

Frequently asked questions: **DSO/Upstream**

Powered by Actenum **DSO**

Questions

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What is DSO/Upstream?

DSO/Upstream is a configurable, interactive software application for scheduling and optimizing oil and gas exploration and production activities. It incorporates a drag-and-drop Gantt chart user interface, together with sophisticated data management capabilities, and makes it easy for you to develop and manage complex integrated operations schedules that are aligned with your business objectives.

You can use **DSO/Upstream** to schedule onshore or offshore upstream operations, where resources—such as rigs, cranes, barges, trucks, and crews—must be assigned to activities—including construction, drilling, frac/completions, workovers, logging, and maintenance—according to various constraints. **DSO/Upstream** incorporates a comprehensive model of your upstream operations environment, and together with the fastest optimization engine in the industry, this enables you to:

- Automatically assign rigs, other equipment, and crews to exploration and production activities in an optimal sequence, rapidly and reliably
- Interactively adjust your schedules to reflect changes and disruptions, using the drag-and-drop Gantt-based interface
- Optimize your results to align with important objectives, such as cost, production output, and equipment utilization
- Collaborate effectively with your colleagues, using a consolidated operations model focused on business objectives
- Create and evaluate scenarios rapidly to identify an optimal alternative

Who uses DSO/Upstream?

DSO/Upstream users range from the largest oil & gas companies in the world to smaller in-dependent operators.

Some use **DSO/Upstream** for scheduling drilling operations only, while many use it to manage all aspects of the well delivery process: leases, milestones, pad and facility construction, spud/drill sequences, fracturing/completions, tie-ins, and field maintenance.

What are the benefits of using **DSO/Upstream**?

DSO/Upstream eliminates the need for error-prone manual data entry and un-auditable collections of spreadsheets and project files. Instead, your equipment and well activity information is centralized in **DSO/Upstream's** database, which is designed to handle all upstream activities, and which makes information available to your other team members through Actenum's companion web-based application, **DSO/CX**.

By coupling Actenum's advanced optimization software to **DSO/Upstream's** internal operations model and sophisticated GUI, scheduling is rapid and automatic (for example, to assign appropriate resources to specific activities while satisfying all operational and technical constraints), while errors and inconsistencies are eliminated.

- Easier management of operations complexity (hundreds or thousands of wells, number of rigs growing or diminishing, multiple types of activities to schedule).
- Increased confidence in your ability to achieve business objectives, such as production output and cost targets

- Improved ability to rapidly respond to budget constraints, equipment breakdowns, or crew availability limitations
- Reduction in risk of non-compliance with lease obligations
- Increased drilling performance and efficiency through insight into critical milestone dates
- Reduction in costs associated with rig movement or idle time
- Immediate clarity on the impact and risks resulting from schedule changes
- Improved team alignment and collaboration around the well delivery process

How is **DSO/Upstream** deployed?

DSO/Upstream is usually deployed as a standalone application on a workstation. It may also be deployed as a cloud-based application.

The **DSO/Upstream** database may be installed locally or on a remote server, using Microsoft SQL Server or Oracle.

You may also deploy **DSO/Upstream** using Citrix.

What data is needed to use **DSO/Upstream**?

DSO/Upstream incorporates an operations model that accommodates a wide range of data about your upstream operations, and it uses this data in the scheduling process. The minimum information needed to use **DSO/Upstream** effectively is:

- Approximate durations of activities
- Information about equipment or crew resources, such as working calendars, environmental restrictions, and dependencies
- A way to determine what resources are compatible with an activity (for example, what type of rig may be used on a particular well, or in a specific area)
- A way to approximate the travel time between activities (only if this is of interest)
- A way to measure the quality or value of the resulting schedule; this might include measures of cost, resource use, production targets, priorities, deadline violations, and so on

How do I get started with **DSO/Upstream**?

Prior to deployment, Actenum conducts a Configuration/Integration workshop with you to determine specific configuration and customization requirements. We also explore integration with external applications for data import and export purposes.

Following the workshop, Actenum configures **DSO/Upstream** for initial use, and deploys the software to users. During the initial use period, Actenum works with you to ensure that your data is imported successfully, and to conduct user and administrator training.

How do I load data into **DSO/Upstream**?

You may load data into **DSO/Upstream** manually, or automatically. Most electronic forms of data are loaded automatically: **DSO/Upstream** can load MS-Excel and MS-Project files directly, for example.

For data stored in relational databases, Actenum provides a connection mechanism for import/export

Will **DSO/Upstream** fit into our workflow and business process?

Your workflow, business process, and the way that schedules are set up and managed, are all very specific to your organization and your operations. This is why we have designed **DSO/Upstream** as a flexible application with an open architecture for ease of adaptation and integration. It may be used as a stand-alone application for management of schedules (replacing other tools such as MS-Excel or MS-Project), or it may be integrated into an existing business process through the available data interchange facilities. You can rapidly and effectively configure the software to meet your operational needs, and take advantage of available data.

Can I share **DSO/Upstream** schedules with other team members?

A companion application, **DSO/CX** (Collaboration eXchange), provides all team members with web-based access to schedules and related information, via a workstation, tablet, or smart phone. **DSO/CX** enables users to view schedule Gantt charts, track activities on a map, create reporting dashboards, and focus on the aspects of a schedule in which they are most interested.

For each schedule, **DSO/Upstream** will also generate a Gantt chart representation as a customizable PDF file. You can email this, or publish it on a corporate intranet.

You can also export **DSO/Upstream** data to MS-Excel, and integrate it with external databases, using a connector provided by Actenum.

Can **DSO/Upstream** make use of production information?

DSO/Upstream is able to associate a production profile with a well, pad, lease, DSU, business unit of some sort, of a geographic area. It will also accept production information in multiple ways:

- As a single value with a decline percentage: for example, 300 bbl/day, with a decline of 3% per quarter for the first 2 years, and 5% for each year after that
- As a time series of values, which may be obtained from another application such as ARIES or Peep
- Using decline curve parameters

What reporting capabilities does **DSO/Upstream** provide?

DSO/Upstream enables you to build custom reports for specific requirements, and also supports common reporting tools, such as Spotfire and Business Objects.

You can also export data to other applications, such as MS-Excel, for reporting purposes.

What training is needed to use **DSO/Upstream**?

Getting started with **DSO/Upstream** is intuitive for most users who are familiar with other scheduling applications. Actenum provides an initial 2-day user training program at the time of initial software deployment. At the same time, a short training class for application administrators is usually scheduled.

How often are updates to **DSO/Upstream** released?

Usually there is one major **DSO/Upstream** release each year, providing new features and support for new operating systems and database platforms. Interim releases or patches address other issues as they arise.

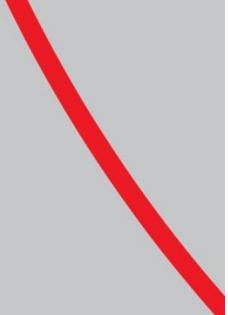
What hardware and software will run **DSO/Upstream**?

Client Workstations

- 2.5 GHz Pentium CPU
- Minimum 8 GB RAM, 40+ GB hard drive
- 100 Mb network connection to server
- MS-Windows 7 and up

Database Server

- Microsoft SQL Server 2005, 2008, 2012
- Oracle 10G or higher



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