 Email: support@lgc.com

Regional Offices

For contact information for regional offices, see the Contact Support page located at:

<http://css.lgc.com/InfoCenter/index?page=contact§ion=contact>

If problems cannot be resolved at the regional level, an escalation team is called to resolve your incidents quickly.

Chapter 2

DecisionSpace Integration Server Installation Process

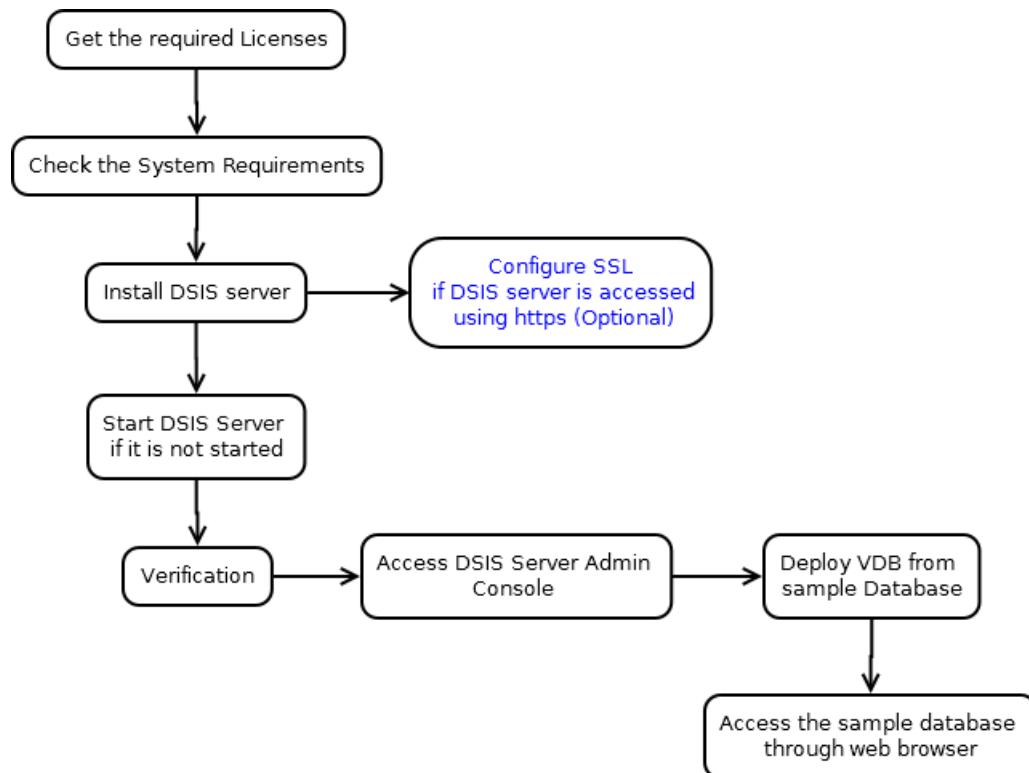
This chapter provides step-by-step instructions for installing the DecisionSpace Integration Server. The process includes installation of the following features:

- DecisionSpace Data Server
- DecisionSpace Search
- DecisionSpace Business Process Management
- DecisionSpace Web Framework
- DecisionSpace Data Transfer
- DecisionSpace Analytics (This is standalone product and not a DSIS feature)

DecisionSpace Data Server Installation

The Data Server provides tools for developers and consultants to integrate data from heterogeneous models, create connections to additional data sources, and expose data as an enterprise service for Exploration and Production (E&P). Data Server also supports data interoperability, open standards-based web accessibility, and integration with enterprise security to identify, authenticate and authorize connections to data sources.

Installation Workflow



System Requirements

The Integration Server 5000.10.4.0 has the following system requirements:

Integration Server	<ul style="list-style-type: none"> • Operating System <ul style="list-style-type: none"> • Windows Server 2008 R2 x64 (Primary) • Windows 7 x64 (Secondary) • Windows Server 2012 x64 (Secondary) • RHEL AS 6 (Primary) <ul style="list-style-type: none"> • RHEL AS 5 (Secondary) • RHEL AS 7 (Secondary) • Third-party Software (bundled with Integration Server and components) <ul style="list-style-type: none"> • JBoss Enterprise Application Platform (EAP) ver. 6.1.0 Alpha 1 • JRE 1.7.0 64-bit • Landmark Software Dependencies <ul style="list-style-type: none"> • See the Licensing Requirements section • Minimum Java Heap Size for DSIS: 4 GB <ul style="list-style-type: none"> • Minimum Java Heap Size: 2 GB for embedded use cases • Recommended Java Heap Size: 16 GB for production servers <ul style="list-style-type: none"> • More may be required depending on functionality deployed • Recommended Disk Install Space: 10 GB for production servers • Recommended Temp Space: 20 GB or more for production servers
Web Browsers	<ul style="list-style-type: none"> • Internet Explorer 11 • Firefox (latest) • Google Chrome (latest)

Install the Integration Server

Who must perform these steps: A Domain user with administrator permissions on the machine where the Data Server will be installed.

Refer to the following steps for installing the Integration Server:

1. Log into the machine where you will install the Integration Server software.
2. Open a terminal session and navigate to the directory where you downloaded the Integration Server installer. For example:
 - **On Windows:** C:\Landmark
 - **On Linux:** /opt/Landmark

Note

Ensure that the installation directory has at least 10 GB of free disk space to install Data Server. Also ensure that sufficient temporary disk space is available at runtime. A minimum of 20 GB of free disk space for temporary storage is suggested for production systems, but more may be required depending on workload and data sizes.

3. On Linux, if performing a console (silent) installation of DSIS and an older version exists which you would like to upgrade from (such as, /opt/Landmark/DSDDataServer5000.10.3), then create a file named **installer.properties** in the same folder as the DSIS_10.4.0_RHL.bin installer. The file should contain the following line:

```
CHOSEN_DIALOG_BUTTON_MIGRATION=0
```

Note

The settings in this file can be used for a regular (GUI) install as well; however, you must remove or comment out the line: INSTALLER_UI=silent.

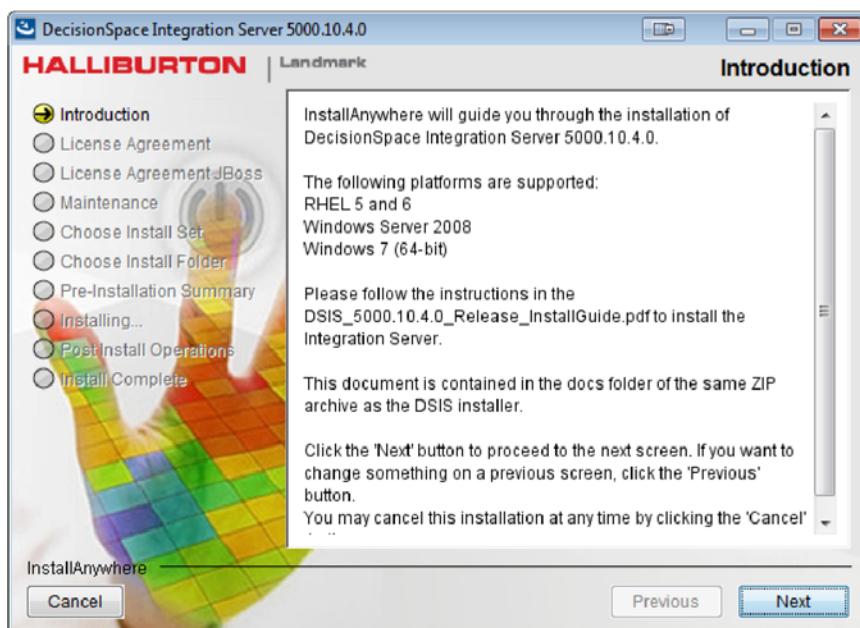
4. Enter the following command on the terminal window prompt:

- **On Windows:** DSIS_10.4.0_Win.exe

- **On Linux (GUI mode):** ./DSIS_10.4.0_RHL.bin
- **On Linux (Console):** ./DSIS_10.4.0_RHL.bin -i silent

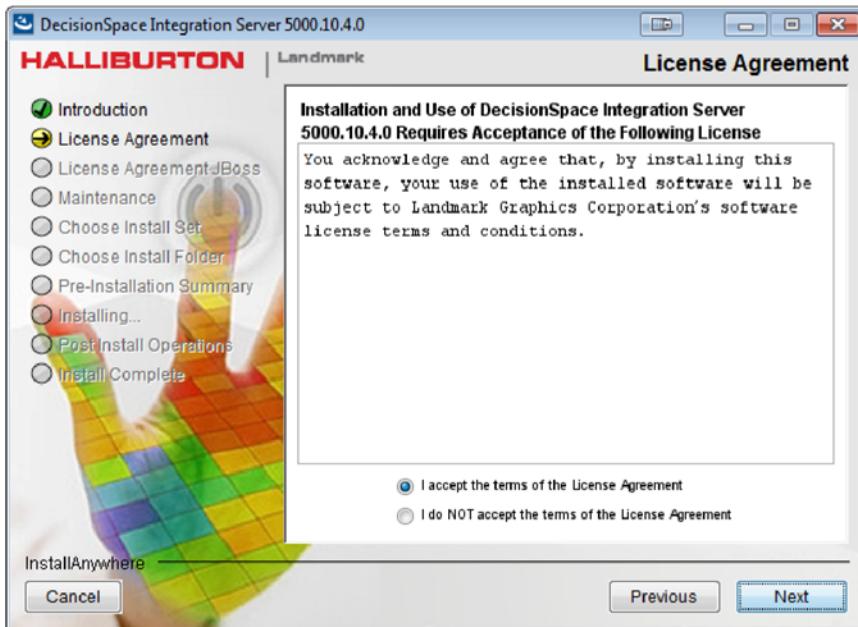
On Linux, the console (silent) mode is simpler and does not require a number of GUI libraries to be installed on your Linux server. It is also the best option if automating or scripting. This mode will install all components, providing a complete installation of DSIS without the unnecessary install wizard steps shown below.

The Data Server splash screen displays for a moment, then the InstallShield Wizard launches and the Introduction screen displays.



5. Read the Introduction and then click **Next**.

The License Agreement screen displays for DecisionSpace Integration Server 5000.10.4.0.



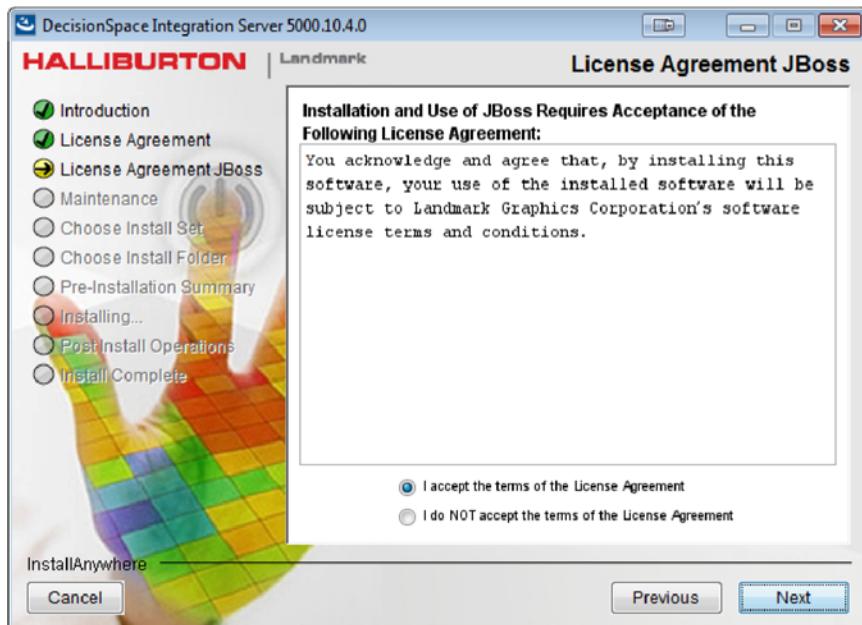
6. Read the license agreement and select the **I accept the terms of the License Agreement** option. Click **Next**.

Note

If you do not accept the terms of the License Agreement, you will not be able to proceed with the installation. You will only be able to click **Previous** or **Cancel**.

The License Agreement screen displays for the JBoss application server.

7. Read the license agreement and select the **I accept the terms of the License Agreement** option. Click **Next**.



Note

If you do not accept the terms of the License Agreement, you will not be able to proceed with the installation. You will only be able to click **Previous** or **Cancel**.

8. If you have Data Server 5000.10.3.0 or Integration Server 5000.10.3.1 installed on your machine, then you will be prompted to migrate the configurations from the original install to the new install.

Click **YES** to migrate the previous settings, or click **NO** if you do not want to migrate the previous settings.



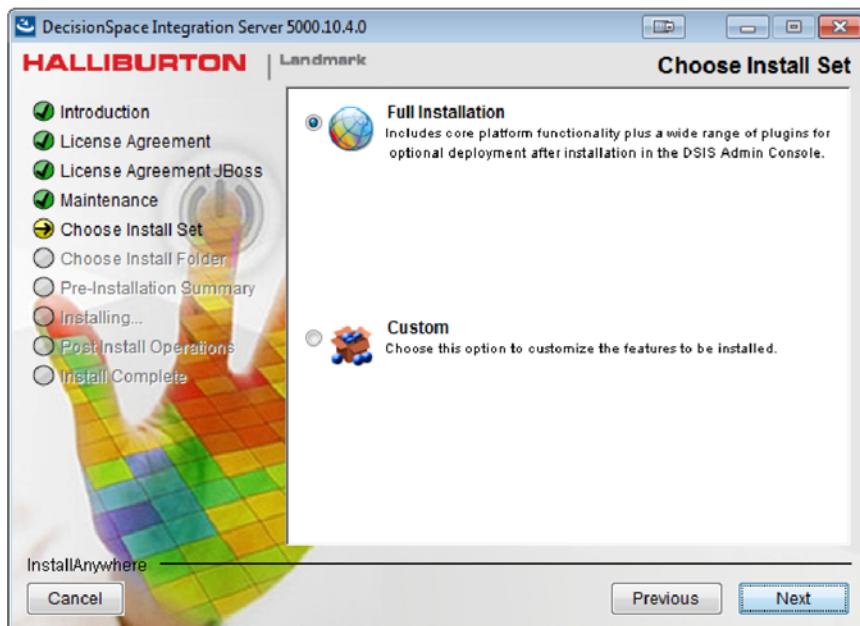
Note

Regardless of whether you want to migrate the previous install settings to the new install, if you want to keep both installs on the same machine, make sure you select a different install location.

When you are running both 5000.10.3.X (old install) and 5000.10.4.0 (new install) on the same machine, your default port selections will be offset by 500. Therefore, if your original HTTP port was 8080, it will be 8580 in the new install.

9. Select an install set and then click **Next**.

- Select **Full Installation** to install the Integration Server core and a repository of plugins for adding capabilities after installation.

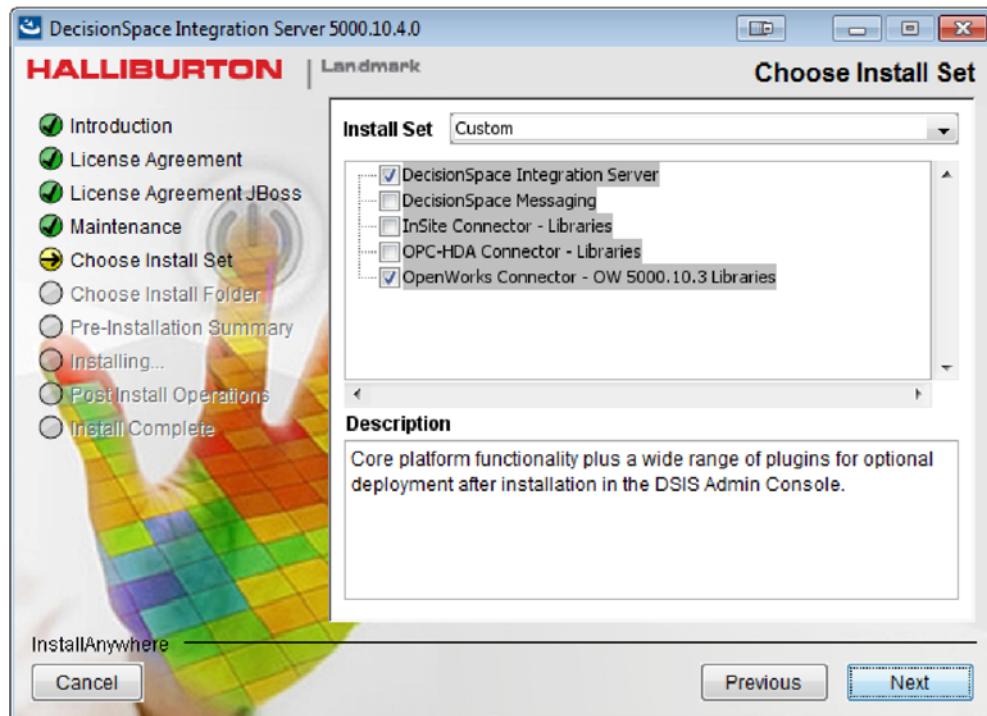


- b) Select **Custom** to install a subset of the components. Currently, the following options are included (some of these are applicable to Windows only):
 - i. DecisionSpace Integration Server - The core DSIS platform, required for fresh installs.
 - ii. DecisionSpace Messaging - A legacy deployment of ActiveMQ 5.10 to support the previous data change notification service built on custom JMS logging. For more details, please see the section *Data Change Logging* in the *DecisionSpace Integration Server Data Service Administration Guide*.

Note

The preferred approach is to deploy the Messaging plugin from the DSIS Admin Console after installation, as described in the *DecisionSpace Integration Server Messaging Administration Guide*.

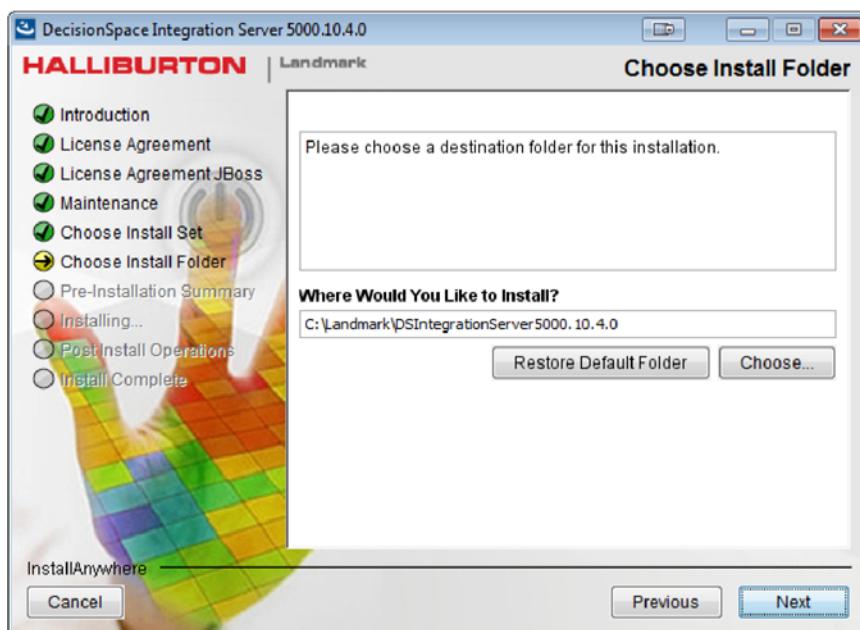
- iii. InSite Connector - Libraries and Service (Windows only). Installs Microsoft .Net Framework 4 and VCREDIST 10. Required if you will install the InSite Connector plugin. See the *DecisionSpace Integration Server Data Service Installation guide* and *Getting Started Guide* for instructions on installing and configuring this plugin.
- iv. OPC Historical Data Access Connector - Libraries and Service (Windows only). Installs Microsoft .Net Framework 4.6. Required if you will install the OPC-HDA Connector plugin. See the *DecisionSpace Integration Server Data Service Installation guide* and *Getting Started Guide* for instructions on installing and configuring this plugin.
- v. OpenWorks Connector - OW 5000.10.3 Libraries. Provides the Java 8 runtime and VCREDIST 11 required for successful connection to OpenWorks 5000.10.3 data sources. See the *DecisionSpace Integration Server Data Service Installation guide* and *Getting Started Guide* for instructions on installing and configuring this plugin.



Note

The first time you select the **Custom** option, the Integration Server is automatically installed.

After you make the install selection(s), the Choose Install Folder screen displays.

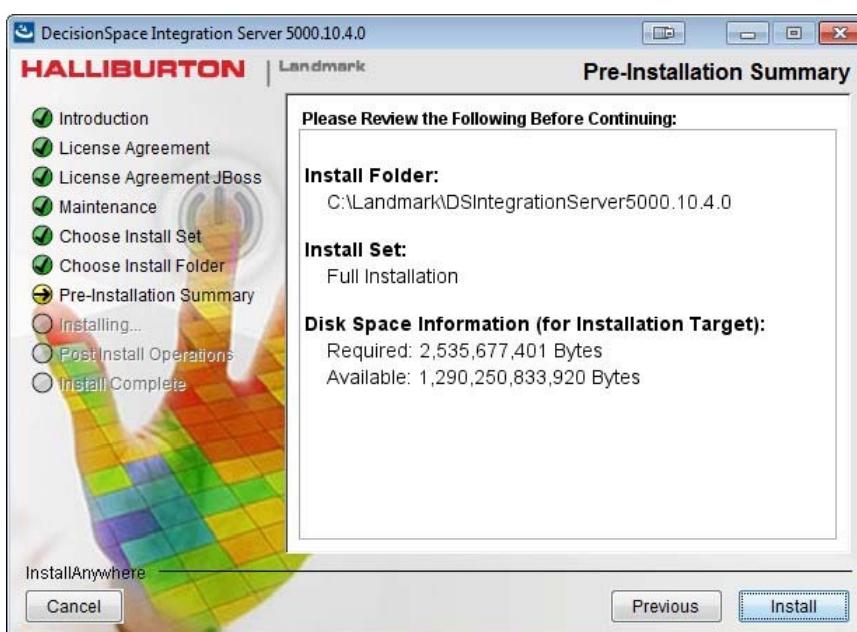


10. Accept the default Installation Path or click **Change** and enter an alternate path. When finished, click **Next**.

Note

If you are installing on Linux and you want to install to a different location than the default: Click **Choose**, navigate to the desired location, and then click **OK**. The "Where Would You Like To Install?" line displays your selection. Make sure to add "/DSIntegrationServer5000.10.4.0" (or similar) to the path (for example, /opt/Landmark/DSIntegrationServer5000.10.4.0). The **DSIntegrationServer5000.10.4.0** folder will be created by the installer.

The Pre-Installation Summary screen displays.



11. Verify the information (the required disk space may be different than the illustration above) and click **Install**.

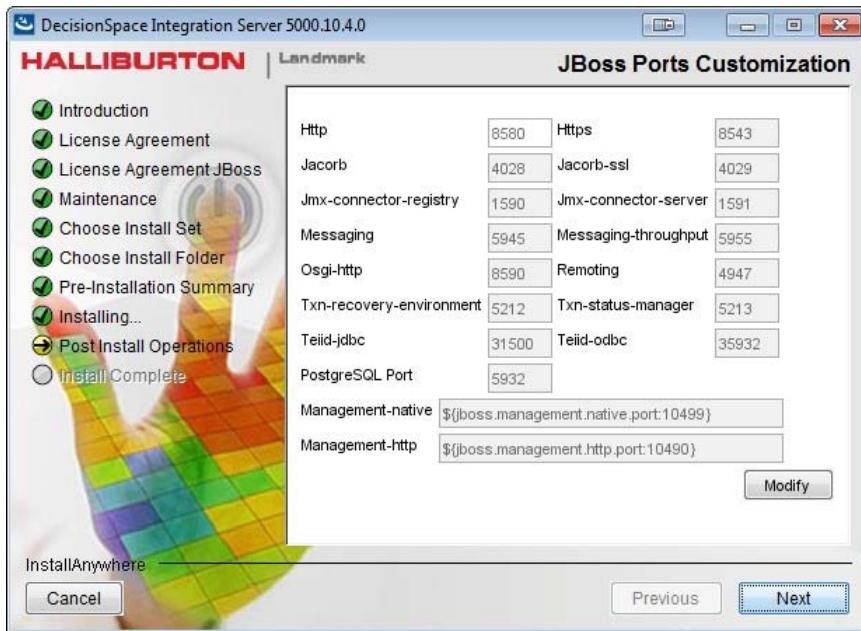
The software selected on the Install Set screen is installed.

12. Click **Next**. Please wait for the Integration Server components to be installed on the target system. Depending on the platform (Linux or Windows) and your selection of Custom install options, you may be prompted to install any of the following:

- Microsoft Visual C++ Redistributable
- Microsoft .Net Framework 4.6

Follow the prompts to install the various dependencies of the Custom option as needed.

13. The JBoss Ports Customization screen displays. You may need to approve the Java executable to determine the state of ports on your current system.

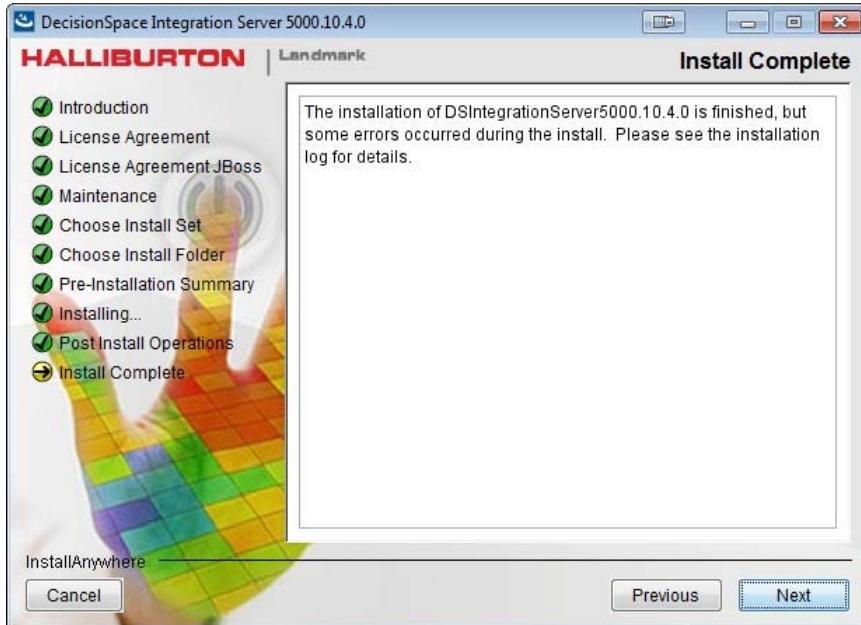


14. If you do not need to modify the default JBoss ports, click **Next**. If you do not need to modify any of the ports for JBoss, click **Modify**.

After you have modified the values accordingly, click **Validate Ports**. If one or more ports you entered are already in use, the violating port(s) are marked in red and the message “Some ports are in use. Please check and try again” displays.

When the message “Port Validation Successful” displays, click **Next**.

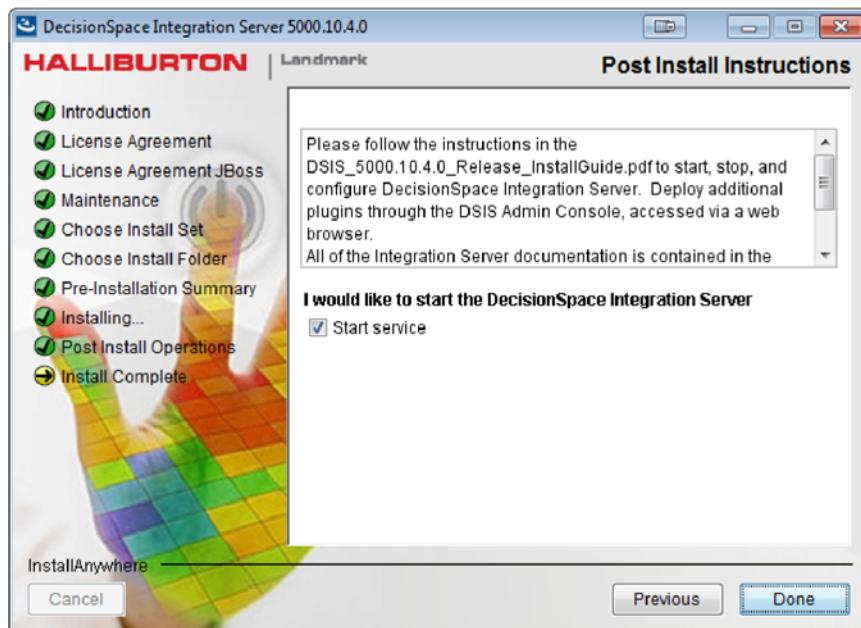
A progress screen displays during the installation, and then the Install Complete screen displays.



Due to Known Issue #266703, the warning about some errors occurring during install can be disregarded.

15. Click **Next**.

The Post Install Instructions screen displays.



16. Select the appropriate service option:

- If this is a new install, select the **Start service** option to start the Data Server service now and then click **Done**. It is not necessary to reboot after the software is installed.
- If you did not start the Integration Server service before exiting the installer, start the service now.

17. If this is a new install of the Integration Server, go to the Post-Installation Procedures.

18. If you are upgrading:

- DSIS plugins installed on DSIS/JBoss 5000.10.3.0 and 5000.10.3.1 are automatically upgraded when starting up DSIS 5000.10.4.0.
- You do not need to select the Plugins tab in the 5000.10.4.0 Admin Console and manually perform upgrades.

Starting and Stopping the DSIS Service

Start the Service

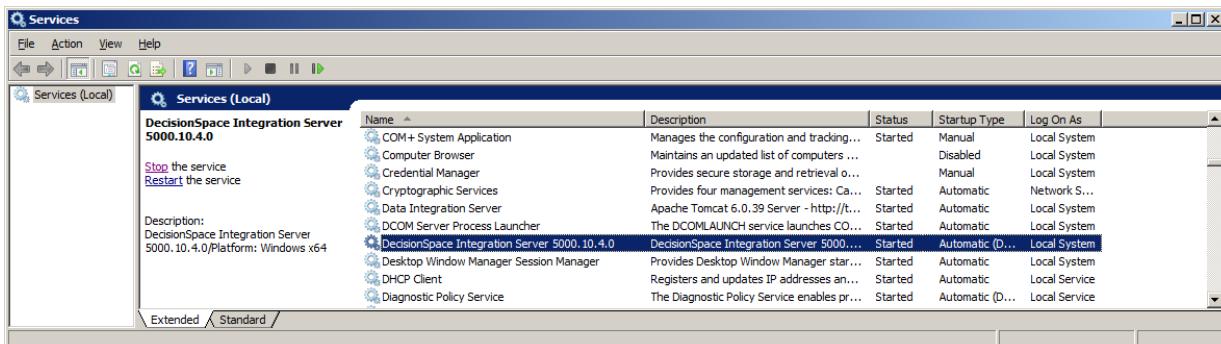
Start the DSIS service now if you did not do so before exiting the installer.

On Windows:

- Select Start > All Programs > Landmark > DecisionSpace Integration Server 5000.10.4.0, right-click Start DecisionSpace Integration Server, and then click Run as administrator.

OR

- Open the Windows Server Manager Services window, select the DecisionSpace Integration Server 5000.10.4.0 service, and then select the Start the service option. “Started” will appear in the Status column.



On Linux:

- To run in the foreground, execute “<DSIS_HOME>/ApplicationServer/bin/runDSDS.sh”.

OR

- To run in the background, execute “<DSIS_HOME>/ApplicationServer/bin/runDSDS.sh start”.

Note

As a security best practice, executing the runDSDS.sh script as **root** is not recommended. Instead, you should use a regular (non-privileged) user, with read/write permissions on <DSIS_HOME>.

Note

If you will be running DSIS on a dedicated server, the regular start script may not be sufficient for your needs. See the *DSIS Data Server System Administration Guide* for a background service approach.

Stop the Service

On Windows:

- Select Start > All Programs > Landmark > DecisionSpace Integration Server 5000.10.4.0, right-click Stop DecisionSpace Integration Server, and then click Run as administrator.

OR

- Open the Windows Server Manager Services window, select the DecisionSpace Integration Server 5000.10.4.0 service, and then select the Stop the service option.

On Linux:

- Terminate the process by pressing **Ctrl-C** in the command window running the server in the foreground.

OR

- If running in the background, execute “<DSIS_HOME>/ApplicationServer/bin/runDSDS.sh stop”.

Post-Installation Procedures

The post-installation procedures are:

1. Check your installation by creating a VDB from the sample data source.
2. Configure SSL only when configuring the Integration Server for communication using the HTTPS protocol.

Check Your Installation

After the service is started, you can make sure everything is installed correctly by creating a VDB using the sample data source shipped with the Data Server.

1. Launch the Admin Console.

On Windows:

- a) In the Start menu, enter the following to launch your default browser and automatically input the Admin Console web address.
Start > All Programs > Landmark > DecisionSpace Integration Server 5000.10.4.0 > Start DecisionSpace Integration Server Console.
- b) Manually launch Internet Explorer and enter the following URL:
<http://<<Server-IPAddress:8580>/dsdataserver-console>

On Linux:

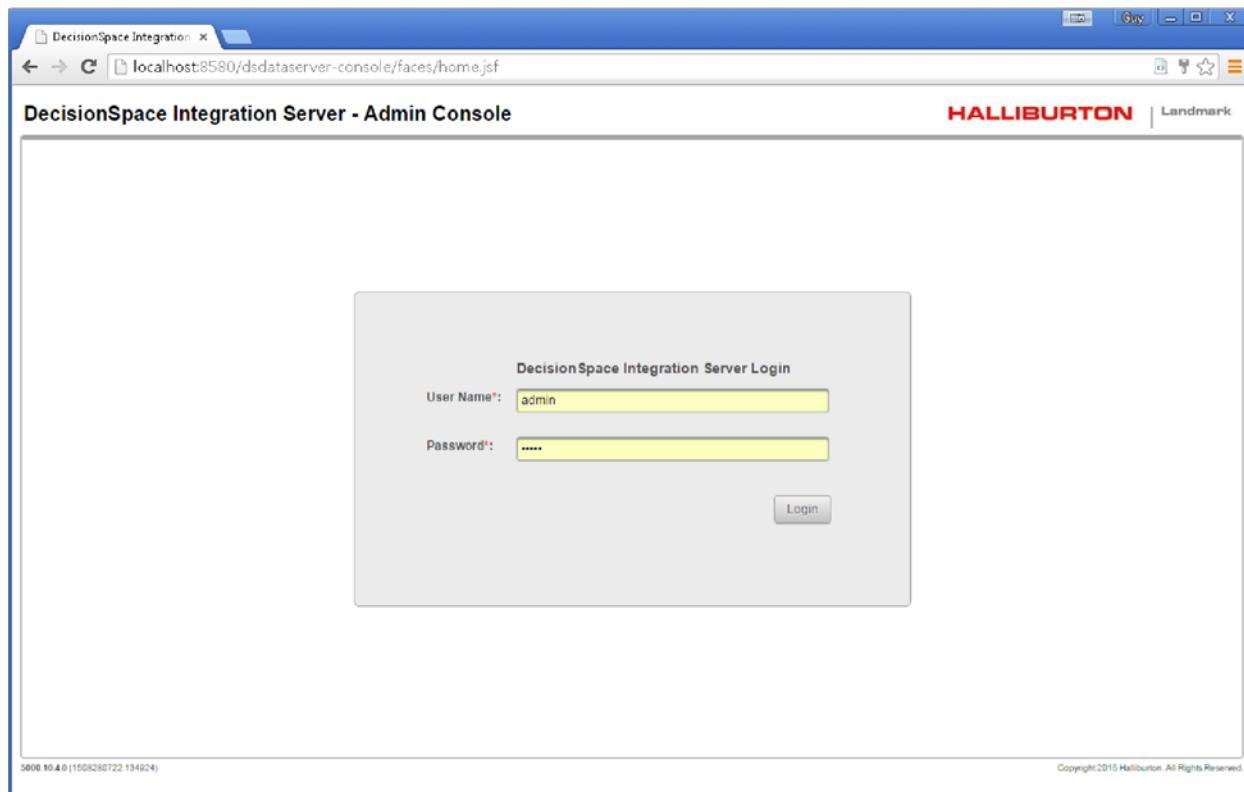
- a) Enter the following URL in a browser:
<http://<<Server-IPAddress:8580>/dsdataserver-console>

Note

Depending on your corporate network configuration, you may need to add the Integration Server hostname to the Windows Control Panel > Internet Options > Security > Local Intranet > Sites section. Adding the DSIS server will avoid a double-login prompt where the first prompt is a built-in browser dialog box and the second is the expected Admin Console login web page.

2. Login using the default administrative user name and password:

User name: admin
Password: admin



3. After login, verify that the DSIS Admin Console is accessible via web browser as shown:

The screenshot shows a web browser window for the DecisionSpace Integration Server Admin Console. The URL in the address bar is `localhost:8580/dsdataserver-console/faces/home.jsf`. The page title is "DecisionSpace Integration Server - Admin Console". On the left, there is a large "DecisionSpace" logo with a globe graphic. The top navigation bar includes links for Home, Plugins, Security, Ports, and Status, along with a "Welcome admin! Log Out" message. The main content area has two sections: "Congratulations!" and "Ports". The "Congratulations!" section informs the user that they have successfully installed DecisionSpace Integration Server and lists several pre-installed plugins. The "Ports" section displays a table of socket binding names and their corresponding ports.

Name	Version	Access Links
No records found.		

Socket Binding Name	Port	Details
http	8580	
https	8443	
management-http	9990	
management-native	9999	

Configure SSL in the Integration Server

Note

Perform the steps in this section to configure the Integration Server to use HTTPS protocol.

By default, the Integration Server will communicate using the HTTP protocol. If this is sufficient for your particular deployment, skip the following sections.

In general, you have **two options** to setup SSL/HTTPS support for your server:

- Using the pure Java implementation supplied by JSSE
- The native implementation based on OpenSSL

In both cases, you have to configure keys and (self-signed) certificates for your web server. This guide will briefly explain how to accomplish that for both options. The instructions are the same on Windows and Linux.

Note

If you wish to use SSL certificates signed by a recognized certificate authority, please refer to the directions provided by that certificate authority to generate an SSL certificate.

Option # 1: Pure Java SSL-Setup Using Keytool

Generate a secret key/certificate and store it in a file called a “key store”. The certificate is valid for 30 years (= 10,950 days). The password used for encryption is **secret**.

One important issue is the common name (CN) of the certificate. For some reason, this is referred to as "first and last name". However, it should match the name of the web server, or some browsers like Internet Explorer will claim the certificate to be invalid although you may have accepted it already.

Step 1: Generate Key

```
$ keytool -genkey -alias foo -keyalg RSA -keystore
foo.keystore -validity
10950
Enter keystore password: secret
Re-enter new password: secret
What is your first and last name?
[Unknown]: foo.acme.com
What is the name of your organizational unit?
[Unknown]: Foo
What is the name of your organization?
[Unknown]: acme corp
What is the name of your City or Locality?
[Unknown]: Duckburg
What is the name of your State or Province?
[Unknown]: Duckburg
What is the two-letter country code for this unit?
[Unknown]: WD
Is CN=foo.acme.com, OU=Foo, O=acme corp, L=Duckburg,
ST=Duckburg, C=WD correct? [no]: yes
```

```
Enter key password for <deva> secret
(RETURN if same as keystore password): Re-enter new
password: secret
```

Step 2: Configure JBoss (standalone-dsds.xml)

```
<subsystem xmlns="urn:jboss:domain:web:1.1" default-
virtual-server="default-host" native="false">
    <connector name="http" protocol="HTTP/1.1"
scheme="http" socketbinding="http" redirect-port="443" />
    <connector name="https" scheme="https" protocol="HTTP/
1.1" socketbinding="https" enable-lookups="false"
secure="true">
        <ssl name="foo-ssl" password="secret"
protocol="TLSv1" key-alias="foo" certificate-key-
file="..../standalone/configuration/foo.keystore" />   </
connector>  ...
</subsystem>
```

Note

In certain deployment cases, continued HTTP access on port 8080 may not be desired. In general, external DSIS port access should be controlled via reverse-proxy or firewall. However, if HTTP must be disabled in DSIS itself, remove the connector line for HTTP above.

Option # 2: Native SSL-Setup Using OpenSSL

Again, you will generate a private key and a self-signed certificate. Additionally, you can also export the certificate to a pkcs12 format file.

Note for Windows

You can import it into Windows certificate storage if you have problems with Internet Explorer.

Step 1: Generate Key

```
$ openssl genrsa -des3 -out foo.pem 1024
Generating RSA private key, 1024 bit long modulus
.....+++++
.....+++++
++ e is 65537 (0x10001)
Enter pass phrase for foo.pem: secret
Verifying - Enter pass phrase for foo.pem: secret
```

Step 2: Generate Certificate

```
$ openssl req -new -x509 -key foo.pem -out foo-cert.pem -
days 10950
Enter pass phrase for foo.pem: secret
You are about to be asked to enter information that will
be incorporated into your certificate request.
What you are about to enter is what is called a
Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value, If you
enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:WD
State or Province Name (full name) [Some-State]:Duckburg
Locality Name (eg, city) []:Duckburg
Organization Name (eg, company) [Internet Widgits Pty
Ltd]:Acme Corp
Organizational Unit Name (eg, section) []:Foo
Common Name (eg, YOUR name) []:foo.acme.com
Email Address []:
```

Step 3: Generate PKCS12 File (Optional)

```
$ openssl pkcs12 -export -in foo-cert.pem -inkey foo.pem
-out foo.p12
Enter pass phrase for foo.pem: secret
Enter Export Password: secret
Verifying - Enter Export Password: secret
```

Step 4: Configure JBoss (standalone-dsds.xml)

```
<subsystem xmlns="urn:jboss:domain:web:1.1" default-
virtual-server="default-host" native="true">
    <connector name="http" protocol="HTTP/1.1"
scheme="http" socket-binding="http" redirect-port="443" />

    <connector name="https" scheme="https" protocol="HTTP/
1.1" socket-binding="https" enable-lookups="false"
secure="true">
        <ssl name="foo-ssl" password="secret" certificate-
keyfile="../standalone/configuration/foo.pem"
certificatefile="../standalone/configuration/foo-
cert.pem"/>
    </connector>    ...

```

Note

In certain deployment cases, continued HTTP access on port 8080 may not be desired. In general, external DSIS port access should be controlled via reverse-proxy or firewall. However, if HTTP must be disabled in DSIS itself, remove the connector line for HTTP above.

JBoss Port Configuration

Both approaches above assume that you have configured JBoss to use the default ports 8080 (HTTP) and 8443 (HTTPS).

```
<socket-binding-group name="standard-sockets" default-
interface="public" ...>
    <socket-binding name="http" port="8080" /> <socket-
binding name="https" port="8443" />
    ...
</socket-binding-group>
```

Note

In certain deployment cases, continued HTTP access on port 8080 may not be desired. In general, external DSIS port access should be controlled via reverse-proxy or firewall. However, if HTTP must be disabled in DSIS itself, remove the connector line for HTTP above.

Configure Web Browser Settings

When accessing the Integration Server or the Admin Console directly through a browser, users need to configure their web browser so that they do not see Certificate Errors or Warnings. Each browser may have a different way of accepting the certificate. Import the certificate to the trusted root authority.

In Internet Explorer you can do this by accessing the Data Server or Admin Console, and right-clicking the Certificate Error at the top-right. Import the certificate to Trusted Root Certificate Authority. Use manual steps on the Import Certificate wizard.

Test Web Browser Access

After configuring the Integration Server for HTTPS, you can access the DSIS Admin Console using the default administrative user account.

1. Launch the Admin Console

- a) In a browser, enter the following URL:
`https://<<Server-IPAddress:8443>/dsdataserver-console`

Note

If using a self-signed SSL certificate, your web browser may show a warning screen. Process past the warning to view the DSIS Admin Console login page.

2. Login using the default administrative user name and password:

User name: admin
Password: admin

Directory Structure

The Data Server directories are created in the <DS Data Server Home> folder. The following table shows the default location if it is not otherwise specified during installation.

Operating System	Location
Windows	C:\Landmark\DSIntegrationServer5000.10.4.0
Linux	/apps/lgc/R5000/DSIntegrationServer5000.10.4.0

The Data Server has the following directory structure after installation. For example:

C:\Landmark\DSIntegrationServer5000.10.4.0\ApplicationServer.

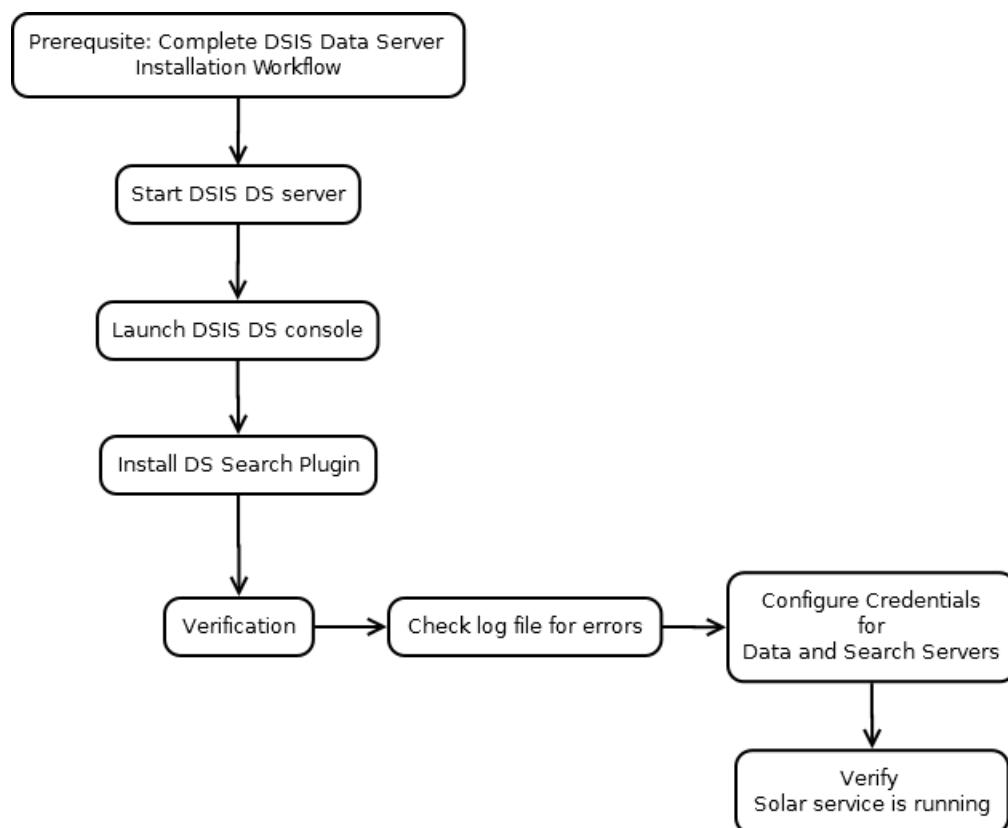
Folders	Description
<DS Data Server Home>	Root directory for Data Server
ApplicationServer	JBOSS tools for DSDS and all its configurations
jre	Java Runtime Environment to run JBOSS
jre1.8.0_40	Java Runtime Environment
plugins	Plugins that are added to the Data Server
repository	Plugin repository that can be added to the DSIS Data Server
Uninstall	Contains Data Server uninstaller

DecisionSpace Search Installation

DecisionSpace Search consists of a suite of technologies that help deliver enterprise search for the DecisionSpace platform.

DecisionSpace Search provides a crawler tool that automatically crawls all defined data sources within the DecisionSpace Data Server and indexes them into the search engine.

Installation Workflow



System Requirements

Your machine must meet the following requirements for the installation of the DecisionSpace Search 5000.10.4 release:

DecisionSpace Search	
Resource	System Requirements
Operating System	<ul style="list-style-type: none"> Windows Server 2008 R2 Windows 7 x64 RHEL AS 6 (Primary) Ensure the installation directory has at least 1 GB of free space to install the DecisionSpace Search plugin
DecisionSpace Data Server 5000.10.4	<ul style="list-style-type: none"> VDBS are deployed and active
Third-Party Software (packaged with DS Search)	<ul style="list-style-type: none"> Apache Solr 4.6. JBoss Enterprise Application Platform (EAP) ver. 6.0.1 Alpha 1

Installation Process

DecisionSpace Search is provided as a plugin to DecisionSpace Data Server that is installed during the data server installation. The plugin must be deployed in the Data Server console.

1. Ensure that the DecisionSpace Data Server service is running. Launch the DecisionSpace Data Server Console by selecting **Start > All Programs > Landmark > DecisionSpace Integration Server 5000.10.4.0 > Start DecisionSpace Data Server Console**.
2. Log on using the default administrative user name and password:

User Name	dsdsadmin
Password	dsdsadmin

3. Select the **Plugins** tab. Click the **Available** button in the Show Plugins group if it is not already selected.

The screenshot shows a web browser window titled "DecisionSpace Integration 5" with the URL "localhost:8580/dsdataserver-console/faces/plugins.jsf". At the top left, there is a "Show Plugins" dropdown with two options: "Installed" (which is checked) and "Available". Below the dropdown is a table with columns: Name, Summary, Installed, and Available. The table lists various plugins, each with a small icon and a brief description. The "Available" column contains the version number "5000.10.4.0" for all listed plugins. At the bottom of the table is a large "Install/Upgrade" button.

	Name	Summary	Installed	Available
<input type="checkbox"/>	Business Process Management	A comprehensive platform for workflow management available on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	CDS Connector	Connects to CDS data sources via Powerhub.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Code Examples	Browse data models and sample code for building apps on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Data Quality	Measure and improve the quality of data on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Data Service	Access data sources on DS Integration Server via OData, JDBC, and ODBC.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Data Transfer	Configure and execute data transfer workflows for data from DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	EDM Connector	Connects to Engineer's Data Model (EDM) 5000.8.3 and 5000.10.0 data sources on both Oracle and SQL Server.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Geolog Connector	Connects to Geolog data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	InSite Connector	Connects to InSite data sources (5000.9.2 and 5000.9.4).	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Messaging	Accepts and distributes data change notifications from data sources to consumers.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	OPC DA Connector	Connects to OPC Data Access data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	OPC HDA Connector	Connects to OPC Historical Data Access data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	OpenWorks Connector	Connects to OpenWorks 5000.8.3, 5000.10.1, and 5000.10.3 data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Petrel Connector	Connects to Petrel data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Recall Connector	Connects to Recall data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Search	Search crawler for fast enterprise search of corporate data and documents available on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0

4. Check the plugin details by clicking the arrow icon adjacent to the **Search** plugin name.

This screenshot is similar to the one above, showing the "plugins.jsf" page. The "Available" checkbox is selected. The "Search" plugin row is highlighted with a gray background. To the right of the table, there is a detailed description of the "Search" component, which includes information about its major features and requirements. At the bottom of the page, there is a "Install/Upgrade" button.

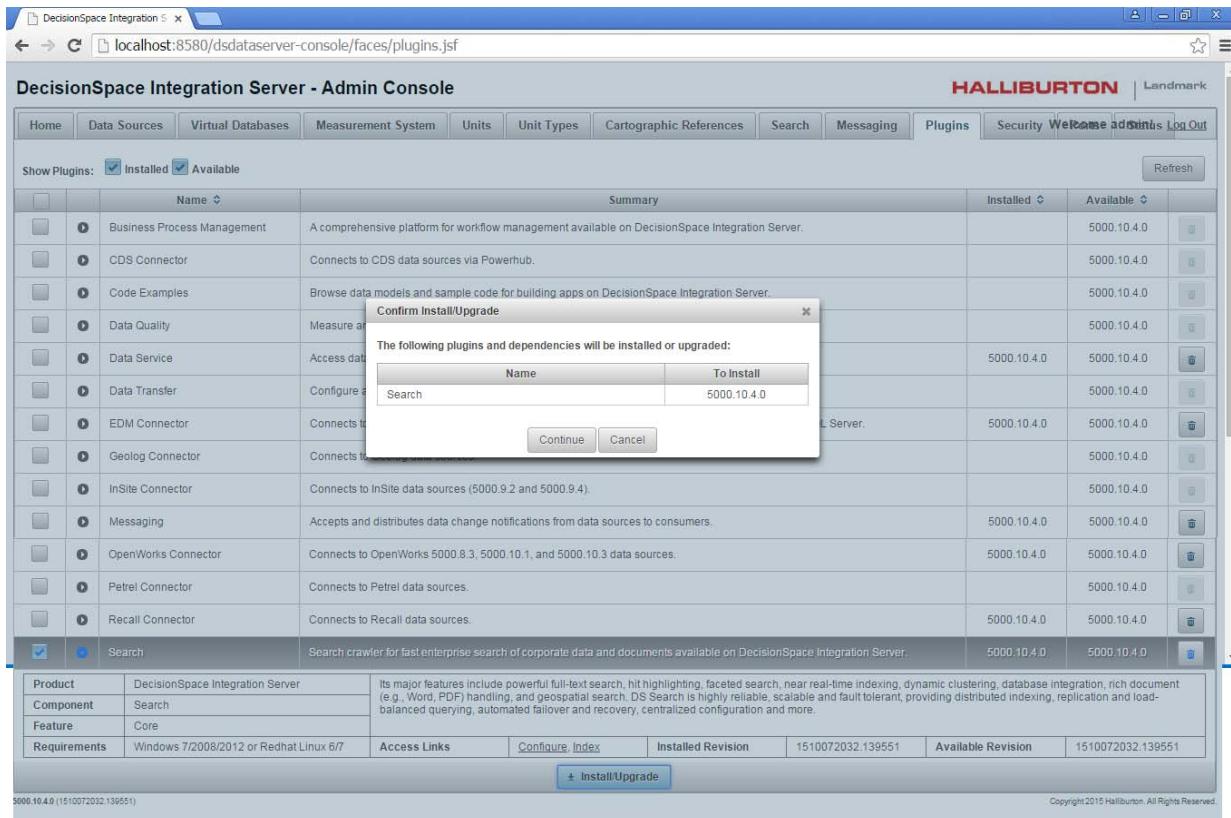
	Name	Summary	Installed	Available
<input type="checkbox"/>	Business Process Management	A comprehensive platform for workflow management available on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	CDS Connector	Connects to CDS data sources via Powerhub.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	OPC HDA Connector	Connects to OPC Historical Data Access data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	OpenWorks Connector	Connects to OpenWorks 5000.8.3, 5000.10.1, and 5000.10.3 data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Petrel Connector	Connects to Petrel data sources.	5000.10.4.0	5000.10.4.0
<input type="checkbox"/>	Recall Connector	Connects to Recall data sources.	5000.10.4.0	5000.10.4.0
<input checked="" type="checkbox"/>	Search	Search crawler for fast enterprise search of corporate data and documents available on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0

Product: DecisionSpace Integration Server
Component: Search
Feature: Core
Requirements: Windows 7/2008/2012 or Redhat Linux 6/7

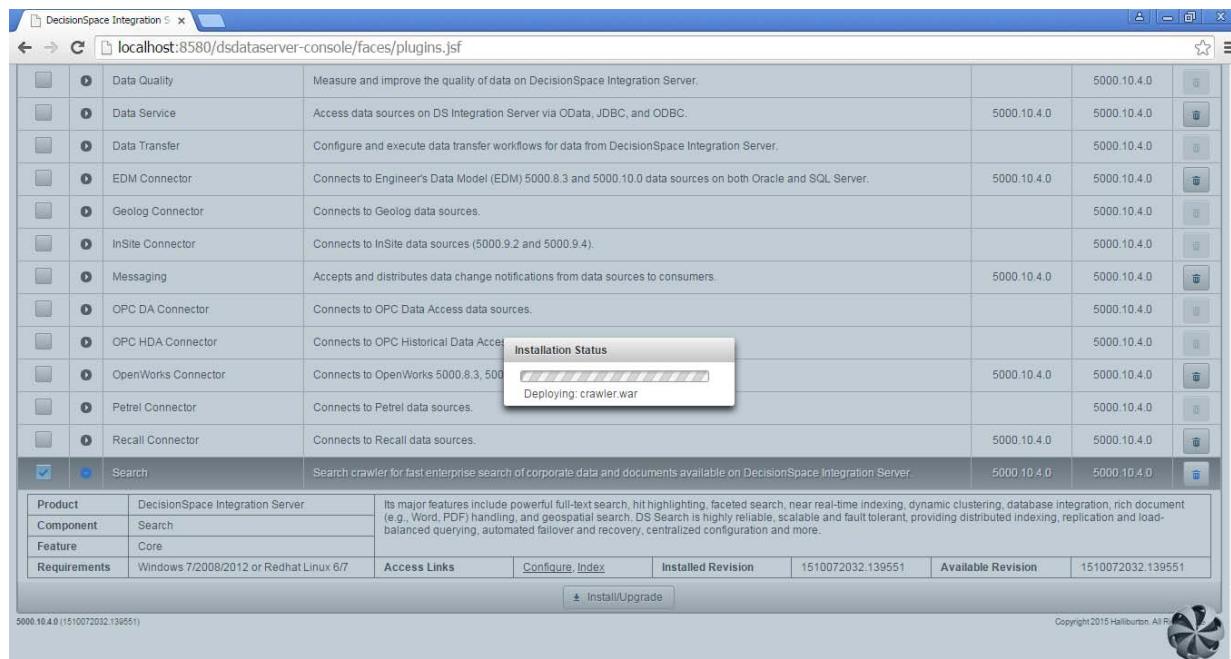
5000.10.4.0 (1510072032.139551) Copyright 2015 Halliburton. All Rights Reserved.

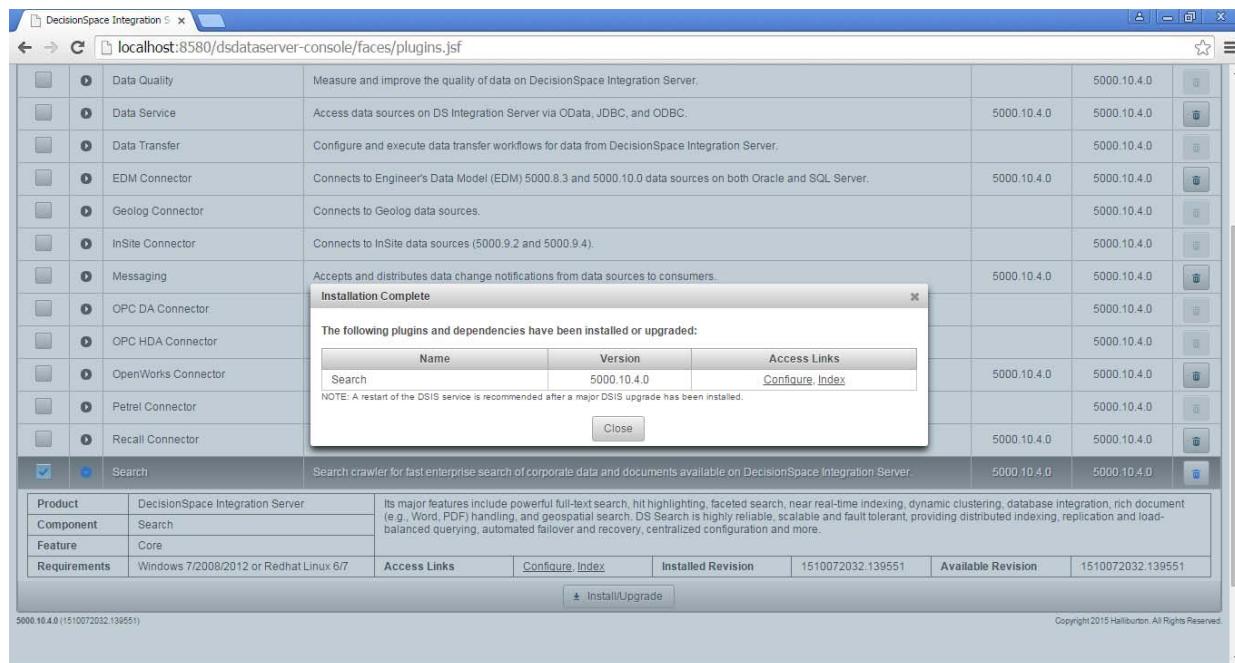
5. Select the check box for the **Search** plugin, and then click **Install/Upgrade**.

6. The Confirm Install/Upgrade dialog box displays. Click **Continue**.



7. After the Search plugin is installed, the Installation Complete dialog box displays. Click **Close**.





8. To verify that there were no errors during the installation of the plugin, open
C:\Landmark\DSIntegrationServer5000.10.4.0\ApplicationServer\standalone\log\server.log.

Directory Structure

The Search directories are created in the <DS Search Home> sub folder of the <DS Data Server Home> folder. The following table shows the default location if it is not otherwise specified during installation.

Operating System	Location
Windows	C:\Landmark\DSIntegrationServer5000.10.4.0\ApplicationServer\data\ds-search
Linux	/opt/DSDDataServer5000.10.4.0/ApplicationServer/data/ds-search

Search has the following directory structure after installation. For example:

C:\Landmark\DSIntegrationServer5000.10.4.0\ApplicationServer\data\ds-search

Folders	Description
Search_Home	Root directory for Search
solr	Solr-4.6.0 open source enterprise search platform and its configurations
crawler	The crawler tool that extracts data from configured data sources within the Data Server and feeds it to the search engine for indexing and storage
databases	Contains the indexed databases from crawler

Installation Verification

Use the steps below to verify that the Solr Search Service is running.

1. In a web browser navigate to the URL of the Solr service:
<http://localhost:8580/solr>.
2. A dialog box appears for credentials. Login with the credentials:

Username	admin
Password	admin

Note:

You can login with any user that has the dssearch-admin-role.

The Solr Admin screen displays.

The screenshot shows the Apache Solr Admin interface at localhost:8580/solr/#/. The dashboard includes sections for Instance (Start 2 days ago), Versions (solr-spec 4.6.0, solr-impl 4.6.0 1543363 - simon - 2013-11-19 11:16:33, lucene-spec 4.6.0, lucene-impl 4.6.0 1543363 - simon - 2013-11-19 11:05:50), System (Physical Memory 92.5% 29.61 GB / 32.00 GB, Swap Space 94.7% 41.67 GB / 44.00 GB), and JVM (Runtime Oracle Corporation Java HotSpot(TM) 64-Bit Server VM (1.7.0_80 24.80-b11), Processors 4, Args: -Dlogging.configuration=file:C:\Landmark\DSIntegrationServer5000.10.4.0\A... -Dorg.jboss.boot.log.file=C:\Landmark\DSIntegrationServer5000.10.4.0\Aplic... -Djboss.server.default.config=standalone.xml -Dfile.encoding=UTF-8 -Djboss.modules.system.pkgs=org.jboss.byteman -Dorg.jboss.resolver.warning=true -Dorg.jboss.netty.epollBugWorkaround=true -Dorg.apache.el.parser.COERCE_TO_ZERO=false -Djava.net.preferIPv4Stack=true -Dsun.rmi.dgc.server.gcInterval=3600000 -Dsun.rmi.dgc.client.gcInterval=3600000 -XKMaxPermSize=512M -Xmx4096M -Xms1024M).

3. Select ds from the Core Selector list (ds is the default value of the solr_core variable in the crawl.props file).

4. When the ds Overview screen displays, verify that the value in the **Num Docs** field in the Statistics group is zero.

The screenshot shows the Apache Solr Admin interface for a system named 'ds'. The left sidebar has a dropdown menu set to 'ds' which is expanded to show:

- Overview (selected)
- Analysis
- Config
- Dataimport
- Documents
- Ping
- Plugins / Stats
- Query
- Replication
- Schema
- Schema Browser

The main content area displays several tabs:

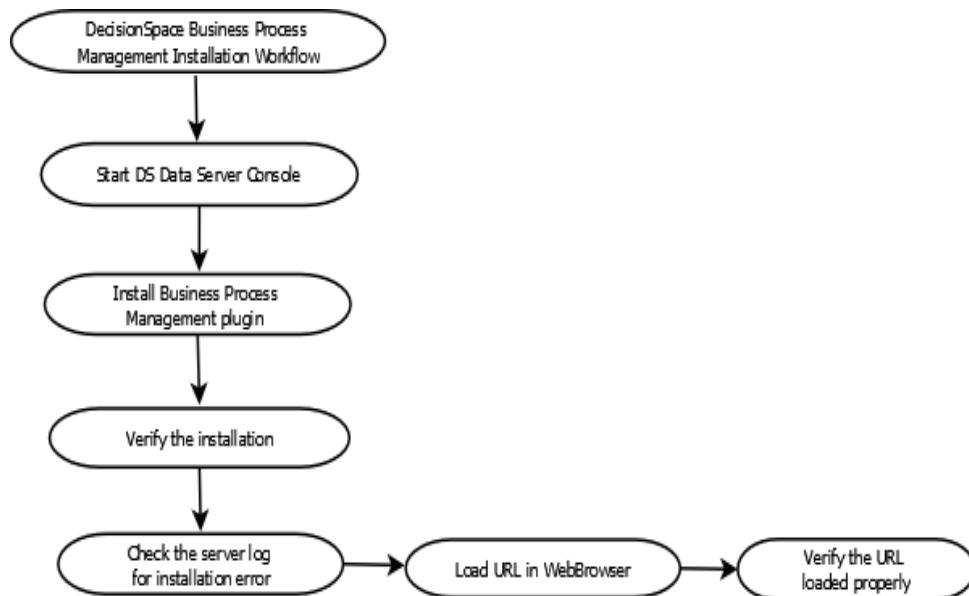
- Statistics**: Shows metrics like Last Modified, Num Docs (0), Max Doc (0), Heap Memory (0), Usage, Deleted Docs (0), Version (1), Segment Count (0), Optimized (✓), and Current (✓).
- Instance**: Displays paths for CWD, Instance, Data, and Index, along with the implementation class: org.apache.solr.core.NRTCachingDirectoryFactory.
- Replication (Master)**: Shows a table with two rows: Master (Searching) and Master (Replicable). The first row has Version 0, Gen 1, and Size 65 bytes.
- Healthcheck**: A note stating 'Ping request handler is not configured with a healthcheck file.'
- Admin Extra**: A section with a '+' icon.

At the bottom of the page are links to Documentation, Issue Tracker, IRC Channel, Community forum, and Solr Query Syntax.

DecisionSpace Business Process Management Installation

BPM allows the orchestration of Business Processes. This involves designing business processes using the BPM repository and executing business processes using the BPM engine. Designing Business Processes is a design-time activity; whereas, executing them is a runtime activity.

Installation Workflow



System Requirements

Your system must meet the following requirements for installing BPM 5000.10.4.

DecisionSpace Business Process Management	
Resource	System Requirements
Operating System	<ul style="list-style-type: none"> Windows Server 2008 R2 Windows 7 x64 RHEL 5 and 6

DecisionSpace Business Process Management	
Browser Compatibility	<ul style="list-style-type: none"> Internet Explorer 9+ for all operations except the Process Definition in BPM-Repo (Guvnor) Google Chrome (29.0+) or Mozilla Firefox (24.0+) to open, create, or edit the process definition in BPM-Repo (Guvnor)
Minimum System Requirements	<ul style="list-style-type: none"> CPU: Dual-core processor Physical memory - 8 GB Hard-disk memory - 60 GB

Other Prerequisites

- The user account for installation should have administrator privileges.
- Uninstall any previous version of DSBPM on the machine.
- Ensure you do not have a JBOSS_HOME environment variable set, or point to any version JBOSS in your path.
- By default, the DSBPM plugin uses port 8080 for HTTP. If you wish to install on some other port, make sure that the port is not consumed by any other process when you install the Integration Server.

Installation Process

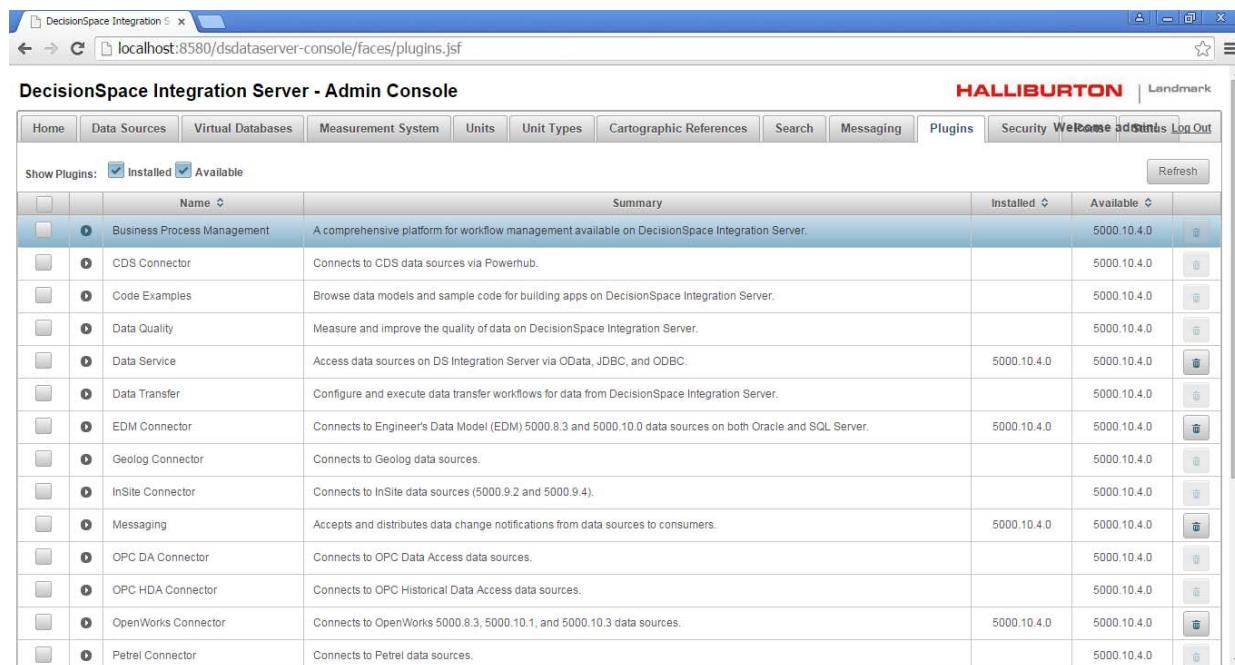
DecisionSpace BPM is provided as a plugin to DecisionSpace Data Server that is installed during the data server installation. The plugin must be deployed in the Data Server console.

1. Ensure that the DecisionSpace Data Server service is running. Launch the DecisionSpace Data Server Console by selecting **Start > All Programs > Landmark > DecisionSpace Data Server 5000.10.4.0 > Start DecisionSpace Data Server Console**.

2. Log on using the default administrative user name and password:

Username	dldsadmin
Password	dldsadmin

3. Select the **Plugins** tab. Select the **Available** option in the Show Plugins group if it is not already selected.



The screenshot shows the 'DecisionSpace Integration Server - Admin Console' interface. At the top, there's a navigation bar with links like Home, Data Sources, Virtual Databases, Measurement System, Units, Unit Types, Cartographic References, Search, Messaging, Plugins, Security, and Log Out. The 'Plugins' link is highlighted. In the center, there's a table titled 'Summary' showing various plugins. The first column has checkboxes, the second has plugin names, and the third has descriptions. The last two columns show 'Installed' and 'Available' versions. A filter at the top left says 'Show Plugins: Installed Available'. The 'Available' checkbox is checked. The table includes entries for Business Process Management, CDS Connector, Code Examples, Data Quality, Data Service, Data Transfer, EDM Connector, Geolog Connector, InSite Connector, Messaging, OPC DA Connector, OPC HDA Connector, OpenWorks Connector, and Petrel Connector. Each entry shows its version number (e.g., 5000.10.4.0) and a trash icon for deletion.

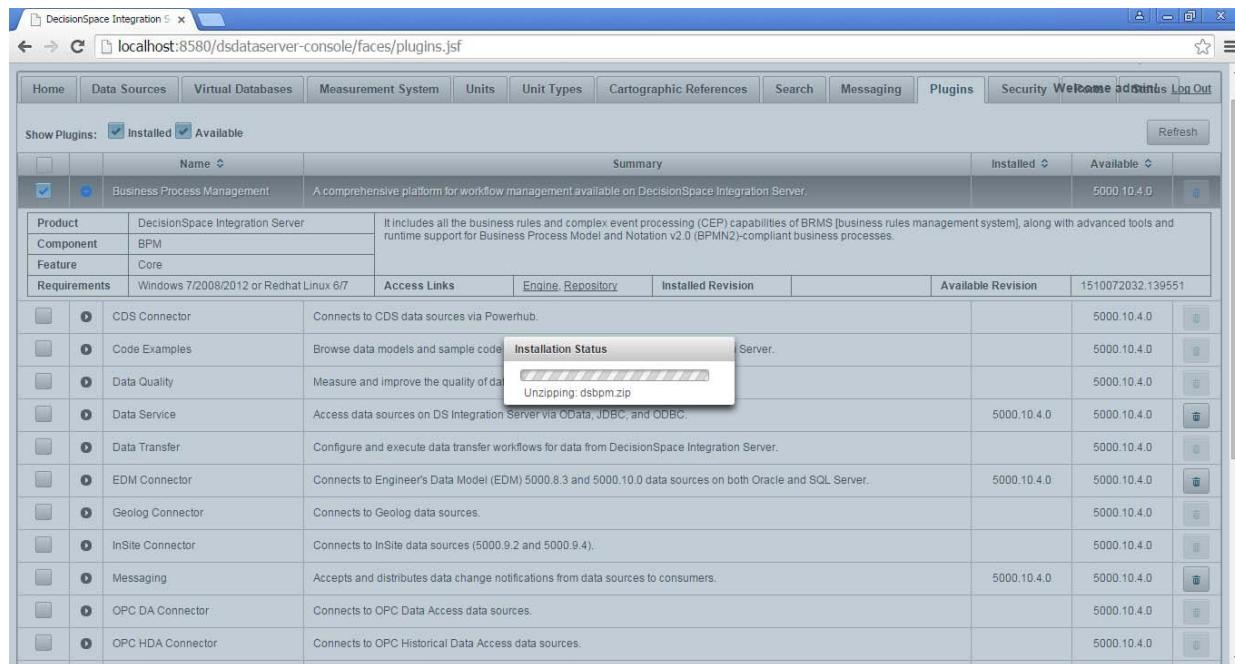
4. Check the plugin details by clicking the arrow icon adjacent to the **Business Process Management** plugin name.

The screenshot shows the 'Plugins' section of the Admin Console. The 'Business Process Management' plugin is selected, indicated by a blue circle next to its name. A summary table for this plugin is displayed, showing its product (DecisionSpace Integration Server), component (BPM), feature (Core), and requirements (Windows 7/2008/2012 or Redhat Linux 6/7). Below the summary is a table listing various connectors and their details, such as CDS Connector, Code Examples, Data Quality, etc., along with their installed and available revisions.

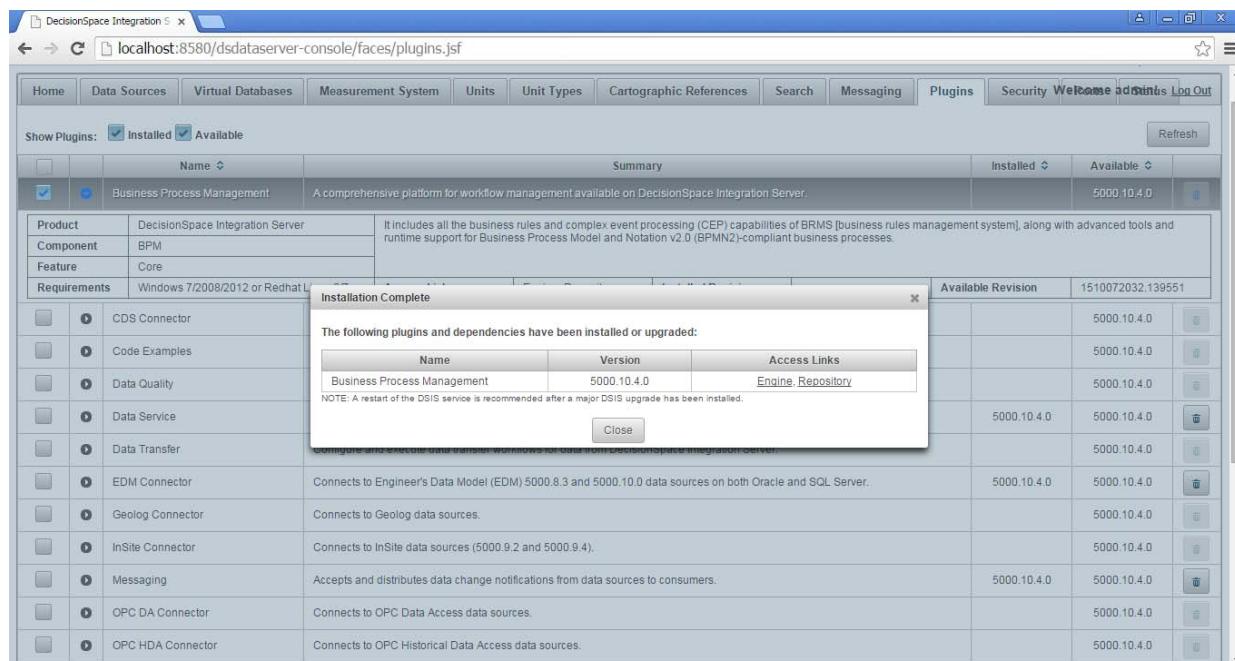
5. Select the **Business Process Management** plugin by selecting the check box, and then click **Install/Upgrade**.

The screenshot shows the same Admin Console interface as before, but with a 'Confirm Install/Upgrade' dialog box overlaid. The dialog lists the plugin and its dependencies that will be installed or upgraded. It includes a table with columns 'Name' and 'To Install', showing 'Business Process Management' with revision '5000.10.4.0'. At the bottom of the dialog are 'Continue' and 'Cancel' buttons.

6. The Confirm Install/Upgrade dialog box displays. Click **Continue**.



7. After the BPM plugin is installed, the Installation Complete dialog box displays. Click **Close**.



- To verify that there were no errors during the installation of the plugin, open **C:\Landmark\DSIntegrationServer5000.10.4.0\ApplicationServer\standalone\log\server.log**.

Post-Installation Procedure

No post installation steps are required for DecisionSpace BPM 5000.10.4.

Directory Structure

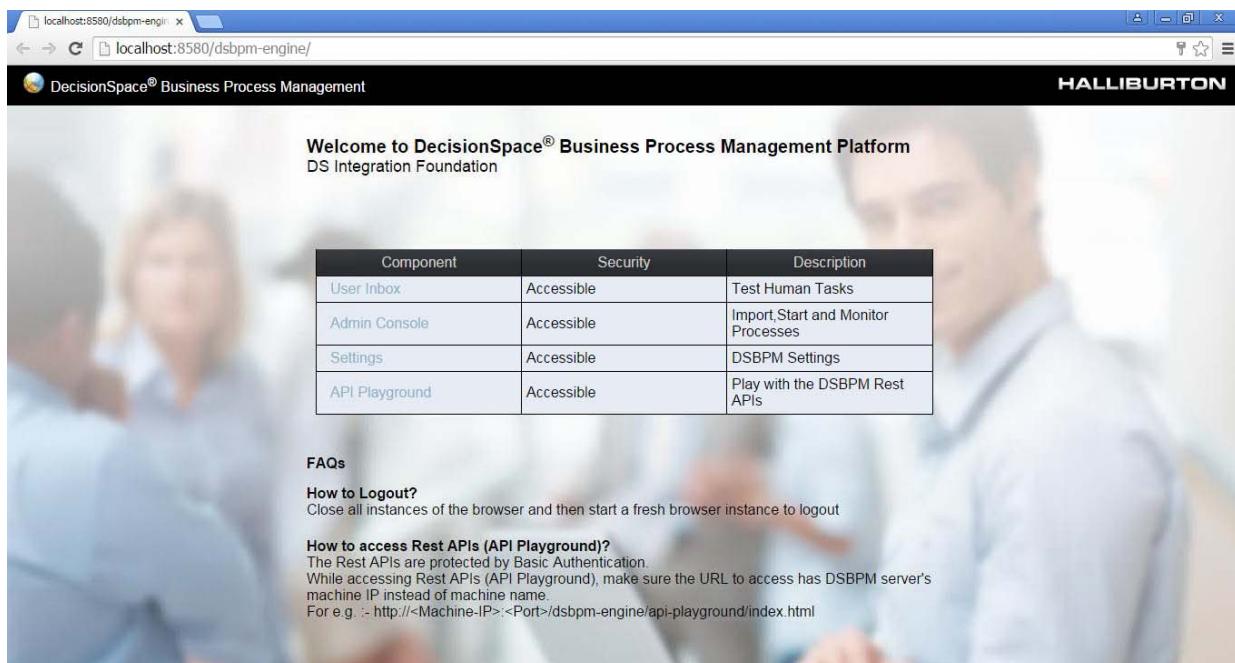
The BPM directories are created in the <DS BPM HOME> sub folder of the <DS Data Server Home> folder. The following table shows the default location if it is not otherwise specified during installation.

Operating System	Location
Windows	C:\Landmark\DSIntegrationServer5000.1 0.4.0\ApplicationServer\data\ds-bpm

Installation Verification

1. In a web browser navigate to the URL of the DS BPM Engine service: <http://localhost:8580/dsbpm-engine>.
2. A dialog box appears for credentials. Login with the credentials:

Username	admin
Password	admin

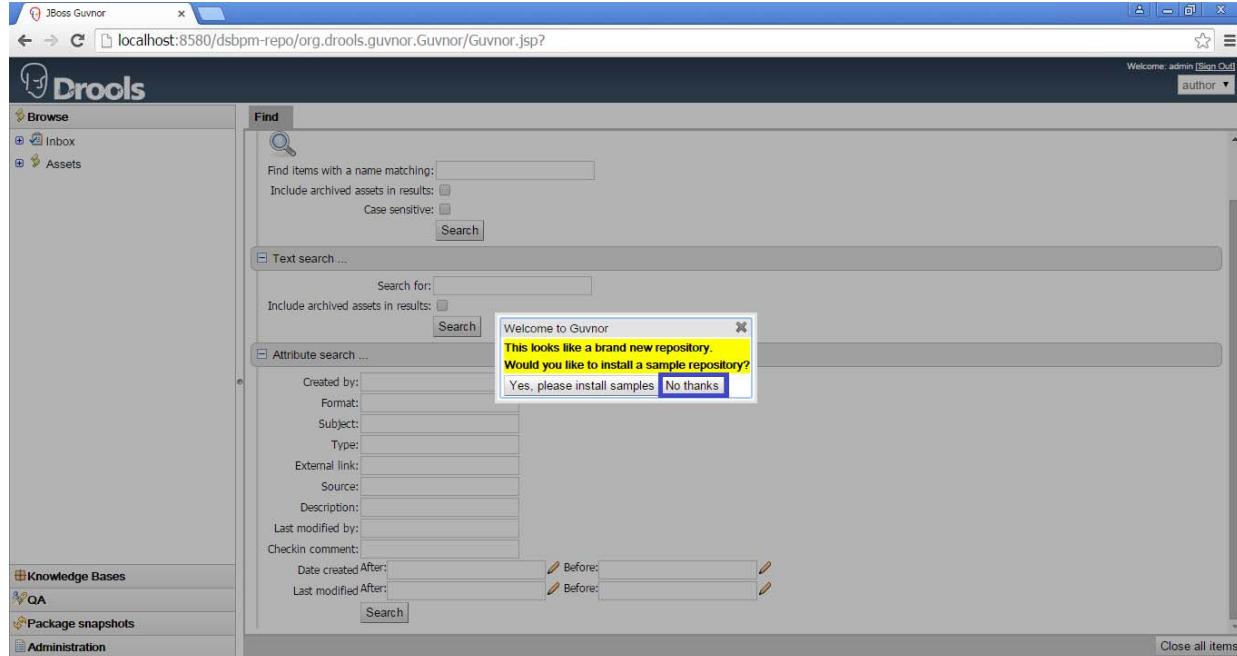


BPM Repo Installation

1. To check the BPM Repo installation, enter the following in a browser:

[http://localhost:8580/dsbpm-repo.](http://localhost:8580/dsbpm-repo)

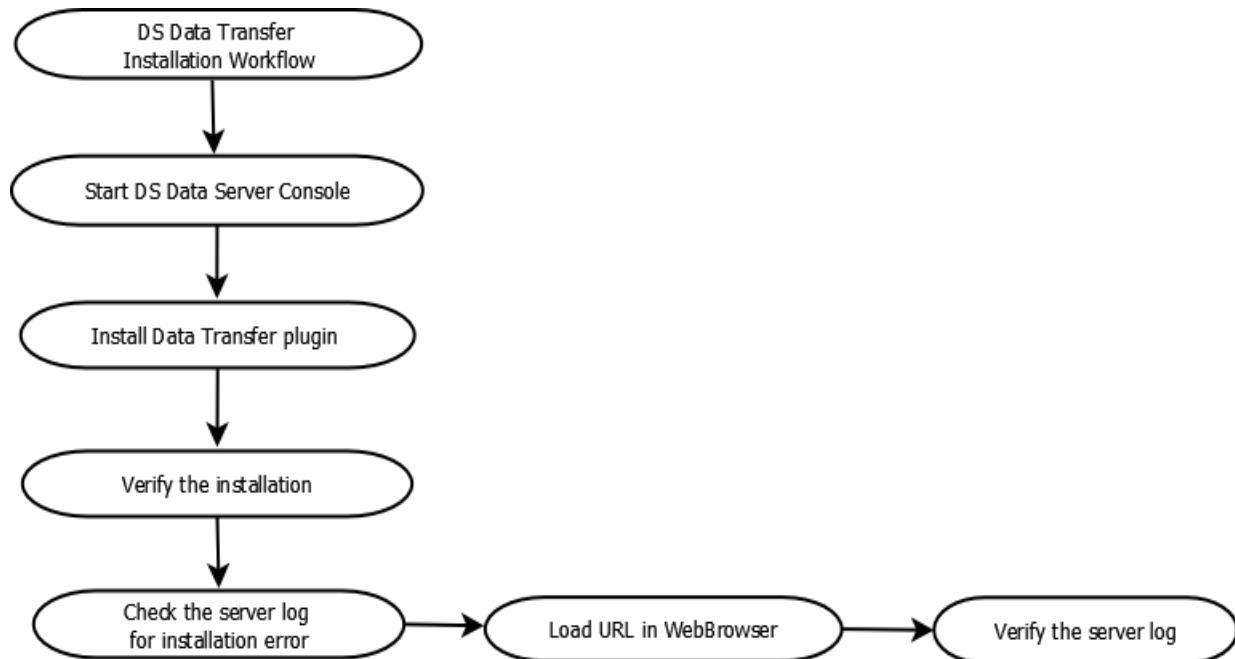
When asked to install the sample repository, select **No**. We will install sample data manually later on.



DecisionSpace Data Transfer Installation

DecisionSpace Data Transfer is a web service interface that is used to initiate, track, and transfer data between supported DSIS (DecisionSpace Integration Server) data sources. DSIS receives calls from client applications (DSIS-Web Framework, PowerExplorer, etc.) and evokes a Kettle exchange solution to complete the data transfer.

Installation Workflow



System Requirements

Your system must meet the following requirements for installing Data Transfer 5000.10.4:

DecisionSpace Data Transfer	
Resource	System Requirements
Operating System	<ul style="list-style-type: none"> Windows Server 2008 R2 Windows 7 x64 RHEL 5 and 6
Browser Compatibility	<ul style="list-style-type: none"> Internet Explorer 9+ Google Chrome (29.0+) or Mozilla Firefox (24.0+)
Minimum System Requirements	<ul style="list-style-type: none"> CPU: Dual-core processor Physical memory - 8 GB Hard-disk memory - 60 GB

Other Prerequisites

- The user account for installation should have administrator privileges.
- Uninstall any previous version of Data Transfer installation on the machine.
- Ensure you do not have a JBOSS_HOME environment variable set, or point to any version JBOSS in your PATH.

Installation Process

DecisionSpace Data Transfer is provided as a plugin to DecisionSpace Data Server that is installed during the data server installation. The plugin must be deployed in the Data Server console.

1. Ensure that the DecisionSpace Data Server service is running. Launch the DecisionSpace Data Server console by selecting **Start > All Programs > Landmark > DecisionSpace Data Server 5000.10.4.0 > Start DecisionSpace Data Server Console**.

2. Log on using the default administrative user name and password:

Username	dldsadmin
Password	dldsadmin

3. Select the **Plugins** tab. Select the **Available** option in the Show Plugins group, if it is not already selected.

Name	Summary	Installed	Available
Business Process Management	A comprehensive platform for workflow management available on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
CDS Connector	Connects to CDS data sources via Powerhub.	5000.10.4.0	5000.10.4.0
Code Examples	Browse data models and sample code for building apps on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
Data Quality	Measure and improve the quality of data on DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
Data Service	Access data sources on DS Integration Server via OData, JDBC, and ODBC.	5000.10.4.0	5000.10.4.0
Data Transfer	Configure and execute data transfer workflows for data from DecisionSpace Integration Server.	5000.10.4.0	5000.10.4.0
EDM Connector	Connects to Engineer's Data Model (EDM) 5000.8.3 and 5000.10.0 data sources on both Oracle and SQL Server.	5000.10.4.0	5000.10.4.0
Geolog Connector	Connects to Geolog data sources.	5000.10.4.0	5000.10.4.0
InSite Connector	Connects to InSite data sources (5000.9.2 and 5000.9.4).	5000.10.4.0	5000.10.4.0
Messaging	Accepts and distributes data change notifications from data sources to consumers.	5000.10.4.0	5000.10.4.0
OPC DA Connector	Connects to OPC Data Access data sources.	5000.10.4.0	5000.10.4.0
OPC HDA Connector	Connects to OPC Historical Data Access data sources.	5000.10.4.0	5000.10.4.0
OpenWorks Connector	Connects to OpenWorks 5000.8.3, 5000.10.1, and 5000.10.3 data sources.	5000.10.4.0	5000.10.4.0
Petrel Connector	Connects to Petrel data sources.	5000.10.4.0	5000.10.4.0

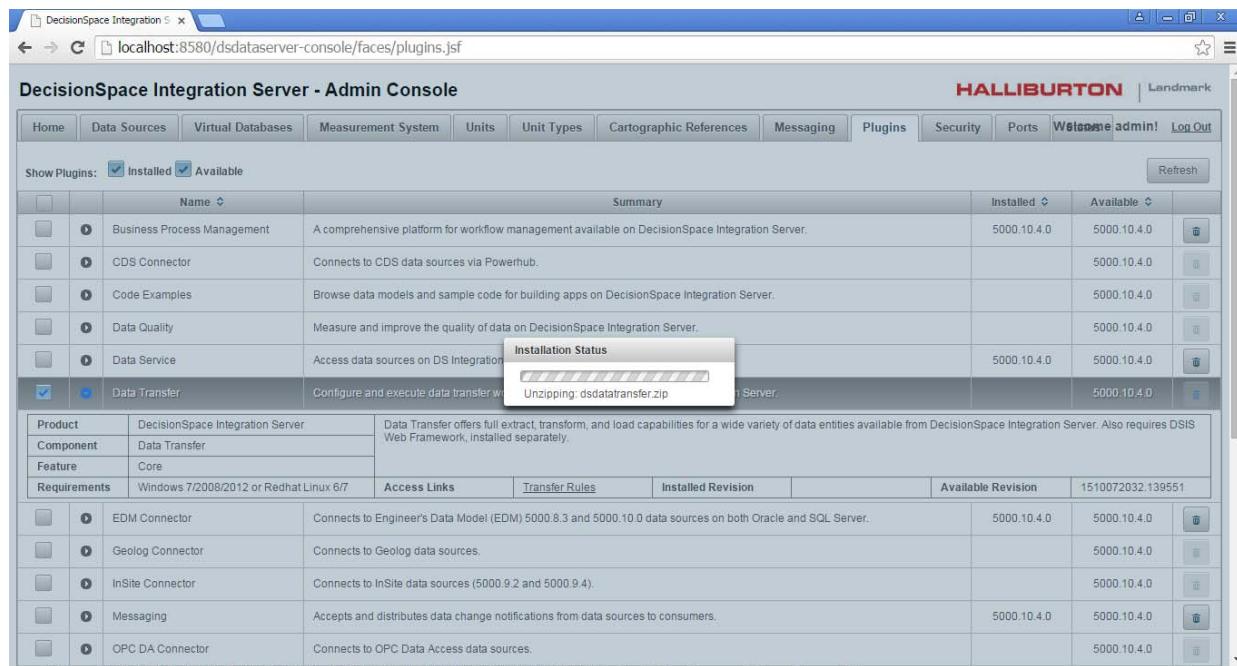
4. Check the plugin details by clicking the arrow icon adjacent to the **Data Transfer** plugin name.

The screenshot shows the 'DecisionSpace Integration Server - Admin Console' interface. The 'Plugins' tab is selected. A table lists various plugins, with 'Data Transfer' checked. The 'Summary' column for Data Transfer states: 'Configure and execute data transfer workflows for data from DecisionSpace Integration Server.' Below the table, a detailed description of the Data Transfer plugin is provided, mentioning it offers full extract, transform, and load capabilities for a wide variety of data entities available from DecisionSpace Integration Server. It also requires DSIS Web Framework, installed separately. The 'Requirements' section specifies Windows 7/2008/2012 or Redhat Linux 6/7.

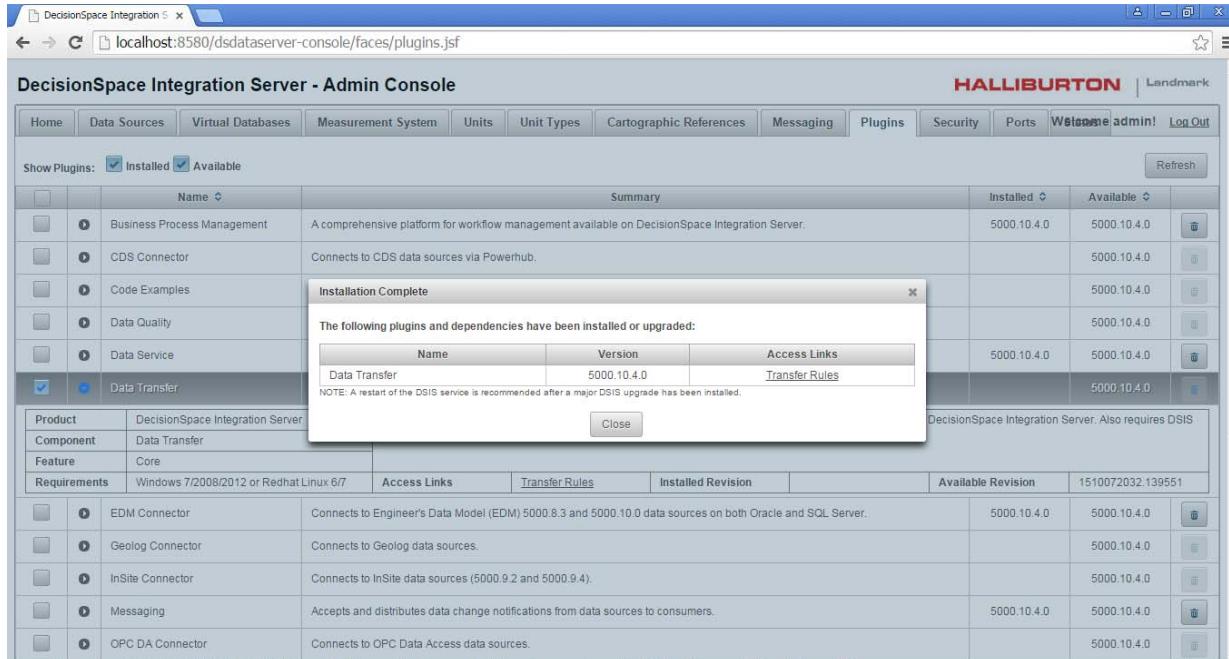
5. Select the **Data Transfer** plugin by selecting its check box, and then click **Install/Upgrade**. The Confirm Install/Upgrade dialog box displays.

The screenshot shows the same 'DecisionSpace Integration Server - Admin Console' interface as the previous one, but with a 'Confirm Install/Upgrade' dialog box overlaid. The dialog box contains the message: 'The following plugins and dependencies will be installed or upgraded:' followed by a table with one row: 'Name' (Data Transfer) and 'To Install' (5000.10.4.0). At the bottom of the dialog are 'Continue' and 'Cancel' buttons.

6. Click Continue.



7. After the Data Transfer plugin is installed, the Installation Complete dialog box displays. Click **Close**.



8. To verify that there were no errors during the installation of the plugin, open
C:\Landmark\DSIntegrationServer5000.10.4.0\ApplicationServer\standalone\log\server.log.

Post-Installation Procedure

No post installation steps are required for DecisionSpace Data Transfer 5000.10.4.

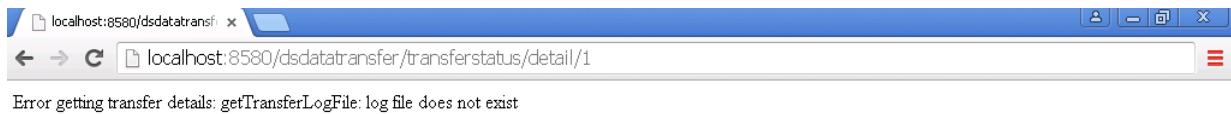
Directory Structure

The Data Transfer directories are created in the <DS Data Transfer HOME> sub-folder of the <DS Data Server Home> folder. The following table shows the default location, if it is not otherwise specified during installation:

Operating System	Location
Windows	C:\Landmark\DSIntegrationServer5000.1 0.4.0\ApplicationServer\data\ds-transfer

Installation Verification

1. In a web browser, navigate to the URL of the DecisionSpace Data Transfer service: <http://localhost:8580/dsdatatransfer/transferstatus/detail/1>.



2. To check the order tracking service installation, enter the following in a web browser:



3. Open the server log file and search for the following:

(C:\Landmark\DSIntegrationServer5000.10.4.0\ApplicationServer\standalone\log\server.log)

- Deployed “dsdatatransfer.war”
- Deployed “order_tracking.war”

DecisionSpace Web Framework Installation

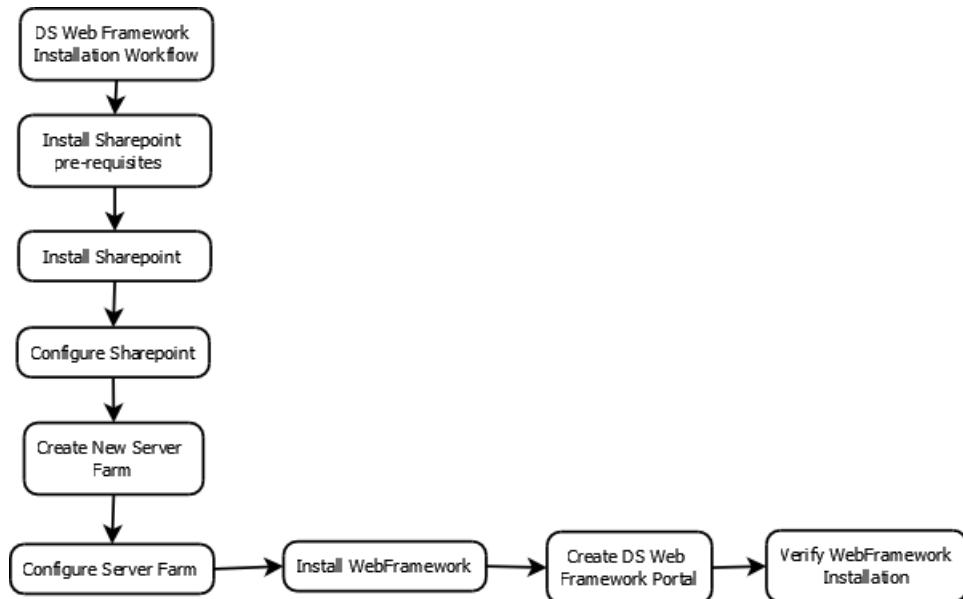
The DecisionSpace Web Framework leverages Microsoft SharePoint infrastructure and provides a hosting environment for developing and running new web-based business applications. These applications support the functionality and framework provided by the DecisionSpace Web Framework and can be independently installed, uninstalled or upgraded.

System Requirements

DecisionSpace Integration Server Web Framework 5000.10.4.0 has the following system requirements:

Environment	Hardware	Software	Notes
Web Framework 2013	<p>64-bit, four core system with:</p> <ul style="list-style-type: none"> • 8 GB RAM for small deployments (fewer than 1,000 users) • 16 GB RAM for medium deployments (between 1,000 and 10,000 users) <p>80 GB of system drive space. Additional storage is necessary for routine operational data storage</p>	<p>Windows Server 2008 R2 (64-bit)</p> <p>Microsoft SharePoint 2013 Foundation, or SharePoint 2013 Enterprise</p> <p>Microsoft .Net 4.5</p> <p>Microsoft SQL Server 2008 R2</p>	<p>Microsoft SQL Server 2008 R2 can be installed locally or on a remote server</p> <p>You can use the Express Edition</p>
Client Computer		<p>Windows 7 x64 (primary)</p> <p>Microsoft Silverlight 4.0</p> <p>Internet Explorer 9.x, or Firefox 15.x or higher, or Chrome</p>	
License Server	Windows 32-bit / 64-bit	Landmark Application Manager 5000.0.3 (Flex 11.7)	

Installation Workflow



Install Prerequisites for SharePoint Foundation 2013

When you have an internet connection, you can run the Products Preparation Tool before installing SharePoint and it will automatically download and install all the prerequisites:



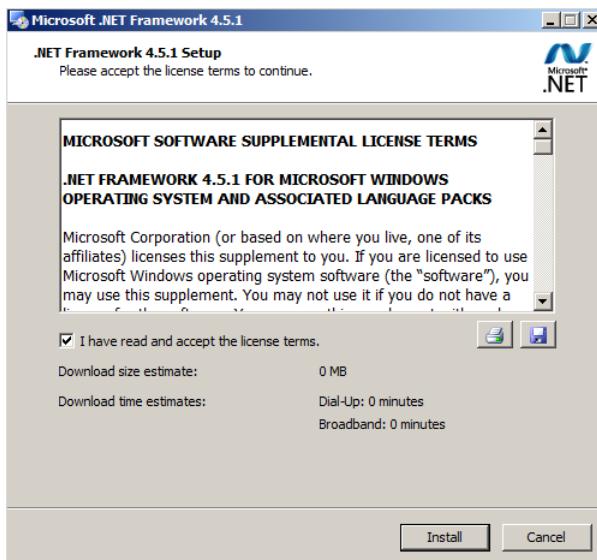
This exercise applies in situations where you do not have internet access on your SharePoint server. All the offline installers for the prerequisites are located under the
C:\Installer\SharePoint2013_offline\Prerequisites directory.

S. No.	Installer	File Name	URL
1	Microsoft .NET Framework 4.5 (Full standalone package)	dotnetfx45_full_x86_x64.exe	http://go.microsoft.com/fwlink/?LinkId=225702
2	Windows Management Frameworks 3.0	Windows6.1-KB2506143-x64.exe	http://www.microsoft.com/en-us/download/details.aspx?id=34595
3	Microsoft SQL Server 2008 R2 SP1 Native Client	sqlncli.exe	http://www.microsoft.com/en-us/download/details.aspx?id=26728
4	Windows Identity Foundation (KB974405)	Windows6.1-KB974405-x64.exe	http://go.microsoft.com/fwlink/?LinkID=226830
5	Windows Identity Extensions	MicrosoftIdentityExtensions-64.exe	http://go.microsoft.com/fwlink/?LinkID=252368

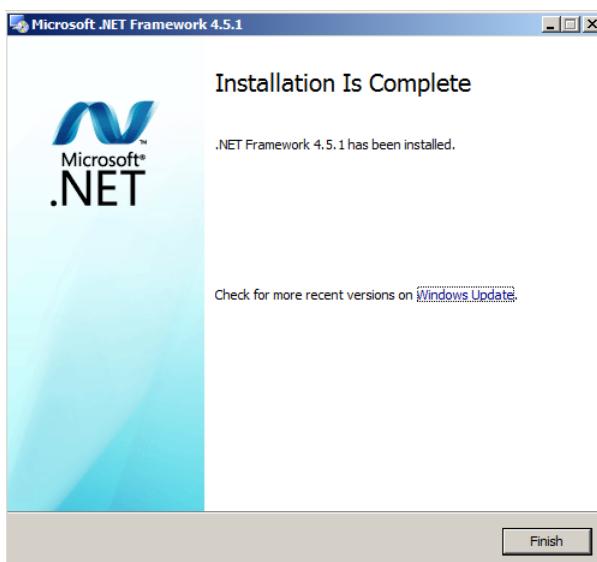
6	Microsoft Sync Framework Runtime v1.0 SP1 (x64)	Synchronization.exe	http://go.microsoft.com/fwlink/?LinkId=224449
7	Microsoft Information Protection and Control Client	setup_msipc_x64.exe	http://go.microsoft.com/fwlink/?LinkId=219568
8	Microsoft WCF Data Services 5.0	WcfDataServices.exe	http://www.microsoft.com/en-us/download/details.aspx?id=29306
9	Microsoft WCF Data Services 5.6 (rename this download to WcfDataServices 5.6.exe)	WcfDataServices 5.6.exe	http://download.microsoft.com/download/1/C/A/1CAA41C7-88B9-42D6-9E11-3C6556DAB1/WcfDataServices.exe
10	Windows Server AppFabric	WindowsServerAppFabricSetup_x64.exe	http://go.microsoft.com/fwlink/?LinkId=235496
11	Cumulative Update Package 1 for Microsoft AppFabric 1.1 for Windows Server (KB2671763)	AppFabric1.1-RTM-KB2671763-x64-ENU.exe	http://www.microsoft.com/en-us/download/details.aspx?id=29241
12	Microsoft Hotfixes: Microsoft KB 2554876, KB 2708075	Windows6.1-KB2554876-v2-x64.msu, Windows6.1-KB2708075-x64.msu	https://support.microsoft.com/en-us
13	Microsoft SQL Server 2008 R2 SP1	SQLEXPRESS_x64_ENU.exe	https://www.microsoft.com/en-us/download/details.aspx?id=30438

1. Install Microsoft .NET Framework 4.5.

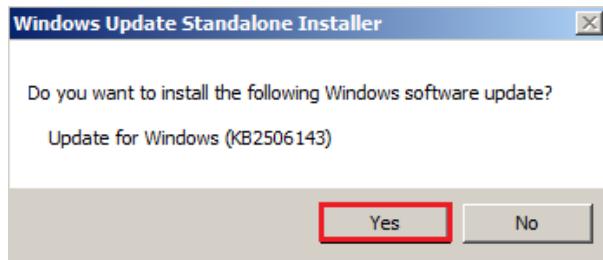
- Run the **dotnetfx45_full_x86_x64.exe** file.
- Accept the license terms and click **Install**.



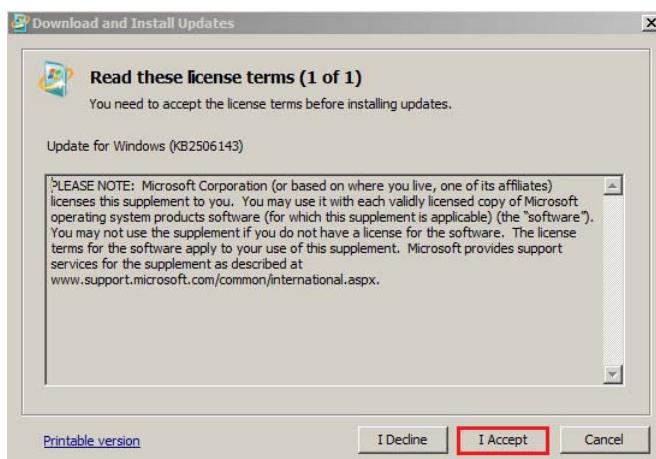
- Click **Finish** when installation is complete.



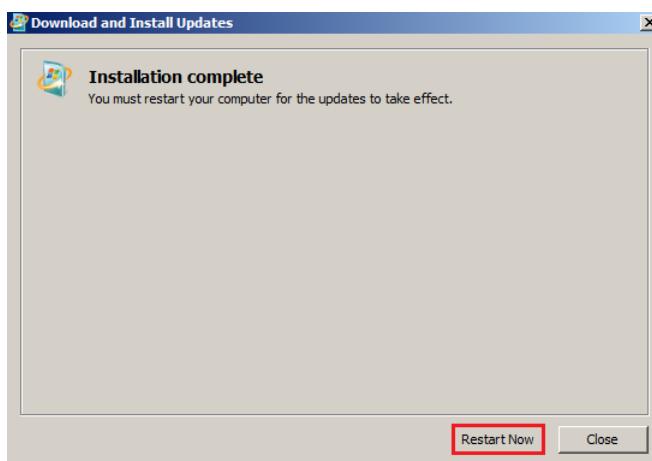
2. Install Windows Management Frameworks.
 - Run the **Windows6.1-KB2506143-x64.exe** file and click **Yes**.



- Click **I Accept** to accept the license terms.

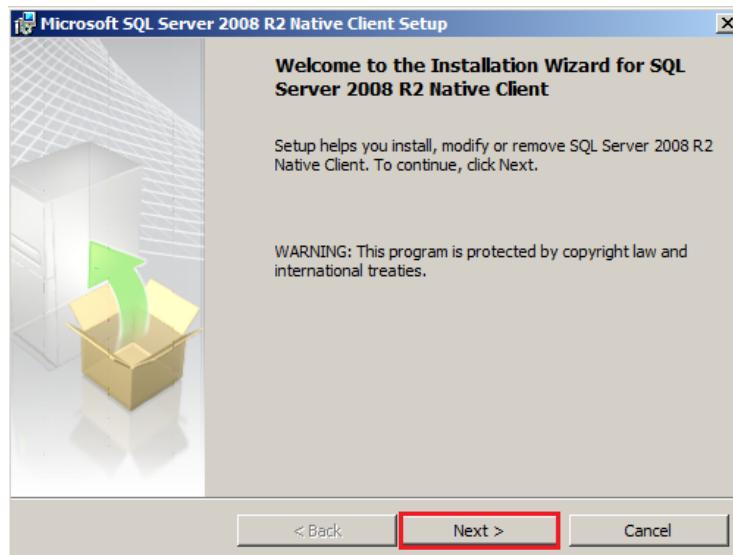


- Click **Restart Now** to restart the server when installation is complete.

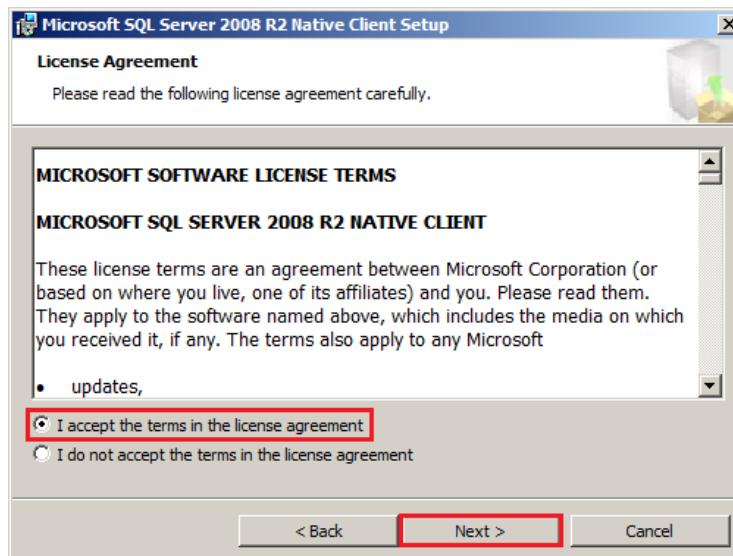


3. Install Microsoft SQL Server 2008 R2 SP1 Native Client.

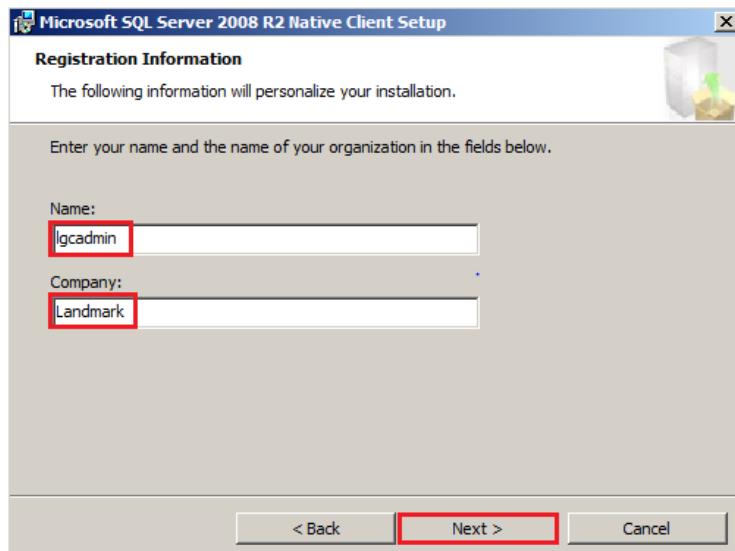
- Run the **sqlncli.exe** file and click **Next**.



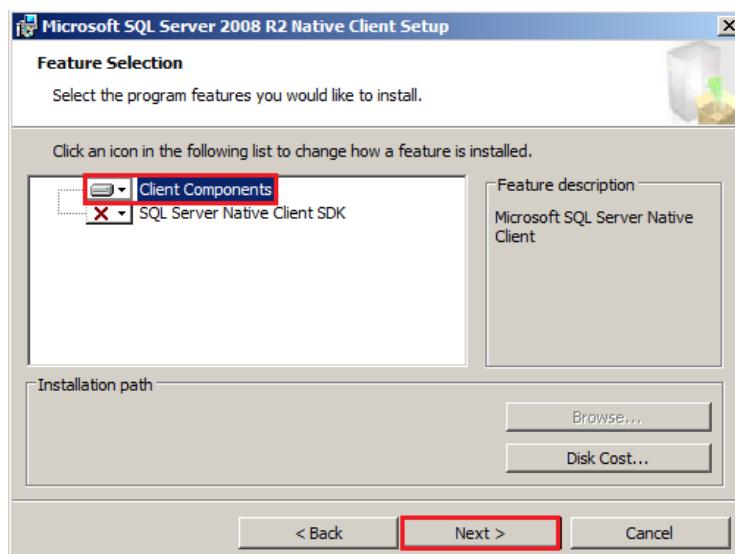
- Accept the license agreement and click **Next**.



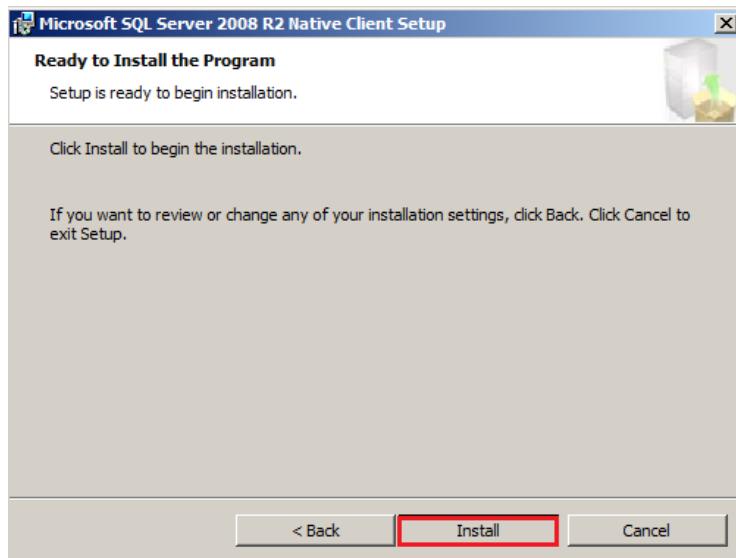
- Enter your name and Company name.
Click **Next**.



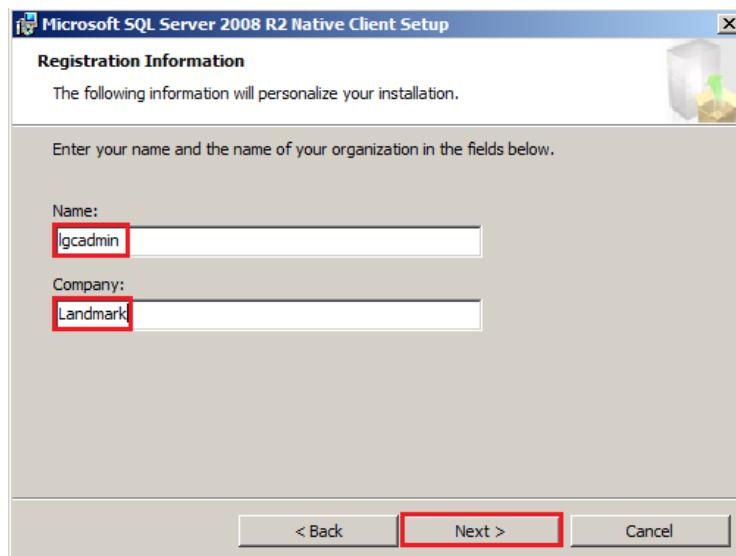
- Select the default feature selection and click **Next**.



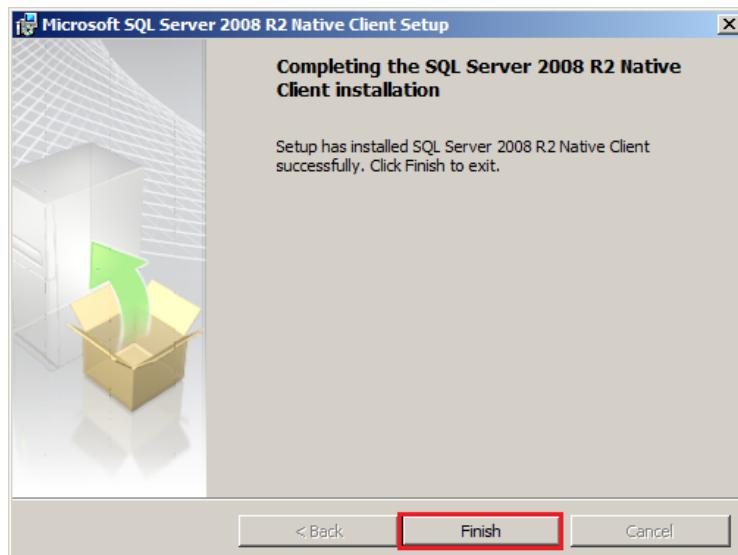
- Click **Install** to start the installation.



- Enter your name and Company name.
Click **Next**.

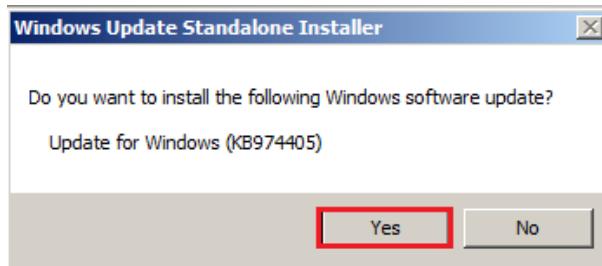


- Click **Finish** to complete the installation.

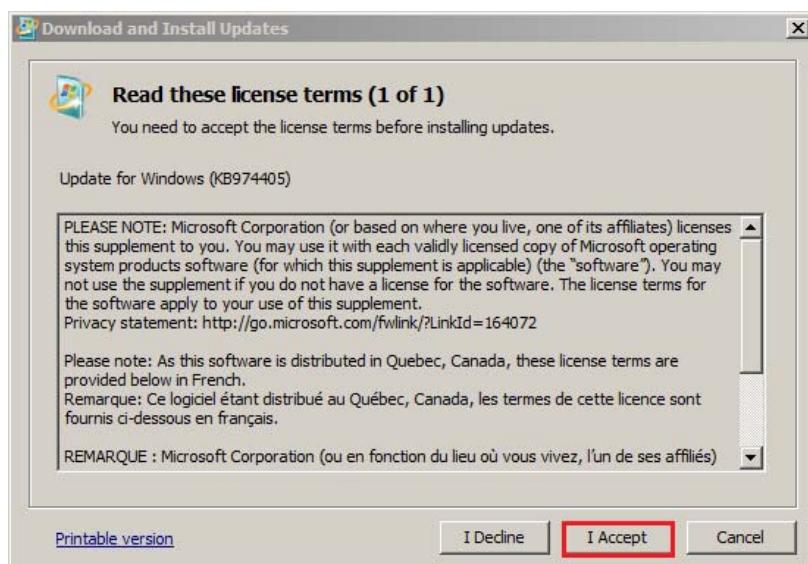


4. Install Windows Identity Foundation (KB974405).

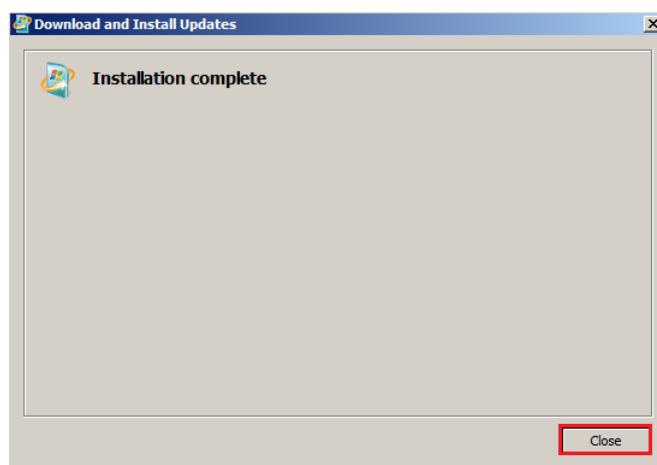
- Run the **Windows6.1-KB974405-x64.exe** file and click **Yes**.



- Click **I Accept** to accept the license terms.



- Click **Close** when installation is complete.

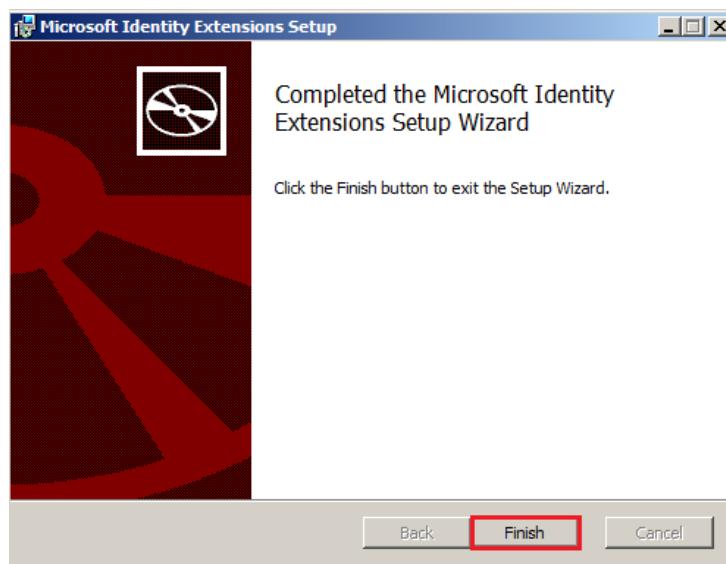


5. Install Windows Identity Extensions.

- Run the **MicrosoftIdentityExtensions-64.exe** file, accept the License terms, and click **Install**.

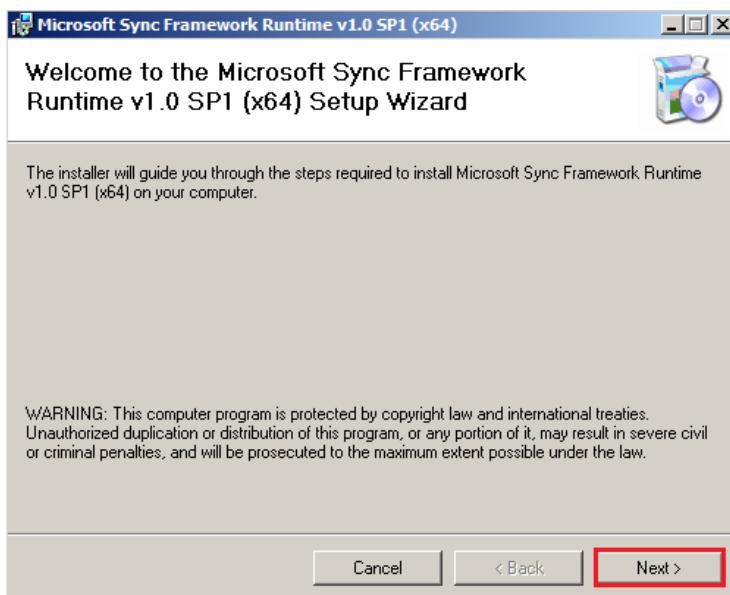


- Click **Finish** when installation is complete.

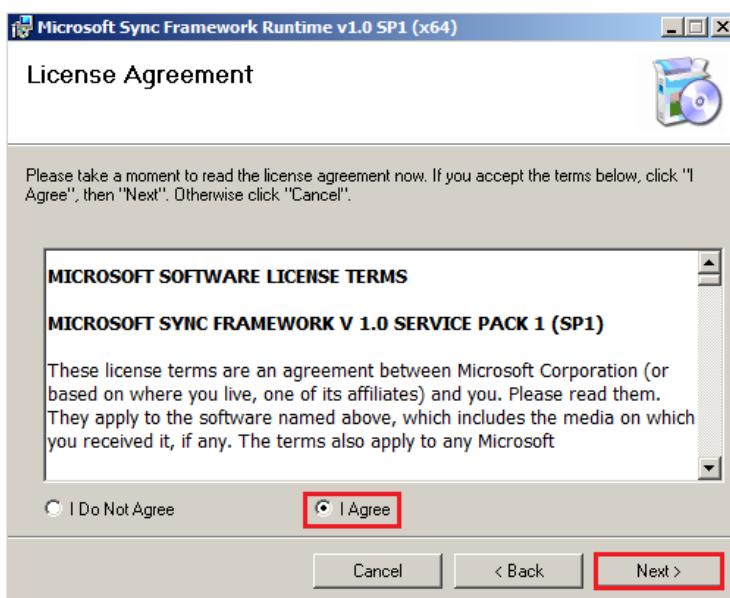


6. Install Microsoft Sync Framework Runtime v1.0 SP1 (x64).

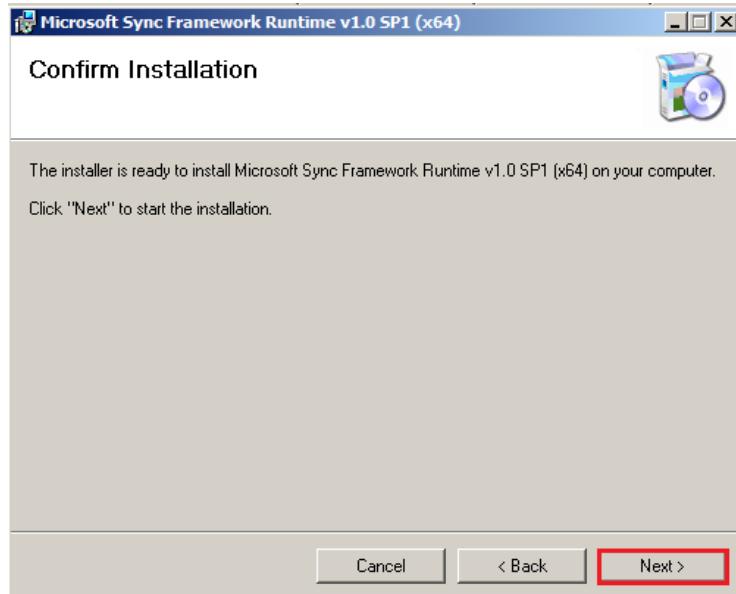
- Run the **Synchronization.exe** file and click **Next**.



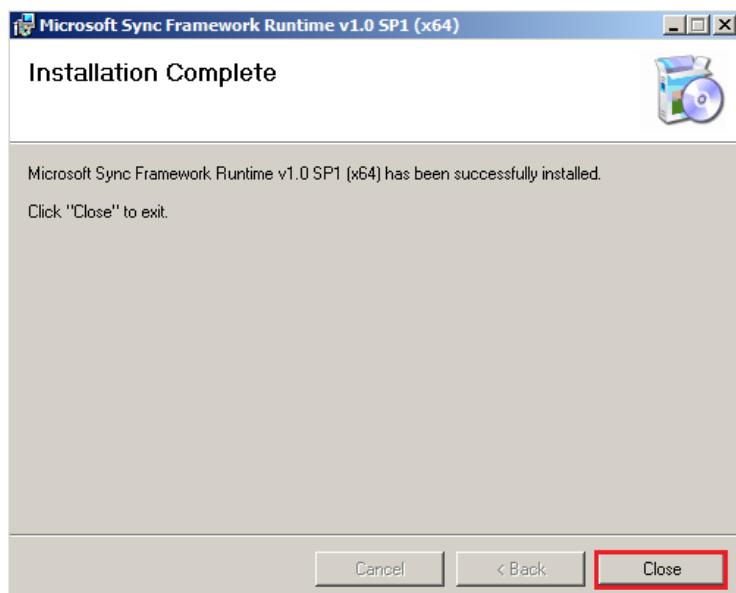
- Select the **I Agree** option to accept the license agreement and then click **Next**.



- Click **Next** to confirm Installation.

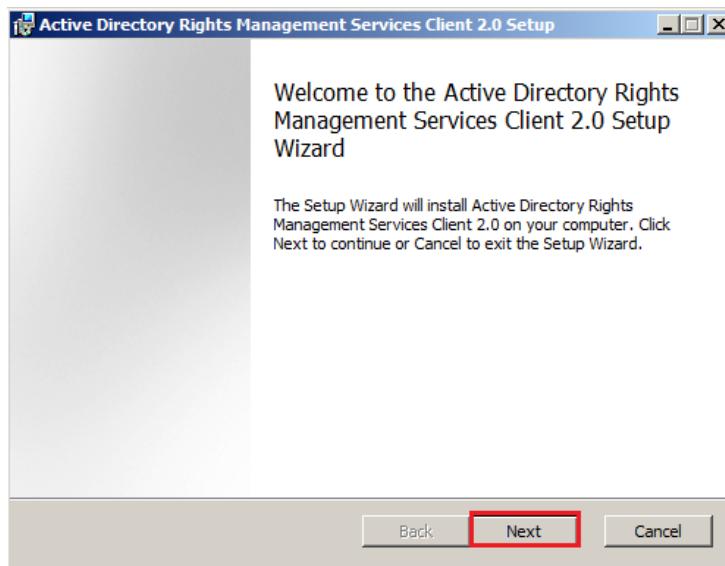


- Click **Close** when installation is complete.

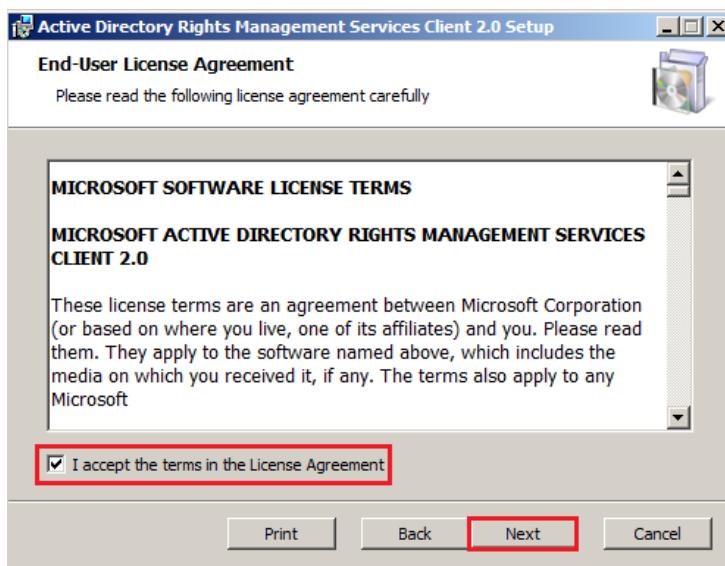


7. Install Microsoft Information Protection and Control Client.

- Run the **setup_msipc_x64.exe** file and click **Next**.



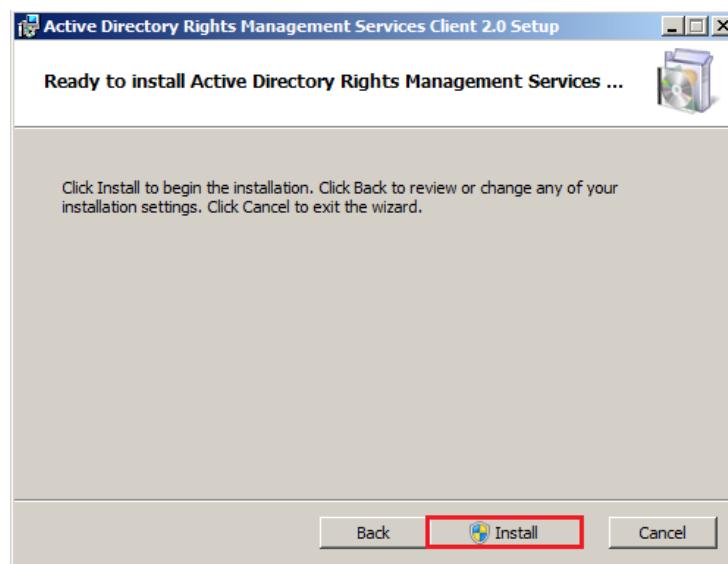
- Accept the License Agreement and click **Next**.



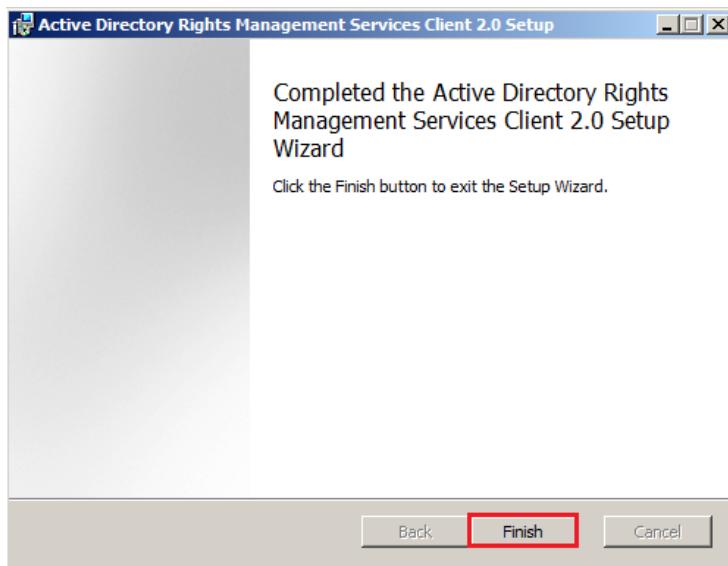
- Select the **I don't want to use Microsoft Update** option and click **Next**.



- Click **Install** to start the installation.

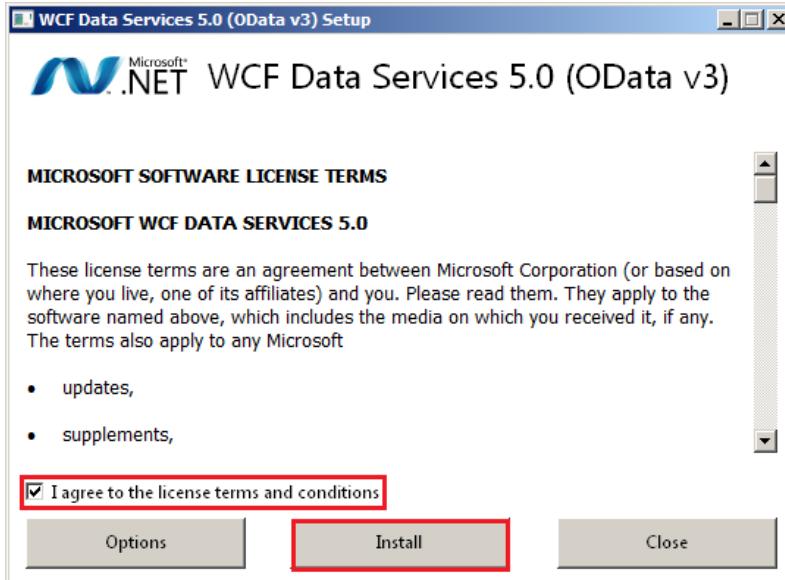


- Click **Finish** to complete the Installation.

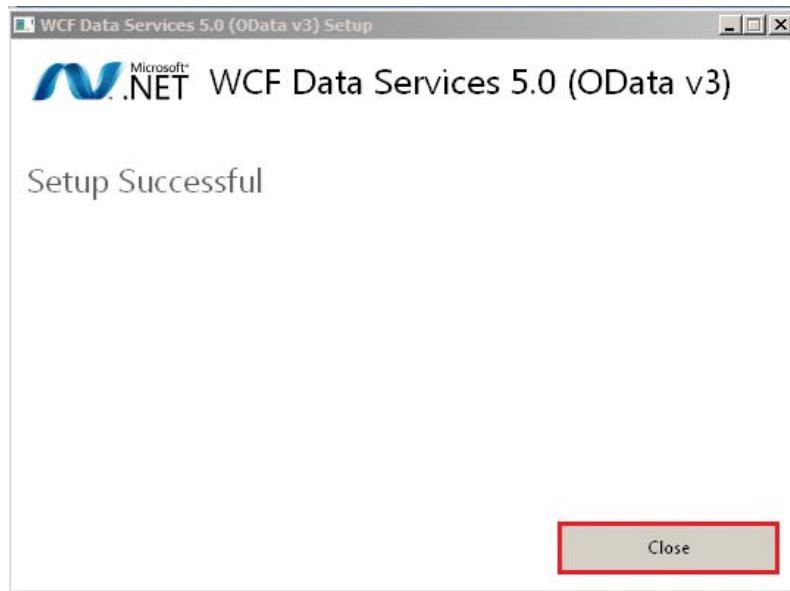


8. Install Microsoft WCF Data Services 5.0.

- Run the **WcfDataServices.exe** file. Accept the license terms and click **Install**.

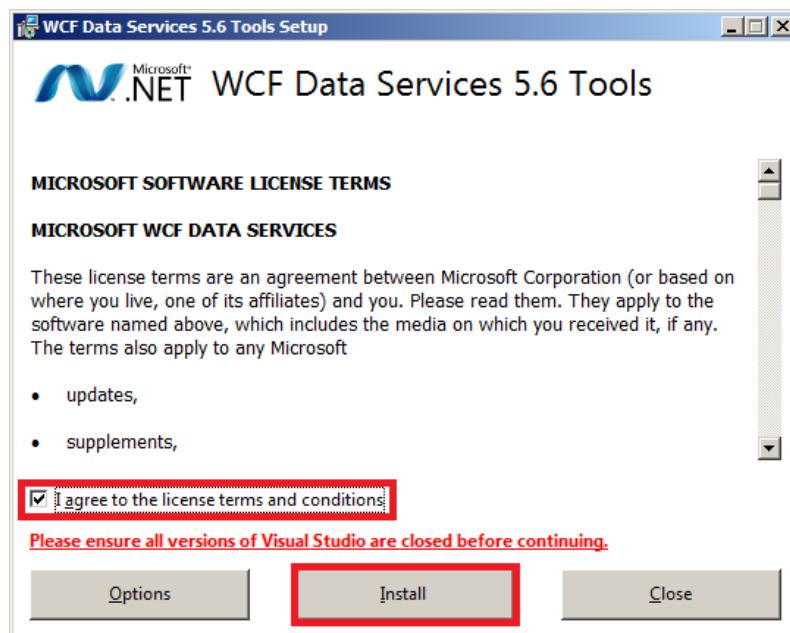


- Click **Close** when installation is complete.

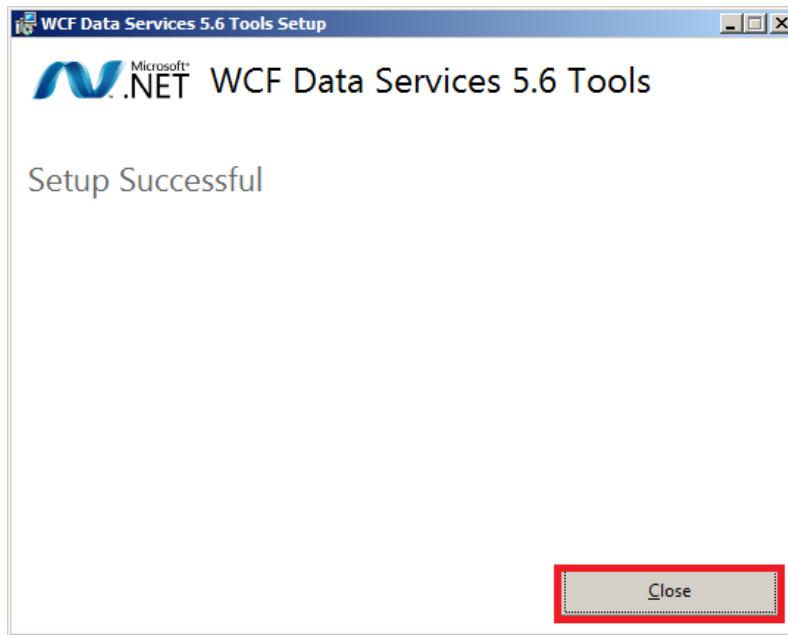


9. Install Microsoft WCF Data Services 5.6.

- Run the **WcfDataServices 5.6.exe** file. Accept the license terms and click **Install**.



- Click **Close** when installation is complete.

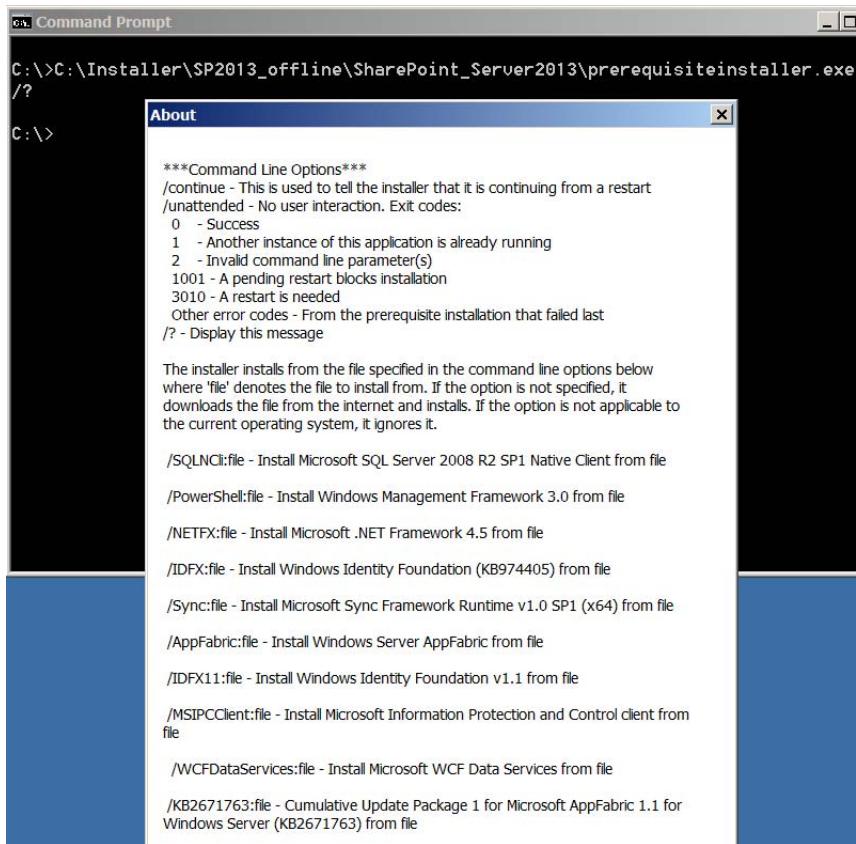


10. Install Windows Server AppFabric.

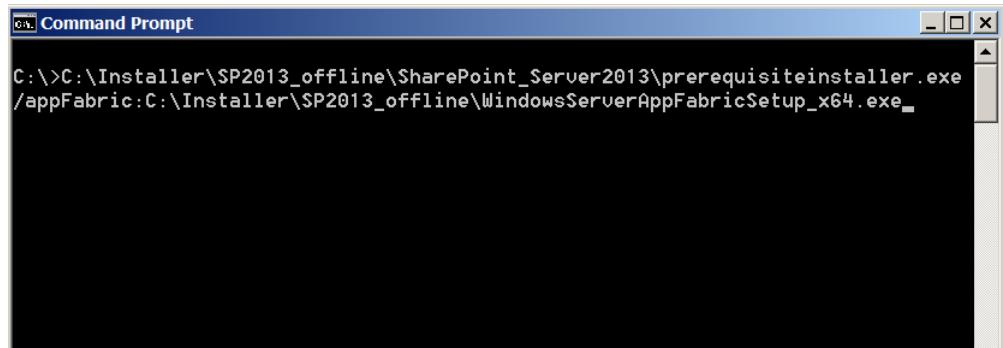
Install AppFabric using the prerequisiteinstaller.exe file from the Share Point installer.

- Find the prerequisiteinstaller.exe file located at:
C:\Installer\SharePoint2013_offline\SharePoint_Server2013.
- If prerequisiteinstaller.exe is not found, open the command line terminal and run the command:
C:\Installer\SharePoint2013_offline\SharePoint_Server2013\sharepoint.exe /extract:
"C:\Installer\SharePoint2013_offline\SharePoint_Server2013\".
- Open the command line terminal and run the following command which will list the various options available for performing the install:
C:\Installer\SharePoint2013_offline\SharePoint_Server2013\prerequisiteinstaller.exe /?

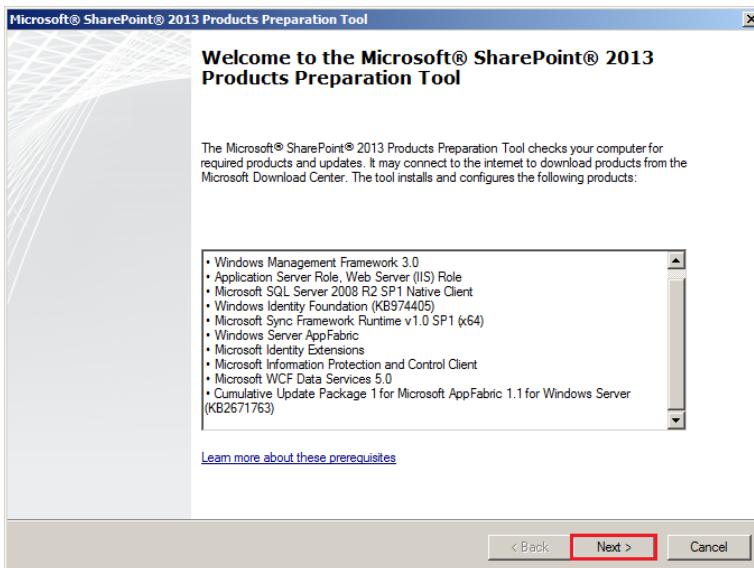
The following window displays:



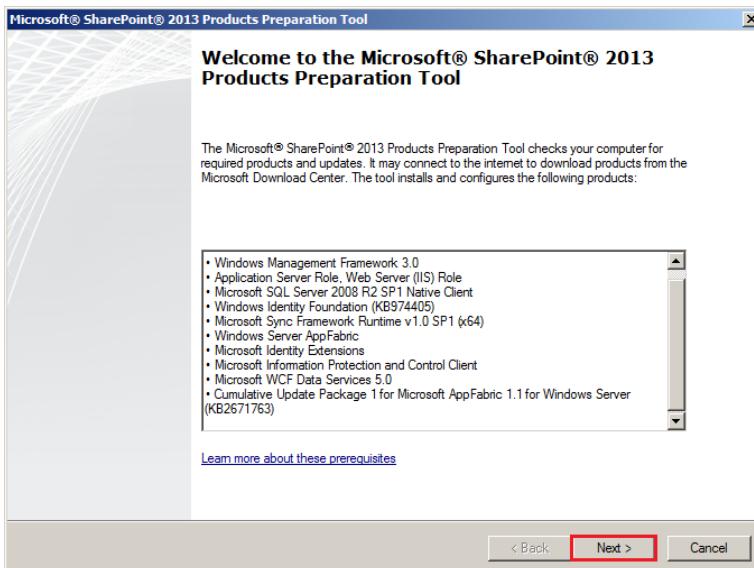
- Tell the prerequisite installer to install appFabric using the following syntax:
C:\Installer\SP2013_offline\SharePoint_Server2013\prerequisiteinstaller.exe /appFabric:
(Full_Path_to_WindowsServerAppFabricSetup_x64.exe).



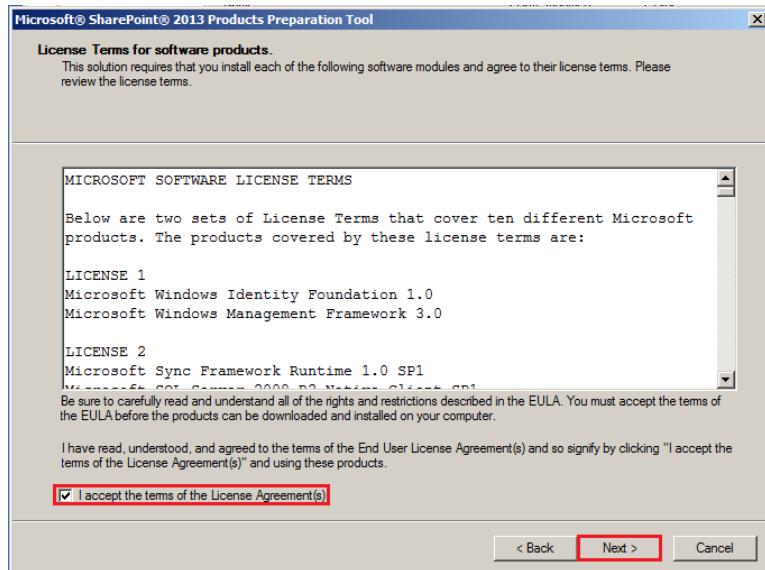
- The Microsoft SharePoint 2013 Products Preparation Tool page displays.



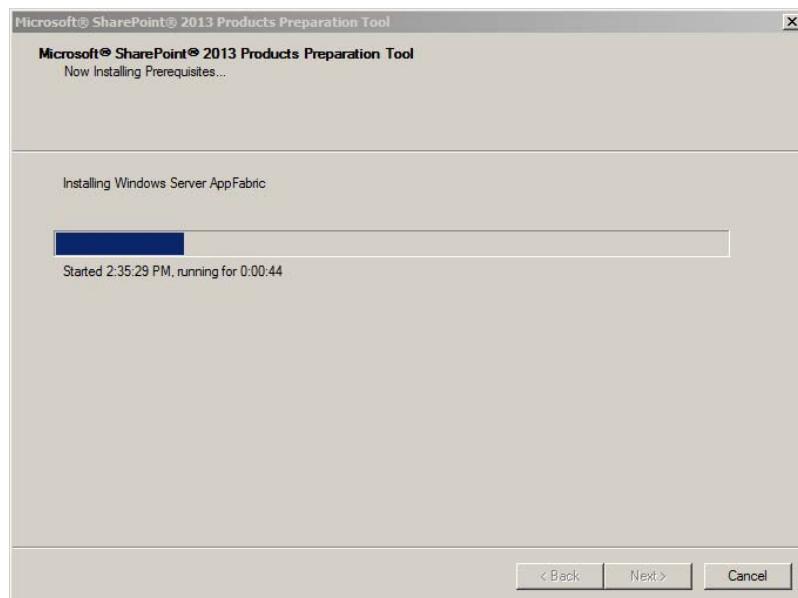
- Click **Next**.



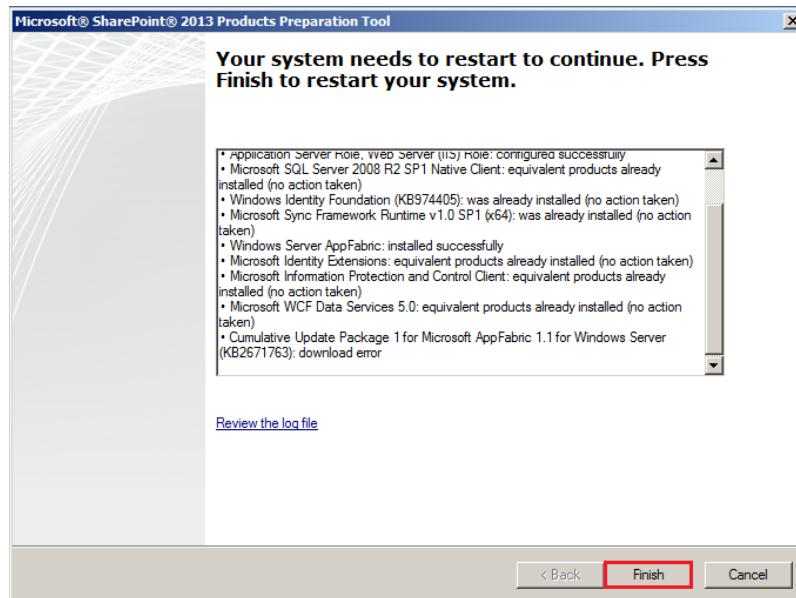
- Accept the license terms and click **Next**.



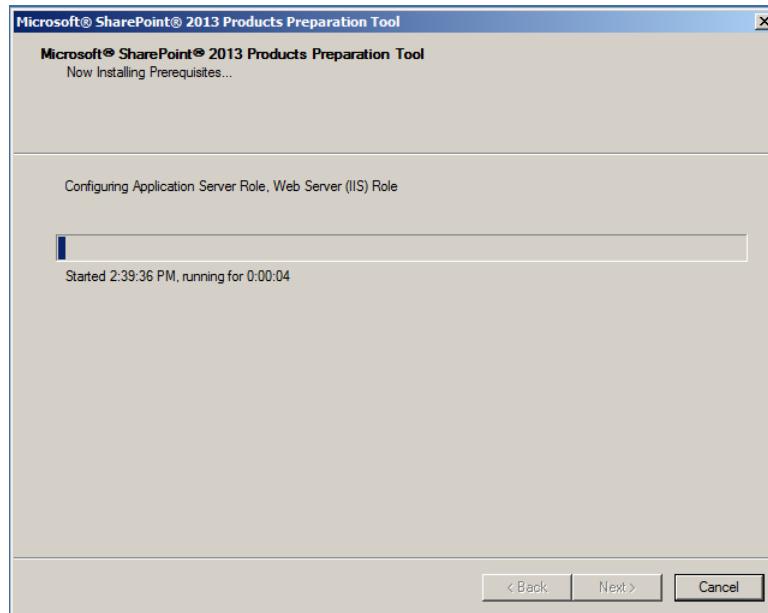
- Installation will start and you can see the progress of the Installation.



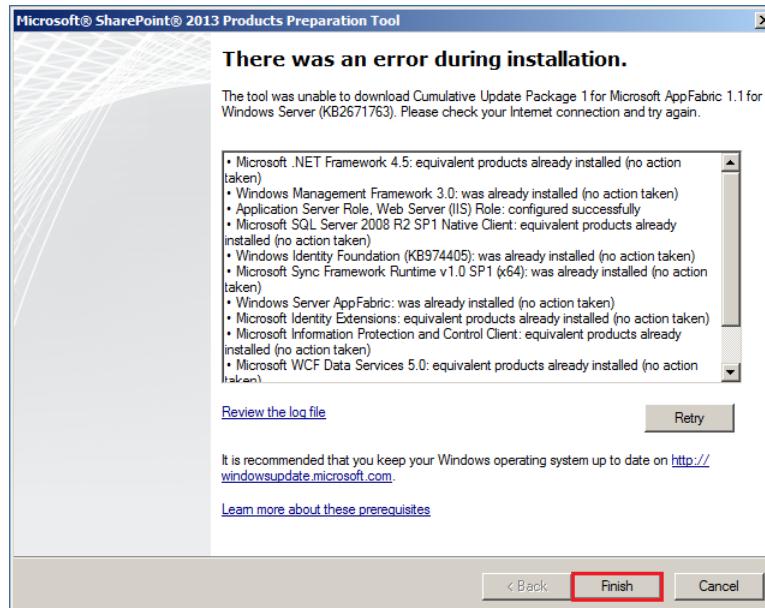
- Click **Finish** when prompted to restart the system.



- After system restart, the installation process resumes.



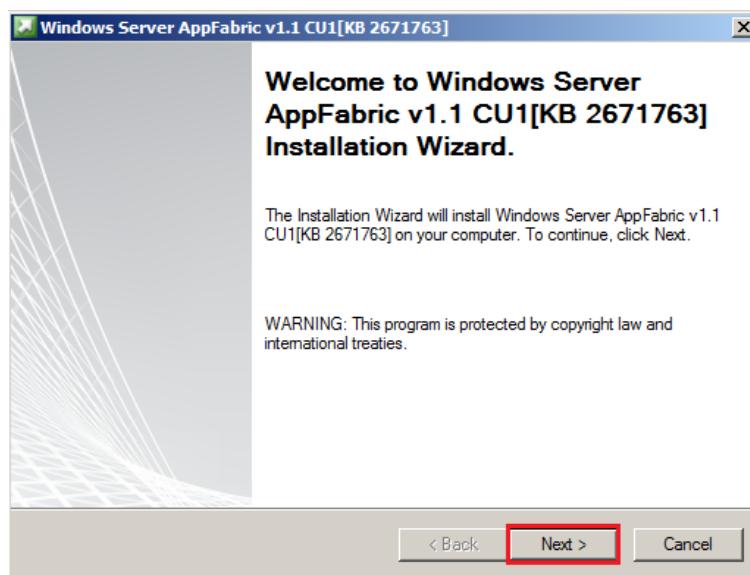
- Click **Finish** to complete the installation.



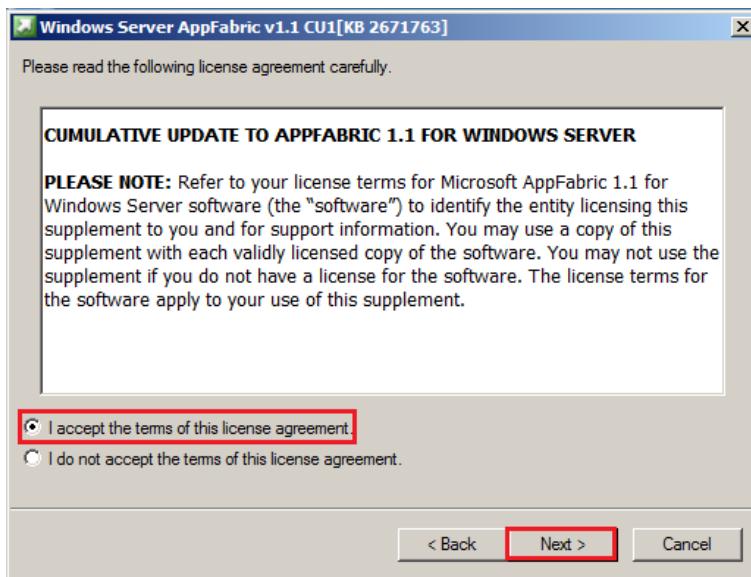
Note

Ignore the error message about the package for Microsoft AppFabric 1.1 not being updated, if it appears. This error will be fixed in the next step.

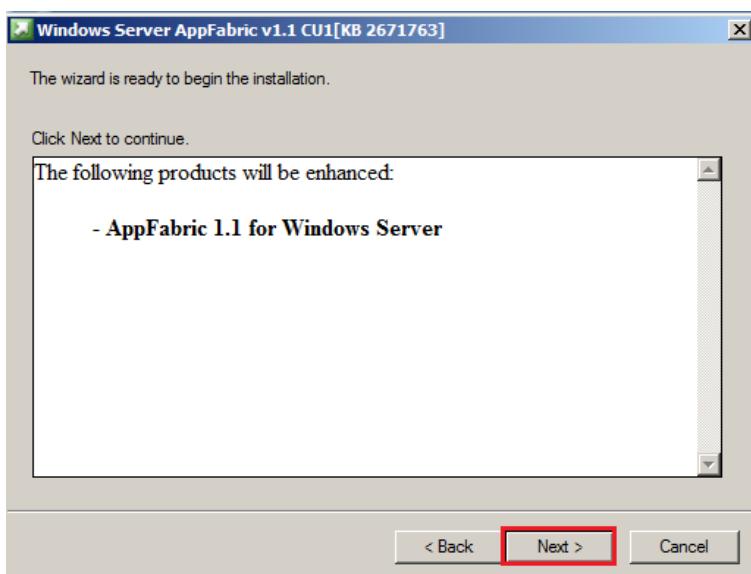
- Install Cumulative Update Package 1 for Microsoft AppFabric 1.1 for Windows Server (KB2671763).
- Run the **AppFabric1.1-RTM-KB2671763-x64-ENU.exe** file and click **Next**.



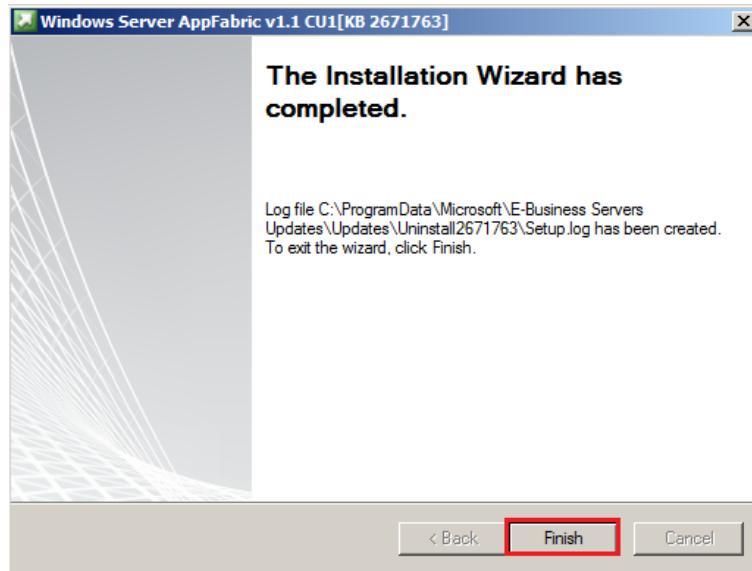
- Accept the license agreement and click **Next**.



- Click **Next** to continue the installation.

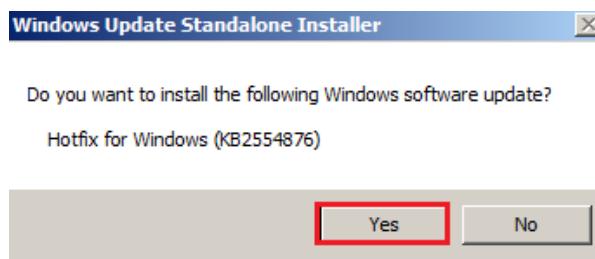


- Click **Finish** when the Installation is complete.

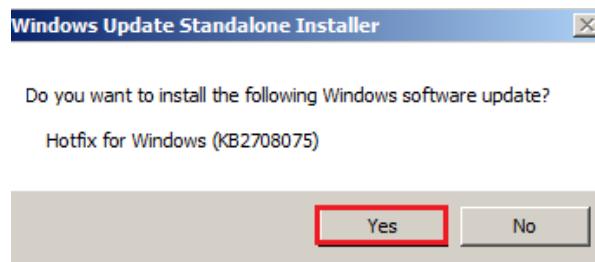


12. After you install the Microsoft SharePoint Products Preparation Tool, you must also install the following:

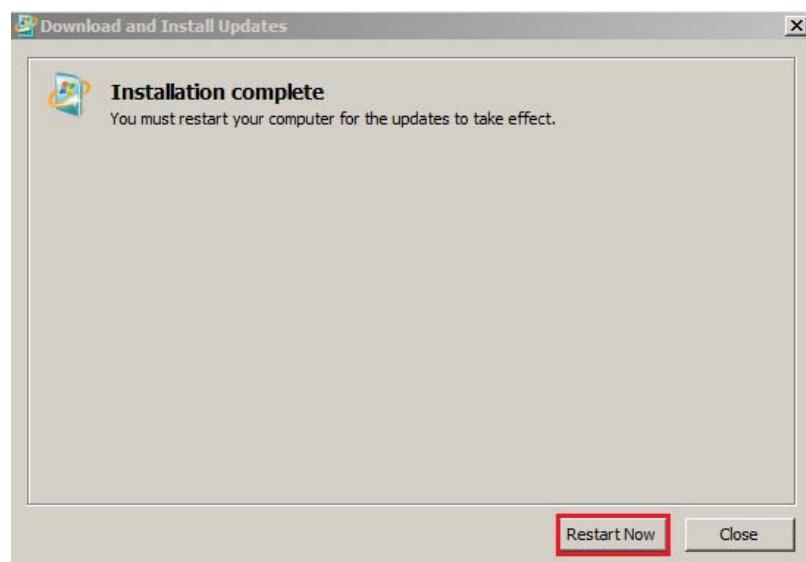
- Microsoft KB 2554876.
 - Run **C:\Installer\SharePoint2013_offline\Prerequisites\Windows 6.1-KB2554876-v2-x64.msu**.



- Microsoft KB 2708075.
 - Run **C:\Installer\SharePoint2013_offline\Prerequisites\Windows6.1-KB2708075-x64.msu**.

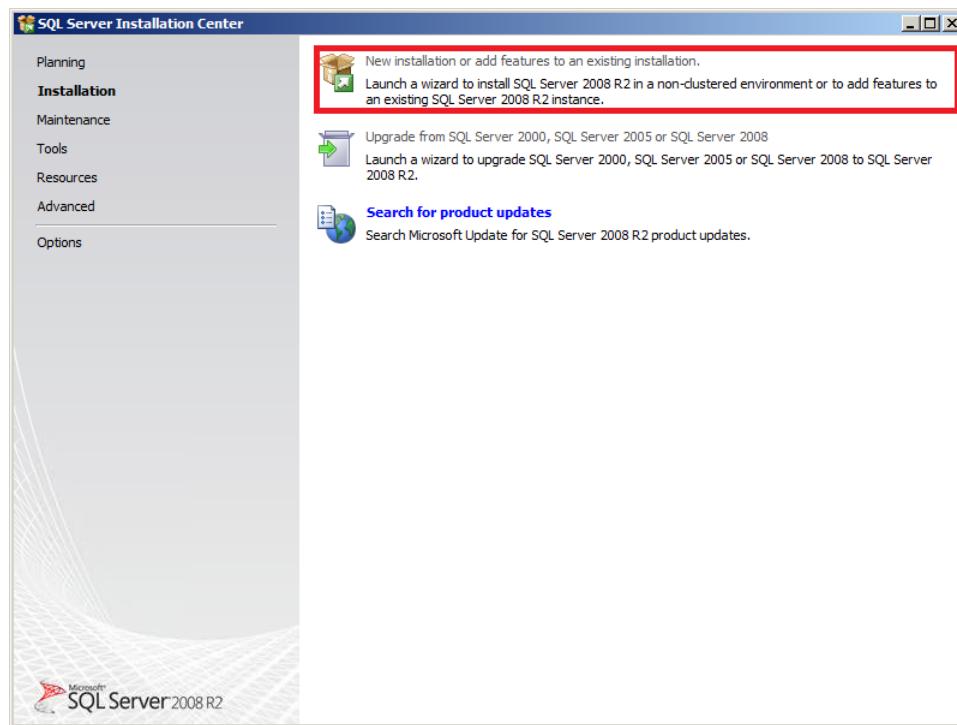


- Click **Restart Now** when the installation is complete.

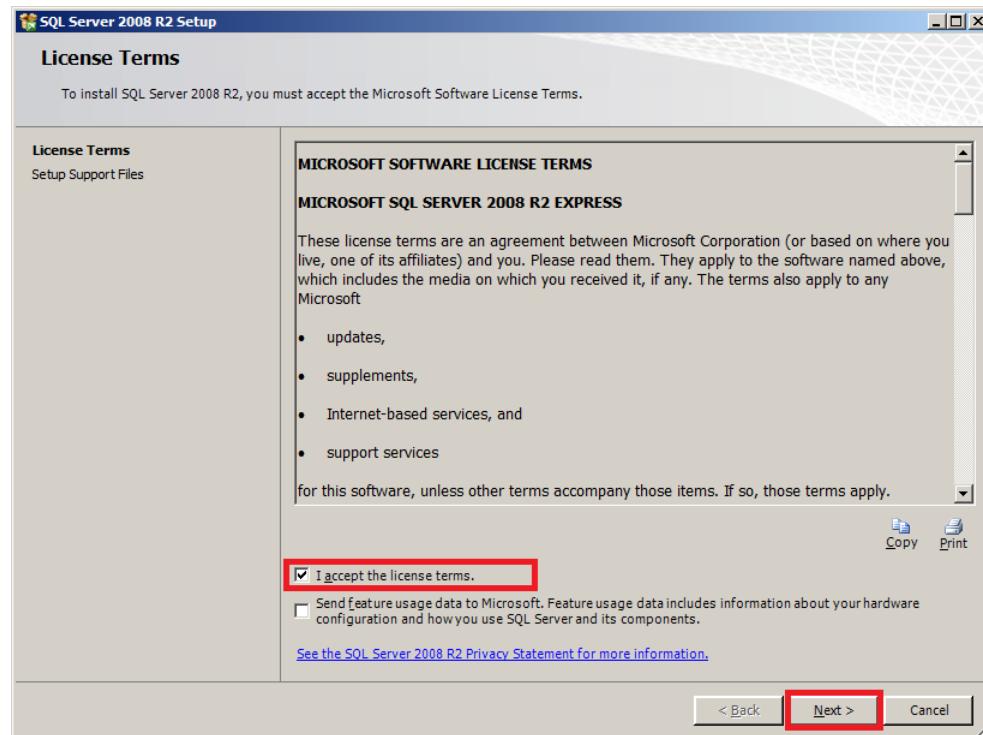


13. Install Microsoft SQL Server 2008 R2 SP1.

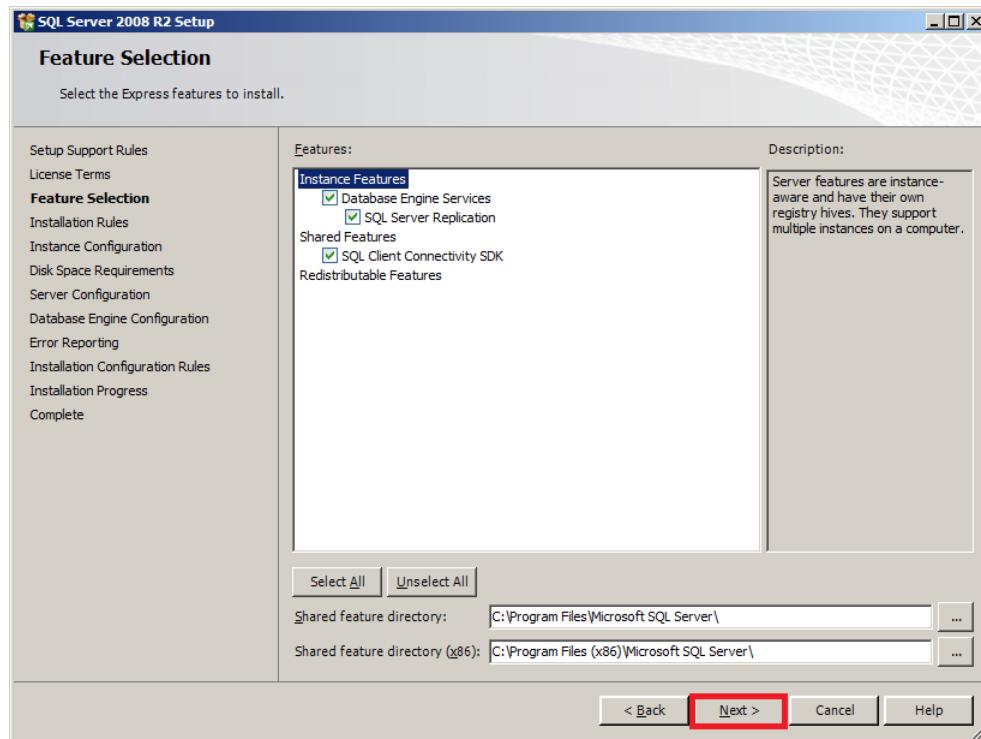
- Run the **SQLExpr_x64_ENU.exe** file and select the **New installation or add features to an existing installation** option.



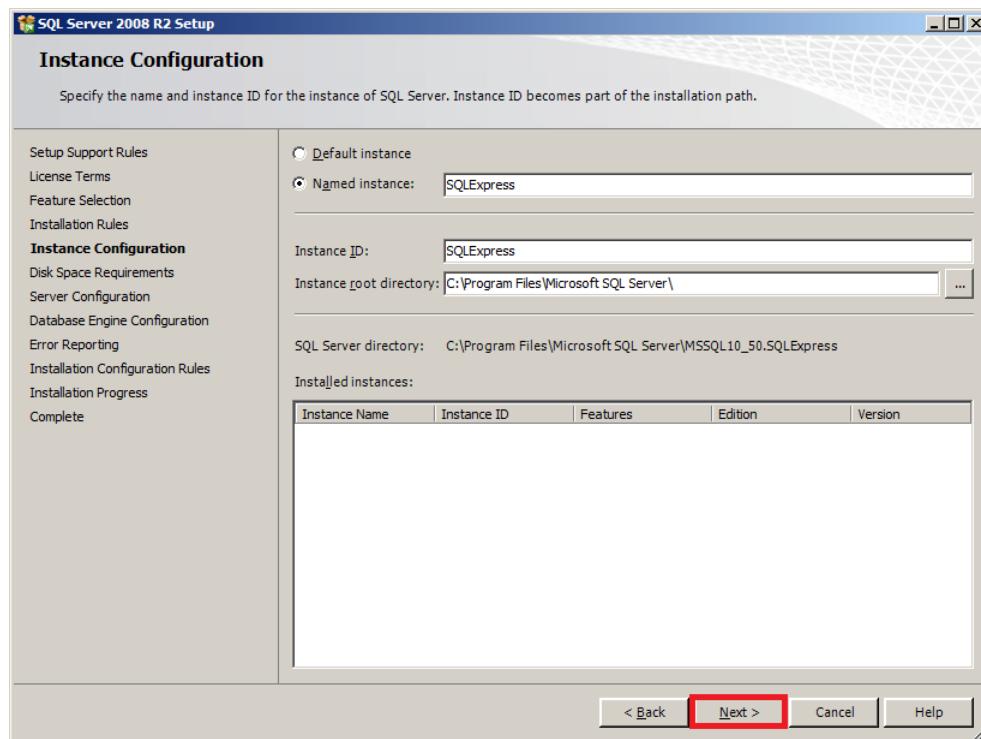
- Accept the license agreement and click **Next**.



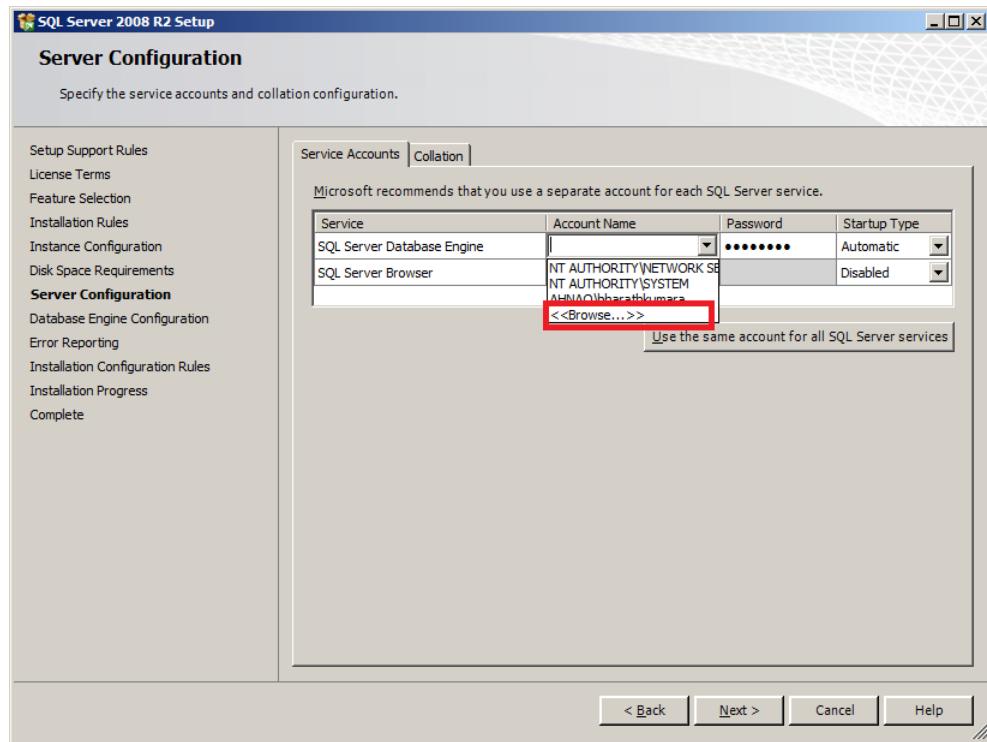
- Click **Next** to proceed to the next step.



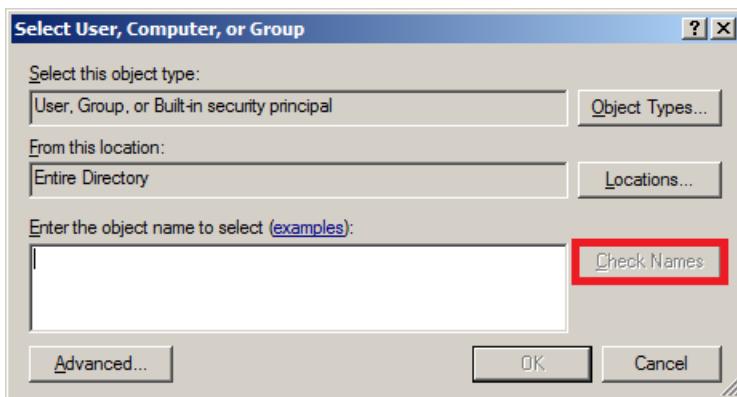
- Click **Next** to proceed to the next step.



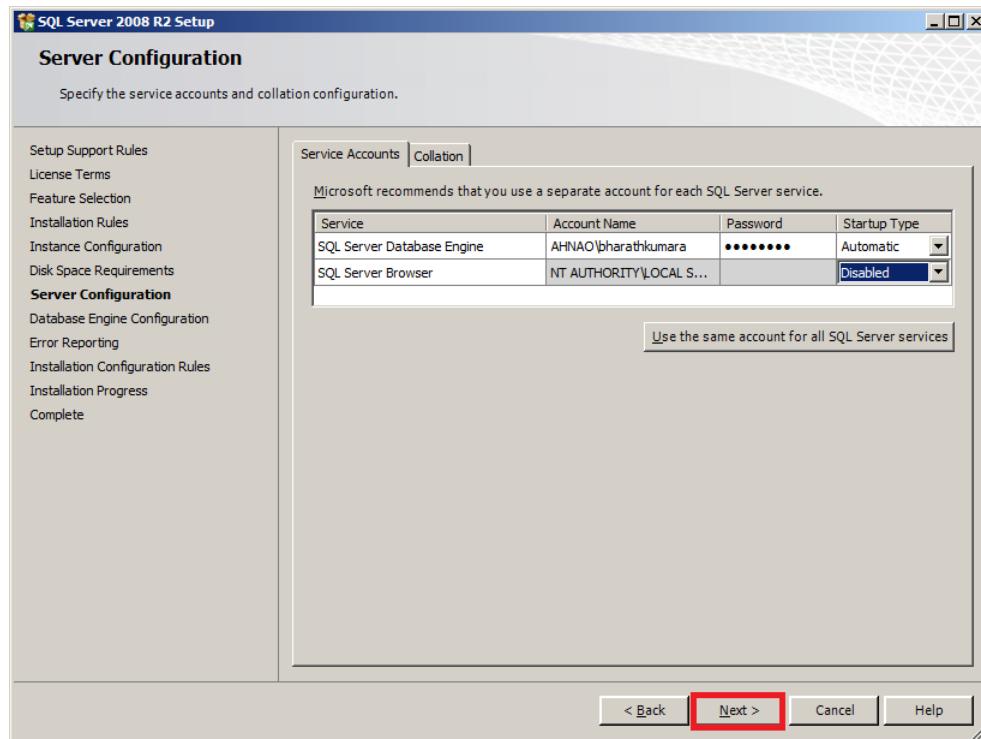
- Select <<Browse...>> from the Account Name drop-down list.



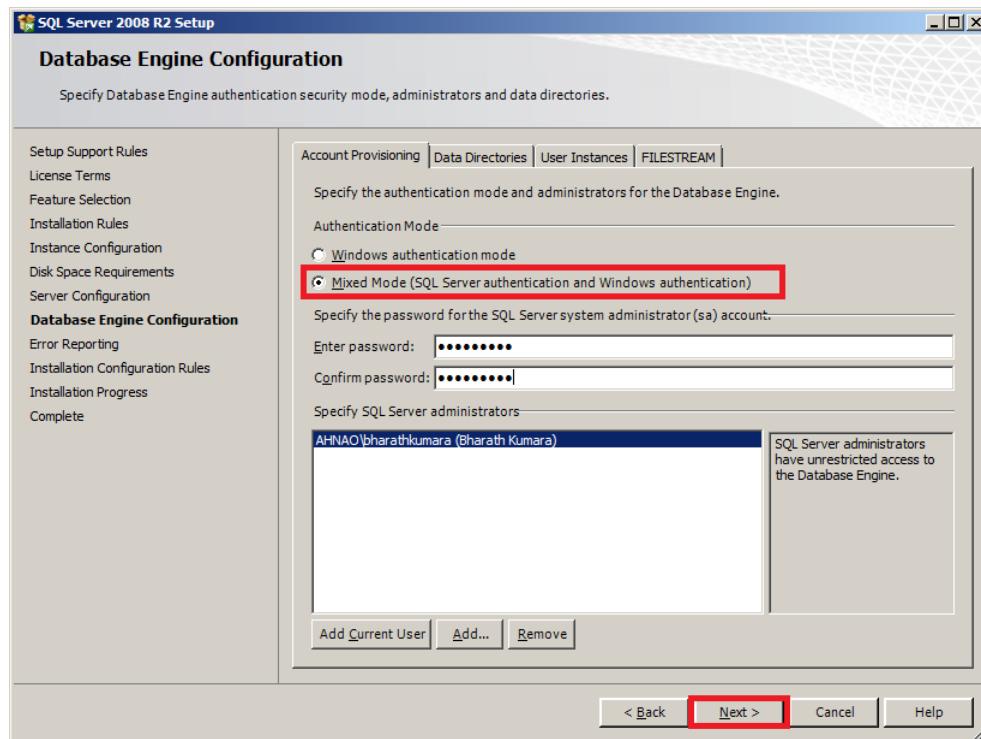
- Enter the user name and click Check Names. Click OK to proceed.



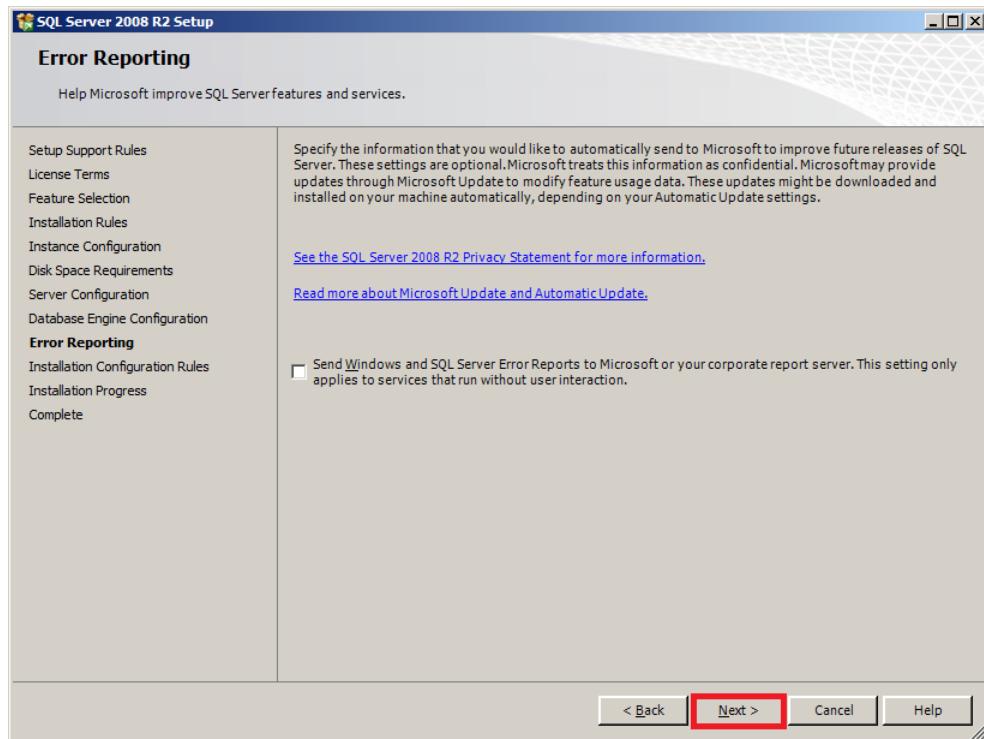
- Click **Next** to proceed to the next step.



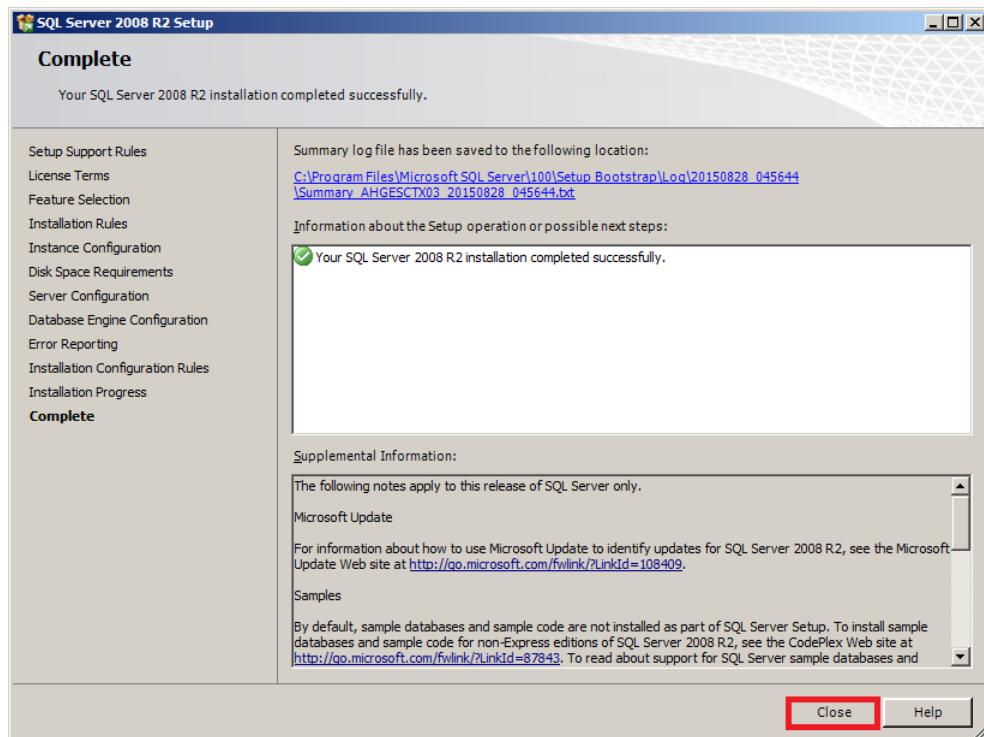
- Select the **Mixed Mode** option and click **Next** to proceed.



- Click **Next** to proceed to the next step.

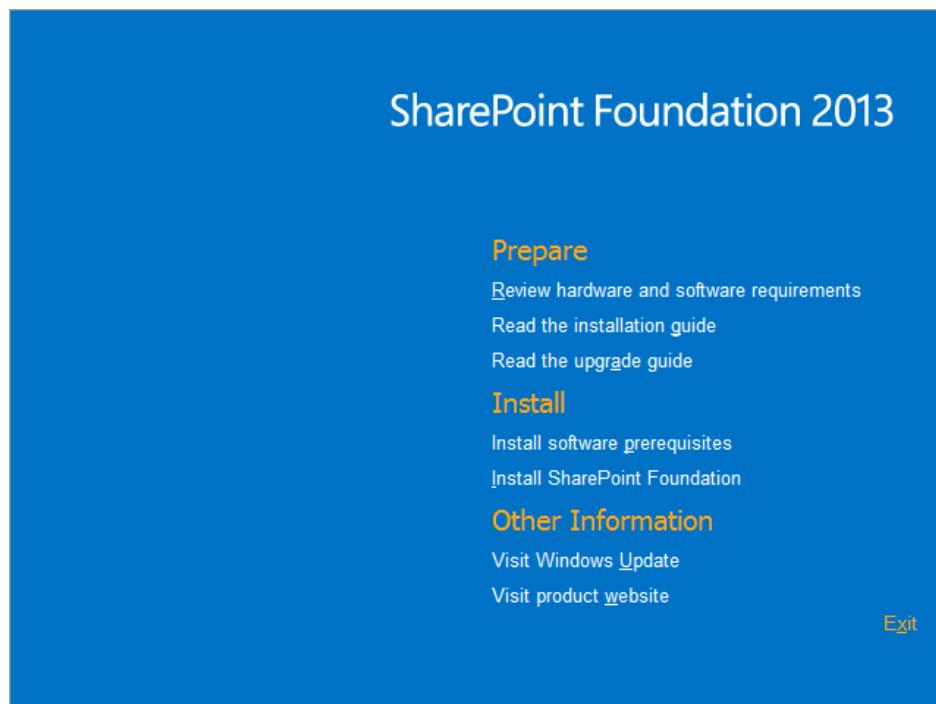


- Click **Close** to finish the installation.

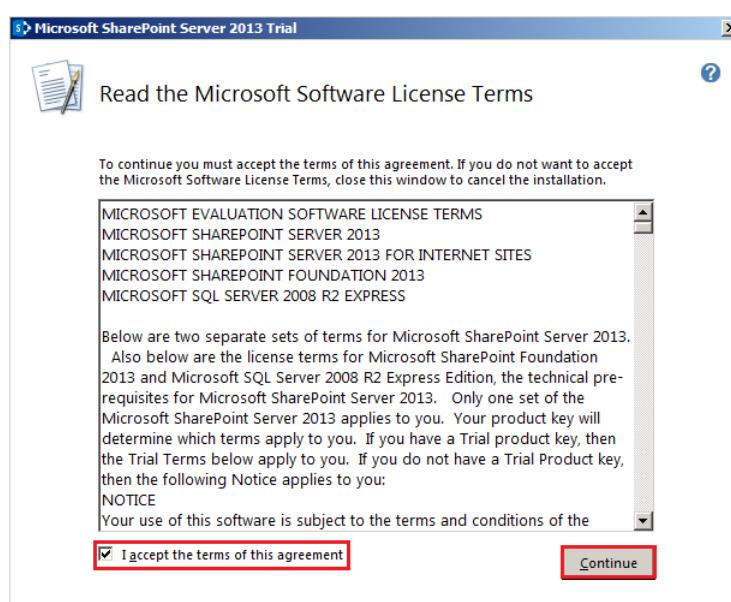


14. Now all the prerequisite installers have been installed. You are ready to install the SharePoint Server 2013.

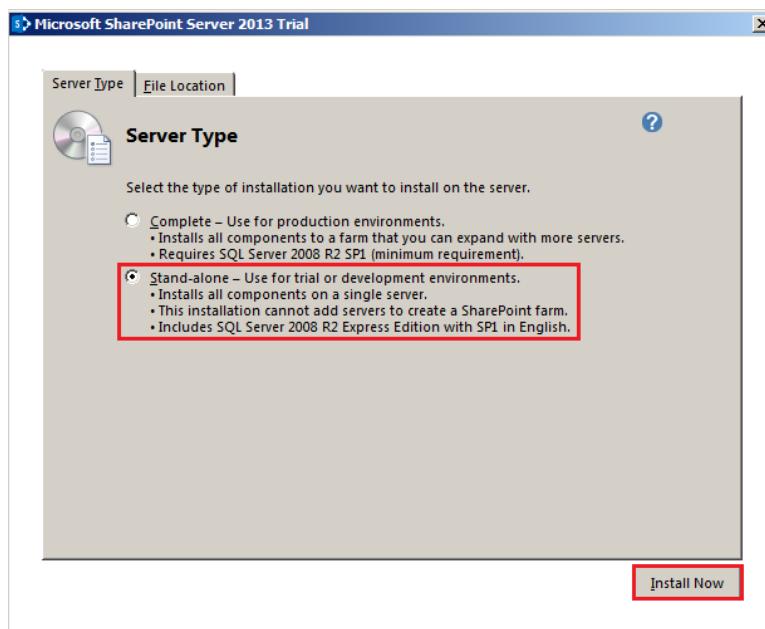
- Log on to the server as TRAINING\lgcadmin user.
- Run **C:\Installer\SharePoint2013_offline\SharePoint_Server2013\setup.exe** and select **Install Share Point Server**.



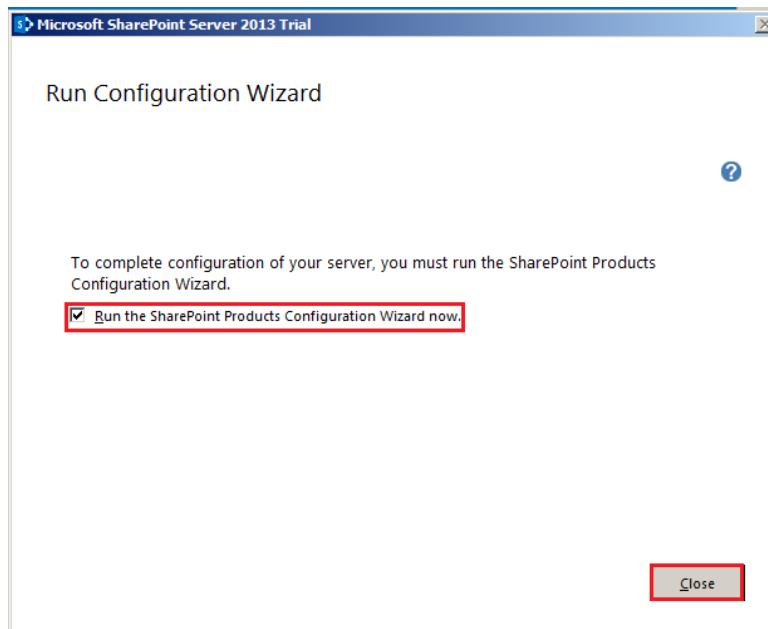
- Accept the license terms and click **Continue**.



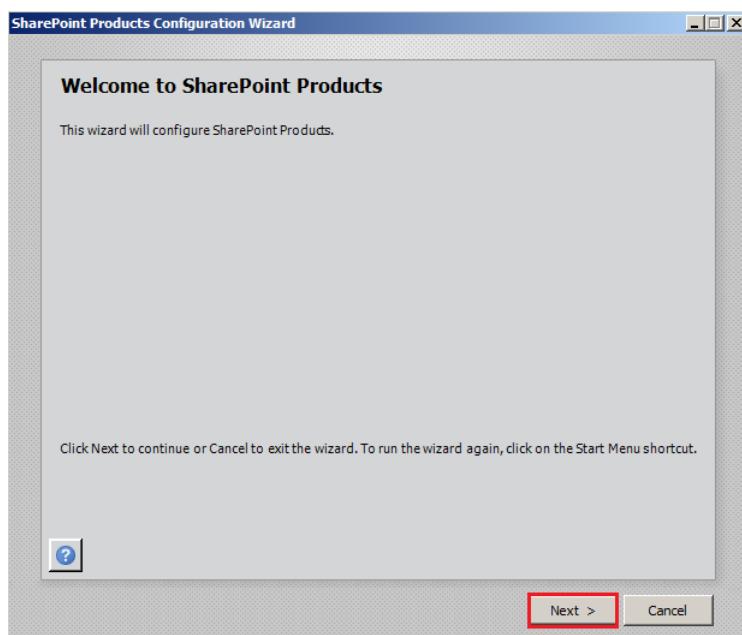
- Select the **Stand-alone** option and click **Install Now**.



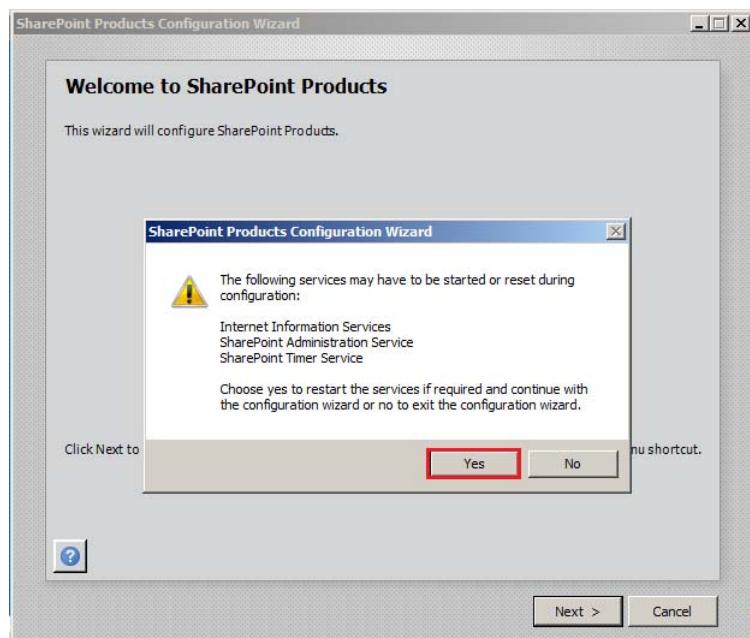
- After installation is complete, a configuration wizard window appears. Select the **Run the SharePoint Products Configuration Wizard now** option and click **Close**.



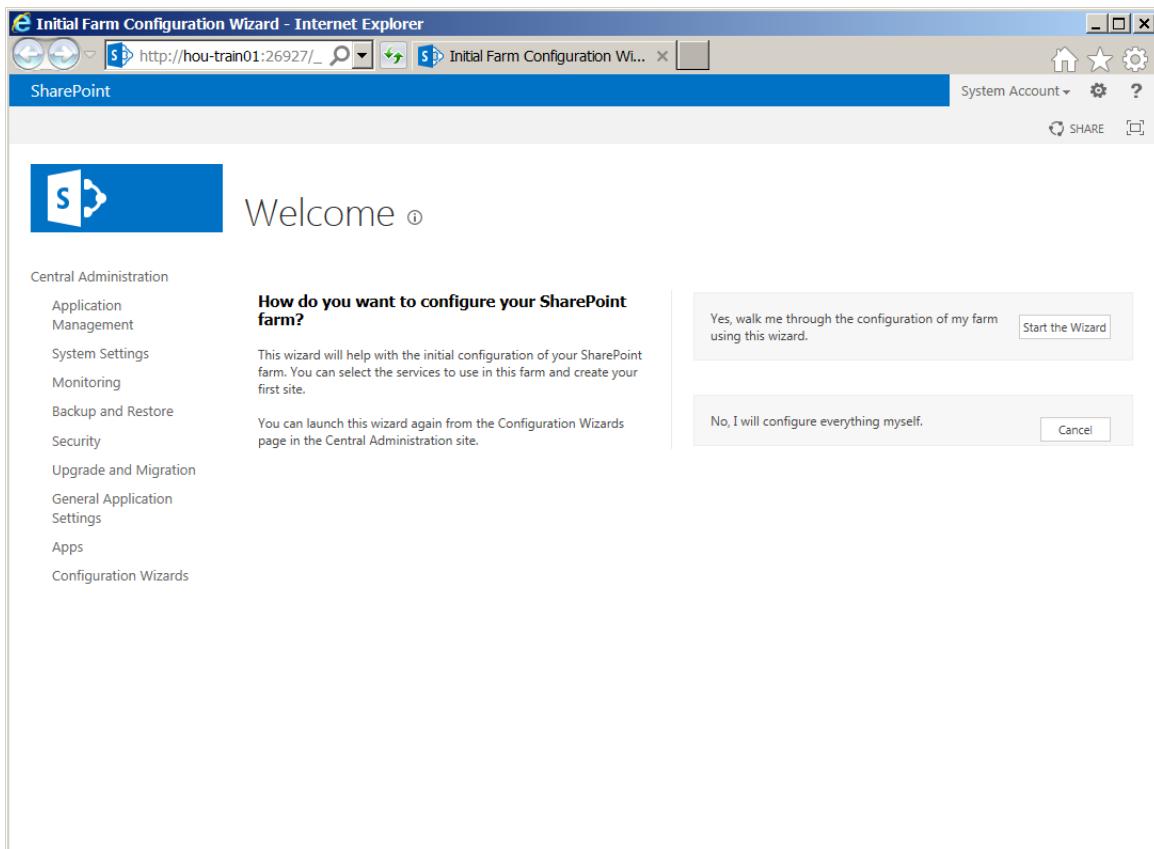
- The SharePoint Configuration Wizard window displays. Click **Next** to continue.



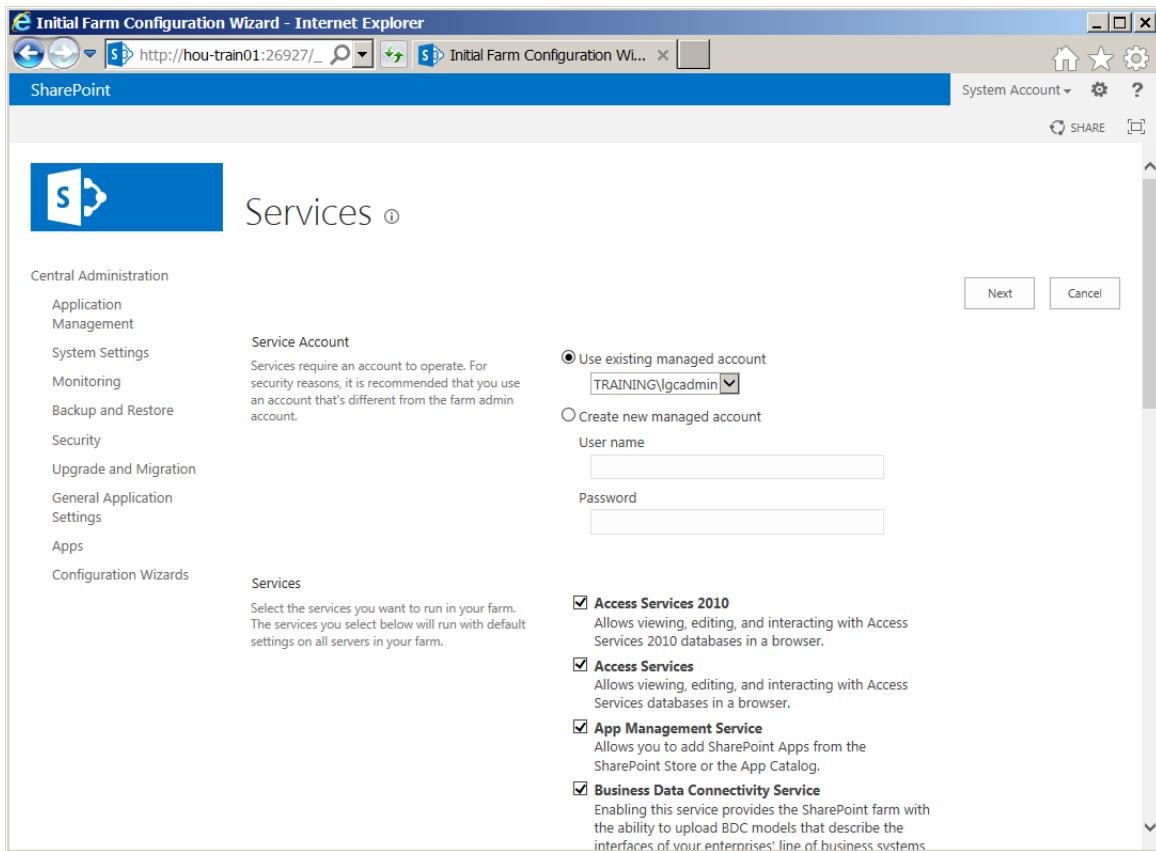
- Click **Yes** when the installer prompts you about several services that may have to be started or reset during configuration, and click **Next**.



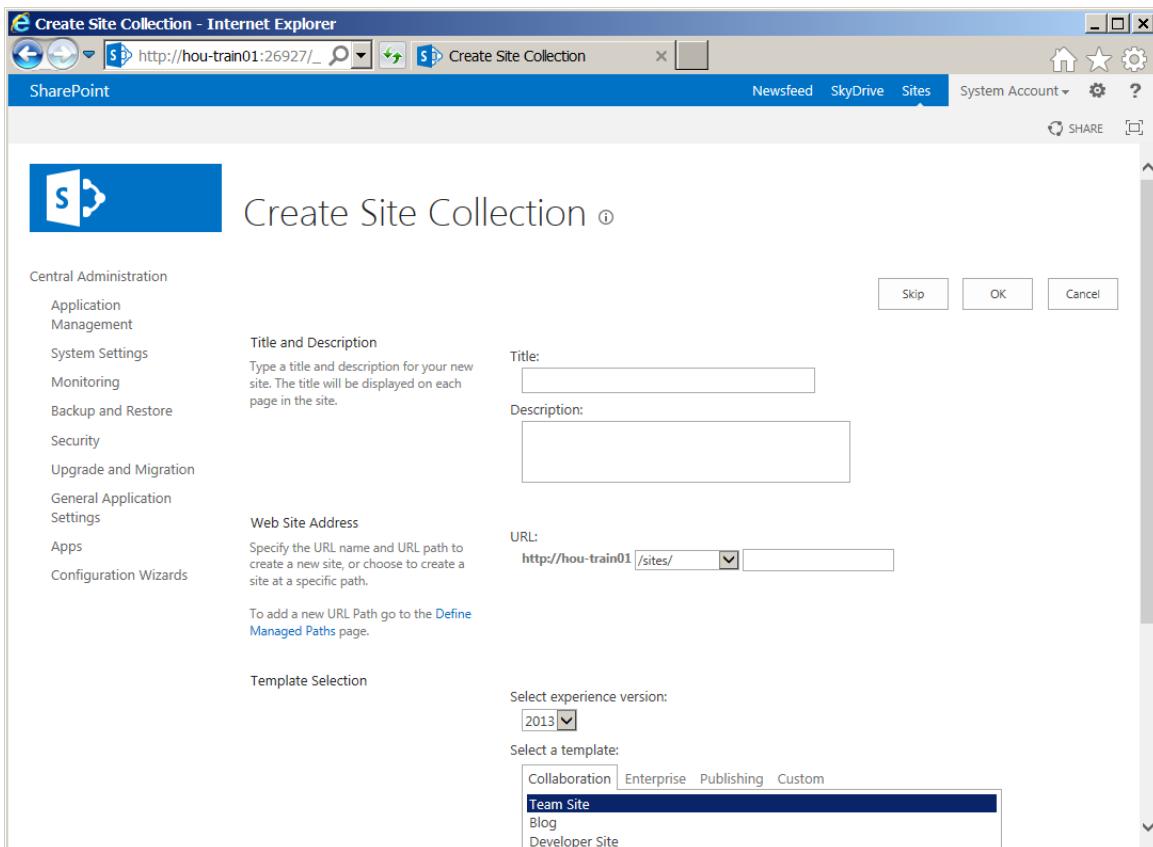
15. The installer will automatically open a web browser to perform the initial farm configuration. Click **Start the Wizard**.

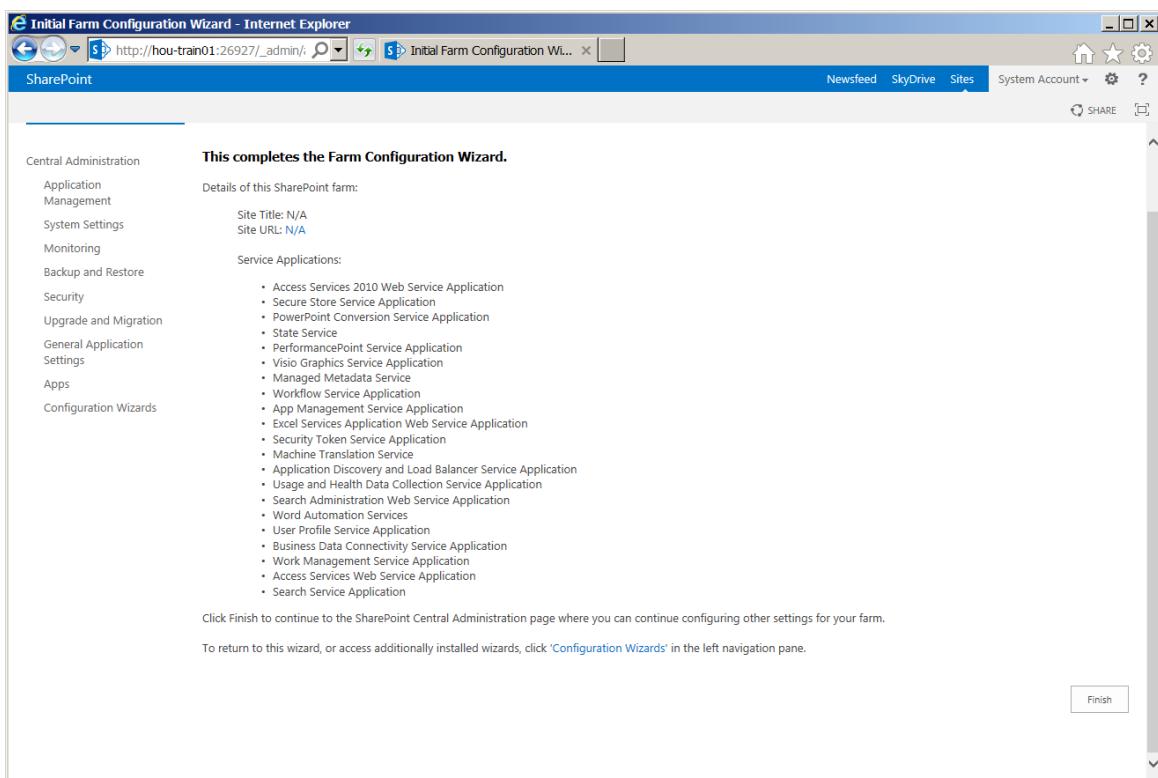


- Select **Igcadmin** as the managed account and leave the default services selected. Click **Next**.



- Skip the creation of Site Collection. The SharePoint Server 2013 Installation and Configuration is now complete and ready for DS Web Framework installation.

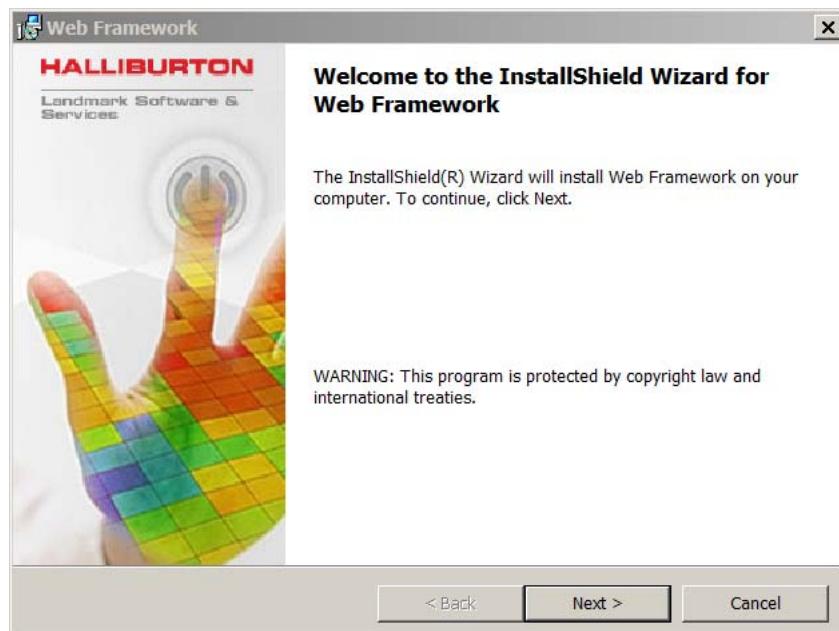




Web Framework Installation Process

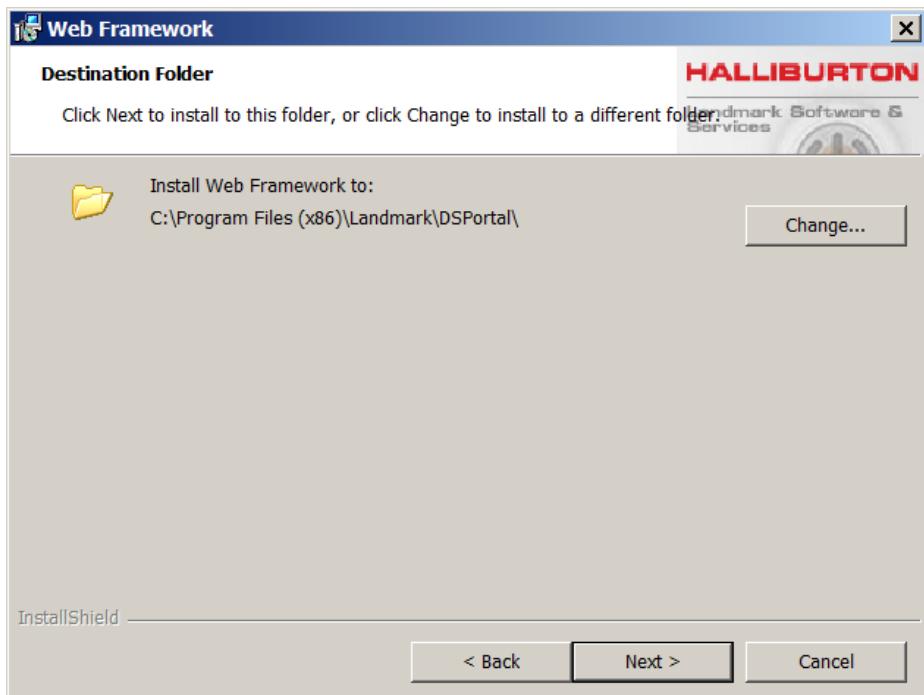
In this section, you will install the DecisionSpace Web Framework 5000.10.4 locally on a Windows Server 2008 R2 operating system. You must have administrative privileges on the machine.

1. Go to **C:\Installer\DSIS** and execute the **WebFramework.exe** file. The DecisionSpace Portal splash screen displays and then the InstallShield wizard launches.



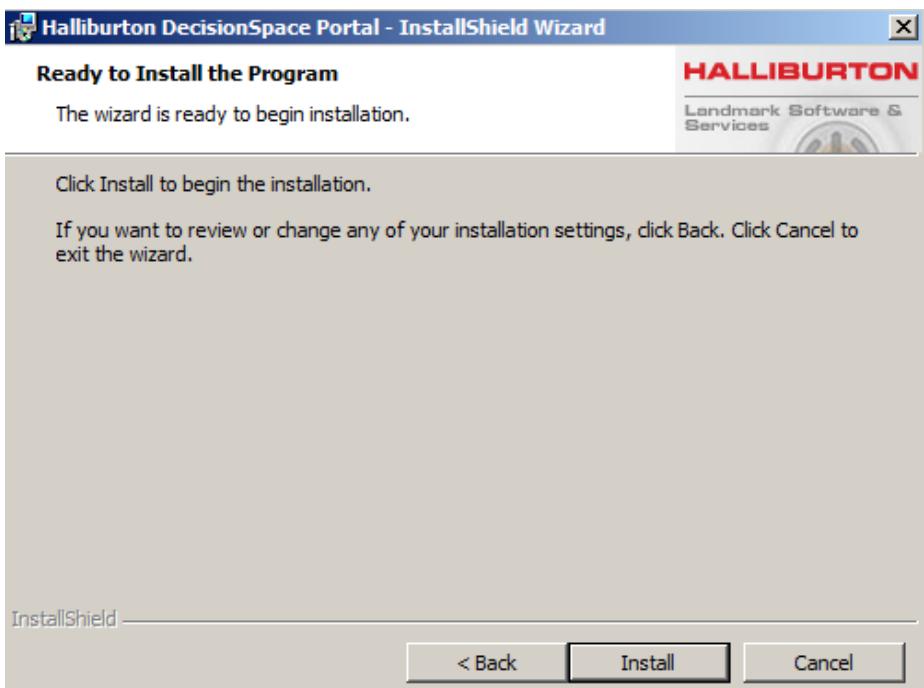
2. Click **Next**.

The Destination Folder screen displays.

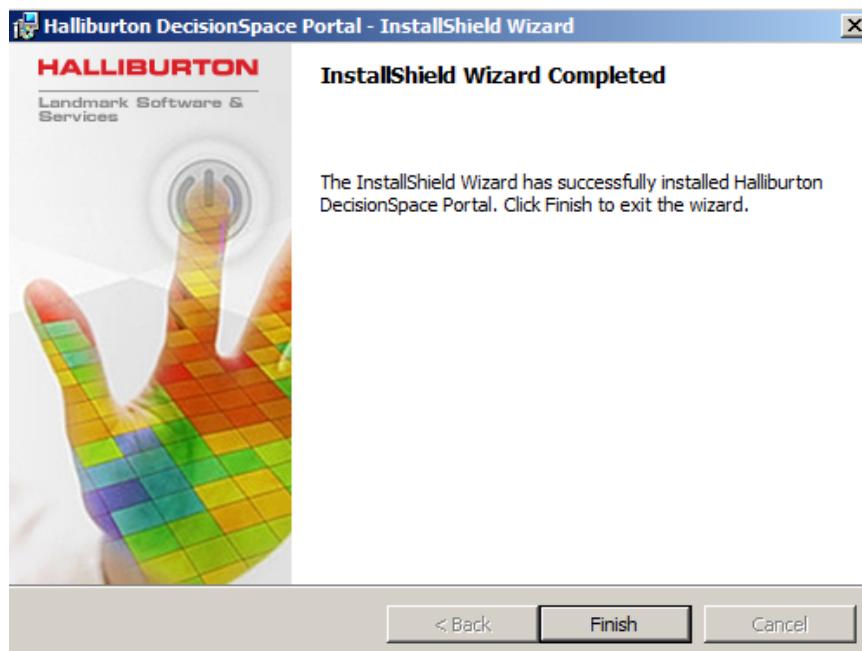


3. Click **Next** to accept the default location.

The Ready to Install the Program screen displays.



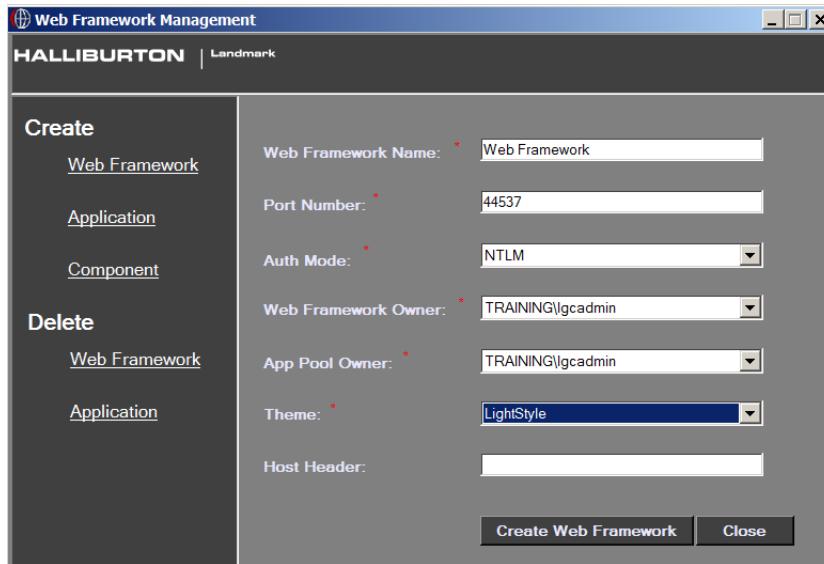
4. Click **Install**. You may be prompted to accept a User Account Control message indicating whether you will allow changes to be made to your machine. If this occurs, click **Yes**.
When the installation process is complete, the InstallShield Wizard Completed screen displays.



5. Click **Finish**.
The InstallShield wizard closes.

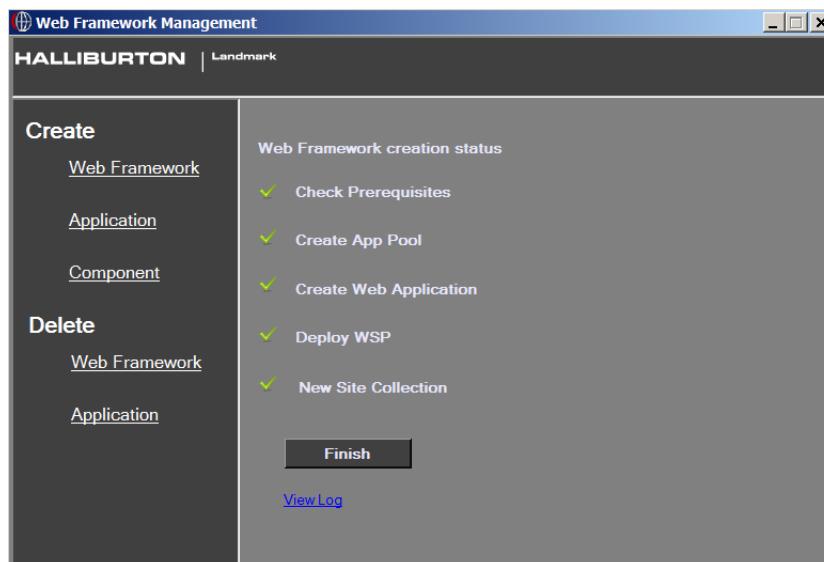
Create DS Web Framework Portal

1. Open the DecisionSpace Web Framework Management tool by selecting **Start > All Programs > Landmark > DecisionSpace Integration Server > Web Framework Management**.
2. In the DecisionSpace Web Framework Management tool, click the **Create > Web Framework** link.



Some of the fields are pre-populated. Click **Create Web Framework** to start the creation process.

3. Click **Finish** when Portal creation is complete.



Post-Installation Procedure

In order to use services of the DecisionSpace Web Framework, the following steps are necessary:

- Click the **View Log** link on the DecisionSpace Web Framework Management screen to check if any error occurs during web framework creation.
- Launch the Web Framework by selecting **Start > All Programs > Landmark > DecisionSpace Integration Server > Launch Web Framework** to verify that the Web Framework is installed correctly.

Directory Structure

The Web Framework directories are created in the **DS Web Framework Home** folder. The following table shows the default location.

Operating System	Location
Windows	C:\Program Files (x86)\Landmark\DSPortal

The Web Framework has the following directory structure after installation. For example:

C:\Program Files (x86)\Landmark\DSPortal.

Folders	Description
DS WF_Home	Root directory for Web Framework
Documentation	Contains the supporting documents for Web Framework
DS Portal SDK	Contains SDK components required for Web Framework and its documents
Files	Contains the configuration files of SharePoint
Resources	Contains images of icons
WSP	Contains all the settings of Web Framework, plugins and upgrade

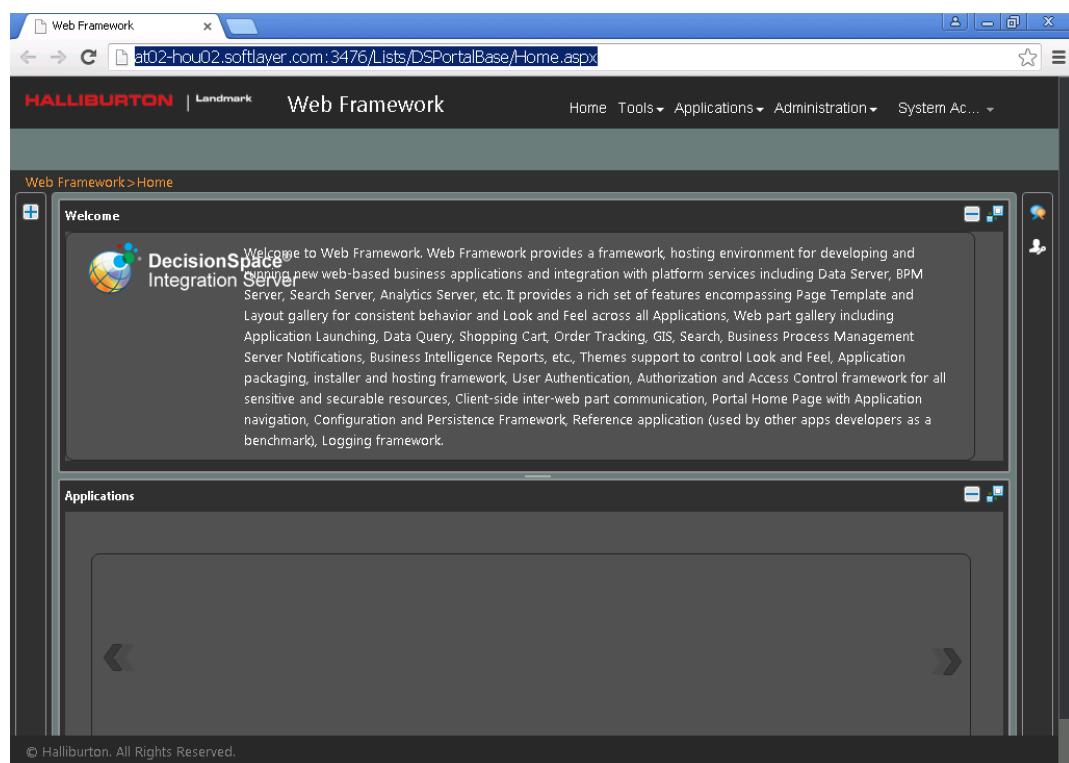
Installation Verification

1. Launch the Portal by selecting **Start > All Programs > Landmark > DecisionSpace Integration Server > Launch Web Framework.**



2. Log on as lgcadmin and click **OK**.

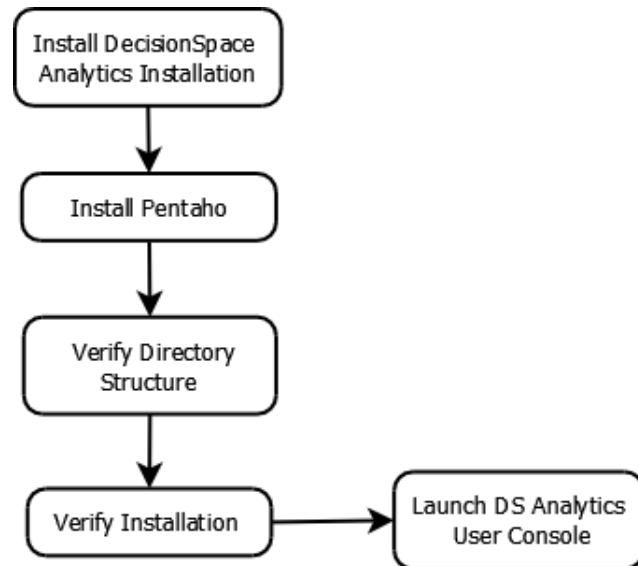
The image below shows a successful installation of the Web Framework with the light style theme.



DecisionSpace Analytics Installation

DecisionSpace Analytics is a platform that provides a comprehensive solution to perform business intelligent analytics on all your enterprise data; discover and visualize data trends in a graphical and responsive mobile enabled dashboard. The platform allows you to customize reports, queries and transformations, and even extend its functionality using the DecisionSpace Analytics API.

Installation Workflow



System Requirements

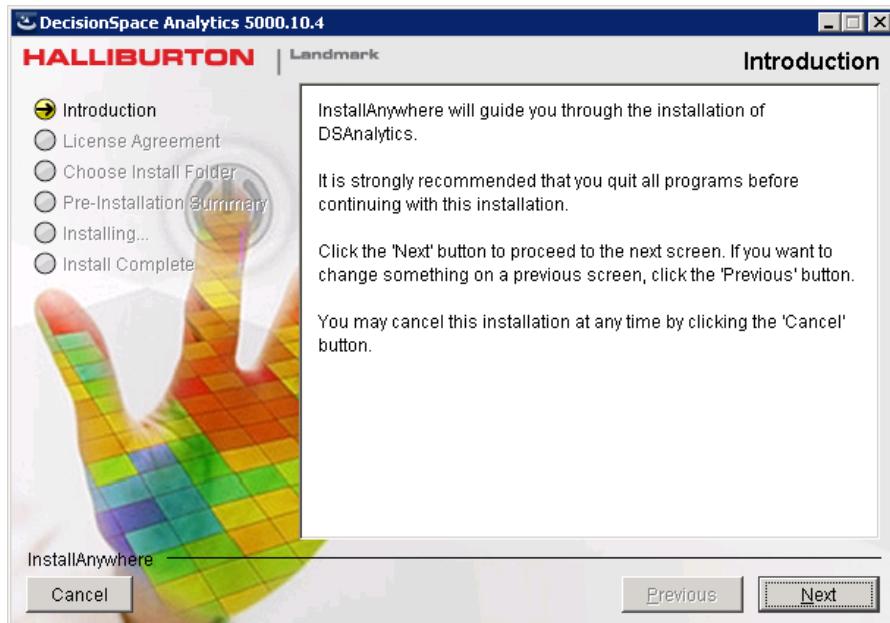
DecisionSpace Analytics	
Resource	System Requirements
Operating System	<ul style="list-style-type: none">• Windows Server 2008 R2• Windows 7 x64• RHEL 5 and 6
Browser Compatibility	<ul style="list-style-type: none">• Internet Explorer 9+ for all operations• Google Chrome (29.0+) or Mozilla Firefox (24.0+)
Minimum System Requirements	<ul style="list-style-type: none">• CPU: Dual-core processor• Physical memory - 8 GB• Hard-disk memory - 60 GB

Installation Process

To install DS Analytics, refer to the following steps:

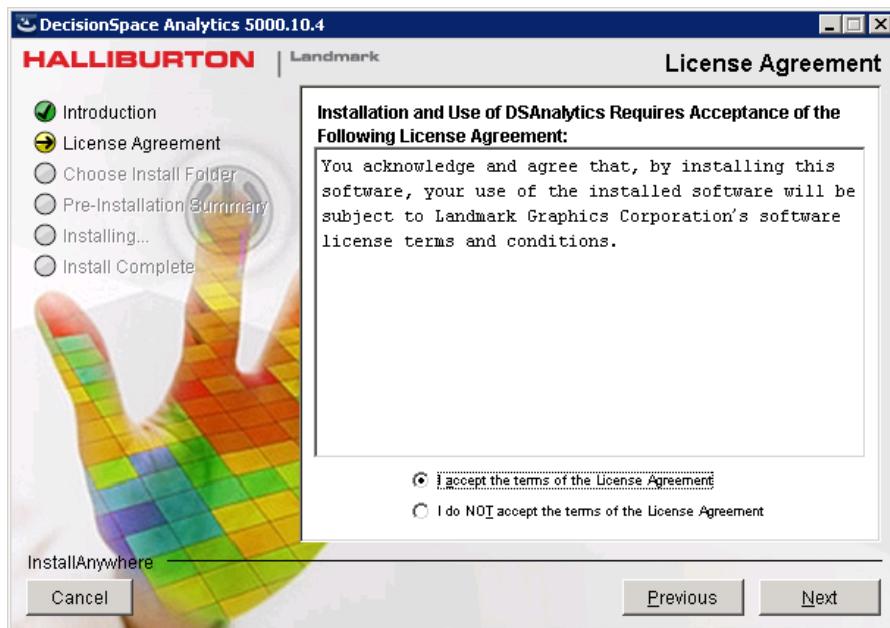
1. Log on to DS Analytics server as **TRAINING\lgcadmin** and run **C:\Installer\DSA\DSAnalytics_10.4_Win.exe**.

The DecisionSpace Analytics splash screen displays for a moment, and then the InstallShield wizard launches and the Introduction screen displays.

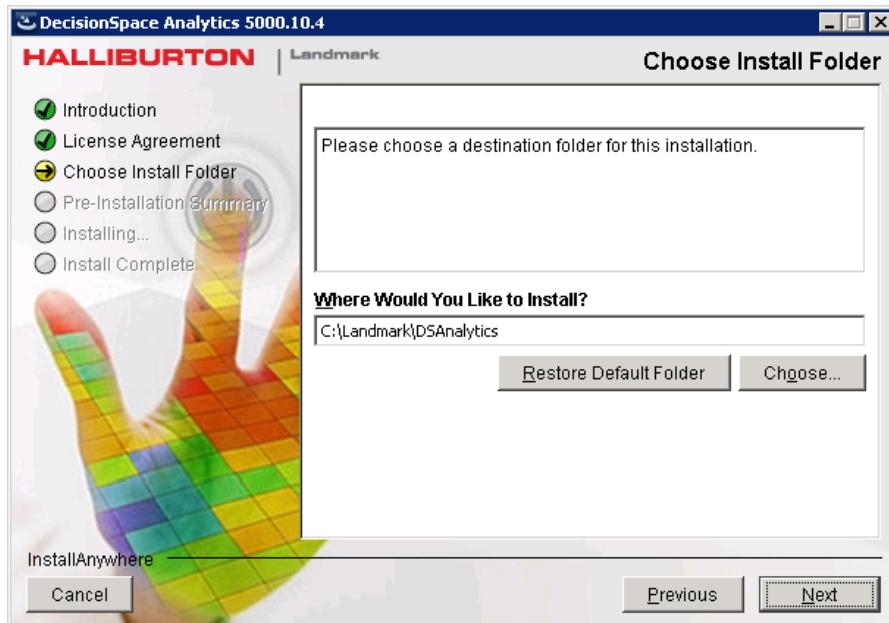


2. Read the Introduction and then click **Next**.

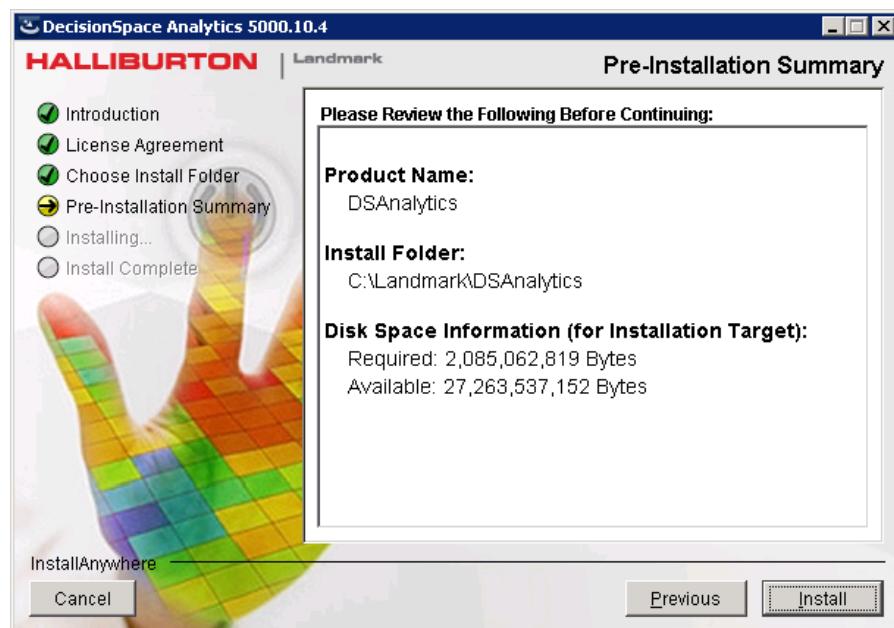
The License Agreement screen displays.



3. Read the license agreement and if you agree, select the **I accept the terms of the License Agreement** option and click **Next**.
4. After you make the install selection(s), the Choose Install Folder screen displays.

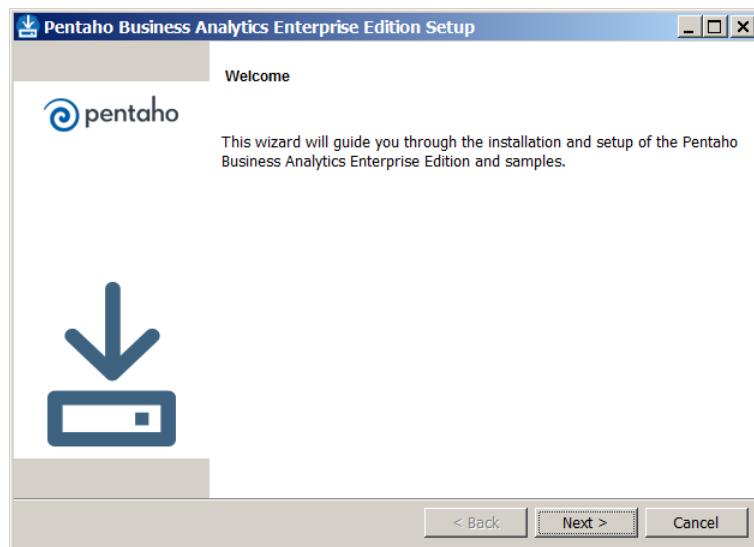
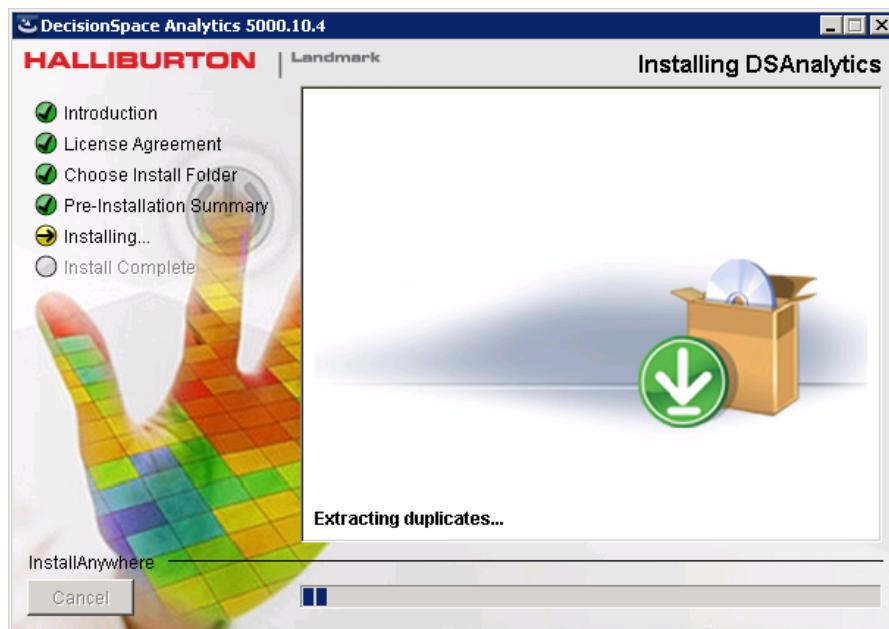


5. Accept the default Installation Path and click **Next**.
The Pre-Installation Summary screen displays.



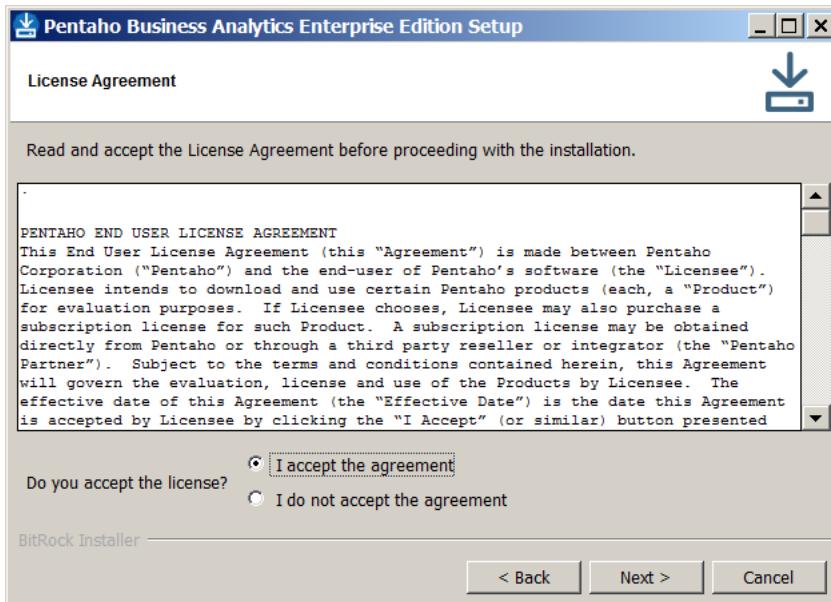
6. Verify the information (the required disk space may differ from the illustration above) and click **Install**.

The DS Analytics installer launches the Pentaho installer.

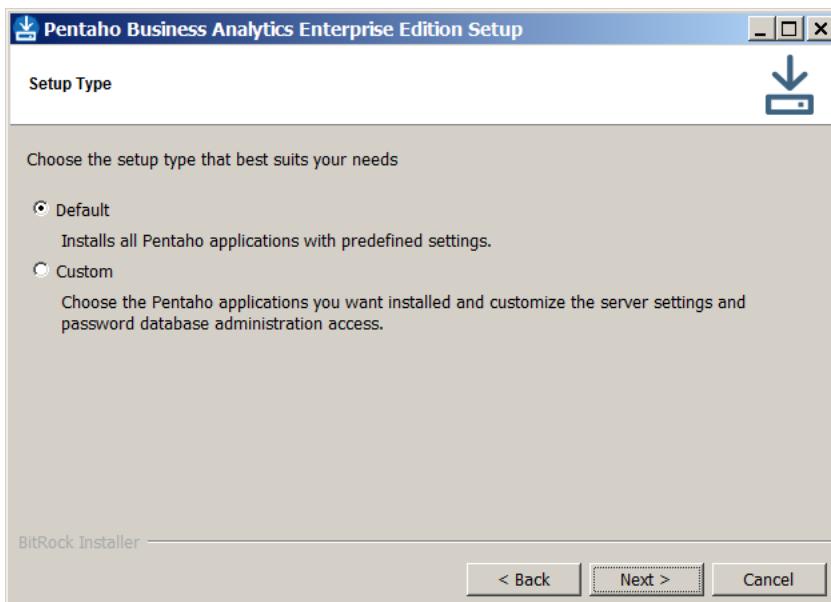


7. Click **Next**.

The License Agreement screen displays.

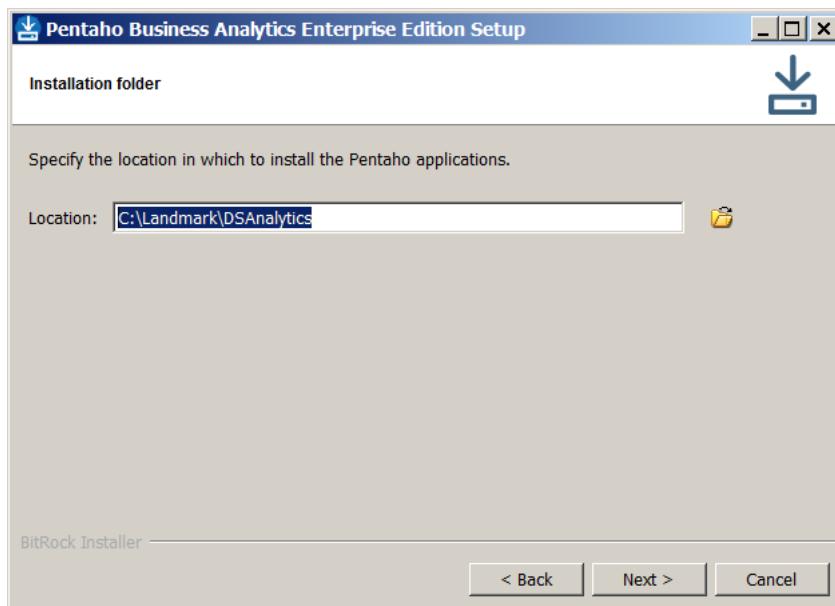


8. Select the **I accept the agreement** option and click **Next**.



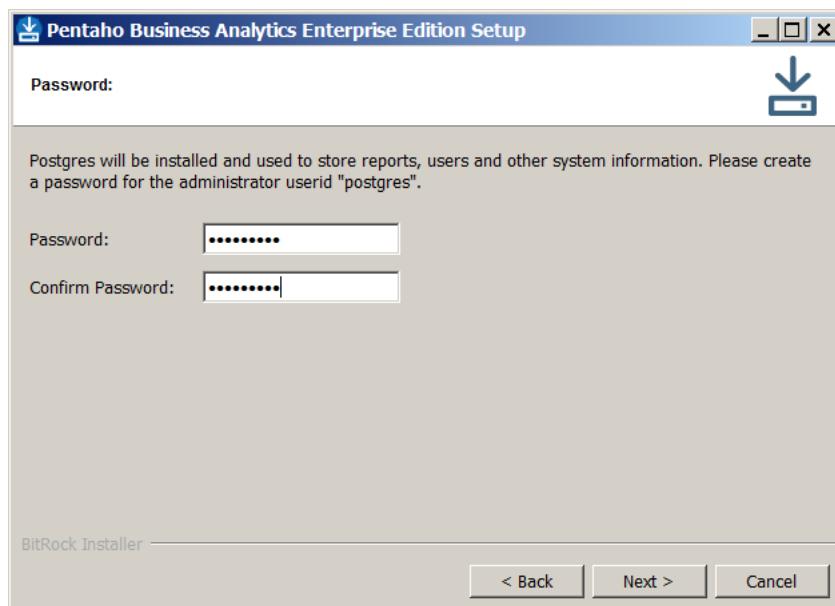
9. Select the **Default** option and click **Next**.

The Installation Folder screen displays.



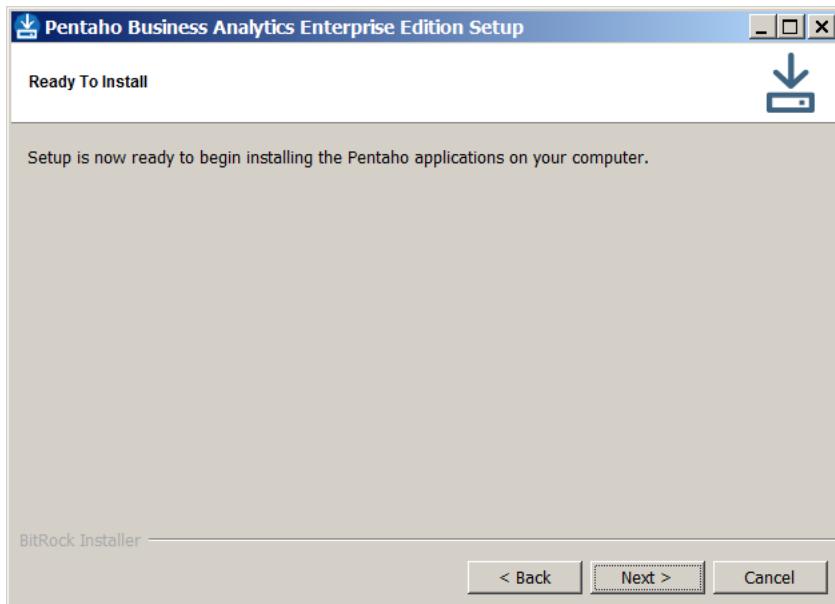
10. Accept the default Installation Path and click **Next**.

The PostgreSQL Password screen displays.



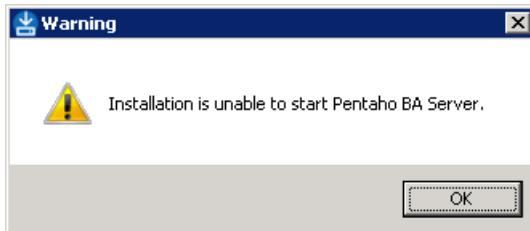
11. Enter **Landmark1** in the Password fields and click **Next**.

The Ready To Install screen displays.

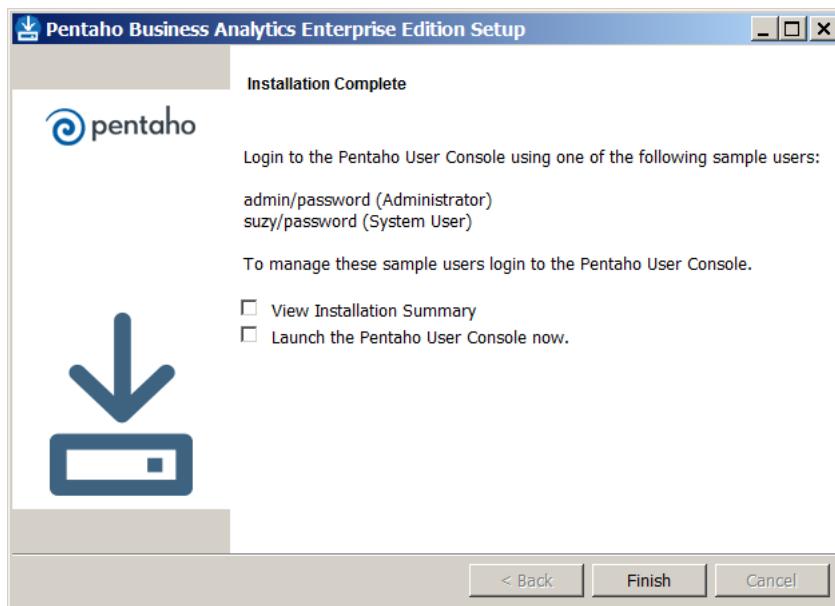


12. Click **Next**.

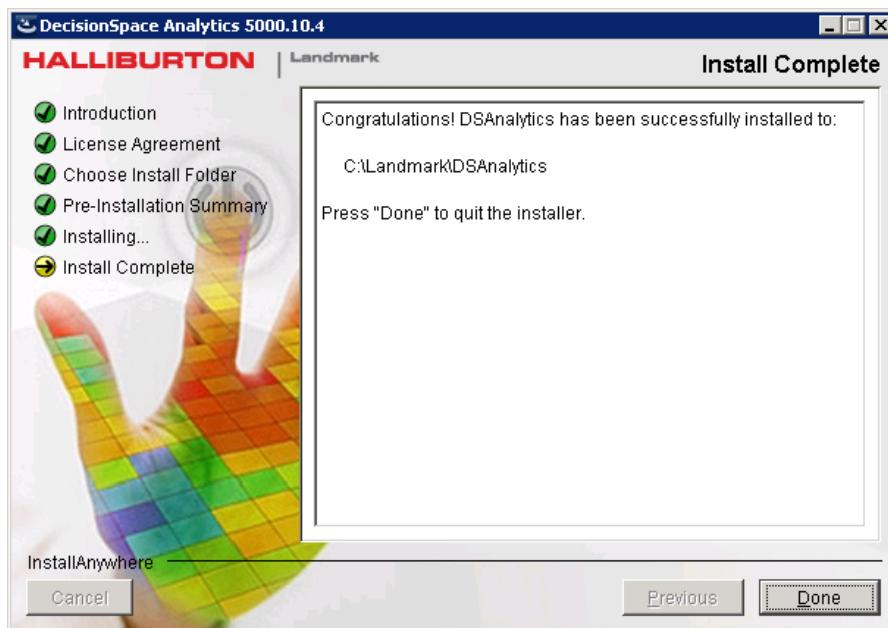
13. If the following error appears, click **OK** and refer to the troubleshooting steps under “DecisionSpace Business Process Management” on page A-14.



14. When the Pentaho installation is complete, the following screen displays:



15. Click **Finish**. The DecisionSpace Analytics InstallShield wizard displays the Install Complete screen.



16. Click **Done**.

Directory Structure

Operating System	Location
Windows	C:\Landmark\DSAnalytics

The DS Analytics software has the following directory structure after installation:

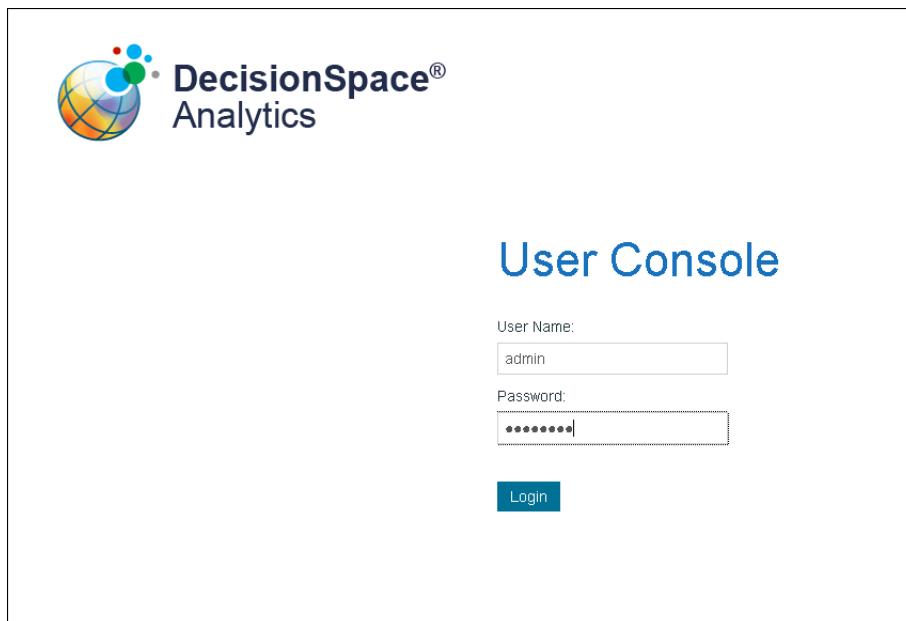
For example: **C:\Landmark\DSAnalytics\Server**.

Folders	Description
DSAnalytics	Root directory for Data Analytics
Server	Contains the Business Analytics and Integration server.
Postgresql	Postgresql database
java	Java Runtime Environment to run JBOSS
Uninstall_DSAnalytics	Contains Data Analytics uninstaller
Documentation	Contains relevant documentation for DS Analytics
design-tools	Contains various design tools like aggregation designer,data-integration,metadata-editor,report-designer, and schema workbench

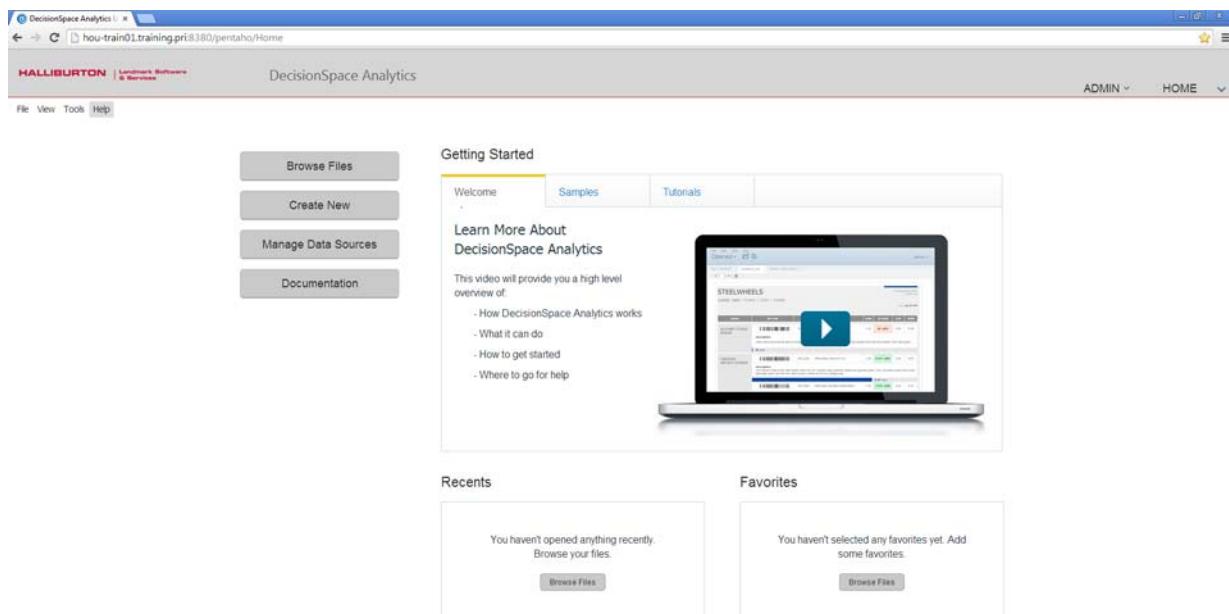
Installation Verification

Go to Start > All Programs > DecisionSpace Analytics > User Console Login.

The DecisionSpace Analytics User Console window displays.



Use the default admin/password to log on to the console.



Appendix A

Troubleshooting

DecisionSpace Data Server

Determining the Data Server Version

Open the dsds_ver.txt file to determine the version of the Data Server.
This file is located at:
<DSDS_HOME>\ApplicationServer\dsds_ver.txt.

The Data Server Does Not Start

To resolve this issue, perform the following steps:

1. Go through the data server log file at:
<DSDS_HOME>\ApplicationServer\standalone\log\server.log.
2. Check if any configuration changes are missing in the file.
3. Restart the data server, and check if the problem still persists.

Server.log is Not Created

If the server does not start and a server.log is not created, use the runDSDS script to start the Data Server. The messaging is automatically written to the command window.

Linux

Execute the JBOSS_HOME/bin/runDSDS.sh script.

Note
DO NOT close the window if using this method. If you wish the program to run in the background, use the '&' sign at the end of the command, which will allow you to continue using the same window for other functions.

Windows

Execute the JBOSS_HOME\bin\runDSDS.bat script.

Note

DO NOT close the window, otherwise the DSDS process stops.

Increasing Memory Allocation

If you receive a Java Heap error, you can change the default memory allocation settings. Open the **<DSDS_HOME>\ApplicationServer\bin\standalone.conf.bat** file or **standalone.conf.sh** file. Search for an entry that looks similar to the example below:

Standalone

```
Set "JAVA_OPTS=Xms64M -Xmx1024M XX:MaxPermSize=512M"
```

- Change the value for -Xms (maximum setting) to the value representing the new memory limit.
- Also update the MaxPermSize as per your server requirement.
- Restart the Data Server service.

Modify Session Time Out for the Data Server Console

The default Data Server Console session time out is 30 minutes. If a user does not interact with the Data Server Console for 30 minutes, the session expires. The user is re-directed to a page with a session time out message. The user may click on the **back to initial page** link to go back to the main configuration page.

If you want to modify this setting, you must modify the **dssdataserver-console.war** file at
<DSDS_INSTALL_HOME>\ApplicationServer\standalone\deployments.

1. Unzip the war file and open the WEB-INF\web.xml file.
2. Search for the timeout setting shown below and change it to the desired value.

- `<session-config>`
 `<session-timeout>30</session-timeout>`
 `</session-config>`

Manual Modification of JBoss Server Port Numbers

Occasionally, during the Data Server installation, fields on the JBoss Ports Customization display as thin slits. You are not able to modify the fields.

If you click **Next**, the installer assigns the default port settings of 8080, 9999, and 9990. If these port numbers are in use, the installer automatically increments the numbers.

To see which port numbers were used, open the **<JBOSS_HOME>/standalone/configuration/standalone-dsds.xml** file and scroll to the bottom. You can see an entry similar to the example below. If necessary, change the port settings and save the file. The important settings are highlighted.

```
<socket-binding-group name="dsds-sockets" default-
interface="public" port-offset="${jboss.socket.binding.port-
offset:0}">
    <socket-binding name="http" port="8080"/>
    <socket-binding name="https" port="8443"/>
    <socket-binding name="jacorb" port="3528"/>
    <socket-binding name="jacorb-ssl" port="3529"/>
    <socket-binding name="jmx-connector-registry"
interface="management" port="1090"/>
    <socket-binding name="jmx-connector-server"
interface="management" port="1091"/>
        <socket-binding name="management-native"
interface="management"
port="${jboss.management.native.port:9999}"/>
            <socket-binding name="management-http"
interface="management" |
port="${jboss.management.http.port:9990}"/>
                <socket-binding name="messaging" port="5445"/>
                <socket-binding name="messaging-throughput"
port="5455"/>
                    <socket-binding name="osgi-http" interface="management"
port="8090"/>
                        <socket-binding name="remoting" port="4447"/>
                        <socket-binding name="txn-recovery-environment"
port="4712"/>
                            <socket-binding name="txn-status-manager" port="4713"/>
                            <socket-binding name="teiid-jdbc" port="31000"/>
                            <socket-binding name="teiid-odbc" port="35432"/>
                            <outbound-socket-binding name="mail-smtp">
                                <remote-destination host="localhost" port="25"/>
                            </outbound-socket-binding>
                        </socket-binding-group>
```

Data Server Logging Levels

In the **standalone-dsds.xml** file, certain logging categories are included which are helpful for troubleshooting the Data Server. These logging levels can be modified to set logging to a 'debug' mode. For example, you may want to increase logging messages to detect a problem. This can be accomplished for particular parts of the product such as JBoss, Teiid, etc. It can also be accomplished for all logging by changing the **root-logger** setting. This is the last entry for logging.

When the logging level is changed, it is very important that it be returned to its original state once an issue is found. Otherwise, the logs generate at a very fast pace. This consumes a large amount of disk space in a very short time frame.

The Data Server can use these settings in several ways. When DecisionSpace Messaging is configured, it displays on a console and writes to the server and jpa logs.

Note

DecisionSpace Messaging displays on the console ONLY when it is started from the command prompt.

Entries and their default settings in the **standalone-dsds.xml** file are displayed below:

```

<file relative-to="jboss.server.log.dir" path="server.log"/>
<periodic-rotating-file-handler name="JPA_FILE_LOG_HANDLER">
  <level name="WARN"/>
<logger category="org.eclipse.persistence">
  <level name="FINEST"/>
<logger category="com.arjuna">
  <level name="WARN"/>
<logger category="org.apache.tomcat.util.modeler">
  <level name="WARN"/>
<logger category="sun.rmi">
  <level name="WARN"/>
<logger category="jacorb">
  <level name="WARN"/>
<logger category="jacorb.config">
  <level name="ERROR"/>
<logger category="org.teiid">
  <level name="WARN"/>
<logger category="org.teiid.SECURITY">
  <level name="DEBUG"/>
<logger category="org.teiid.COMMAND_LOG">
  <level name="DEBUG"/>
<logger category="org.teiid.AUDIT_LOG">
  <level name="DEBUG"/>
<root-logger>   <level name="WARN"/>

```

The diagram illustrates the structure of the `standalone-dsds.xml` configuration. It shows a block of XML code with annotations:

- A bracket on the right side groups the `<logger category="org.eclipse.persistence">` and `<level name="FINEST"/>` entries, labeled "These two items are linked".
- A bracket on the right side groups the `<logger category="org.teiid.SECURITY">`, `<logger category="org.teiid.COMMAND_LOG">`, and `<logger category="org.teiid.AUDIT_LOG">` entries, labeled "Categories must be at debug level."
- An arrow points from the `<root-logger>` entry to the `<level name="WARN"/>` entry, labeled "Root logger discussed above."

Log Levels

Level	Description
OFF	This setting disables the generation of the log output. You may want to set logging to OFF during production to avoid the overhead of logging.
SEVERE	This level enables reporting of failure cases only. Usually, if failure occurs, the application stops.
WARNING	This level enables logging of issues that have a potential to cause problems. For example, a setting that is picked by the application and not by the user.
INFO	This level enables the standard output. The contents of this output are very limited.
CONFIG	This level enables logging of configuration details such as your database logon information and some metadata information. You may want to use the CONFIG log level at deployment time.
FINE	This level enables logging of the first level of the debugging information and SQL. You may want to use this log level during debugging and testing, but not at production.
FINER	This level enables logging of further debugging information than the FINE setting. For example, the transaction information is logged at this level. You may want to use this log level during debugging and testing, but not at production.
FINEST	This level enables logging of further debugging information than the FINER setting, such as a very detailed information about certain features (for example, sequencing). You may want to use this log level during debugging and testing, but not at production.

Creating a JBoss Application Server Realm Administrative User

To access the JBoss Application Server you must log on using a JBoss Server Realm administrative user. If this user does not exist, perform the following steps to create it:

1. Navigate to the JBoss home\bin folder. Typically, this is:

<DSDS_HOME>\ApplicationServer\bin

2. Run the “add-user” script in the command window, and specify the following information:
 - a) Enter “a” to add a Management User.
 - b) At the Realm prompt, press **Enter**.
 - c) Enter the admin user name.

Note

The user name cannot contain special characters.

- d) Enter the admin user's password.
- e) Enter the admin user's password again.
- f) Enter “y” if the user name is correct.
- g) Press **Enter** to add the user.

The JBoss Server administrative user is created and added to the following files:

- <DSDS_HOME>\ApplicationServer\standalone\configuration\mgmt-user.properties
- <DSDS_HOME>\ApplicationServer\domain\configuration\mgmt-users.properties

3. If you want to connect remotely, or use the full hostname in the http link, you must modify the **<DS_HOME>\ApplicationServer\standalone\configuration\standalone-dsds.xml** entry shown below to include the IP address of the Data Server machine:

Default setting:

```
<interface name="management">
<inet-address value="${jboss.bind.address.management:127.0.0.1}" />
</interface>
```

Modified setting, for example:

```
<interface name="management">
<inet-address value="${jboss.bind.address.management:34.28.139.78}" />
</interface>
```

4. Open a new browser instance, and go to the JBoss Application Server at the full IP address of the Data Server machine:

<http://localhost:9990/console/App.html#server-overview>

- The Data Server is running, but the models cannot be accessed, and you see the following exception in the data model log file:

“java.sql.SQLRecoverableException: IO Error: The Network Adapter could not establish the connection”.

- Ensure that the username and password are correctly specified for this data source in the file **JBOSS_HOME/standalone/configuration/standalone-dsds.xml**
- Make sure you have the correct JNDI name set in **<file JBOSS_HOME/standalone/configuration/standalone-dsds.xml** for your data source.

This JNDI name must match the one we provide for the data source defined in our VDB file.

Note

The “java:/” prefix can be ignored while setting the connection JNDI name in the VDB.

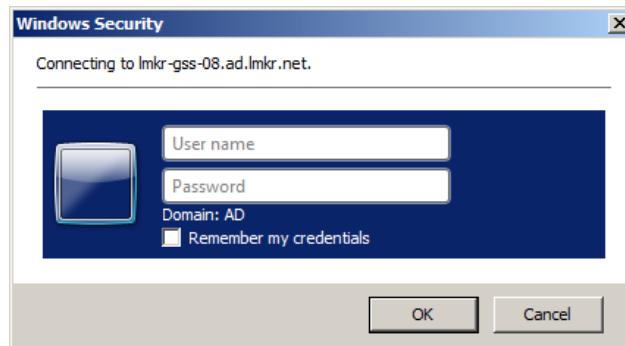
- The user can log on to the administration console, but gets a 403 error in the browser.
 - Check the data server log file (**JBOSS_HOME/standalone/log/server.log**) and see if there is any license checkout error.
 - If yes, then ensure that the **LM_LICENSE_FILE** is correctly set in the system environment variables. It should either point to the LAM server - <LAM port number>@<LAM server name>, or path if the LAM server is local - **C:\Landmark\IAM\<license file>**.
 - Also ensure that the lgcx daemon is running on the LAM server. Lgcx daemon is available in later versions of the LAM license server.
- If you have items that have been deployed and no longer appear in the administration console, but are still visible in standalone-dsds.xml and content area, then:
 - Stop the Data Server Service.
 - Remove the log files and tmp directories from **JBOSS_HOME/standalone/**.
 - Remove teiid-data; timer-service-data and tx-object-store (everything but content) from the **JBOSS_HOME/standalone/data** file.
 - Restart the service. If your deployments do not appear, repeat the same steps and restart the service.
 - Lastly, if nothing else works, back up the directory before deleting, but remove the **JBOSS_HOME/modules/org/jboss/teiid/main/deployment** file.

DecisionSpace Web Framework

Host Header Problems

Perform the following steps if:

- You performed the steps in “Configure the Host Header” when you installed the Web Framework, and
- You added a value to the Host Header field when you installed the Web Framework, and
- After installing, a “Windows Security” dialog box displays and the Web Framework does not open in the browser.



To resolve this problem, perform the following steps:

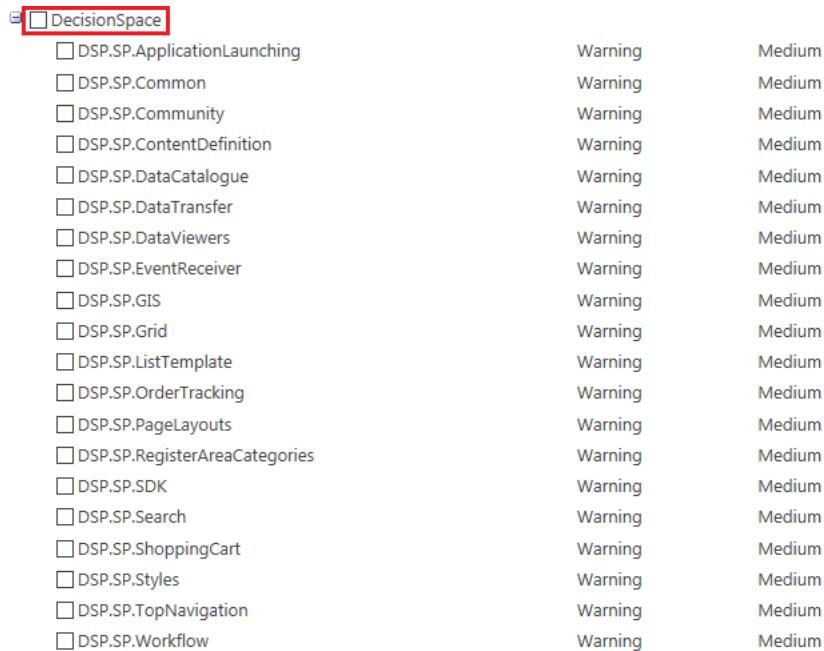
1. Open the PowerShell Module.
2. Run the following command in PowerShell:

```
New-ItemProperty  
HKLM:\System\CurrentControlSet\Control\Lsa -Name  
"DisableLoopbackCheck" -Value "1" -PropertyType  
dword
```

Checking DecisionSpace Logging Categories

Perform the following steps to check if DecisionSpace Logging Categories are configured in the SharePoint server:

1. Navigate to **Central Admin > Monitoring > Configure Diagnostic Logging**, and see if the DecisionSpace root and categories exist.



<input type="checkbox"/> DSP.SP.ApplicationLaunching	Warning	Medium
<input type="checkbox"/> DSP.SP.Common	Warning	Medium
<input type="checkbox"/> DSP.SP.Community	Warning	Medium
<input type="checkbox"/> DSP.SP.ContentDefinition	Warning	Medium
<input type="checkbox"/> DSP.SP.DataCatalogue	Warning	Medium
<input type="checkbox"/> DSP.SP.DataTransfer	Warning	Medium
<input type="checkbox"/> DSP.SP.DataViewers	Warning	Medium
<input type="checkbox"/> DSP.SP.EventReceiver	Warning	Medium
<input type="checkbox"/> DSP.SP.GIS	Warning	Medium
<input type="checkbox"/> DSP.SP.Grid	Warning	Medium
<input type="checkbox"/> DSP.SP.ListTemplate	Warning	Medium
<input type="checkbox"/> DSP.SP.OrderTracking	Warning	Medium
<input type="checkbox"/> DSP.SP.PageLayouts	Warning	Medium
<input type="checkbox"/> DSP.SP.RegisterAreaCategories	Warning	Medium
<input type="checkbox"/> DSP.SP.SDK	Warning	Medium
<input type="checkbox"/> DSP.SP.Search	Warning	Medium
<input type="checkbox"/> DSP.SP.ShoppingCart	Warning	Medium
<input type="checkbox"/> DSP.SP.Styles	Warning	Medium
<input type="checkbox"/> DSP.SP.TopNavigation	Warning	Medium
<input type="checkbox"/> DSP.SP.Workflow	Warning	Medium

2. If the DecisionSpace root and categories do not exist, navigate to **Site Settings > Site Collection Features**, and check if the **DSP Register Logging Categories** feature is activated.



3. If the **DSP Register Logging Categories** feature is not activated, activate it and repeat Step 1.
4. If the DecisionSpace root and categories do not exist, follow the steps in the link below to clear the SharePoint timer service cache.

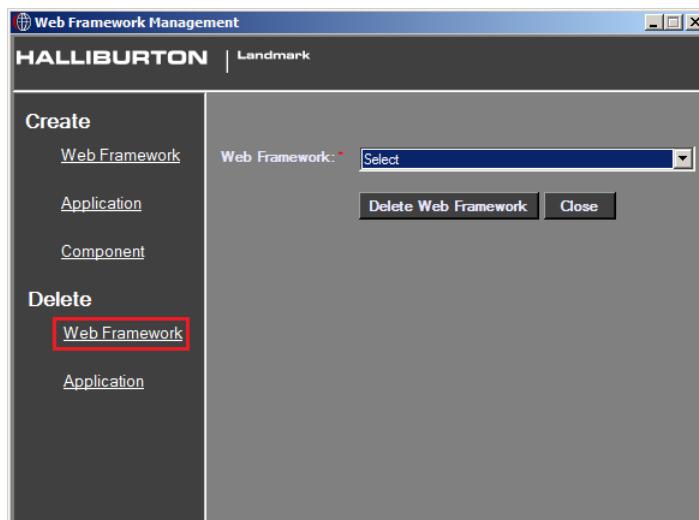
<http://blogs.msdn.com/b/josrod/archive/2007/12/12/clear-the-sharepoint-configuration-cache-for-timer-job-and-psconfig-errors.aspx>

5. Navigate to **Site Settings > Site Collection Features**, and deactivate and activate the **DSP Register Logging Categories** feature.
6. Repeat Step 1. If the DecisionSpace root and categories do not exist, contact the DecisionSpace support team.

Deleting a DecisionSpace Web Framework Site

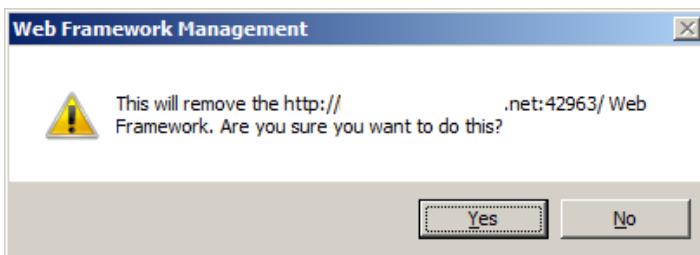
To delete a Web Framework, perform the following steps:

1. Select **Web Framework Deployment** from the Windows **Start** menu.
2. Click the **Web Framework** link in the Web Framework Management tool.



3. Select the Web Framework you want to delete from the drop-down list. You can also select all Web Frameworks to delete.
4. Click **Delete Web Framework**.

5. Click **Yes** to confirm the deletion.



The deployed WSPS are retracted and removed, and the Web Framework is removed from the server.

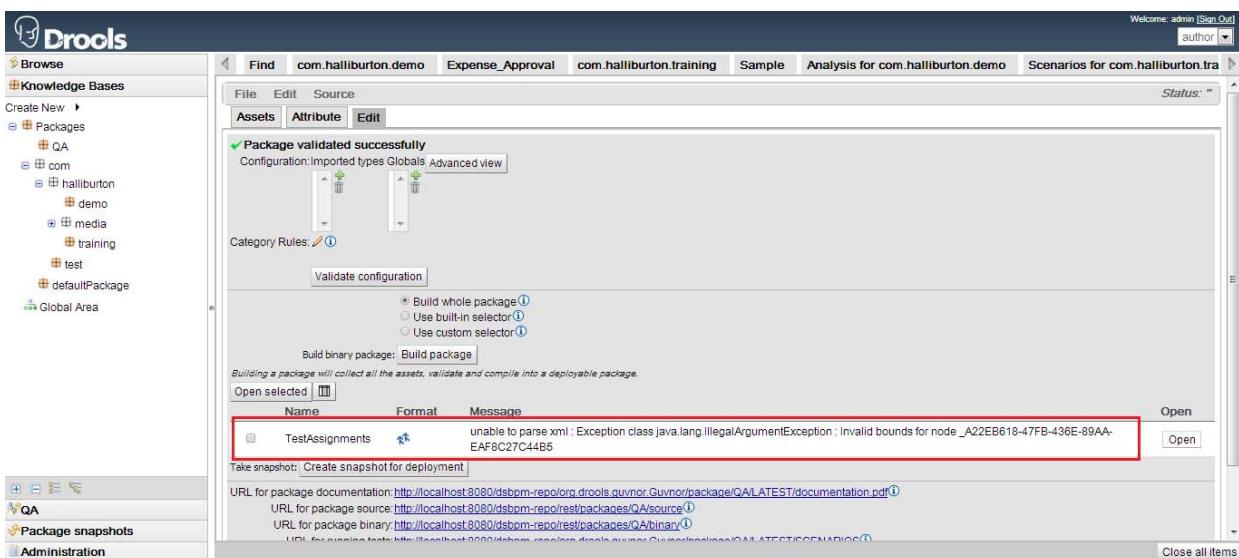
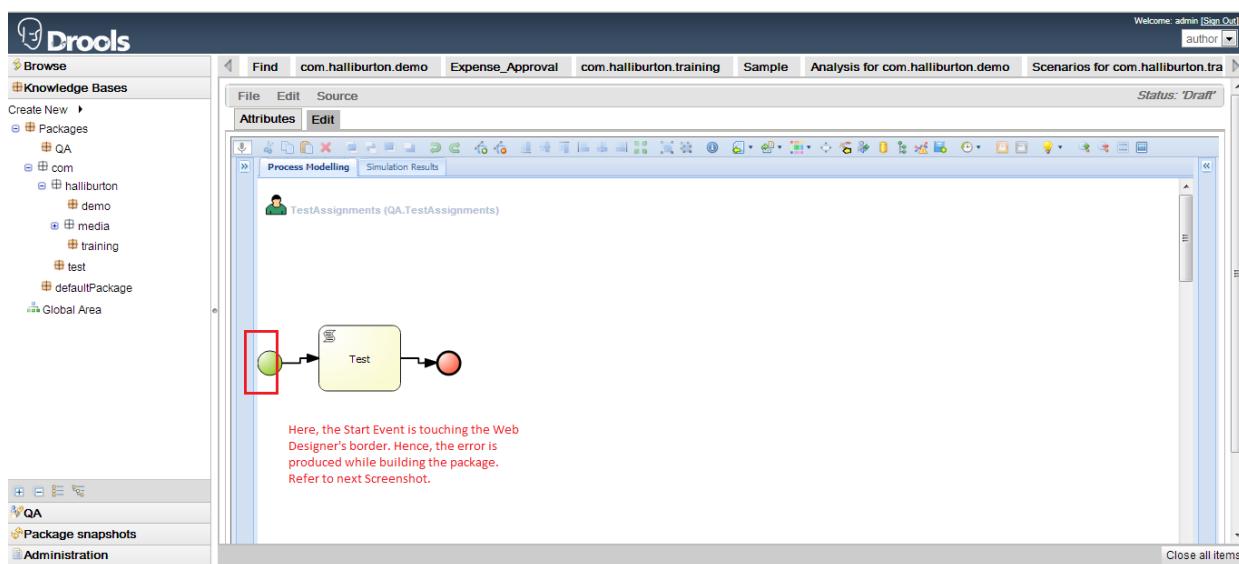
6. Click **OK** in the Web Framework Management dialog box.
7. If the deletion is erroneous, you are prompted to view the log file. Click the **View log** link.

DecisionSpace Business Process Management

Save Regularly and Export When You Have Reached a Milestone

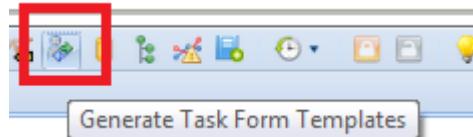
Please ensure that you save process definitions regularly to avoid loss of data. If you fail to do so and close the browser, the DSBPM repository does not cache your work. Start from the last saved version.

Do Not Get the Shapes Touch Boundaries of Canvas or Swim Lanes

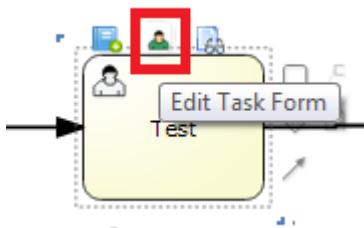


Check List for Human Task/User Task

- To verify that task forms are generated, click the **Generate Task Form Templates** icon.



- Click the **Edit Task Form** icon.
- Click **Save**.



- Verify that the Task Name property of human task is populated appropriately. Otherwise the task forms are not generated and the validate process also fails.

A screenshot of the 'Properties (Task)' dialog box. The 'Task Type' field is set to 'User' and the 'Task Name' field is set to 'Test123'. Red boxes highlight both of these fields. The dialog box is overlaid on a process definition diagram where a task node is labeled 'Test'.

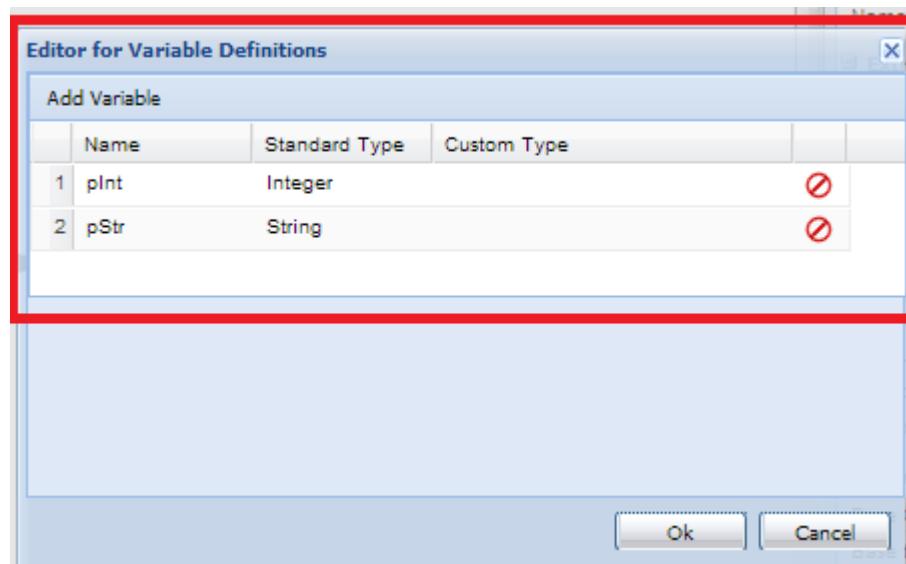
A screenshot of the 'Form Generation Results for Process QA.TestAssignments' dialog box. It shows two generated templates: 'QA.TestAssignments-taskform' and 'Test123-taskform'. A red box highlights the 'Test123-taskform' entry. A note on the left says 'This template won't generate if Task Name is missing' with an arrow pointing to the 'Test123-taskform' entry.

5. Verify that mapping between Process Variables and Data Input/Output Set variables follows the RHS to LHS mapping.

This implies that when mapping Data Input Set Parameters to Process Variables, Process Variables are on RHS and input parameters are on LHS.

This also implies that when mapping Data Output Set Parameters to Process Variables, Process Variables are on LHS and Output Parameters are on RHS, as seen in the images below:

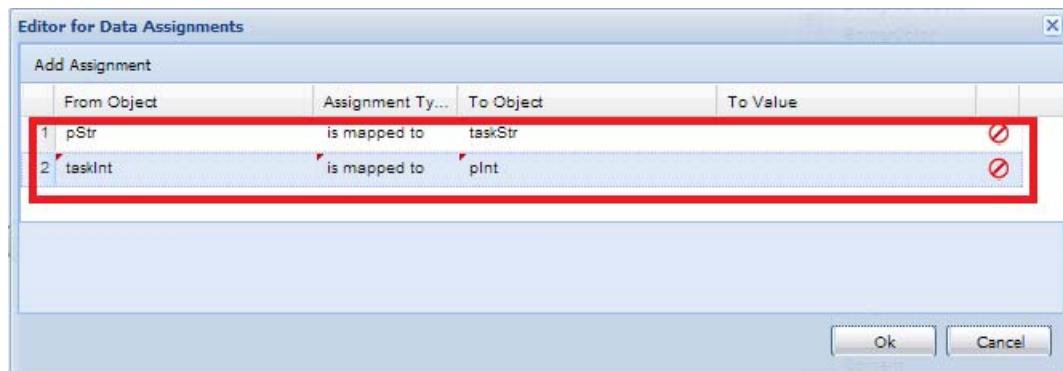
- **Process Variable defined**



- **DataInputSet and DataOutputSet**



- Assignment



Scope of DSBPM Repository

The DSBPM Repository only supports **create packages** and **create BPMN2 Process**. The remaining **Create** features are not yet supported.

Package Should be Validated and Built Before Importing into the DSBPM Engine

The DSBPM Engine's Import Process tab is a mirror image of the DSBPM Repository. After a process is created in the package, it is immediately reflected in the DSBPM Engine. To run the process, validate the package of the process, and build it in the DSBPM Repository.

API Playground Does Not Return any Results

If you can list the APIs but no results are returned when you click **Try it out!**, check if the Request URL has the same hostname as in your address bar.

Error Status Codes

HTTP Status Code	Reason
500	Internal Server Error

[Try it out!](#) [Hide Response](#)

Request URL

`http://...1...-21-0-...71...-1...-1...-com:8080/dsbpm-engine/rest/process/definition?api_key=special-key`

If this hostname is different than the one in the address bar, update the current hostname in the host file.

1. Stop the DSIS service.
2. Go to <DSIS_HOME>/ApplicationServer/standalone.
3. Delete the tmp directory.
4. Update the current hostname in the hosts file.

If the DSIS Admin console has the URL
<http://dsis.xzy.com:8080/dsdataserver-console/faces/home.jsf>, then use the dsis.xzy.com hostname in the host file.

- a) Open the hosts file in a text editor.

On Windows: C:\Windows\System32\drivers\etc\hosts

On Linux: /etc/hosts

- b) Check if this hostname is as the first entry in the hosts file for hosts, otherwise add this as the first entry.

For example:

1.2.3.4 dsis.xzy.com
1.2.3.4 DSISNTLMWF.com

5. Update the URL in **dsbpm.engine.war**.

- a) Go to <DSIS_HOME>/ApplicationServer/standalone/deployments.
- b) Open **dsbpm-engine.war** using a zip utility.
- c) Go to WEB-INF and open **web.xml** in any text editor.
- d) Search for **swagger.api.basepath**. You will find the following snippet:

```
<init-param>
<param-name>swagger.api.basepath</param-name>
<param-value>
http://DSISNTLMWF.com:8080/dsbpm-engine/rest<
param-value>
</init-param>
```

- e) Change the hostname in the param-value to the FQDN in your DSIS URL.

For example, if the DSIS Admin Console has the URL:
<http://dsis.xzy.com:8080/dsdataserver-console/faces/home.jsf>, then use `dsis.xzy.com` as the hostname.

```
<init-param>
<param-name>swagger.api.basepath</param-name>
<param-value> http://
dsis.xzy.com:8080/dsbpm-engine/rest< param-value>
</init-param>
```

- f) Save **web.xml** and save the **war** file, and then close the zip utility.
6. Start the DSIS service. Check the results.

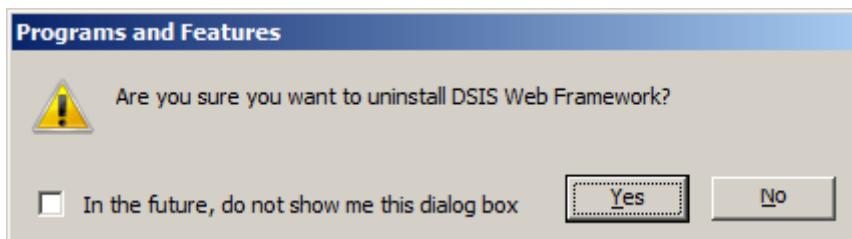
Appendix B

Uninstall Procedures

Uninstalling the DecisionSpace Web Framework

Perform the following steps to uninstall Web Framework from your machine:

1. In the Windows **Start** menu, click **Control Panel**.
2. Click **Programs and Features**.
3. Right-click **DSIS Web Framework** from the program list, and click **Uninstall**. The **Programs and Features** dialog box appears.
4. Click **Yes** to uninstall DSIS Web Framework.



Uninstalling DecisionSpace Search

Who must perform these steps: Domain users with administrator permissions on the machine where DecisionSpace Search is installed.

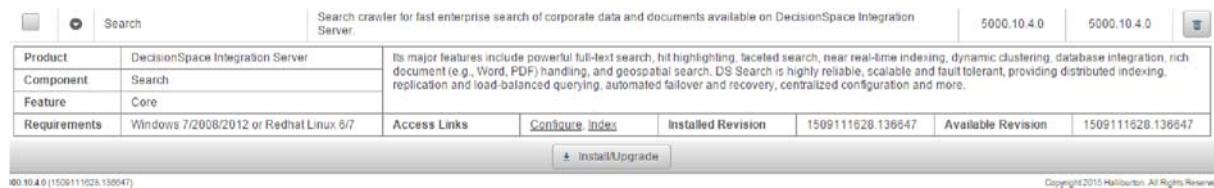
This section provides instructions to remove the DecisionSpace Search plugin.

1. Make sure the DSIS Data Server service is running on the machine where you will remove the DecisionSpace Search plugin.

If the service is not running, please refer to the *DecisionSpace Integration Server Data Server* documentation on how to start the Data Server service.

2. Launch the Data Server console and log in using the administrative user name and password.
3. When the Data Server console becomes available, select the Plugins tab.
4. On the Plugins page, select the **Installed** option to display a list of installed plugins.

You will see a “Search” entry in the Plugins list.

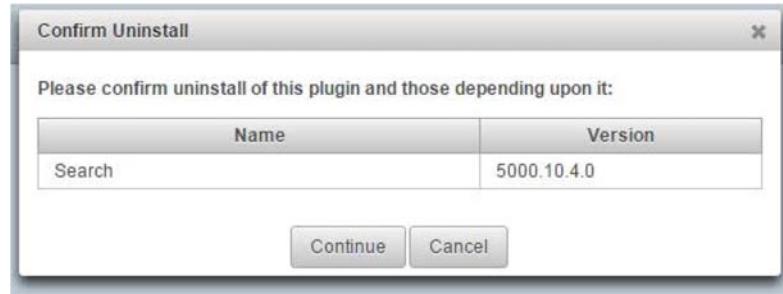


You can see the plugin details by clicking the arrow button adjacent to the plugin name:



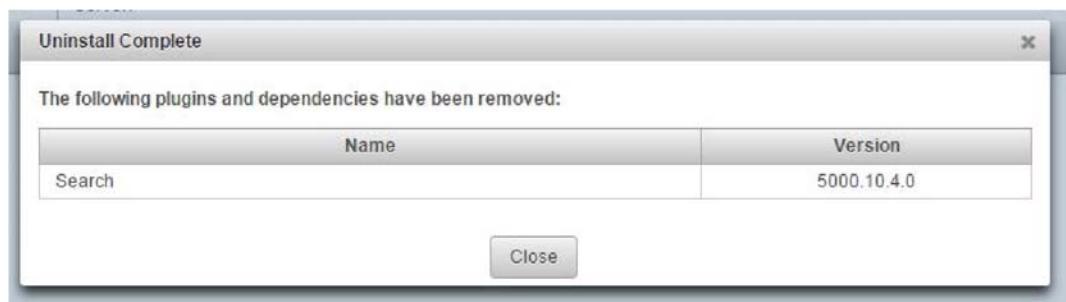
5. Select the **Search** plugin and click the trash bin icon (trash bin icon) (Uninstall Search).

The Confirm Uninstall window displays:



6. Click **Continue**. The Uninstall Status window displays.

After the Search plugin is installed, the Uninstall Complete window displays.



7. Click **Close**.

The Search plugin uninstall is now complete. You can see that the Search plugin is not listed as an installed plugin anymore.

It is not necessary to reboot the system after the software is uninstalled.

Uninstalling DecisionSpace BPM

Who must perform these steps: Domain users with administrator permissions on the machine where the DS BPM plugin will be removed.

This section provides instructions on uninstalling the DS BPM plugin.

1. Make sure the DSIS service is running on the machine where you will uninstall the DS BPM plugin.
2. Launch the DSIS Admin console and log in using the administrative user name and password.
3. When the DSIS Admin console becomes available, select the Plugins tab.
4. On the Plugins page, select **Installed** to display a list of installed plugins.

You will see a “Business Process Management” entry in the Plugins list.

DecisionSpace Integration Server - Admin Console

The screenshot shows the 'Plugins' tab selected in the navigation bar. Under 'Show Plugins:', 'Installed' is checked. A table lists one plugin: 'Business Process Management'. The details column for this plugin states: 'A comprehensive platform for workflow management available on DecisionSpace Integration Server.' The 'Summary' column shows the version as '5000.10.4.0'. The 'Available' column also shows '5000.10.4.0'. There is a small arrow icon next to the plugin name.

You can see the plugin details by clicking the arrow adjacent to the plugin name:

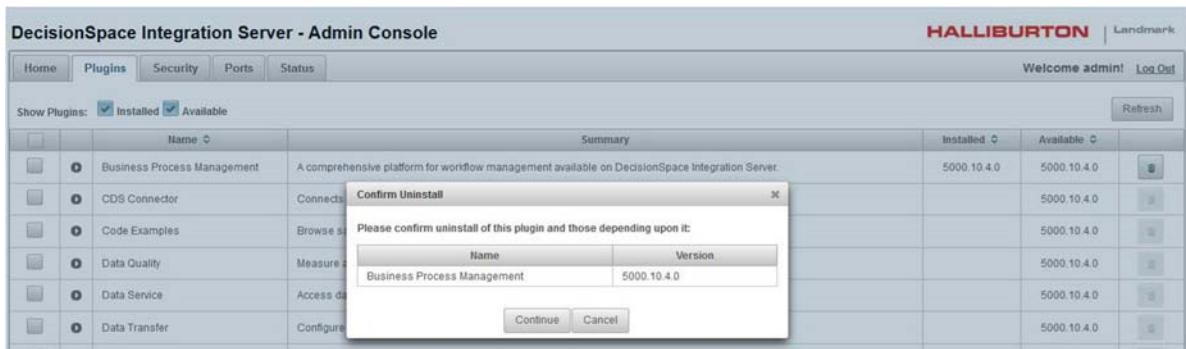
DecisionSpace Integration Server - Admin Console

The screenshot shows the detailed view for the 'Business Process Management' plugin. The 'Summary' table includes the following information:

Product	DecisionSpace Integration Server	It includes all the business rules and complex event processing (CEP) capabilities of BRMS [business rules management system], along with advanced tools and runtime support for Business Process Model and Notation v2.0 (BPMN2)-compliant business processes.		
Component	BPM			
Feature	Core			
Requirements	Windows 7/2008/2012 or Redhat Linux 5/7	Access Links	Enable Resources	Installed Revision
				1508232000.134104
				Available Revision
				1508232000.134104

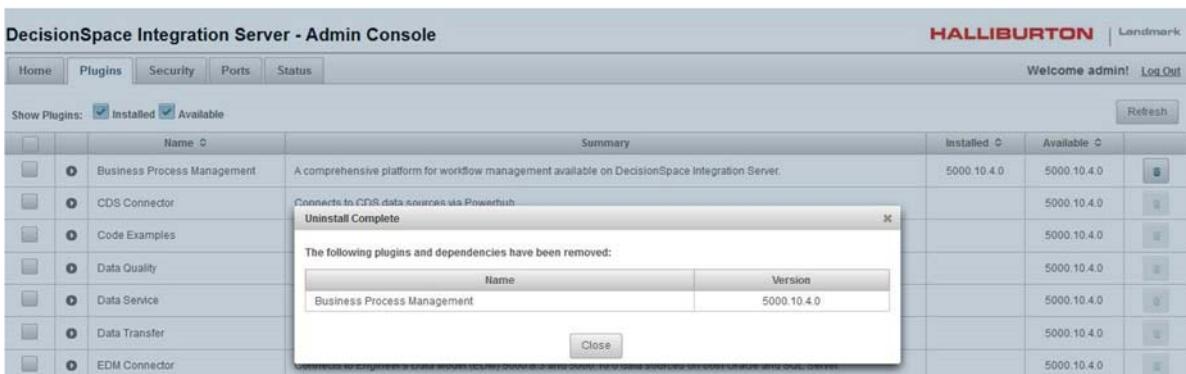
5. Select the **Business Process Management** plugin and click the trash bin icon ().

The Confirm Uninstall window displays:



6. Click **Continue**. The Uninstall Status window displays.

After the Business Process Management plugin is installed, the Uninstall Complete window displays:



7. Click **Close**.

The Business Process Management plugin is now complete. You can see that the Business Process Management plugin is not listed as an installed plugin anymore.

It is not necessary to reboot the system after the software is uninstalled.

Uninstalling Data Transfer

Who must perform these steps: Domain users with administrator permissions on the machine where Data Transfer was installed.

This section provides instruction on removing Data Transfer.

1. Make sure the DecisionSpace Data Server service is running on the machine where will remove Data Transfer.

If the service is not running, please refer to the *DecisionSpace Integration Server Data Server* documentation on how to start the Data Server service.

2. Launch the Data Server console and log in using the administrative user name and password.
3. When the Data Server console becomes available, select the Plugins tab.
4. On the Plugins page, select **Installed** to display a list of available plugins for installation.

You will see a “Data Transfer” entry in the Plugins list.

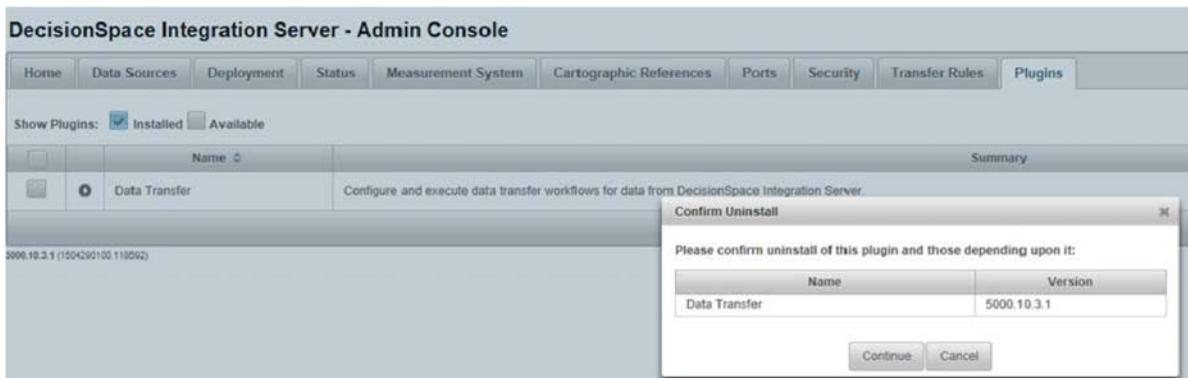


You can see the plugin details by clicking the arrow button adjacent to the plugin name:



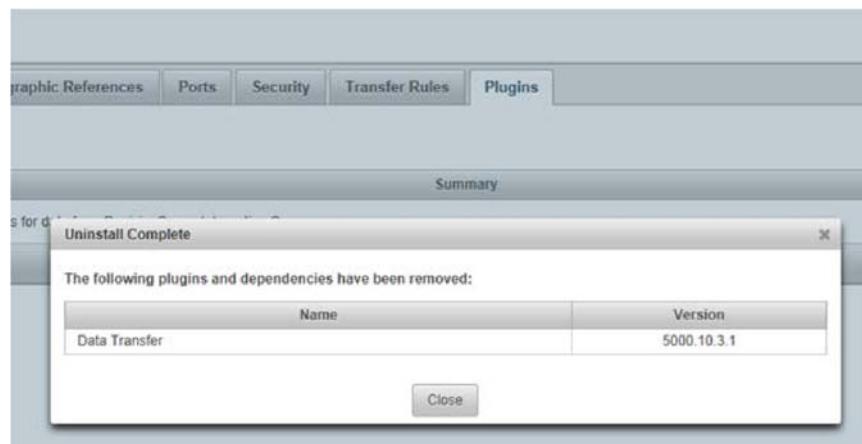
5. Select the **Data Transfer** plugin and click the trash bin icon (trash bin icon) (Uninstall Data Transfer).

The Confirm Uninstall window displays:



6. Click **Continue**. The Uninstall Status window displays.

After the plugin is removed, the Uninstall Complete window displays.



7. Click **Close**.

The Data Transfer uninstall is now complete. You can see that the Data Transfer plugin is not listed as an installed plugin anymore.

It is not necessary to reboot the system after the software is uninstalled.

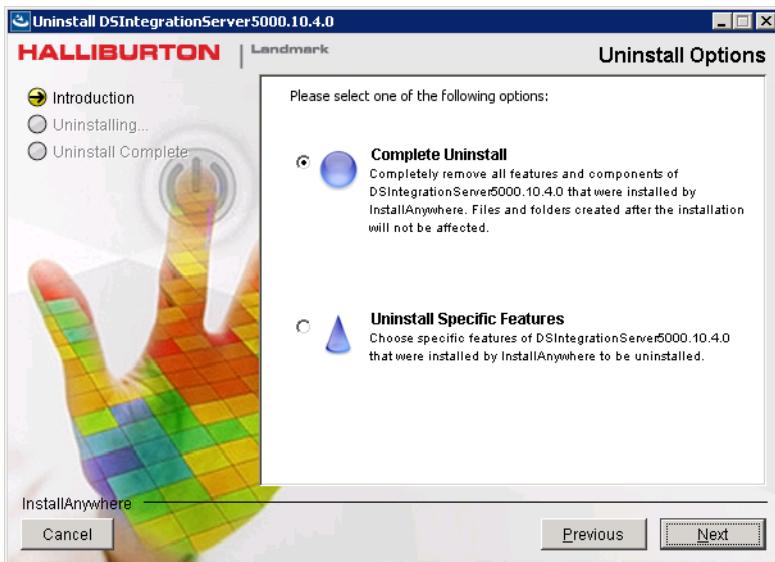
Uninstalling the DecisionSpace Integration Server

Perform the following steps to uninstall Integration Sever from your machine:

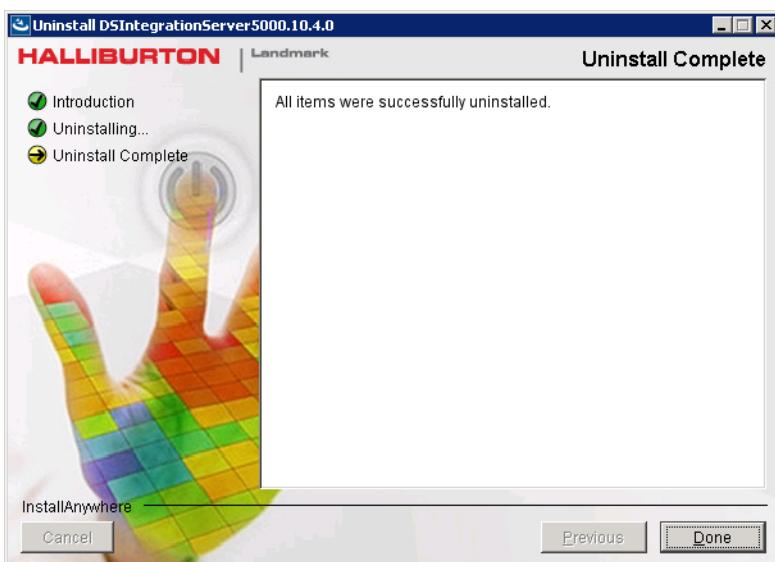
1. In the Windows **Start** menu, click **Control Panel**.
2. Click **Programs and Features**.
3. Right-click **Landmark DecisionSpace Integration Server 5000.10.4.0** from the program list, and click **Uninstall**. The Uninstall DSIntegrationServer5000.10.4.0 dialog box appears.
4. Click **Next**.



5. Select the **Complete Uninstall** option and click **Next**.

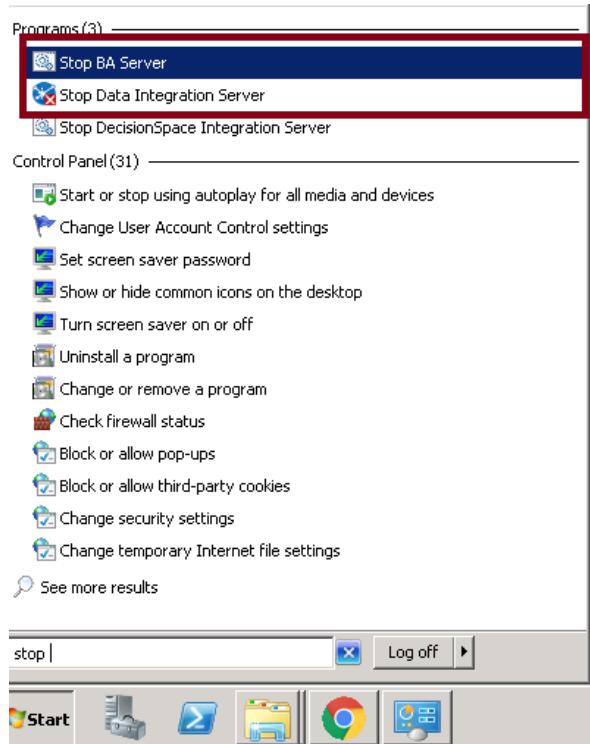


6. Click **Done** to complete the uninstall process.



Uninstalling DS Analytics

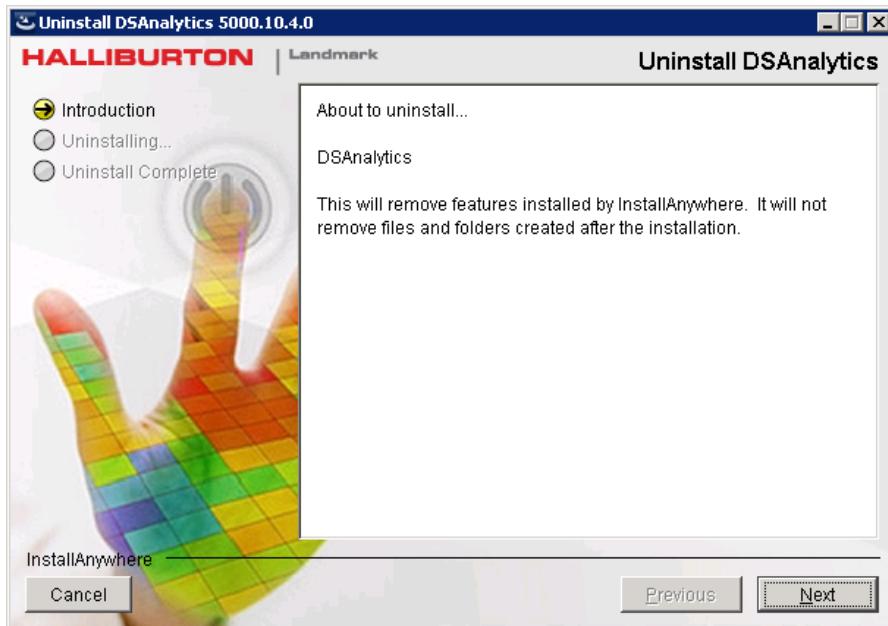
1. Stop the BA server and Data Integration Server before uninstalling DS Analytics.



2. Wait five minutes for the application server to stop completely before proceeding.
3. Open Windows Explorer and navigate to the directory where DS Analytics is installed.
4. Navigate to the Uninstall folder, i.e., <DSA Installation>/Uninstall_DSAnalytics.

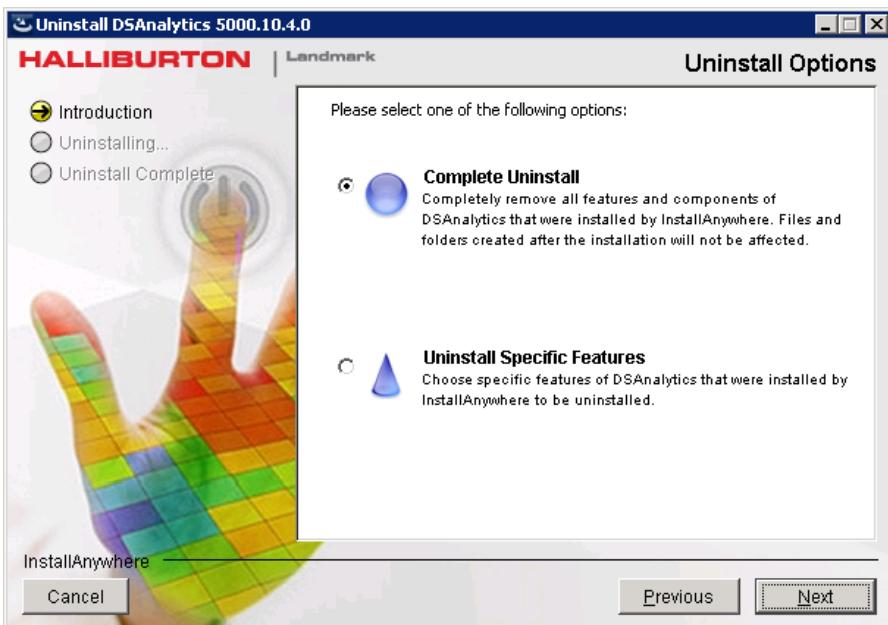
5. Double-click **Uninstall DSAnalytics.exe** to launch the DS Analytics uninstaller.

The InstallShield Wizard opens, and the Uninstall DSAnalytics screen displays.

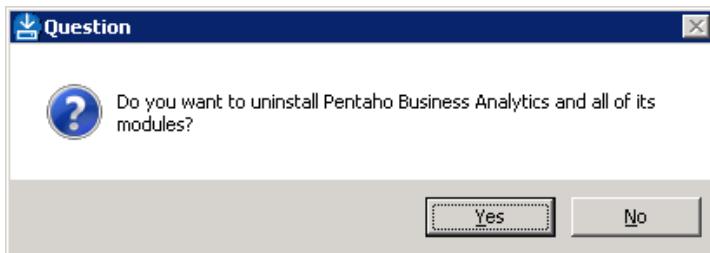


6. Click **Next**.

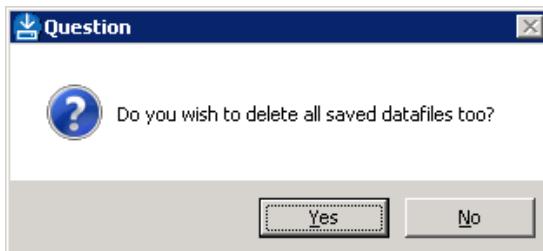
The Uninstall Options screen displays.



7. Select the appropriate option and then click **Next**:
 - a) Select **Complete Uninstall** to uninstall the application completely.
 - b) Select **Uninstall Specific Features** to uninstall only the DS Analytics application and not the help files.
8. If you select **Complete Uninstall**, you will be prompted to confirm your choice. Click **Yes**.



9. You will be prompted to delete all saved data files. Click the appropriate option.

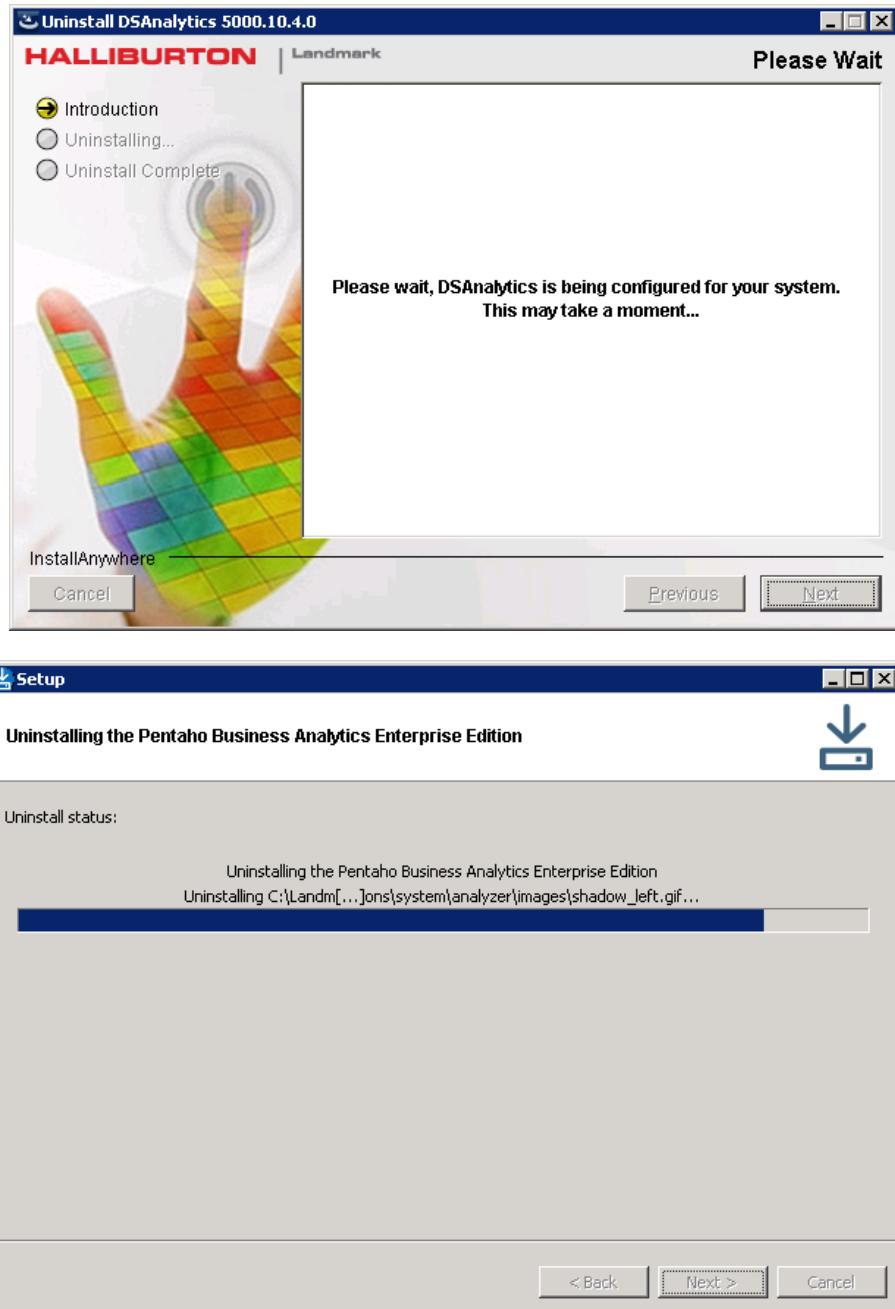


10. A common window will display and you will be prompted to stop the Pentaho repository service. Enter **Y** and press Enter.

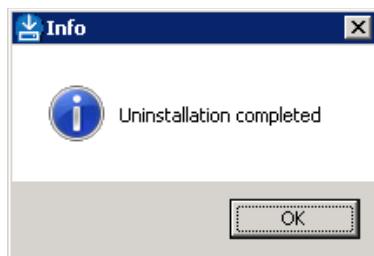
```
C:\Windows\system32\cmd.exe - C:\Landmark\DSANAL~1\postgresql\scripts\servicerun.bat STOP
The following services are dependent on the Pentaho Solution Repository service.
Stopping the Pentaho Solution Repository service will also stop these services.
Pentaho BA Server
Do you want to continue this operation? <Y/N> [N]: Y
```

A screenshot of a Windows Command Prompt window. The title bar shows the path "C:\Windows\system32\cmd.exe - C:\Landmark\DSANAL~1\postgresql\scripts\servicerun.bat STOP". The main window displays a message about stopping services dependent on the Pentaho Solution Repository service, specifically mentioning the "Pentaho BA Server". It then asks "Do you want to continue this operation? <Y/N> [N]: Y".

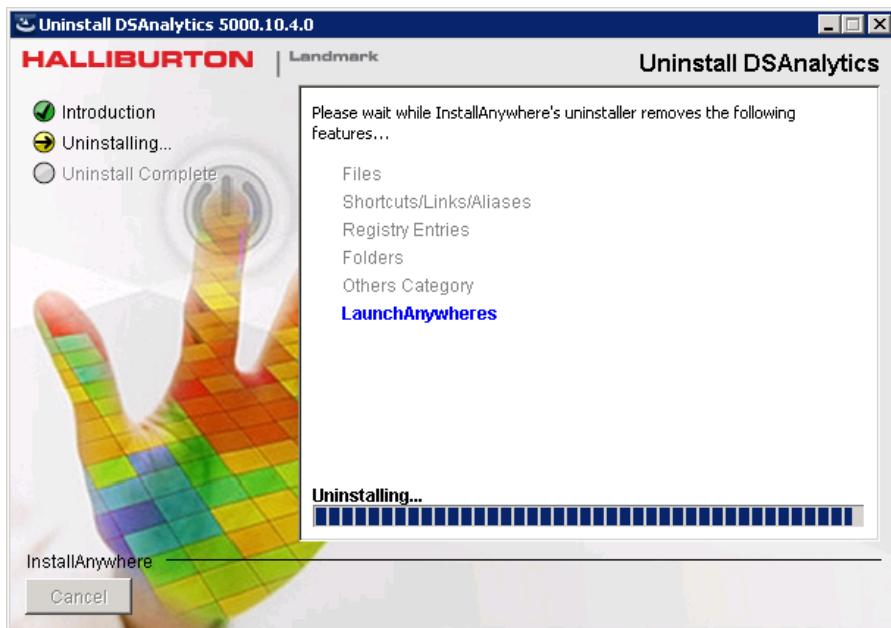
The Please Wait screen displays and then the Pentaho uninstaller launches.



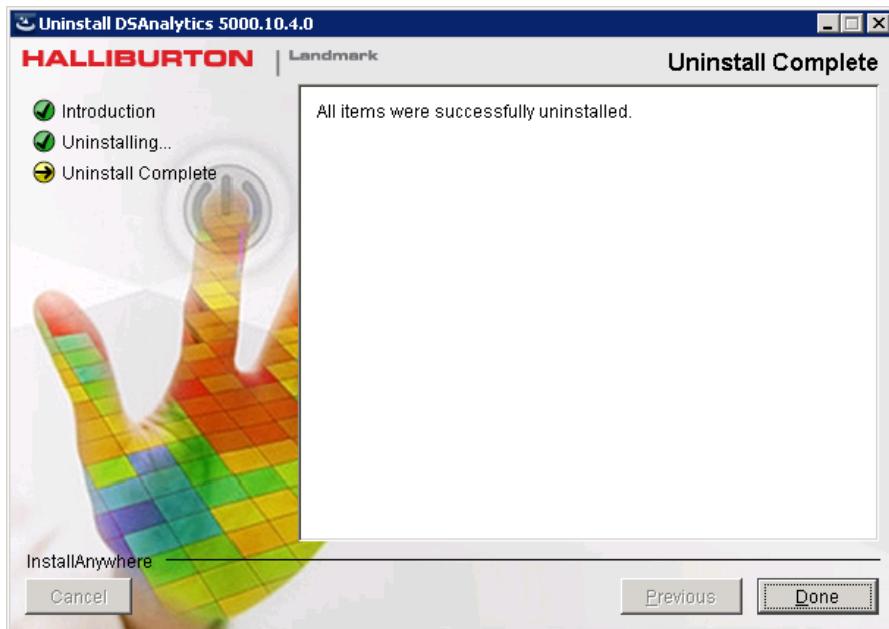
11. Click **OK** on the resulting Uninstallation completed dialog box.



The Uninstall DSAnalytics screen displays.



The Uninstall Complete screen displays.



12. You must restart your system after uninstalling. By default, the **Yes, restart my system** option is selected.

Select the appropriate option and click **Done**.

Note

Landmark recommends restarting immediately after clicking **Done**.

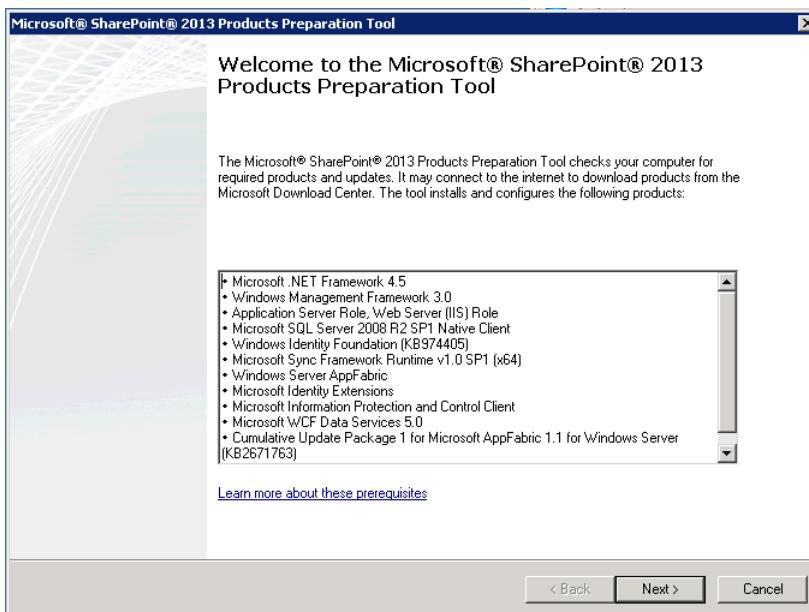
Appendix C

SharePoint Server 2013 Enterprise Edition Installation

SharePoint Server 2013 Enterprise Edition Installation

Prerequisites for SharePoint Server 2013 Enterprise Edition

When you have an internet connection, you can run the Products Preparation Tool before installing SharePoint and it will automatically download and install all the prerequisites:

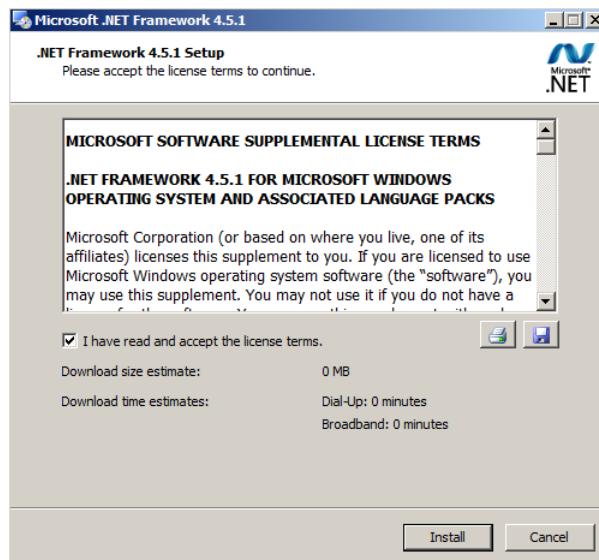


This exercise applies in situations where you do not have internet access on your SharePoint server. All the offline installers for the prerequisites are located under the
C:\Installer\SharePoint2013_offline\Prerequisites directory.

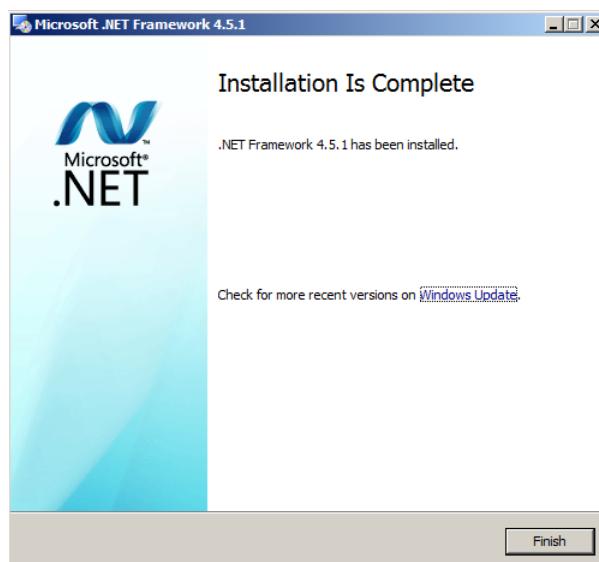
S. No.	Installer	File Name	URL
1	Microsoft .NET Framework 4.5 (Full standalone package)	dotnetfx45_full_x86_x64.exe	http://go.microsoft.com/fwlink/?LinkID=225702
2	Windows Management Frameworks 3.0	Windows6.1-KB2506143-x64.exe	http://www.microsoft.com/en-us/download/details.aspx?id=34595
3	Microsoft SQL Server 2008 R2 SP1 Native Client	sqlncli.exe	http://www.microsoft.com/en-us/download/details.aspx?id=26728
4	Windows Identity Foundation (KB974405)	Windows6.1-KB974405-x64.exe	http://go.microsoft.com/fwlink/?LinkID=226830
5	Windows Identity Extensions	MicrosoftIdentityExtensions-64.exe	http://go.microsoft.com/fwlink/?LinkID=252368
6	Microsoft Sync Framework Runtime v1.0 SP1 (x64)	Synchronization.exe	http://go.microsoft.com/fwlink/?LinkID=224449
7	Microsoft Information Protection and Control Client	setup_msipc_x64.exe	http://go.microsoft.com/fwlink/?LinkID=219568
8	Microsoft WCF Data Services 5.0	WcfDataServices.exe	http://www.microsoft.com/en-us/download/details.aspx?id=29306
9	Windows Server AppFabric	WindowsServerAppFabricSetup_x64.exe	http://go.microsoft.com/fwlink/?LinkID=235496
10	Cumulative Update Package 1 for Microsoft AppFabric 1.1 for Windows Server (KB2671763)	AppFabric1.1-RTM-KB2671763-x64-ENU.exe	http://www.microsoft.com/en-us/download/details.aspx?id=29241
11	Microsoft Hotfixes: Microsoft KB 2554876, KB 2708075	Windows6.1-KB2554876-v2-x64.msu Windows6.1-KB2708075-x64.msu	https://support.microsoft.com/en-us

1. Install Microsoft .NET Framework 4.5.

- Run the **dotnetfx45_full_x86_x64.exe** file.
- Accept the license terms and click **Install**.

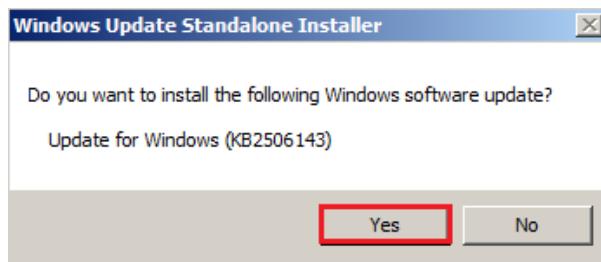


- Click **Finish** when installation is complete.

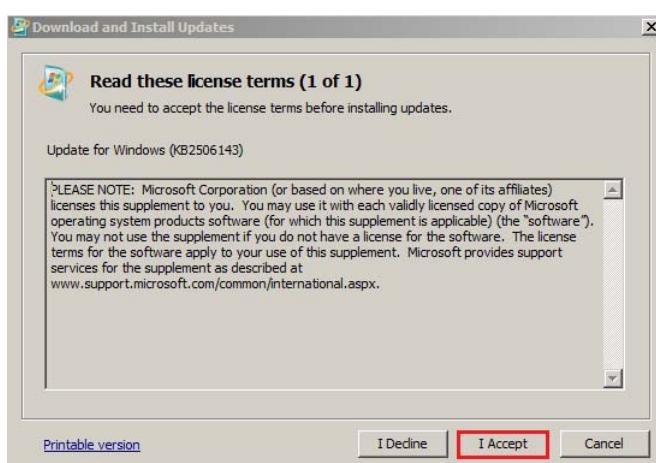


2. Install Windows Management Frameworks.

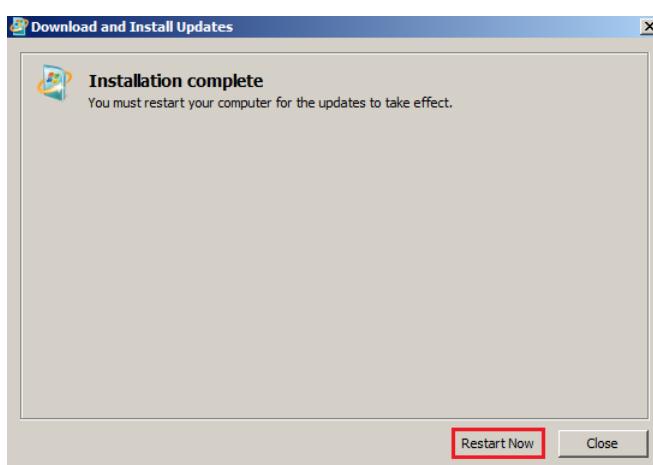
- Run the **Windows6.1-KB2506143-x64.exe** file and click **Yes**.



- Click **I Accept** to accept the license terms.

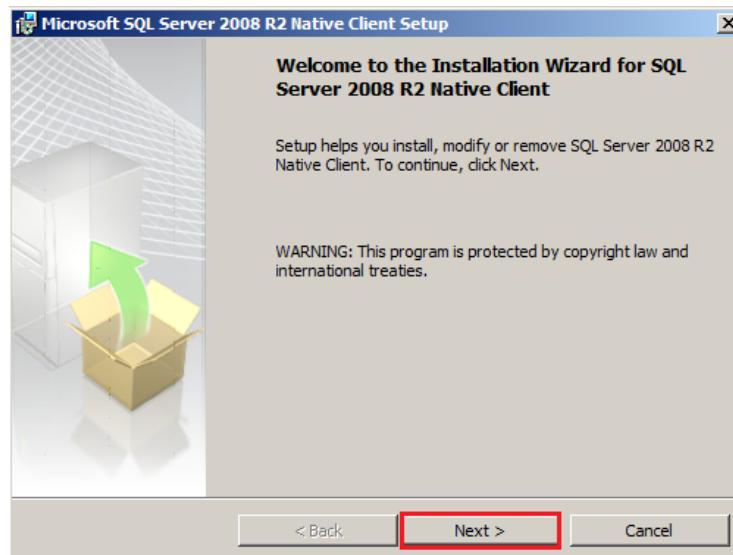


- Click **Restart Now** to restart the server when installation is complete.

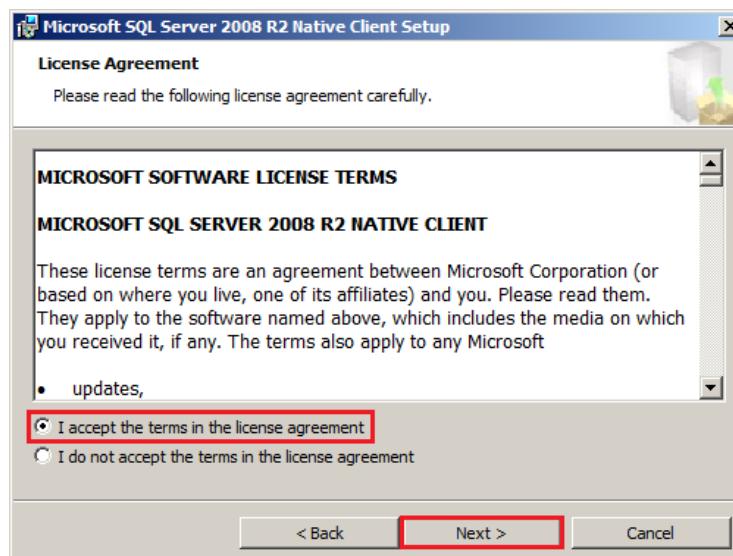


3. Install Microsoft SQL Server 2008 R2 SP1 Native Client.

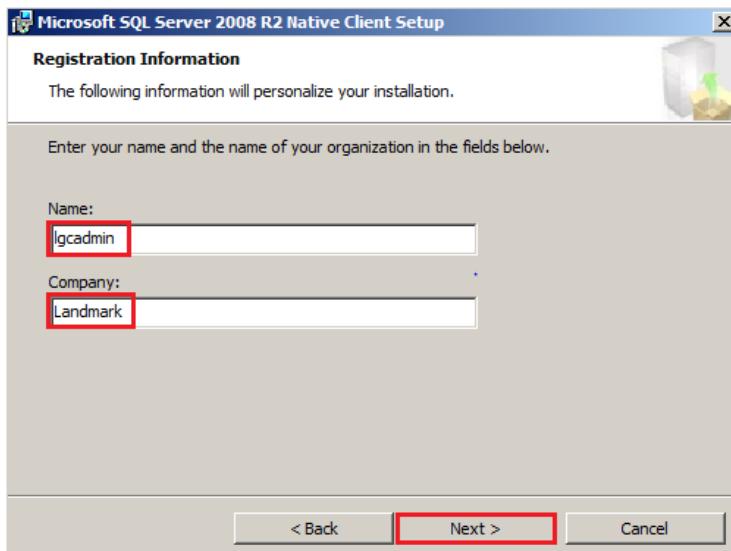
- Run the **sqlncli.exe** file and click **Next**.



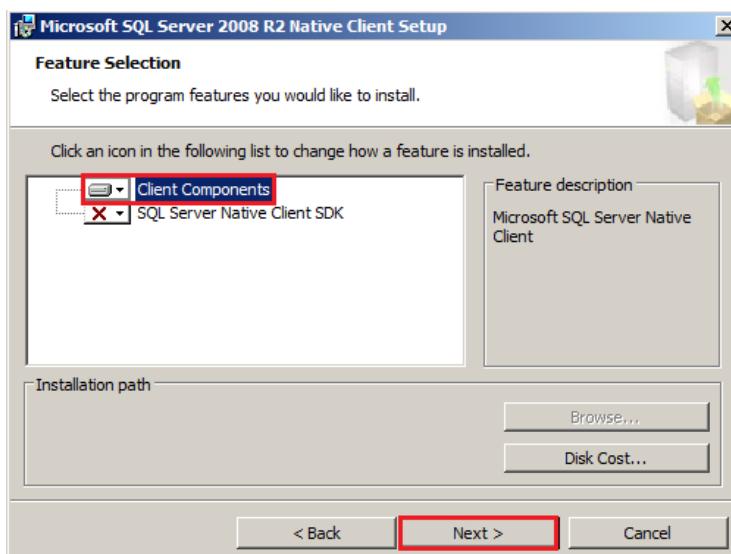
- Accept the license agreement and click **Next**.



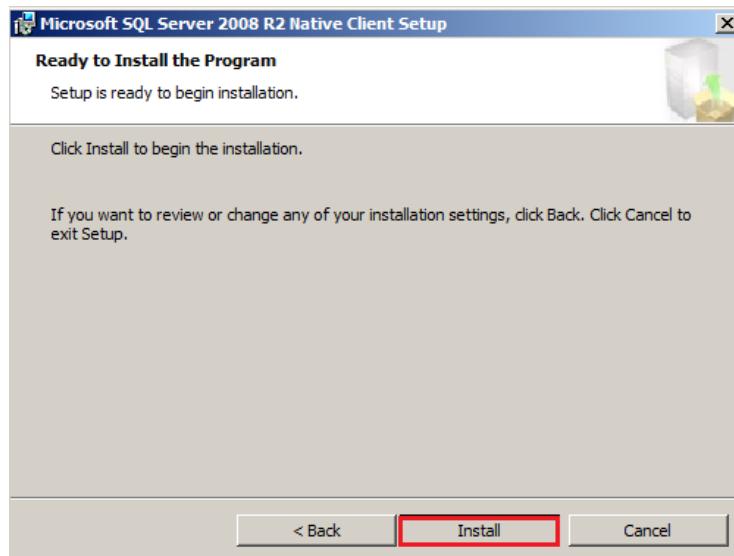
- Enter your name and Company name.
Click **Next**.



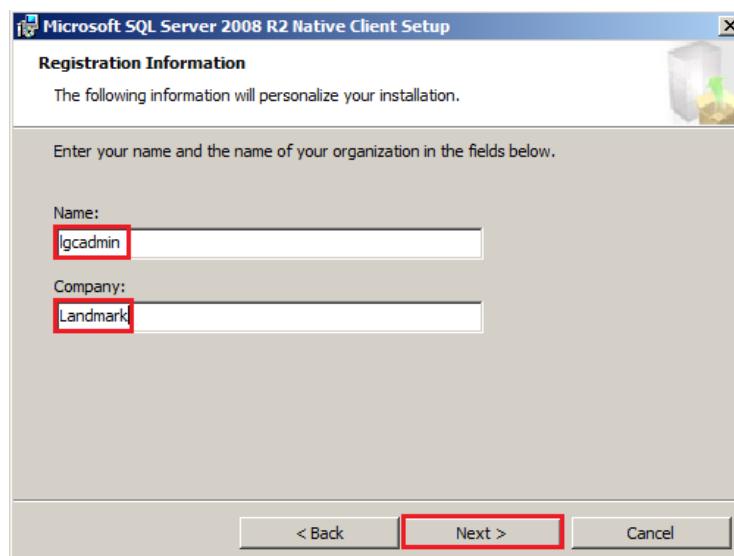
- Select the default feature selection and click **Next**.



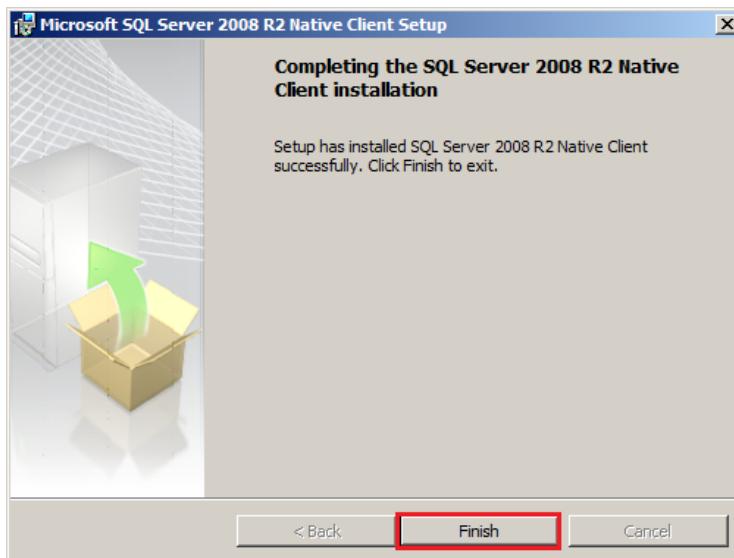
- Click **Install** to start the installation.



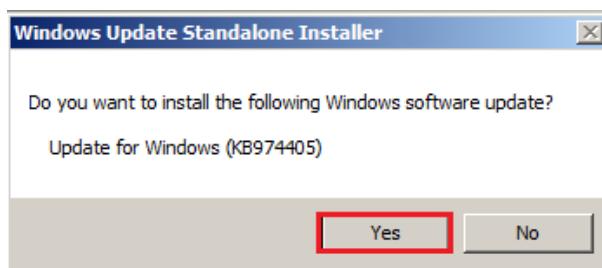
- Enter your name and Company name.
Click **Next**.



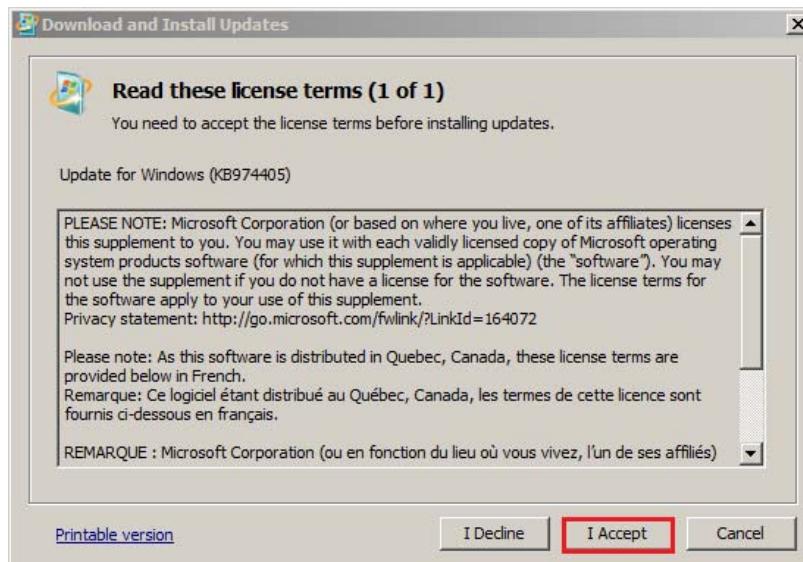
- Click **Finish** to complete the installation.



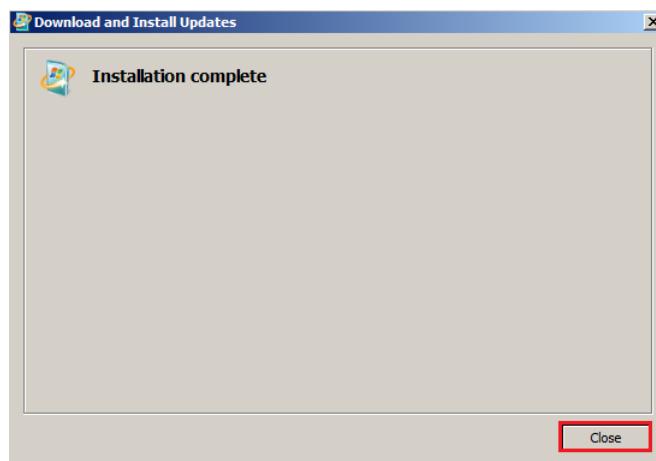
4. Install Windows Identity Foundation (KB974405).
 - Run the **Windows6.1-KB974405-x64.exe** file and click **Yes**.



- Click **I Accept** to accept the license terms.



- Click **Close** when installation is complete.

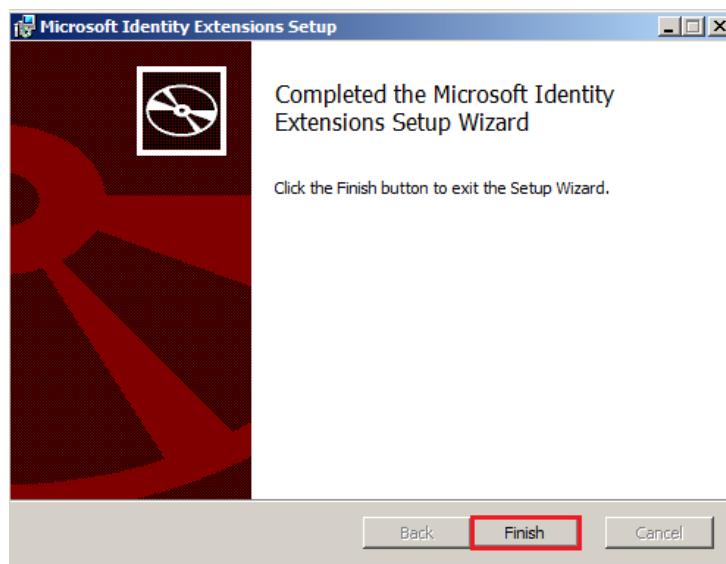


5. Install Windows Identity Extensions.

- Run the **MicrosoftIdentityExtensions-64.exe** file, accept the License terms, and click **Install**.

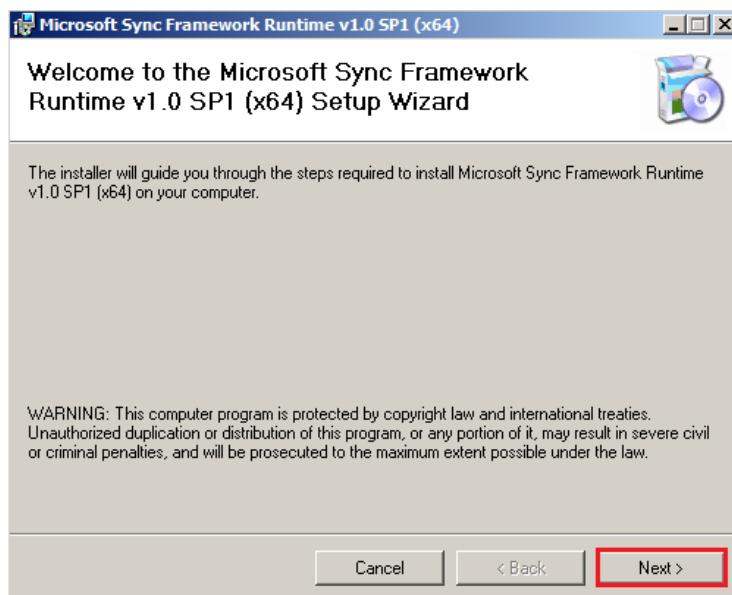


- Click **Finish** when installation is complete.



6. Install Microsoft Sync Framework Runtime v1.0 SP1 (x64).

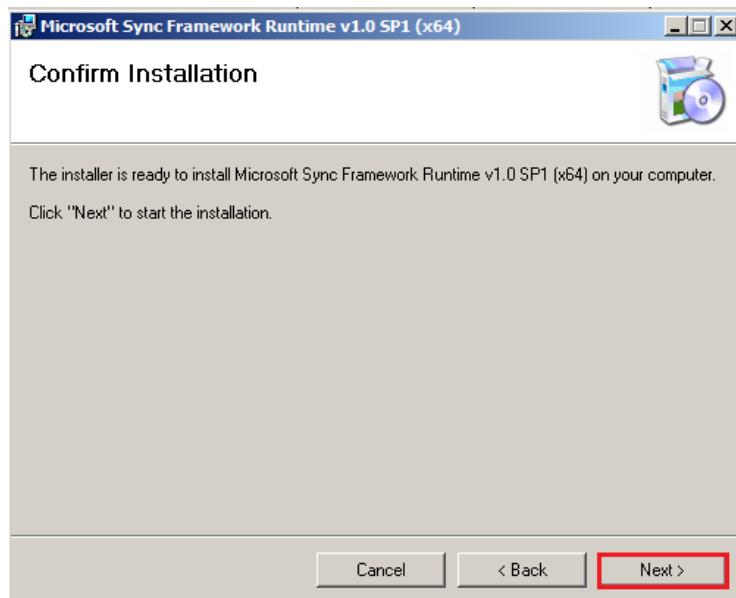
- Run the **Synchronization.exe** file and click **Next**.



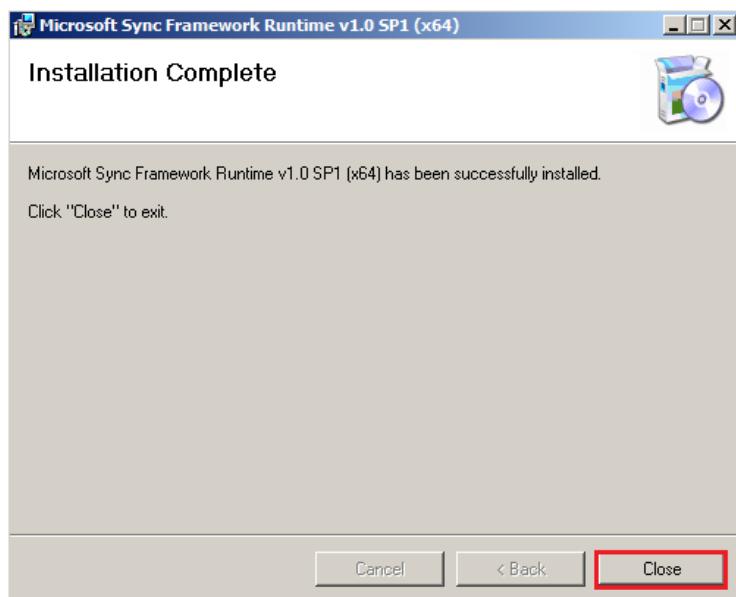
- Select the **I Agree** option to accept the license agreement and then click **Next**.



- Click **Next** to confirm Installation.

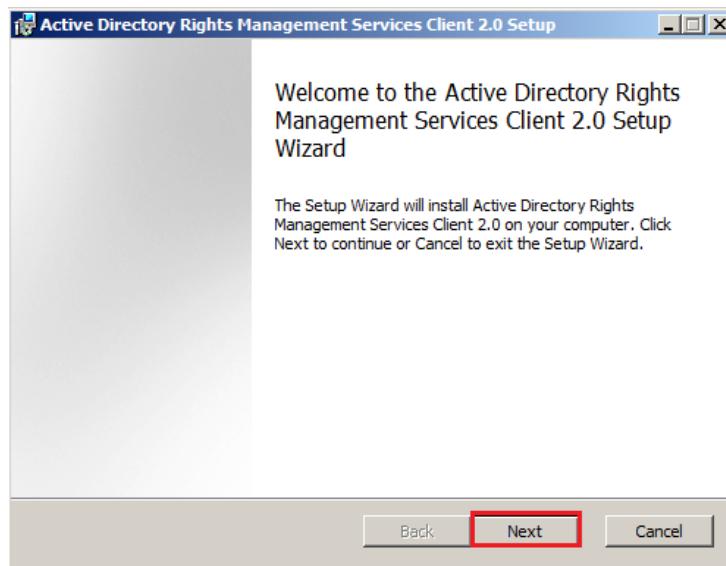


- Click **Close** when installation is complete.

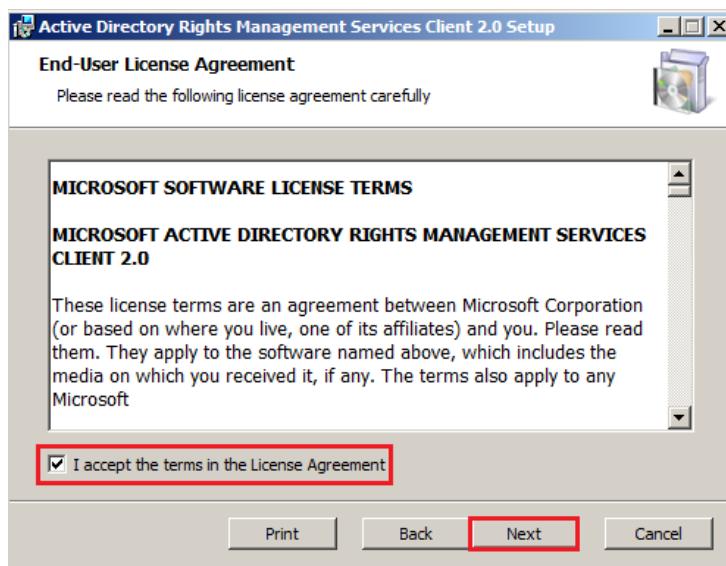


7. Install Microsoft Information Protection and Control Client.

- Run the **setup_msipc_x64.exe** file and click **Next**.



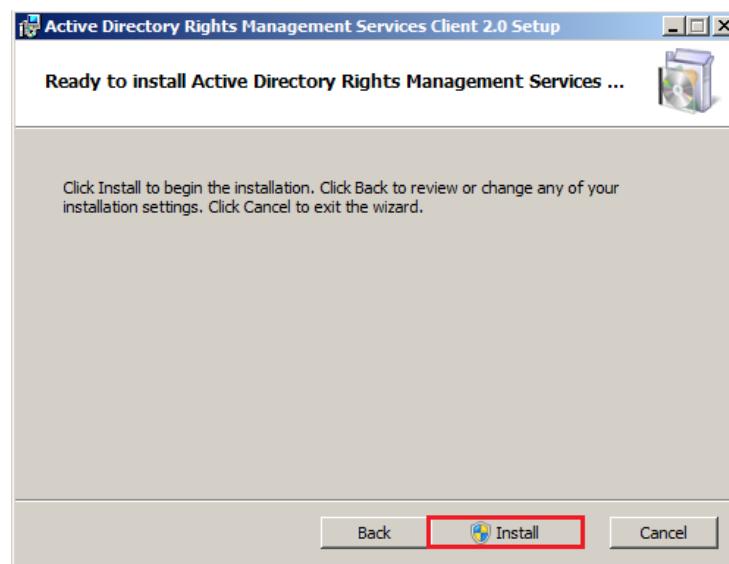
- Accept the License Agreement and click **Next**.



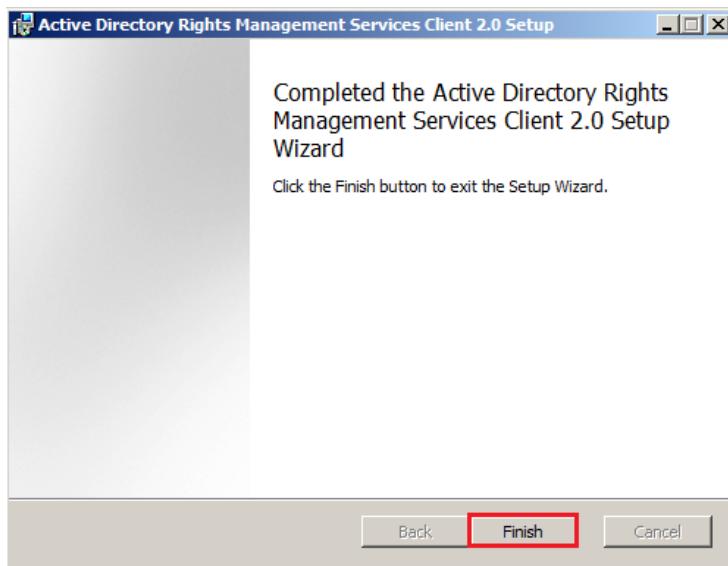
- Select the **I don't want to use Microsoft Update** option and click **Next**.



- Click **Install** to start the installation.

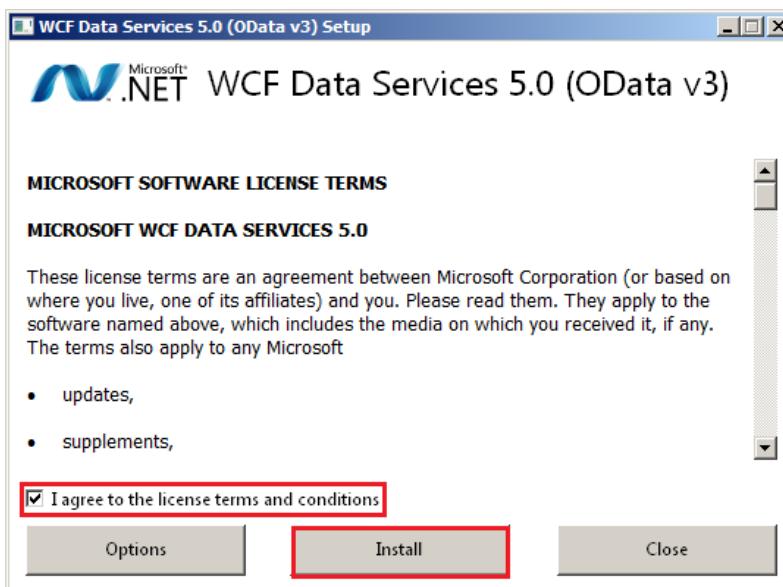


- Click **Finish** to complete the Installation.

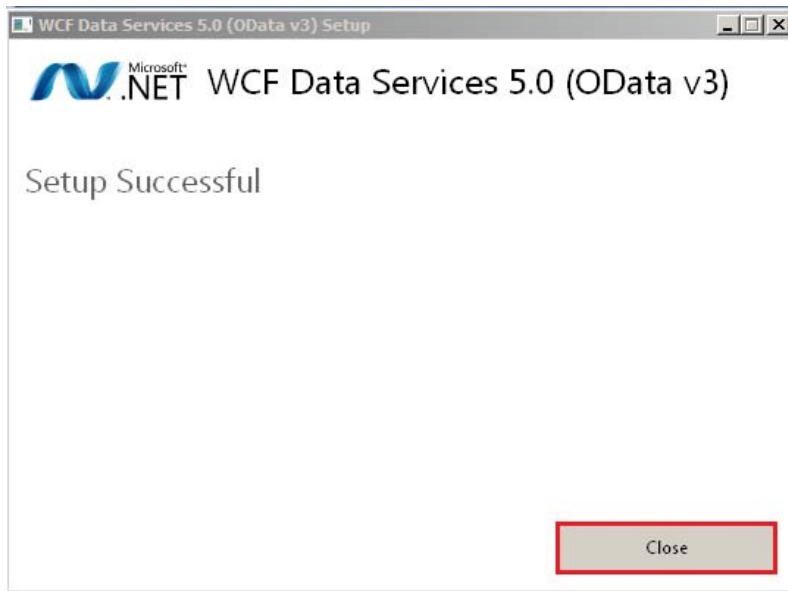


8. Install Microsoft WCF Data Services 5.0.

- Run the **WcfDataServices.exe** file. Accept the license terms and click **Install**.



- Click **Close** when installation is complete.

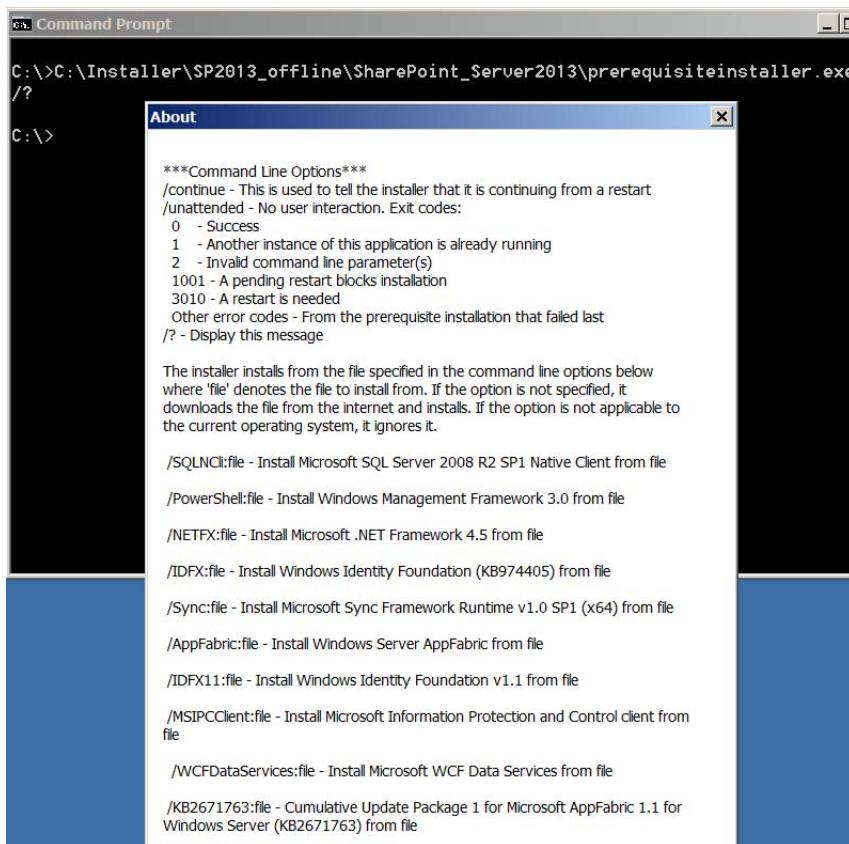


9. Install Windows Server AppFabric.

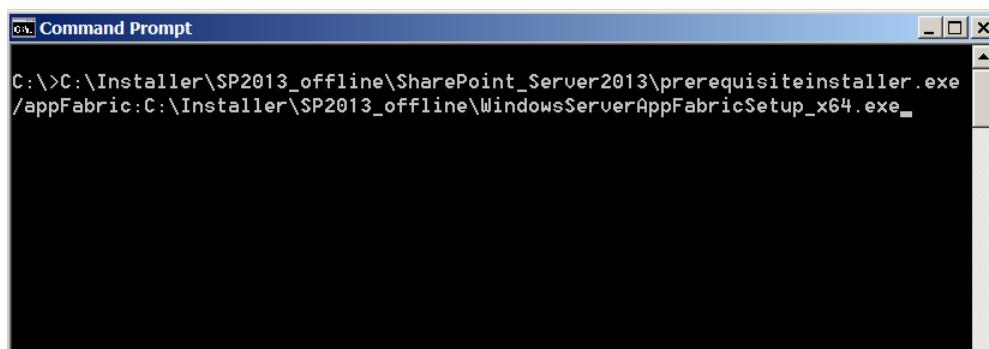
Install AppFabric using the prerequisiteinstaller.exe file from the Share Point installer.

- Find the prerequisiteinstaller.exe file located at:
C:\Installer\SharePoint2013_offline\SharePoint_Server2013.
- Open the command line terminal and run the following command which will list the various options available for performing the install:
C:\Installer\SharePoint2013_offline\SharePoint_Server2013\prerequisiteinstaller.exe /?

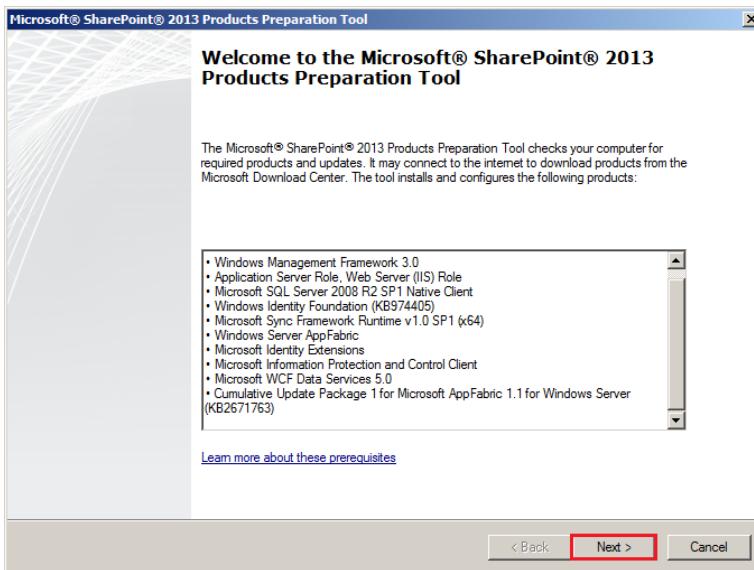
The following window displays:



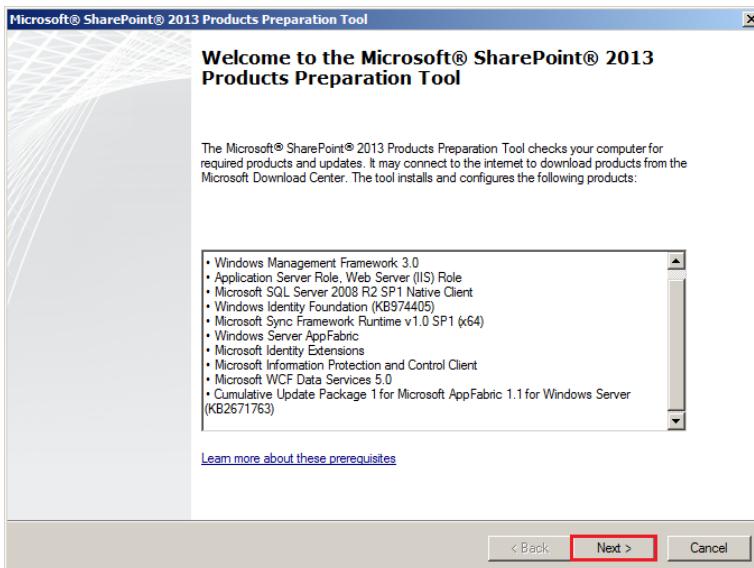
- Make sure that the prerequisite installer installs appFabric using the following syntax:
C:\Installer\SP2013_offline\SharePoint_Server2013\prerequisiteinstaller.exe /appFabric:
(Full_Path_to_WindowsServerAppFabricSetup_x64.exe).



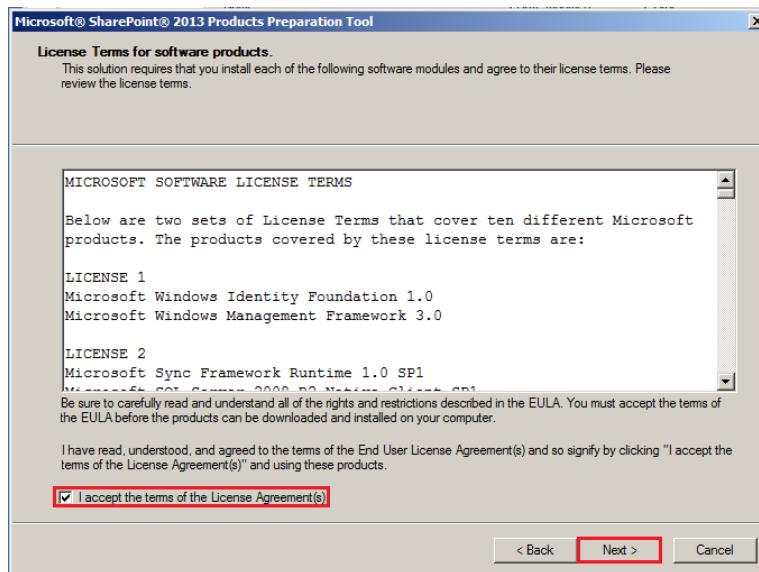
- The Microsoft SharePoint 2013 Products Preparation Tool page displays.



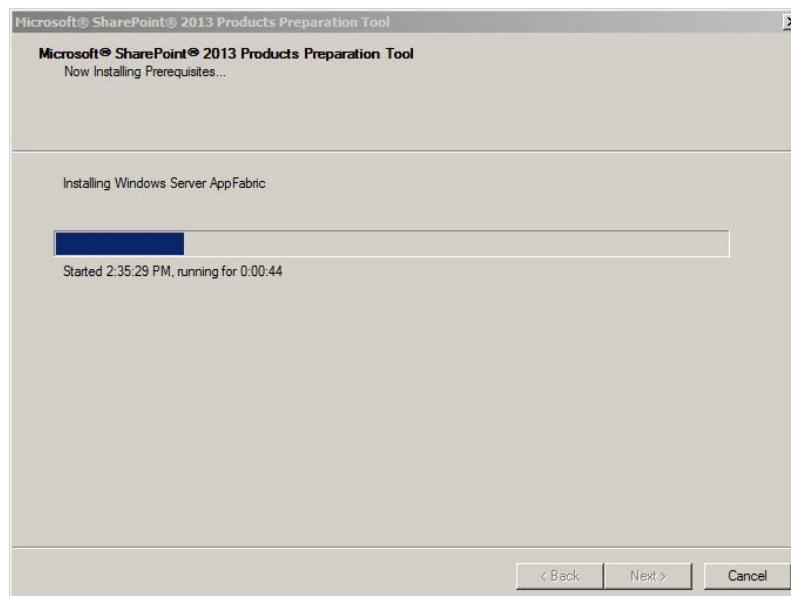
- Click **Next**.



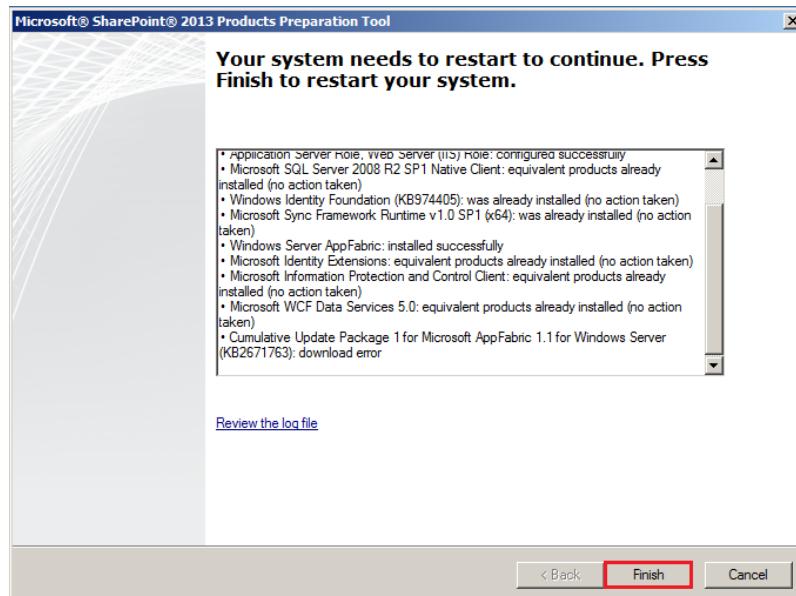
- Accept the license terms and click **Next**.



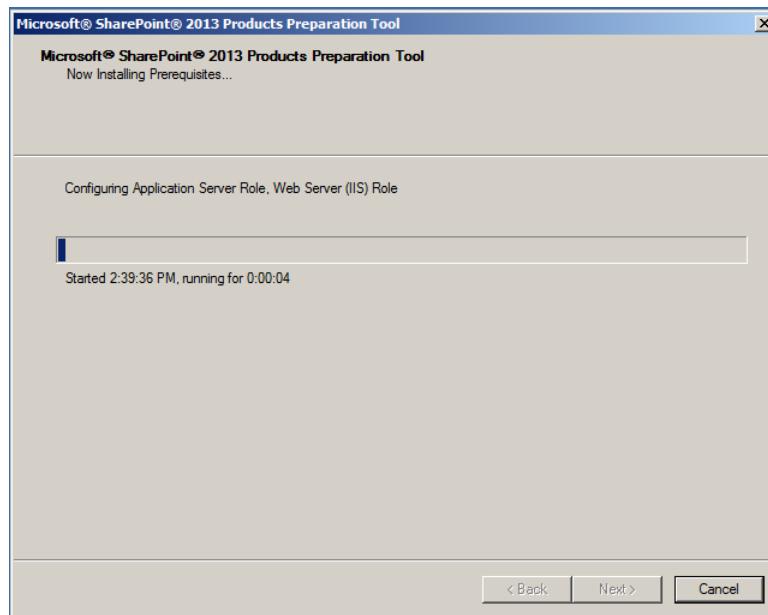
- Installation will start and you can see the progress of the Installation.



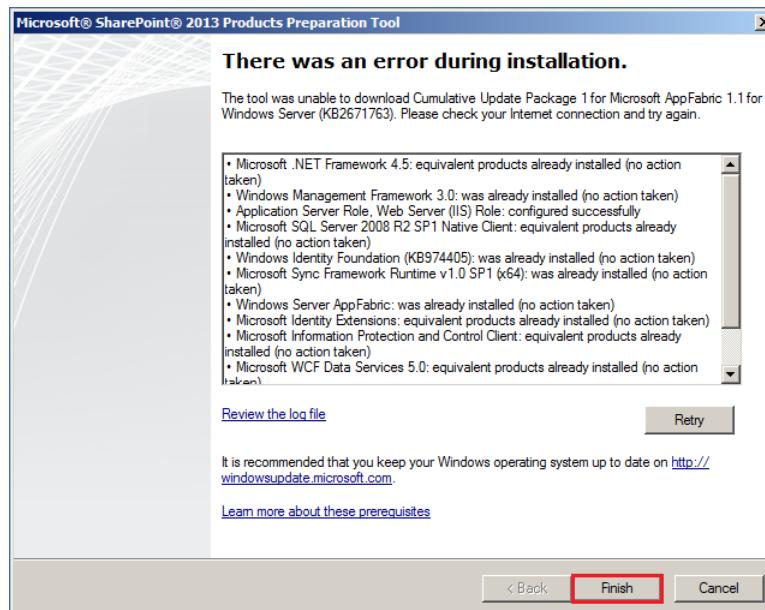
- Click **Finish** when prompted to restart the system.



- After system restart, the installation process resumes.



- Click **Finish** to complete the installation.

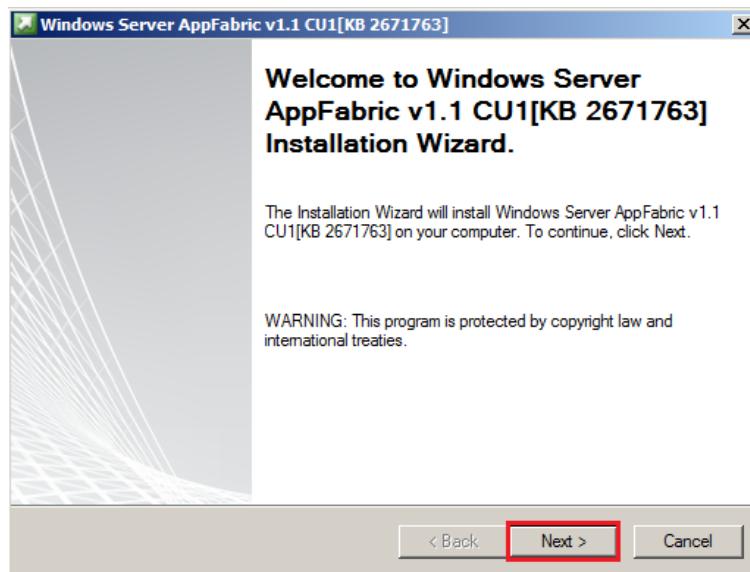


Note

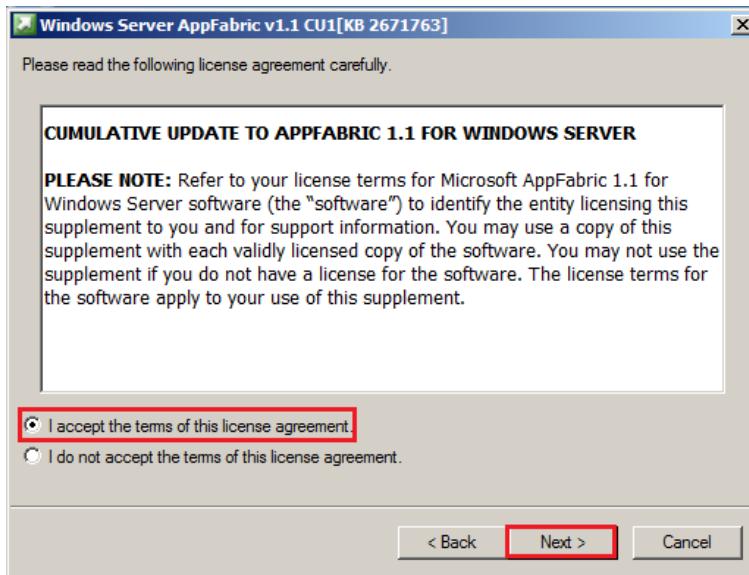
Ignore the error message about the package for Microsoft AppFabric 1.1 not being updated, if it appears. This error will be fixed in the next step.

10. Install Cumulative Update Package 1 for Microsoft AppFabric 1.1 for Windows Server (KB2671763).

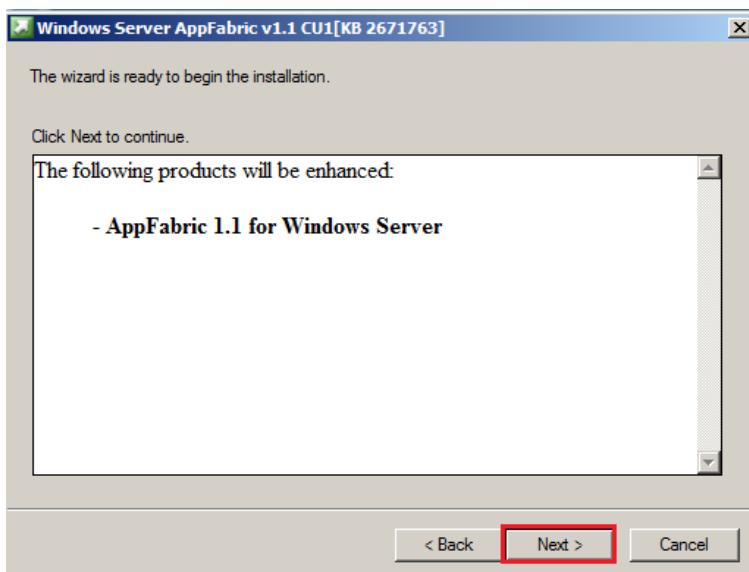
- Run the **AppFabric1.1-RTM-KB2671763-x64-ENU.exe** file and click **Next**.



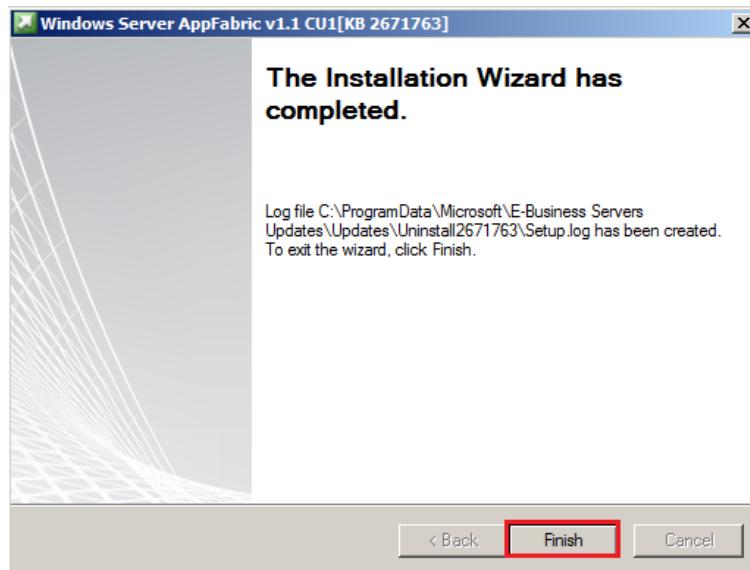
- Accept the license agreement and click **Next**.



- Click **Next** to continue the installation.

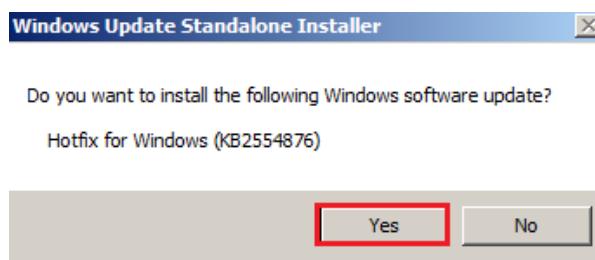


- Click **Finish** when the Installation is complete.

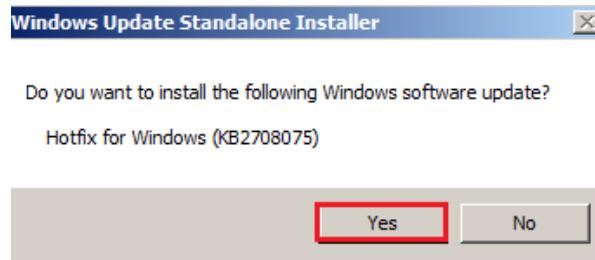


11. After you install the Microsoft SharePoint Products Preparation Tool, you must also install the following:

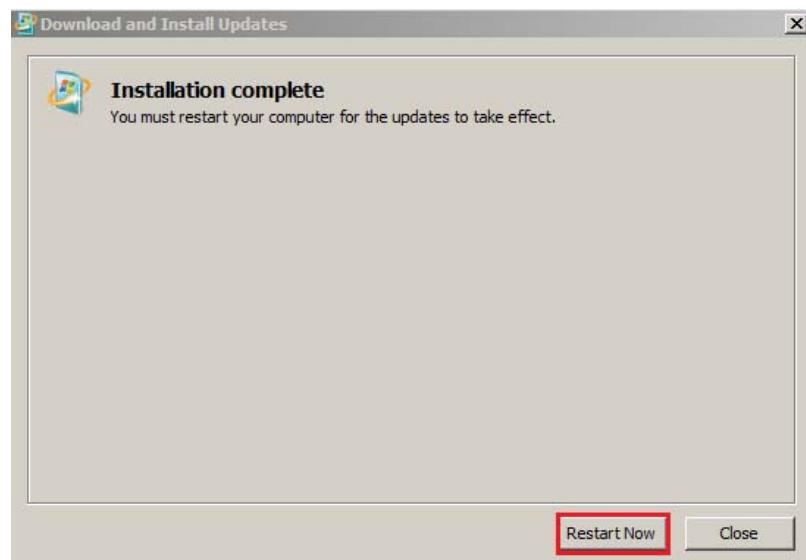
- Microsoft KB 2554876.
 - Run **C:\Installer\SharePoint2013_offline\Prerequisites\Windows 6.1-KB2554876-v2-x64.msu**.



- Microsoft KB 2708075.
 - Run C:\Installer\SharePoint2013_offline\Prerequisites\Windows6.1-KB2708075-x64.msu.

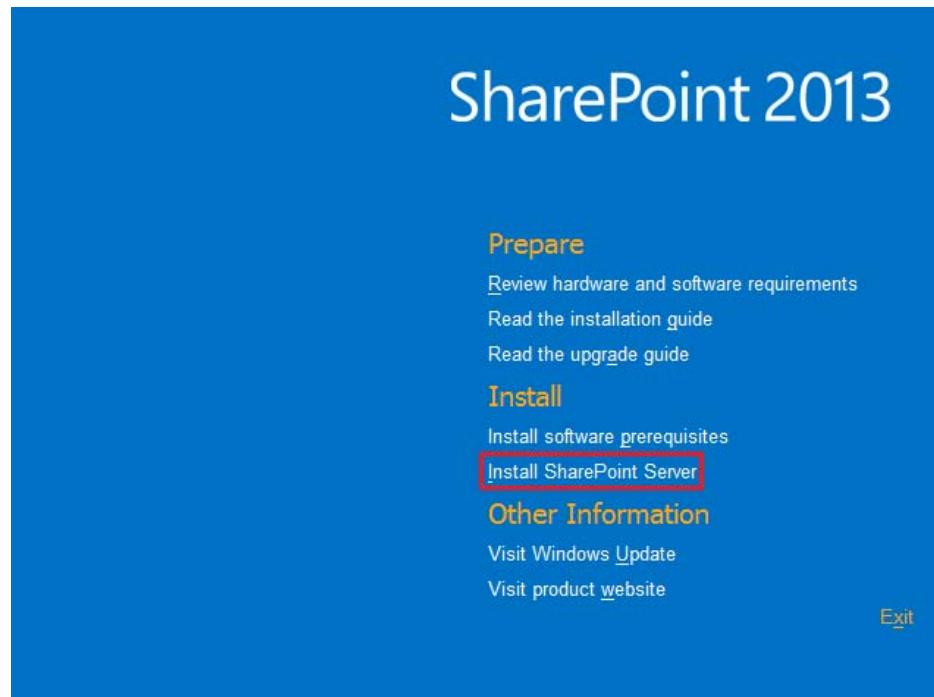


- Click **Restart Now** when the installation is complete.



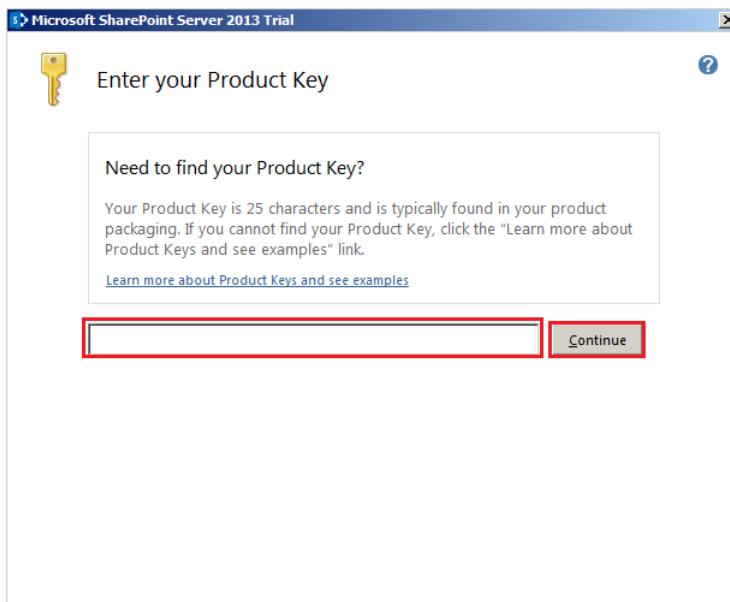
12. Now all the prerequisite installers have been installed. You are ready to install the SharePoint Server 2013.

- Log on to the server as TRAINING\lgcadmin user.
- Run **C:\Installer\SharePoint2013_offline\SharePoint_Server2013\setup.exe** and select **Install Share Point Server**.

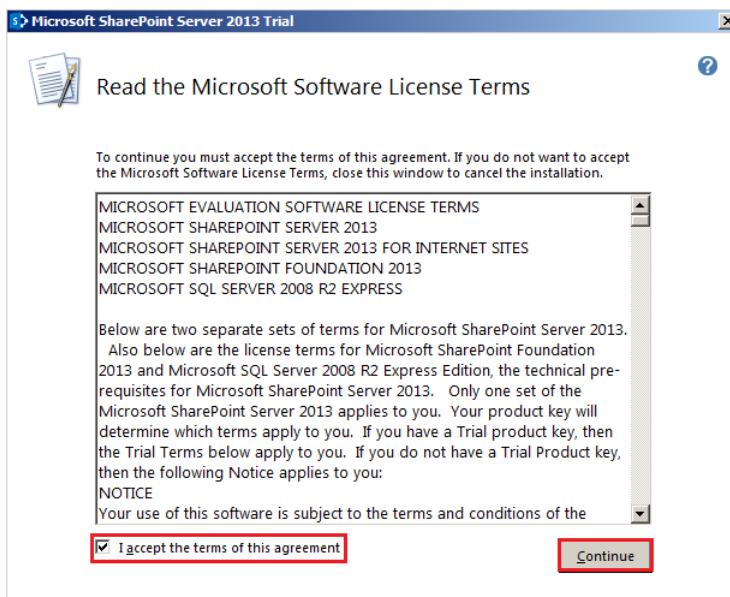


- The Product Key window displays.

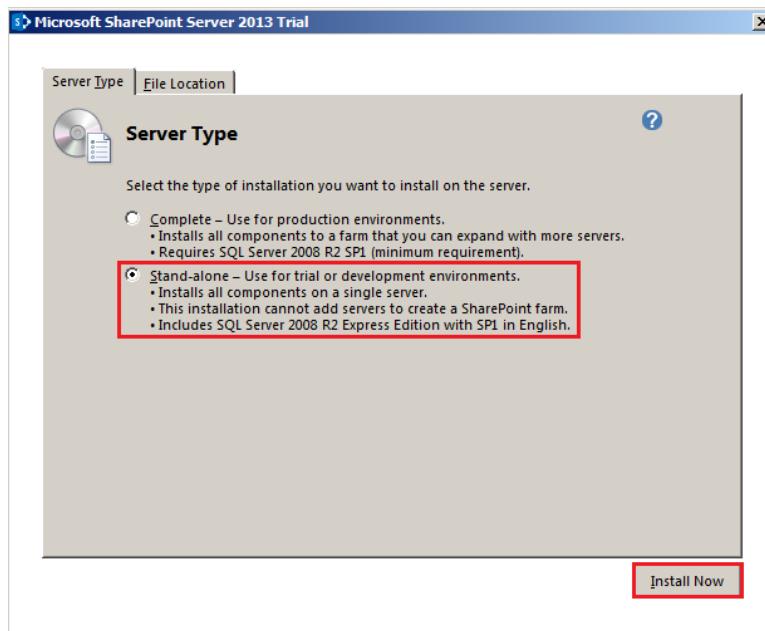
- Enter the Product Key and click **Continue**.



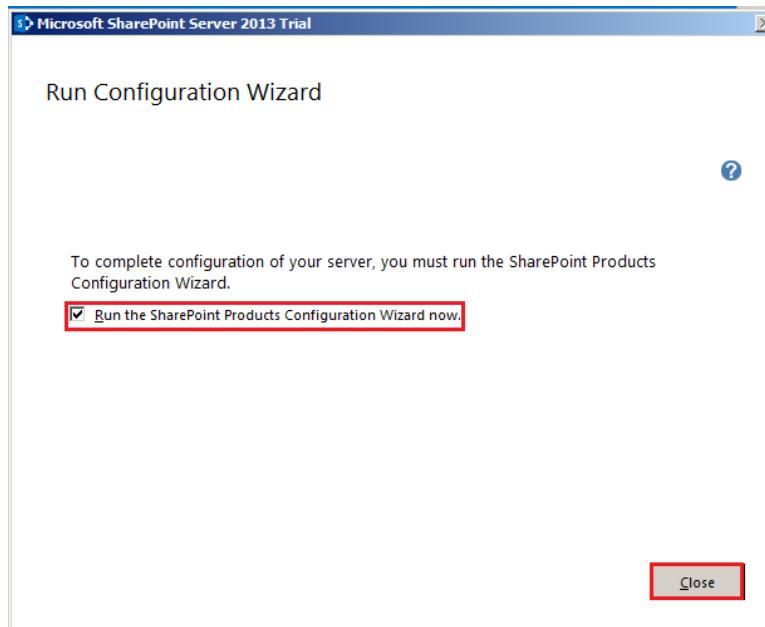
- Accept the license terms and click **Continue**.



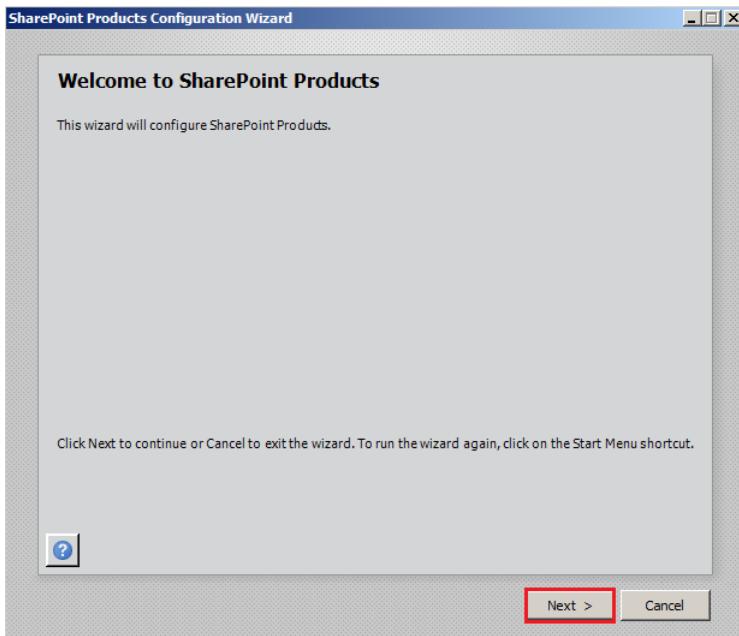
- Select the **Stand-alone** option and click **Install Now**.



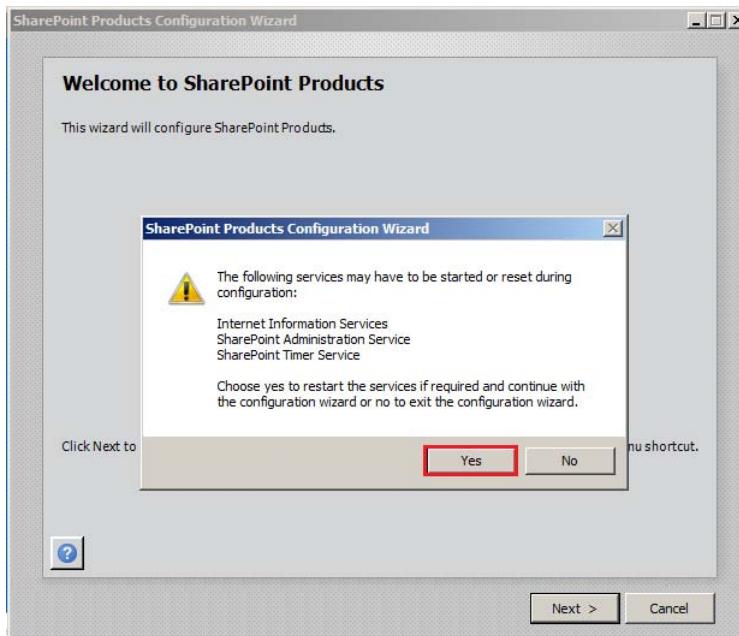
- After installation is complete, a configuration wizard window appears. Select the **Run the SharePoint Products Configuration Wizard now** option and click **Close**.



- The SharePoint Configuration Wizard window displays. Click **Next** to continue.



- Click **Yes** when prompted to start or reset several services during configuration, and then click **Next**.



- Select the **Create a new server farm** option when prompted for information about connecting to a server farm. Click **Next**.



- Install the SQL Server and SQL Server Management Console, and create the database server and database as a prerequisite for the class:

Database server	localhost
Database name	Sharepoint_Config
Username	Training\lgcadmin
Password	Landmark1

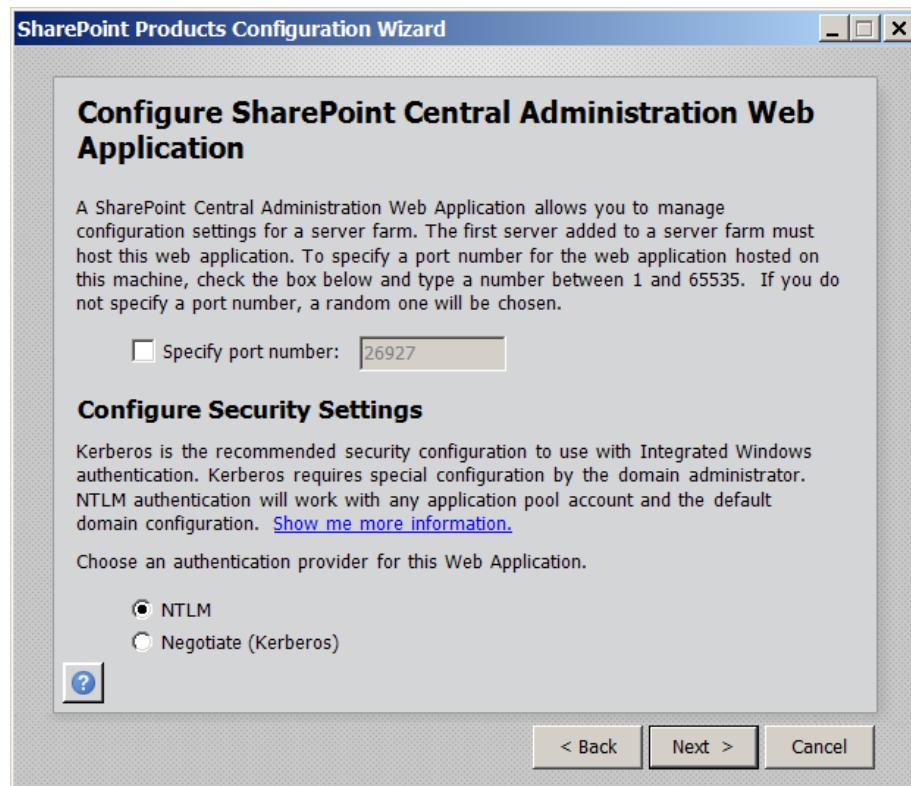
- Click **Next**.



- Enter **Landmark1** as the Passphrase and then click **Next**.



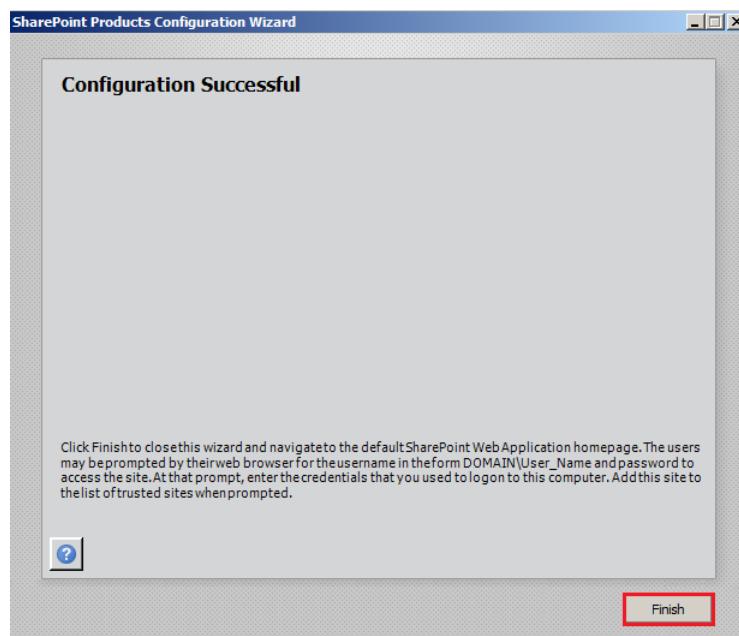
- Accept the default port number for this installation and leave the authentication provider as NTLM. Click **Next**.



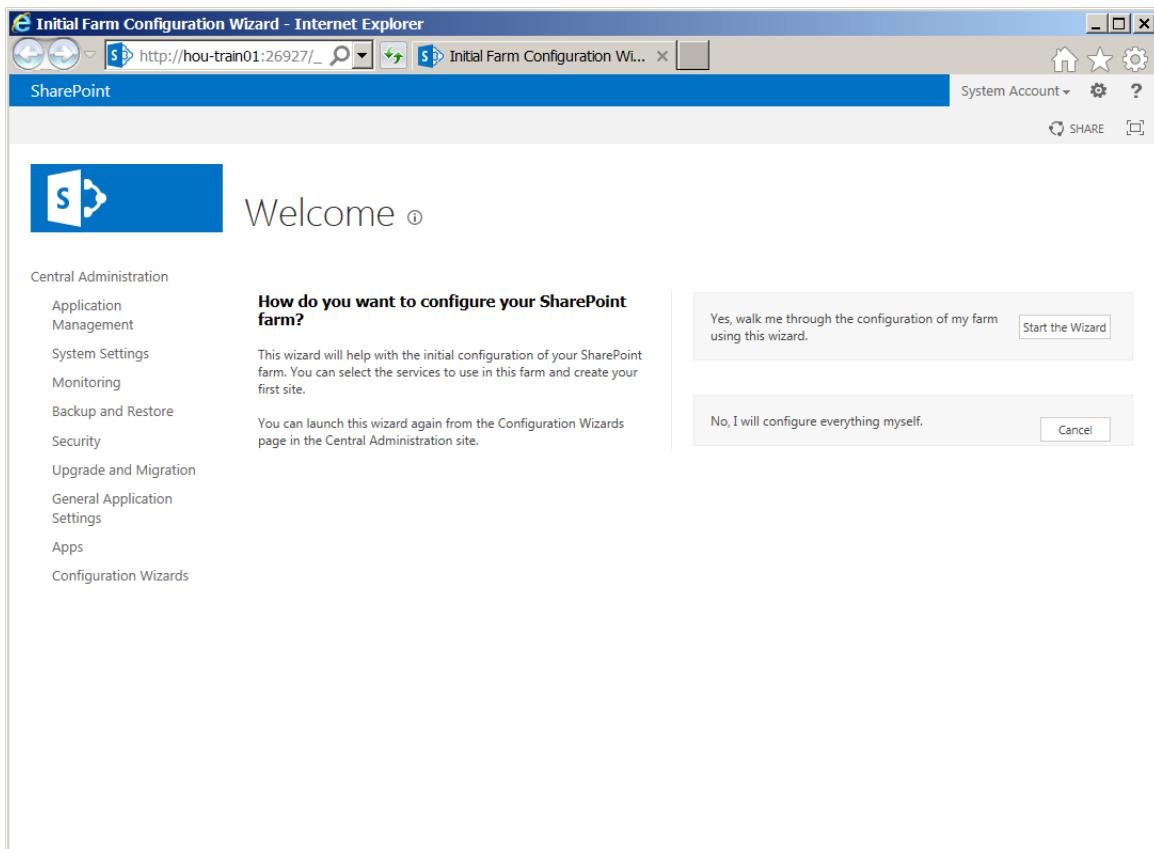
- Verify that the configuration settings are correct and click **Next**.



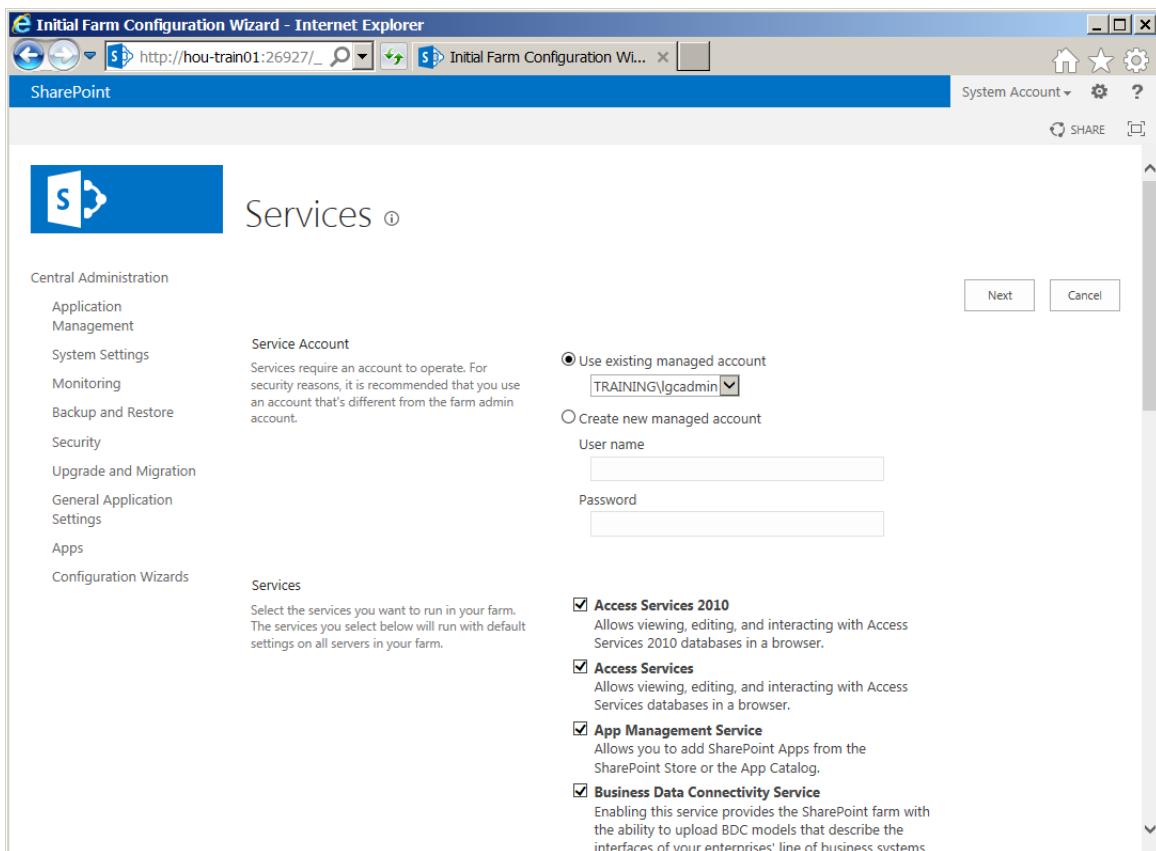
13. Click **Finish** when the configuration is complete.



14. The installer will automatically launch a web browser to perform the initial farm configuration. Click **Start the Wizard**.



- Select **lgcadmin** as the managed account and leave the default services selected. Click **Next**.



- Skip the creation of Site Collection. The SharePoint Server 2013 Installation and Configuration is now complete and ready for DS Web Framework installation.

