OVERVIEW

Over the last 20 years, oil and gas companies have evolved from highly centralized, monolithic organizations into much more flexible, globally distributed, asset-team-centered organizations. Even more so today, these companies exist in a highly dynamic and competitive industry with data, information and knowledge resources at the core of commercial decision-making. Their challenge to identify and exploit these information resources in a cost-effective and timely manner is ever-present.

Within a typical oil company, key decision-makers, managers and support staff depend on thousands of databases and applications. These resources have been developed over many decades by disparate suppliers, including internal IT, third-party commercial providers and commercial partners. Each has a distinctive interface that must be used to access the information stored within. These interfaces can be difficult to use and typically require some amount of expertise to be used efficiently. In addition, they do not provide a holistic view of the data across data sources. Yet, decision-makers require efficient access to comprehensive data sets to make critical business decisions. How can they accomplish this?

DecisionSpace® Integration Server software provides a comprehensive solution for solving upstream E&P data challenges. The product embraces the diverse application portfolio of a company and its need to create, develop, leverage and protect intellectual property. It does this by providing a web-enabled view of dynamically updated data from any data source. As a result, data managers and engineers share on-the-spot access to current data, allowing them to collaboratively make better decisions.

Built specifically for E&P, DecisionSpace Integration Server software brings to the DecisionSpace® platform an enterprise-class middleware that directly accesses any federated information management solution. It includes the data management interfaces for all data repositories, published through industry-standard SOA web services. It also powers the data management tools for data connectors, search, quality, transfer and synchronization. All these capabilities are integrated with business process management (BPM) workflow orchestration and analytics engines.

BENEFITS

Access a single instance of all the data, in context

DecisionSpace Integration Server’s DataServer™ component is used by applications for synthesizing multi-sourced (Landmark and non-Landmark data sources) information into definitive, common quality-assured data sets. Data from multiple databases can be combined or federated via a logical data model. Applications consume that data through web services as if the data was from a single source and visualize it to business users and data managers in the context of the workflow.
they are using. All the data is completely secure and only users who have permissions can view the data.

DataServer component allows applications to retain core data with the associated decisions and provides reporting that documents auditable outcomes. Disparate data management systems that typically are not integrated throughout the full lifecycle of a data set cannot provide this auditable reporting. The DataServer component also provides tools for developers and consultants to create connections to additional data sources.

Find relevant information faster
DecisionSpace Integration Server’s Search component provides domain-specific search capabilities across master data, domain data, and applications. It also integrates with enterprise-wide data search of unstructured data and documents, but in the language and semantics of the domain user.

The Search component provides a dynamic crawling capability that updates indexed data with any new data or document added to the list of sources. Its project, data type or data source-based filters allow users to quickly drill down to find specific information. Upon identifying the exact information, the Search component offers options for viewing related/contextual information and for rendering images of any contextual horizons, faults and logs on the fly.

Collaborate across geographies, domains, applications and data sources
Organizations implement business process management (BPM) to standardize business processes across the enterprise, encourage business transformation, improve business and IT agility, and reduce IT maintenance. The flexible BPM component of DecisionSpace Integration Server provides business analysts, process owners and developers a comprehensive suite of tools to design, orchestrate and execute business
processes across disparate system landscapes throughout the enterprise. It also helps managers and operations personnel effectively manage process performance for continuous improvement. Key attributes include:

**Usability** – The BPM component provides process management features and tools in a way that both business users and developers can leverage. 

**Agility** – It supports adaptive and dynamic processes that require flexibility for modeling complex, real-life situations not easily described using a rigid process. BPM gives control back to end users by allowing them to control which parts of the process should be executed, which parts should dynamically deviate from the process, etc.

**Automation** – More than an isolated process engine, the BPM component enables complex business logic to be modeled as a combination of business processes, with business rules and complex event processing.

*Activate the mobile enterprise*

DecisionSpace Integration Server software provides the framework and capability for a solution partner or internal business units to deliver high-quality and relevant information from a private or virtual private cloud. This eliminates the need to search for various data files, and blend or create the right version of the data for consumption by the domain user. The application reduces the constant need for loading data into various tools and creating data sets for transfer to other domains. Information is always available at the user’s fingertips. DecisionSpace Integration Server manages information holistically, in the context of the asset workflow and the domain users’ needs.

DecisionSpace Integration Server also provides a Web Framework component that enables geographically-dispersed asset teams and partners to access any web or thick-client application from one central location on the cloud. The Web Framework component integrates with a company’s own Microsoft Active Directory infrastructure to provide single sign-on to all the applications. It also provides one central location for all administrative tasks such as creating new applications, workspaces, web dashboards, adding new data and granting access to users. Users can also quickly view key OpenWorks® project data without opening the project.
### System and Software

**Operating Systems**
- Windows 2008 R2 Server x64
- Windows 7 x64
- RHEL AS 6 (Primary)
- RHEL AS 5.x (Secondary)

**Hardware**
- 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

**Software Requirements**

**Browsers**
- Internet Explorer 9 or higher
- Firefox 20.x or higher
- Google Chrome

**For Portal 2010**
- Microsoft SharePoint 2010
- Microsoft .Net 3.5 SP1 Framework
- Microsoft SQL Server 2008 R2

**For Portal 2013**
- Microsoft SharePoint 2013
- Microsoft .Net 4.5
- Microsoft SQL Server 2008 R2

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# Pull GIS data from company map sources

Geographic information system (GIS) maps are an important aspect of data management activities for oil companies. DecisionSpace Integration Server software provides a powerful, fully web-based GIS map viewer. The HTML 5-based GIS Map component works with the industry-leading Esri ArcGIS system to enable viewing of maps published in disparate company locations. Users can view or search any spatially-enabled data available from the supported data sources and perform rich and varied actions, such as clipping, exporting to shape files, creating bubble maps, merge data, compare and many more actions.

### Key Features
- Connectors to Landmark and third-party applications, including Engineer’s Data Model™ (EDM™), OpenWorks®, DecisionSpace® InSite®, DecisionSpace® Production Data Model, PPDM, Petrel® and more
- Support for unit and cartographic conversion
- Crawling/indexing is available for all supported data sources, network locations and SharePoint sites
- Search provides ability to drill down to related information and view seismic or log images for these results
- Editors support the graphical creation of business processes (drag-and-drop)
- An open software development kit (SDK) provides the capabilities to design domain-specific tasks
- Communities feature provides rich collaboration capabilities within and outside of project team
- Customized HTML 5-based Esri GIS map provides a rich feature set including importing/exporting shape files and dynamically displaying spatially-enabled data
- Authorization and access control framework provides security for all sensitive and securable components
- IT/project administration can be performed from one central location

DecisionSpace Integration Server enables **better collaboration** across domains, **faster decisions**, and **reduced risk** by eliminating repeated data transfers and duplication that degrade data quality.

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*Landmark offers solutions to help you deliver on your business strategies. For questions or to contact your Landmark representative, visit us at landmarksoftware.com.*

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