All Nippon Airways increases IT quality and cuts cost

Client name: All Nippon Airways
Location: Asia
Industry: Travel, Transportation & Logistics
DXC Technology ensures 24x7x365 operation of 1,000 servers

All Nippon Airways (ANA) needed help managing its complex open systems infrastructure to ensure high availability of critical systems, so it chose DXC as an outsourcing partner. As a central member of the dedicated team for open systems operations, DXC now supports the ANA Group’s continued progress 24 hours a day, 365 days a year.

Move to open systems

The aviation industry has entered an era of global competition. All Nippon Airways, a member of the Star Alliance Network, has increased its number of international flights in response. It has developed a multibrand strategy of both full-service and low-cost flights. ANA is also known for its world-class reliability as a carrier and continues to outclass other airlines on a variety of points, including safety, service quality, on-time arrival rate and in-service rates.

The group’s continued progress is based on efficient IT services, including its open systems. ANA began the migration of its principal systems from mainframes to open systems 10 years ago. Currently, approximately 80 percent of its systems — from passenger, cargo and maintenance services to its online reservations — are running in open environments such as Unix and Linux, as well as Windows.

“Moving to open systems resulted in an increase in service-provision speeds, but we were faced with new issues, like how to operate those open systems,” recalls Yukihiko Sasaki, managing director, Portfolio Management, Innovation & IT Strategy, at All Nippon Airways.

Operations team members were so busy dealing with problems that they didn’t have the time to actually work on improving the operational process itself and implement measures to avoid recurrence of incidents.

“We decided that it would require too much time to remedy the situation on our own and began to seriously consider seeking the assistance of a specialist with large-scale open systems operations know-how,” notes Sasaki.

Outsourced infrastructure

The IT Services Unit, now the Business Process Reform Unit, reversed its policy of fully in-house operations and decided to make use of outsourcing services.

At the time, the IT subsidiary’s Infrastructure Operations Division was overseeing operations of approximately 80 ANA open systems that contained a total of 630 servers. This was a multivendor environment, consisting of a mix of hardware, middleware and operating systems. The outsourcer would obviously need to have
large-scale open systems operations knowledge, and it was decided that experience with IT Infrastructure Library (ITIL) procedures would also be a requirement.

“To improve operational quality, just responding to the events at hand wouldn’t be enough. We needed to continue to improve the operational process while anticipating events that might occur in the future. To do this, it was necessary to implement ITIL, with its provisions for continued improvement of operations,” comments Sasaki.

Proposals from multiple outsourcers were considered, but in the end ANA chose to partner with DXC, mainly because of its technological competence. “HPE [now DXC] had played an important part in our move to open systems, so we had already seen the high level of skill displayed by HPE [now DXC] technicians,” says Sasaki.

“HPE [now DXC] also had a proven track record of providing ITIL-compliant operations outsourcing services to clients around the world.”

ANA entered into a 5-year infrastructure operations outsourcing contract with DXC. At the same time, it established a team of open systems operations specialists called the Open-systems Maintenance Center (OMC). This system of operations between the IT subsidiary company and DXC staff was designed to operate 24 hours a day, 365 days a year. Operations of existing systems were transferred to the OMC in batches.

**Increased availability**

The mission of the OMC is to ensure stable operations of a large-scale open systems infrastructure. This involves a wide variety of tasks, including operations monitoring, fault management, configuration management, response inquiry, reporting and more.

“Building a framework from which to approach operations was the starting point for improving the operational process,” comments Kiyokazu Kataoka, a member of the Infrastructure Maintenance team. “In the past, there was no clear set of procedures for operations, so there weren’t many standards to aim for even if you wanted to make improvements. HPE [now DXC] redefined all of our operational processes using HPE [now DXC] best practices, which are ITIL compliant.”

DXC’s expertise also comes into play in defining the control items used in operations management, as well as in staff training. Next was the establishment of key performance indicators (KPIs). DXC used various indicators, including incident numbers, recovery time and service provision rates to achieve a visualization of operational quality.

“Being able to visualize the effects made it possible to test hypotheses regarding operational process improvements. We had established a plan-do-check-act (PDCA) cycle,” adds Kataoka. “By analyzing incident records and understanding the sources and mechanisms of problems, we were able to begin predicting where problems might occur next and respond appropriately,” he explains.

Building a knowledge base about the circumstances of past problems and resolution procedures also resulted in having to spend less time on problem resolution.
“We’re always looking forward to new ideas from HPE [now DXC]. Our goal should be worldwide-leading operational quality, with the service to support this. We want HPE [now DXC] at our side as we boldly take on challenges that others couldn’t even consider.”

— Yukihiko Sasaki, managing director, Portfolio Management, Innovation & IT Strategy, at All Nippon Airways

Drawing on DXC best practices to implement these measures resulted in massive improvement in operational quality of ANA open systems. Currently, over 100 open systems and 1,000 servers are overseen by the OMC. Critical system failures leading to service downtime has been reduced by 82 percent. Incident numbers per server have also fallen dramatically. A high availability of 99.997 percent has been achieved for mission-critical systems, such as the reservation systems and the flight operations systems, which depend on on-time arrival rates.

The OMC ended its first-stage 5-year contract 1 year early and is currently under a second-stage contract. “Incidents that affect customer service were on a downward trend in stage one, but still hadn’t reached zero. In stage two, we wanted to achieve even higher operational quality in a short period of time,” notes Sasaki.

In addition to increased quality, cost reduction was once again an important theme in stage two. To pull ahead in the global market, it was necessary to reduce fixed costs, even for IT operations. After surveying the IT operations outsourcing situation in various industries, Sasaki and his team decided to make “global cost-competitiveness within 5 years” a requirement.

It was a difficult requirement to meet, but in the end DXC delivered and was chosen once again. “Of course, HPE’s [now DXC] proposal was excellent, but that wasn’t the only reason. We also considered the high level of motivation and onsite capability that HPE [now DXC] technicians had shown up until then. When it comes to operations, practical ability in the field is critical,” explains Sasaki.

With 24 hours a day, 365 days a year operations, communication and relations between team members can’t be ignored. When an incident occurs, rapport and teamwork are put to the test. The DXC team members are not only technologically proficient, but also displayed excellent interpersonal skills.

“In the field, it doesn’t matter who belongs to which company. Both the high motivation of the members and the improvement of operational quality are connected to having worked together with the same sense of mission – supporting a social infrastructure. We look forward to achieving even greater improvements in stage two, together with team members that we trust,” says Sasaki. He summed up with:

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The ANA Group aims to be the world’s leading airline, and DXC continues to help support the open systems infrastructure that provides a foundation for that challenge.

About DXC Technology

DXC Technology (DXC: NYSE) is the world’s leading independent, end-to-end IT services company, serving nearly 6,000 private and public-sector clients from a diverse array of industries across 70 countries. The company’s technology independence, global talent and extensive partner network deliver transformative digital offerings and solutions that help clients harness the power of innovation to thrive on change. DXC Technology is recognized among the best corporate citizens globally. For more information, visit dxc.technology.