AWS FOR INDUSTRIAL

Run your exploration and production business confidently

With cloud E&P software from Halliburton Landmark on AWS

In collaboration with

HALLIBURTON
Landmark

Table of contents

Why exploration and production software in the cloud makes sense

Your exploration and production (E&P) company is probably no stranger to risk, uncertainty, or asset management in challenging or complex market conditions. E&P software helps transform organizations and workflows and connect subsurface technology to operational activities so that they are better equipped to address these challenges with increased efficiency. However, on-premises E&P software can be a major investment of time, capital expenditures, IT resources, hardware, and infrastructure.

Fortunately, Amazon Web Services (AWS) and Halliburton have a solution: E&P software in the cloud. DecisionSpace® 365 Essentials is an industry-leading suite of E&P software that uses AWS workspace technology for a self-service approach so customers can run their solutions independently.

Proven cloud technology delivers rapid deployment and pay-as-you go pricing

Developed by E&P experts with 40+ years of experience, DecisionSpace® 365 runs on AWS, the world's most comprehensive and broadly adopted cloud platform. Rapidly deployable and using a cloud self-service model, DecisionSpace® 365 Essentials delivers a flexible pricing model that enables customers to pay as they go for high-performance E&P software capabilities with no large upfront cost. It also provides the flexibility to work anywhere on any workstation, laptop, or handheld tablet at any time. As a result, E&P operators can bypass lengthy deployments and start working up to two weeks faster[1].

High performance for E&P use cases

Along with the advantages of cost savings and quick deployment, DecisionSpace® 365 Essentials cloud applications automate the customer experience, delivering rapid onboarding and improved performance. Operators can make informed decisions in shorter time frames throughout the asset lifecycle, from exploration to production. So, what use cases do these applications cover? This eBook walks you through them.

DecisionSpace®365 essentials

1. https://decisionspace365.io

Construct safe, cost-effective, productive wells

Minimizing planning cycle times, reducing drilling costs, and accelerating critical decision-making are essential to the success of your company's well construction. How can you do that while mitigating risk, maximizing reservoir contact, and achieving repeatable drilling performance—in a time when your teams are not likely to be working from the same place? Well Construction Essentials Suite on AWS, can help your E&P company reduce well preparation time, enable distributed teams to work together, increase well reliability, and maximize well productivity while lowering costs.

Want to experience the Well Construction Essentials Suite yourself?

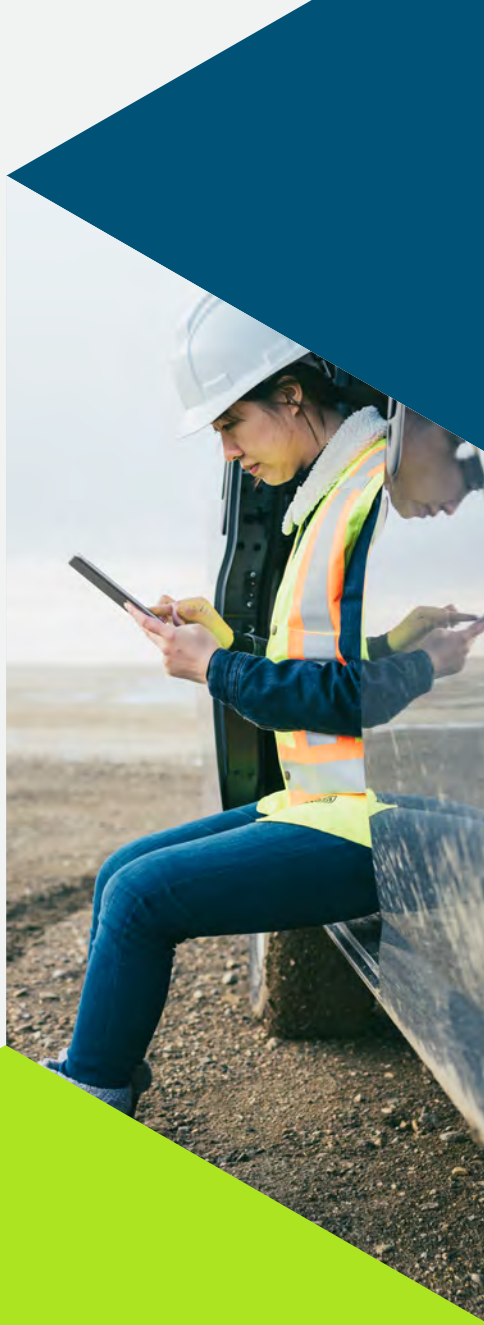
Try it before you buy

Well construction essentials in the cloud

The Well Construction Essentials Suite combines trajectory planning and well-string operations software with the most comprehensive well engineering data management solutions in the industry. You can simulate various cementing operations, optimize tubular design, and determine critical budgeting and scoping with risk analysis, thanks to robust casing and cementing design software. For complex well design scenarios, you can use advanced tubular design, advanced wear prediction, vibration and critical speed analysis, as well as advanced hydraulics analysis like well control prediction and surge-swab analysis in transient state.

Better collaboration, better wells

The easier it is for teams to collaborate, the easier it is to ensure your wells are constructed right. The Well Construction Essentials Suite provides a seamless experience that helps keep everyone working from the same page, with the latest data and designs. Integrated workflows and lean process execution can enhance your entire well construction lifecycle management. With anywhere and anytime access, your engineers can plan and design your next well, no matter the location, by using connected and compatible devices.



Get maximum return from your geoscience analysis

Analyzing the physical properties of the earth's surface for oil and gas extraction, determining how to make the best use of your assets, and making decisions about locating new wells all require handling large data files and powerful analytics. With the innovative Geosciences Essentials Suite of cloud applications on AWS, you can manage that data and use insights to optimize returns from existing assets and replace your produced reserves.

Geoscience essentials in the cloud
Geosciences Essentials is a fully-managed suite of geoscience applications that can be accessed from anywhere at any time. An option for a multi-user cloud environment, it enables collaboration across multi-domain workflows and data types—all on a singular, integrated data-management platform. It also offers rapid well planning workflows that allow asset teams to keep pace with ambitious drilling schedules for unconventional plays and increasingly complex offshore developments.

Accurate decisions, enhanced exploration, and appraisals
Geosciences Essentials offers integrated geologic and seismic interpretation, attribute analysis, velocity modeling, well tie workflows, and dynamic depth conversion software on an open data platform. Cross-domain workflows and high-quality data generation enhance your entire exploration and appraisal lifecycle management. As a result, you can make informed decisions quickly and accurately, and with the freedom to work from anywhere, without sacrificing security, quality, or speed.

IS Interpretation Services, Inc.

How a geophysicist saves time and shares data faster with Geosciences Essentials on AWS

Geophysicist Tanya Inks of IS Interpretation Services uses Geosciences Essentials through Amazon WorkSpaces, a fully managed desktop virtualization service. She has 24/7 access to necessary data, applications, and resources from anywhere and from any supported device. Using Amazon WorkSpaces, Inks can download and share information with her clients at any time, thus providing significant time savings.

"I now have a very fast, high-end machine at my fingertips," Inks says. "I don't have to depend on the configuration of my local computer when I am working on Amazon WorkSpaces," says Inks.

Read the full story ›

Evaluate, assess, and forecast petroleum economics and reserves with precision

To justify projects and plan budgets, assess the impacts of price or ownership changes, and calculate and roll up the results in any arrangement, you need a fast, flexible economic evaluation tool. Halliburton Landmark Aries®, one of the industry's most trusted petroleum economics and reserves software, is now on AWS. Aries Essentials enables you to evaluate new products, assets, potential acquisitions, and reserves at any level of detail in a trusted cloud environment. Core data and results are all stored in a shared database, which seamlessly integrates with the associated reserves management system application or other company applications.

Economics and reserve essentials in the cloud
Aries Essentials jump starts your economics evaluations and enables business and operations teams to collaborate. It provides on-demand access to an economic simulator, data manager, and forecasting tools in an easy-to-use cloud environment. For advanced economics, it provides a modeler.

Comprehensive property value understanding, when and where you need it
Industry-standard economic simulation coupled with powerful modeling in the cloud ensures that complete property value understanding
is available when and where you need it. You can comprehensively evaluate new assets and acquisitions and assess price and ownership changes in detail. Interactive decline curve analysis techniques for rigorous production and reserves estimates enable you to forecast confidently. A highly-flexible and extensible data model enables you to manage property and economic data with ease.

Develop an accurate and insightful understanding of the subsurface

Artificial intelligence, machine learning, and advanced visualization can not only unlock new insights into complex geology but also reduce cycle times from exploration to production. The challenge is having the compute power and storage to use these capabilities—as well as other analytics tools—to get insights, predictions, and forecasts from your data. Because Seismic Processing Essentials runs on AWS, E&P operators like your company are assured the right set of tools for seismic processing, from field QC to advanced 4D and multicomponent processing and more.

Seismic processing essentials in the cloud

The cloud-based architecture of Seismic Processing Essentials optimizes productivity and efficiency to help you remotely manage and oversee seismic processing workflows. Tomographic Migration Velocity Analysis allows you to build velocity models to run imaging algorithms while iterative updates produce accurate images of subsurface geologic structures during the migration process. Depth imaging tools can address advanced depth processing.

Efficient processing, high-quality output

Because Seismic Processing Essentials can easily and efficiently process large volumes of seismic data, you can develop an insightful and accurate understanding of the subsurface even in the most challenging and complex environments. Interactive tools enable you to quickly analyze multiple revisions of data and validate results at every step to ensure high-quality output. And you can unlock maximum value from your seismic data with advanced geophysical algorithms and optimized parallel processing.

Accelerate the productivity and efficiency of well operations

Having the right data management and well operations reporting software enables your team to access all recorded activity in one place and instantly share insights company-wide. Well Operations Reporting Essentials on AWS enables your E&P company to harness the power of the cloud for data storage and analytics so you can track, report, and analyze rig operations quickly and effectively. You can use the results to determine how to improve the productivity and efficiency of well operations at an accelerated pace.

Well operations reporting essentials in the cloud
The simple, interactive solutions delivered by Well Operations Reporting Essentials speed up data entry using the industry standard Engineer's Data Model™ (EDM™). Pre-configured, activity-based data entry forms and output reports specifically geared towards onshore or unconventional assets—or both—are available in the suite.

Supercharged performance, informed decisions
Well Operations Reporting Essentials helps you optimize performance and make informed decisions with in-depth activity tracking and reporting. Accurate and reliable data management helps ensure that your data integrity and quality are optimal. Easy and seamless processes and workflows deliver workforce productivity and efficiency—fast—while enabling seamless collaboration between rig supervisors, managers, and engineers anywhere in the world.

Improve reservoir characterization and boost drilling efficiency

Determining the performance that a reservoir will have over the production life of the field is critical. How easy is it for your E&P company to predict and assess different reservoir operational conditions and compare the economics of different recovery methods? Reservoir Evaluation Essentials runs on AWS and is a cloud offering designed to improve volumetric calculations and assessment of reservoir performance.

Reservoir evaluation essentials in the cloud
Reservoir Evaluation Essentials is a user-friendly, integrated solution that connects subsurface evaluation and reservoir engineering—for both single and multi-well studies. An integrated well log evaluation application includes different modules applied to asset evaluations and provides integrated workflows across subsurface disciplines, supporting improved reservoir performance throughout its lifecycle. Advanced functionality delivers subsurface interpretations to your expert users.

Minimized uncertainty, smart predictions
Reservoir Evaluation Essentials delivers accurate evaluations of conventional and unconventional reservoirs to reduce uncertainty. A more accurate characterization of rock properties improves decision-making. Because it runs on AWS, you have the compute power and storage you need to apply neural networks, SOM (Self Organizing Maps) and other ML approaches to predict continuous logs or discrete zonations. You can also run deterministic or probabilistic workflows for porosity and water saturation including options for organic shales and thin beds.

Summary

DecisionSpace® 365 Essentials on AWS helps you maximize E&P lifecycle management and optimize decision-making with a cloud solution that delivers integrated workflows, lean processes, and the compute power and storage needed for analyzing massive volumes of data that are often unstructured. There are no lengthy or time-consuming deployment processes, and you get immediate scalability and workspaces personalized for each user powered by Amazon Workspaces. Self-service usage and billing and new and existing user management help you manage your software subscriptions and costs better—and all but eliminate capital expenditures.

About Haliburton

Halliburton is an AWS Energy Competency partner and provides E&P professionals with software-driven lifecycle insights that generate new ideas, actions, and results to maximize asset value.

Learn more about the AWS and Halliburton partnership ›