

PROJECT PROFILE:

VALLEY INFRASTRUCTURE UPGRADE

SENTINEL PEAK RESOURCES

Customer Background

Longtime customer Sentinel Peak Resources (SPR) is an upstream oil and gas company responsible for heavy oil development and extraction. The company owns and operates several sites throughout California, with most located in the Central Valley area.

Project Background

Prior to the valley infrastructure upgrade, EA conducted an audit of all SPR's SCADA-related assets and developed a master plan for the next steps in the evolution of their system. During the audit of the SCADA-related assets, EA found SPR had obsolete software and operating systems that manufacturers no longer supported. The system had problems with reliability, and a lack of redundancy and consistency in the programming negatively impacted the equipment maintainability and the ease of training staff. The valley infrastructure upgrade project, included in EA's original master plan, was a platform upgrade of four Central Valley sites to address these issues.

EA Solutions

To update the SCADA systems for the four Central Valley sites, EA first had to complete a platform replacement. The underlying computing and network infrastructure was upgraded from various obsolete versions of Wonderware System Platform to the latest version of AVEVA (formerly Wonderware) System Platform software to make the system more robust, reliable, and supportable.



Project Manager:

Jeff Benson



Project Technical Lead:

Alex Coker



EA installed thirty Dell servers running over one-hundred new VMWare virtual machines with the latest available Windows operating systems and upgraded the AVEVA SCADA software to the latest version. Over eighty new Moxa Ethernet network switches were installed along with new server racks, air conditioning units, power supplies, and power protection units.

There was no acceptable downtime to bring on the new system, so EA completed the installations virtually, in parallel to the existing system.

Key stakeholders from Sentinel Peak Resources had an opportunity to view and verify the functionality before the new system was brought online. This solid foundation gave Sentinel Peak Resources' internal staff the confidence to perform equipment maintenance and update the software and security patches. It also offers the ability for future expansion of the SCADA assets.



Key Insights

- EA completed its most extensive single platform replacement to date with thirty new servers and over one-hundred virtual machines across four locations.
- EA installed the new system in parallel to verify the functionality before transferring control from the existing system.

Key Technology

- AVEVA System Platform
- VMWare

Project Metrics

- EA's Services Value: ~\$400k
- Project Length: 6 months

