



# A Critical, Non-Stop Network for Kashima Oil Mineral Refinery

Kashima Oil Co., Ltd. in Japan gets a high-performing network upgrade, with industry-leading Allied Telesis technology and software.

## Customer

### Kashima Oil Co., Ltd.

**Industry:** Mineral oil refinery  
**Established:** 1967  
**Headquarters:** 1-1-2 Ootemachi,  
 Chiyoda, Tokyo, Japan



“Kashima Oil plays a very important role in the Eastern Complex. If the oil-refining process was halted for any reason, it would not only affect our business—it would also have a severe negative impact on the production of other companies.”

**Mr. Yoji Nemoto**, a team leader of planning group, system team in Kashima Oil, Co. Ltd.

## Challenge

Kashima Oil's mineral refinery is located in the Eastern Complex of the Kashima Seaside Industrial District, where more than 20 closely-related companies work alongside each other and share resources. A core part of the complex, Kashima Oil distills and refines crude oil to produce natural gas, LPG, naphtha, paraffin and much more.

When Kashima Oil decided to build a new office building, it was a prime opportunity to update the network. Because of the company's core role within the Eastern Complex, a high-performing, non-stop network was of utmost importance.

One of Kashima Oil's top priorities was ensuring the continuous, safe and secure shipping of its refined oil products out of the complex. Shipping had to occur on a non-stop basis—Kashima Oil's onshore shipping facility operates 24 hours a day, 365 days of the year. As Mr. Nemoto said, “All of our operations—especially shipping-out—had to be non-stop. If there is a failure, it must be instantly resolved.”

The previous network was problematic, with any network failure taking too long to recover. The new network had to be extremely resilient, with sub-second failover in the event of a link or device failure. This would ensure non-stop access to their data, phone, and shipping systems, all of which were being converged onto the new network. It was also important that the refinery's equipment control systems operate continuously. Plus, easy management was a key requirement for the planning and system team.

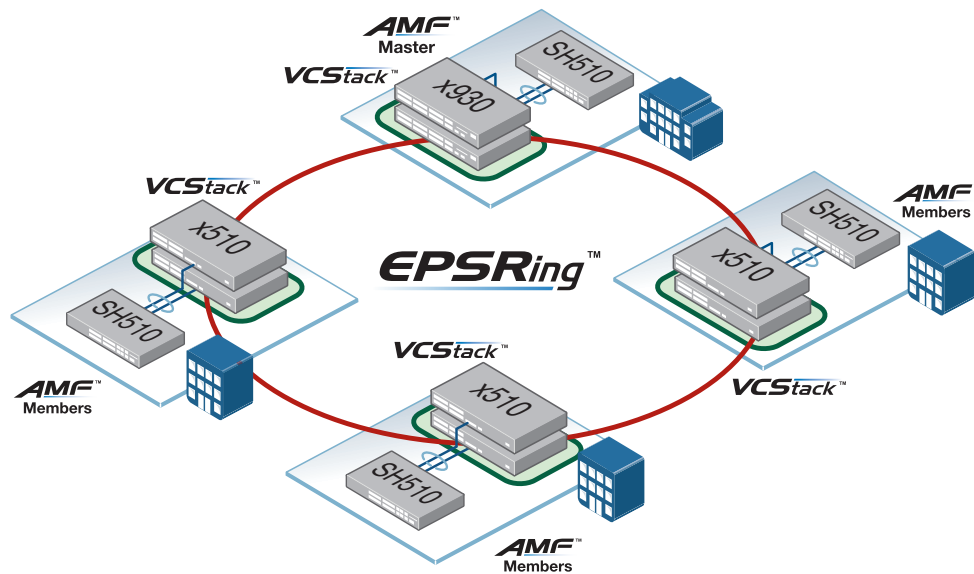
## Solution

From a selection of strong competitors, Kashima Oil chose a proposal from NIKKO Telecommunications Co., Ltd. featuring Allied Telesis advanced products and solutions.

The company now operates a ring-style network, connecting four sites on the premises via the use of optical fiber. Allied Telesis Ethernet Protected Switching Ring (EPSRing™) allows the switches to form a high-speed protected ring with failover in as little as 50ms.

At the main office site, a pair of x930 Series switches is connected in a Virtual Chassis Stack (VCStack™), which acts as a single device to provide a resilient network core. Each of the other 3 sites has a pair of x510 Series switches, which are also connected in a VCStack. Using this combination of EPSR to connect the 4 sites, alongside VCStack, has created a powerful distributed network with no single point of failure. Allied Telesis SH510 Series switches are used at the edge for network access connectivity.

## Kashima Oil: The New Network



“ Allied Telesis have a lot of experience building ring networks using EPSR, and a great history of constructing highly-reliable, non-stop networks.”

**Mr. Koike**, Manager of Sales, Kashima branch office, NIKKO.

The new network uses Allied Telesis Autonomous Management Framework™ (AMF) to automate and simplify network management. The x930 core switches perform the role of AMF master, automatically backing up the entire network regularly, and providing centralized management of many, or all, devices at once.

Mr. Ishizuka, a system leader of planning group, system team in Kashima Oil said, “At first we planned to replace only the core switches installed at each site in a ring network. However we decided to replace all the switches with models supporting AMF, to reduce administration using network automation.”

### Success

Since May 2016, Kashima Oil has been operating the new and highly-resilient network, and reaping the benefits of always-on access to shipping information and other online resources and applications, as well as continuous operation of refinery equipment control systems. Should a link or device failure occur, it will be recovered almost instantaneously thanks to EPSR and VCStack.

AMF delivers real and immediate value to Kashima Oil. Powerful features like centralized management, auto-backup, auto-upgrade, auto-provisioning and auto-recovery enable plug-and-play networking and zero-touch management.

AMF has eased the burden of network administration for the planning and system team, reducing the time and cost of managing the new network.

Kashima Oil now enjoys a cutting-edge combination of the latest technologies for non-stop operation, and simplified, automated network management. This allows the company to concentrate on their core oil-refinery business, while it runs smoothly all day, every day.