

Verint Solutions in Action



Customer

The Port of Los Angeles

Industry

Critical Infrastructure

Solutions and Services

Nextiva Video Management Software and
Nextiva Encoders and Decoders

Region

Americas

Location

California

The Port of Los Angeles

The Organization

The Port of Los Angeles, located in San Pedro Bay, is Southern California's gateway to international commerce. Just 20 miles south of downtown Los Angeles, this booming seaport is the nation's largest container port and is also known for its groundbreaking environmental initiatives, progressive security measures and diverse recreational and educational facilities. A department of the City of Los Angeles, the Port of Los Angeles encompasses 7500 acres, 43 miles of waterfront and features 27 cargo terminals, including dry and liquid bulk, container, breakbulk, automobile and omni facilities. Combined, these terminals handle more than 157 million metric revenue tons of cargo annually.

Operational Overview

In 2009, the Port moved an impressive 6.7 million TEUs. The Port is the busiest port in the United States by container volume, the 16th busiest container port in the world and the 7th busiest internationally when combined with the neighboring Port of Long Beach. The Port of Los Angeles is among the largest cruise ship centers on the West Coast of the United States and contains three ship berths transporting over 850,000 passengers annually. The newly renovated World Cruise Center is claimed to be "the nation's most secure cruise passenger complex." As the leading seaport in North America in terms of shipping container volume and cargo value, the Port generates 1.1 million jobs in California and \$21.5 billion in tax revenue throughout the United States.

Strategic Challenge

Monitoring 43 miles of waterfront can be a daunting task. The port sought a solution that would unify stakeholders and effectively monitor its vast 43 miles of waterfront.

The Solution

Today, one of the country's most innovative ports in terms of security measures, the Port of Los Angeles was not always ahead of the curve. Prior to 2006, the Port operated with a few analog cameras across their expansive grounds. "We had just a few cameras run independently through an IP address operated by different departments," states Don Farrell, captain of the Los Angeles Port of Police. "There was no master plan or integration of the systems."

Prior to a new security system or plan, Port officials orchestrated a training exercise to determine how agencies would respond to a potential threat. The Port of Los Angeles announced that a container with radiological contents had exploded. Evaluating the amount of agencies that responded (Los Angeles Police Department, Coast Guard, County Sheriff, Los Angeles County, FBI and more), they concluded the need to design a phased approach to deploying an integrated security solution. "We discovered that the lines of communication were similar to a child's game of telephone," added Farrell. "Too much important information could possibly be lost or misinterpreted by the time it reached the appropriate agency."



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Leveraging funding from the Port Security Grant Program, officials designed a new security system that would upgrade a disparate system into an integrated 20th century innovation. In order to successfully implement the new security platform, the Port worked in phases to deploy the most important elements first.

Monitoring 43 miles of waterfront can be a daunting task. The port sought a solution that would unify stakeholders and effectively monitor its vast 43 miles of waterfront. After an extensive evaluation process, the Port of Los Angeles chose the Nextiva® IP video portfolio from Verint® Video Intelligence Solutions™. This initial deployment is known as the Waterside Surveillance System. Over the years, the Port has made continuous investments in technology and today is leveraging next-generation Nextiva Video Management software, integrated analytics, encoders/decoders, and wireless devices along the port's waterfront and land-based facilities. The Nextiva IP video solution integrates with more than 350 third-party cameras to monitor highly critical areas. Captured data is then transmitted to a state-of-the-art "Threat Detection Center" for central monitoring on Nextiva Review workstations.

With Nextiva, the Port of Los Angeles is able to collect vast amounts of information and provide security and emergency management staff with timely intelligence about events of genuine importance. "We have been extremely impressed with Nextiva's open-architecture and the willingness of Verint engineers to provide SDKs to help work with other technologies," adds Farrell. The Port uses Nextiva's enterprise-class video security platform to help increase situational awareness, improve emergency preparedness and response, and expedite investigations.

"Another issue with situational awareness is having a good GIS system," explains Farrell. In 2007-2008, Port Police began to assess and implement GIS technology in support of its security initiatives. Several departments at the Port were leveraging various GIS systems, and officials wanted to ensure that consistent data was obtained without duplicating and wasting resources. The Port turned to NorthSouth GIS LLC® to provide customized geospatial data of the port and surrounding lands.

The GPS data is made available on an enterprise GIS system accessible to all internal port users. Mission-critical GIS information is used for situational and domain awareness in the "Threat Detection Center" as well as on handheld devices in the field – providing

information such as the geographic location of critical infrastructure facilities, underground drainage, and diagrams of storm water run-off systems.

Integrated with Nextiva's Video Management software and third-party cameras, officials at the Port are able to leverage the enterprise GIS system so that personnel in the "Threat Detection Center" can pinpoint locations of their first responders in the field while having a complete view of activities. Through the use of this innovative GIS technology, integrated with Verint's state-of-the-art security platform, the Port has increased their ability to make the right decisions faster.

After deploying the Nextiva IP video system in conjunction with the enterprise GIS system, the Port of Los Angeles required a unified operating picture for situational awareness while protecting its investment in existing technologies. With a PSIM solution, the Port of Los Angeles integrates data from Nextiva Video Management software – including alarms and analytic reports – while leveraging the enterprise GIS system data. The PSIM software incident reporting and system analysis tools enable better coordination of the interaction between people, alerting sources and responses at the Port.

The PSIM capabilities are enhanced by and fully support Verint's Nextiva portfolio of video management software, integrated analytics, encoders and decoders at the Port of Los Angeles. "We were able to easily integrate our PSIM solution with Nextiva and AMAG's access-control system to take video and data and share it with the appropriate agency when needed," comments Farrell.

In the final phase, the Port searched for a solution that would support field personnel in responding to real-time emergency situations and provide the right information to the right people at the right time. In 2010, the Port deployed the RealityVision® solution from RealityMobile®. Integrated with Nextiva, RealityVision delivers clear transmission of high-quality images to any authorized smart phone or handheld computer. This innovative solution ensures that an officer can view real-time images between the field and the "Threat Detection Center". Additionally, the GPS tagging capabilities give the Port the ability to actively view the location of vehicles and vessels to optimize the deployment of personnel and assets.

"As officers arrive on a scene, they can actually see real-time video on their smart phone or handheld computer, so they know what is happening and not to run into the danger zone. They can then use this information to make an intelligent decision as to where to deploy, or what actions to take first," adds Farrell.

In a world economy that depends on the safe and efficient flow of goods, maintaining the port's security is critical to the nation's commerce. "We know through intelligence data that the ports of our nation are vulnerable to terrorist attacks," states Farrell. "If the Port of Los Angeles and Port of Long Beach were to shut down for just one day, the cost to our economy would be approximately \$1 billion in commerce."

Because of this potential impact, the Port needs to rely on the most innovative and cutting-edge technology in the market. Utilizing Nextiva's Video Management software, the Port can easily integrate with other technology vendors to manage the large, geographically-



distributed video operations more efficiently and cost effectively. Further, Nextiva's single- and multi-port encoders and decoders combine low cost of ownership with industry-leading video encoding technology for superior imagery and optimal bandwidth utilization.

For the Port of Los Angeles, Nextiva Analytics enhance situational awareness around its properties and transforms what used to be a manual, resource-intensive operation to an efficient, accurate, automated process. The Port leverages Nextiva Analytics to secure their expansive waterfront and perimeters by creating custom detection rules that secure tangible and virtual perimeters or borders. "We use the analytic capabilities of Nextiva to identify vessels that stray into small areas, or violate entry into restricted zones," explains Farrell. "With the alarm features, we can identify vessels that loiter and immediately dispatch marine police to investigate suspicious activity."

Finally, Nextiva wireless devices transmit images from locations managed by the Port to the "Threat Detection Center". Using Verint's SPCF protocol, the Nextiva wireless system removes hidden nodes issues common in standard WI-FI deployments, provides predictable bandwidth usage, and extends the range of the wireless links without impacting the quality of the video streams. Leveraging Verint's industry-leading encoding technology, Nextiva wireless transmitters deliver high-quality images, while minimizing use of valuable network bandwidth at the Port.

Today's Port of Los Angeles is America's premier gateway for goods and services, and a bustling center for global commerce. Handling cargo as diverse as the world it serves, the Port's economic impact is unprecedented in terms of regional jobs and economic impact. In this leadership role, the Port of Los Angeles has also prioritized green growth initiatives as well as security, dedicating millions of dollars to ensure the quality of life for the surrounding communities, while safeguarding cargo, property and the nation's largest long-shore workforce.

"The Port of Los Angeles is run by very progressive management who recognize the national security value of the Port. "We get great encouragement to be the best in the nation and strive to be at the forefront of deploying technology to make the port safe and secure while ensuring the efficient flow of cargo," states Farrell.

About Verint Video Intelligence Solutions

Verint® Video Intelligence Solutions™ is the worldwide leader in networked video, a "single source" for virtually every facet of video surveillance operations: from cameras, encoders, and intelligent DVRs to video management, viewing, and analytics software.

Verint. Powering Actionable Intelligence.®

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