The Cisco® Collaborative Operations solution combines voice, video, and data communication over an optimized, secure network to enable seamless collaboration between workers in the field and experts in the office.

As the oil and gas industry shifts both the type and locations of its main activities, there is an increasing complexity that requires greater collaboration and involvement of remote experts to accelerate decision making and problem resolution, increase efficiencies that improve workflows, and proactively monitor remote operations. For example, critical operations such as seismic, directional drilling, down-hole tooling, and rig services monitoring, all require specialty expertise. Yet that expertise can hard to come by when operational issues arise, especially on remote or off-shore rigs, where issues can be extremely expensive and dangerous if not resolved quickly.

So how can companies help ensure that they are involving their most experienced experts for the most effective use of knowledge and skills transfer? How can they reduce nonproductive time and risk by solving problems on the first pass, and improve overall employee safety?

Built on the network to streamline user collaboration and communication, the Cisco Collaborative Operations solution delivers real-time data and visuals in a single-pane-of-glass view to facilitate informed decision making, increase jobsite safety, and help to ensure non-productive time is kept to a minimum.

Cisco Collaborative Operations helps oil and gas companies:

- Overcome collaboration challenges faced by the field and operations teams
- Improve the speed and ease with which information is shared between employees and stakeholders in your organization
- Change the way you schedule, meet, and interact in day-to-day operations as well as when emergencies arise
Challenges

One of the biggest challenges faced in the oil and gas industry is the loss of productivity and profitability due to unforeseen outages and flat time. Furthermore, communication barriers and uncertainty can exist between offsite locations and the home office, which can make it difficult to arrive at a resolution on the first pass. Often compounding these pressures is the need for complete transparency between stakeholders in the company and the outside world. Companies need to overcome these barriers using a means of communication that is instantaneous and accurate, and includes relevant subject matter experts and key decision makers.

With a younger and growing workforce, and with fewer experienced workers available, allocating personnel across multiple jobsites becomes a daunting task to ensure the right resources are in the right places at the right time. Experienced operators, who are in short supply, can instead become valuable assets as remote experts. Remote experts can lend their experience and advice during mission-critical situations without the expense of time and transportation. The challenge becomes not only how to connect the company's remote experts with workers in the field but also how to make sure that they are always available when a situation arises.

And, with the increasing opportunities for unconventional oil and gas exploration and drilling, the pressure for improved safety of workers and assets in the industry has never been greater. There is a need to improve the visibility of connected jobsites while also promoting a clear adherence to company policies and procedures.

Solution Overview

The Cisco Collaborative Operations solution combines voice, video, and data communication in a single pane of glass to enable seamless collaboration between workers in the field and experts in the office. It delivers real-time information and collaborative capabilities that facilitate informed decision-making, increase site safety, and ensure minimal flat time. This seamless collaboration environment combines:

- Video surveillance (analog and IP cameras)
- Voice (landline, mobile, two-way radio, and remote speaker integration)
- Chat functionality
- Web conferencing, including multiple desktop and application sharing capability
- Optimized, secure networks built for low-bandwidth environments
- The ability to include analytics for more proactive monitoring
- Configurable interface suitable for a variety of deployments or projects

By enabling employees to collaborate and communicate in real time with remote experts, and with all key data points in front of them, the solution provides maximum visibility to those who can help guide on-rig operations in real time. In this way, non-productive time can be significantly reduced.
The Cisco Collaborative Operations solution enables:

- **Expert remote collaboration**: Engage remote experts to put eyes and experience on the ground of offshore locations or hard-to-reach jobsites. Application and desktop sharing allows for complete transparency and real-time information sharing for mission-critical applications.

- **Automation and surveillance**: Use proactive monitoring of operations to anticipate issues before they occur and to react faster when they do.

- **Workforce development and training**: Facilitate knowledge transfer and improve worker safety through interactive-training capabilities to reach employees through compelling, engaging, and meaningful interactions. The ability to record and archive sessions enables you to use them later for training, safety and process improvements.

- **A scalable and flexible application interface**: Integrate thousands of surveillance streams or even thousands of employees with the Cisco Collaborative Operations solution. The Cisco Collaborative Operations interface, shown in Figure 1, can be flexibly branded, creating a wide variety of deployment and accessibility options.

- **Utilization of existing infrastructure in new ways**: The solution allows integration with existing investments, such as handheld radio systems and analog surveillance systems, while maintaining system accessibility even on bandwidth-challenged devices, (for example, smartphones and tablets) by taking advantage of an optimized, secure network.

*Figure 1. Cisco Collaborative Operations Interface*
Business Benefits

The Cisco Collaborative Operations solution can change the way you communicate and improve the overall decision-making process when faced with difficult situations. By speeding up the flow of communication and eliminating barriers to communication, your company can gain valuable foresight, increase productivity, while reducing expenses and operating risks. The Cisco Collaborative Operations solution helps you:

- Involve all relevant stakeholders and remote experts in the decision-making process, resulting in improved technical accuracy and first pass resolution
- Use remote experts and onsite personnel to quickly gain in-depth visibility into issues with voice and video, avoiding language issues and other miscommunication and reaching better decisions faster
- Reduce operations downtime by taking advantage of remote expertise to solve problems at inaccessible offshore sites
- Provide a means for interactive training opportunities and knowledge sharing from more experienced employees to younger, less-experienced workers
- Grow competitive advantage, generate revenue, improve return on assets, and reduce operational risk
- Improve operational intelligence and extend competitive advantage in a globalized work environment by adopting collaborative operations approach
- Use proactive monitoring of operations with analytics to create opportunities to anticipate issues and react faster when they arise
- Create an opportunity for workforce training, safety improvements, and risk reduction by recording and capturing incident handling for later reference by the extended team

Solution Components

The Cisco Collaborative Operations solution combines proven Cisco web-based applications and technologies in a central, configurable interface (Table 1).

<table>
<thead>
<tr>
<th>Component</th>
<th>Capabilities</th>
<th>Optimized for:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Surveillance Operations Manager</td>
<td>● Audio, video, event monitoring</td>
<td>● IP-based, scalable platform</td>
</tr>
<tr>
<td>(VSM 7.5 + VSOM)</td>
<td>● Real-time monitoring for collaboration or unmanned onsite situation assessment</td>
<td>● Secure policy-based access</td>
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<td></td>
<td>● Advanced scheduling and recording</td>
<td>● Optimal in high- or low-bandwidth connections and high- or low-latency connections</td>
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<tr>
<td>IP Interoperability and Collaboration System</td>
<td>● Alarm monitoring, rapid dispatch, and incident response</td>
<td>● IP-based, scalable platform</td>
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<tr>
<td>(IPICS 4.6)</td>
<td>● Instantly share information relating to incidents among participants</td>
<td>● End-to-end encryption</td>
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<td></td>
<td>● Ability to match users across a variety of devices analog or digital into a single event</td>
<td>● Push-to-talk (PTT), touchscreen, wireless IP phone, mobile-ready</td>
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<td>● Coded and clear channel, and radio-to-telephone patching</td>
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<tr>
<td>Cisco WebEx® Training Center 28/Jabber Component</td>
<td>● Collaborative live conferencing and interaction through video, voice, PC, and mobile</td>
<td>● Cloud-based access across multiple computing platforms and mobile devices</td>
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<td>● Built-in tools for desktop sharing, content creation, and subgroup participation</td>
<td>● Secure authentication-based services</td>
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<td></td>
<td>● Recording and shared playback functions</td>
<td>● Scalable platform for high-quality communication across high- and low-bandwidth connections</td>
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<tr>
<td></td>
<td>● Cisco Jabber® instant-messaging capabilities</td>
<td>● Integration with common productivity tools and instant-messaging services</td>
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<td></td>
<td>● Advanced scheduling and instant session options</td>
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</table>
Deployment Options

The Cisco Collaborative Operations solution is designed to work across multiple platforms, including mobile devices, and supports up to thousands of participants. Deployment options include:

- **On premise:** Uses onsite hardware and monitoring equipment
- **Cloud-based:** Allows access anytime, anywhere with web-based services
- **Mobile:** Optimizes access for bandwidth-limited devices

Cisco Advanced Services

Cisco Advanced Services helps to ensure that your expectations are met completely from planning to building and implementing your solution. Consult with Cisco Advanced Services to maximize your return on investment and achieve your goals in every phase of your project, even after deployment.

Conclusion

The Cisco Collaborative Operations solution offers a powerful platform for collaboration and information sharing between all stakeholders. The solution speeds up the communication process and eliminates communication barriers, which helps to reduce flat time and restore productivity. The Cisco Collaborative Operations solution is flexible and easily accessible by employees at the office or in hard-to-reach sites like offshore rigs. The solution provides a means to help to grow your company’s revenues, reduce operational risks, and improve worker safety.

For More Information

For more information about Cisco Collaborative Operations, please ask your account manager or contact Cisco at ask-cos@cisco.com or visit the Cisco oil and gas website: http://www.cisco.com/web/strategy/energy/external_oil.html.