

Harris Corporation supports air traffic control systems with the System x Reliability Solution for Stratus everRun



Overview

Harris Corporation needed a reliability solution it could count on to support its complete software package for air traffic control, the Liberty-STAR voice communication system. Harris deployed System x3250 class servers using Intel® Xeon® E3 family of processors, Stratus everRun continuous availability software and XenServer virtualization software. Harris met its clients' strict requirements for demanding air traffic and airport control applications with continuous availability, management console duplication and redundancy capabilities.

Harris Corporation is an international communications and information technology company serving government and commercial clients in more than 125 countries. Headquartered in Melbourne, Florida, it earns approximately USD5 billion in annual revenue and has 14,000 employees. With roots in printing in the 1890s, Harris next evolved to electronic communications, then added space and military technology. Subsequent expansion of its electronic product offerings transformed Harris into a global company—one of the few focused exclusively on developing voice, data and video networks.

Supporting continuous availability in critical transportation environments

To provide products and services to air traffic control and civil navigation installations, Harris needed an enhanced reliability solution for new implementations in the Middle East, South Africa and South Asia. Since Harris' Liberty-STAR Voice Communication System management console had to meet stringent operational requirements, the company chose Stratus everRun MX software running on System x3250 class servers.

“Whenever we need the Stratus solution, we use System x servers—and we don’t plan to change that.”

—Francis Deault,
Air Traffic Control Systems Engineer,
Harris Corporation



This downtime prevention solution adds robustness and duplication to virtual machines, delivering continuous availability and ensuring fault tolerance in these critical transportation environments. At each airport, the System x Reliability Solution for Stratus everRun Enterprise supports the ability of air traffic controllers to communicate with airplanes and allows engineers to maintain the communications environment.

To ensure uninterrupted reliability, Harris needed time-tested, industry-standard servers from a trusted vendor. It found just that in the System x3250 class servers.

Enabling easy communication and system management worldwide

For each of the three airport sites, Harris selected the System x Reliability Solution for Stratus everRun. To support the Harris Liberty-STAR solution, the company installed two System x servers at the Middle East site, 10 at the South Africa site and four at the South Asia site. Harris also purchased spare System x3250 servers for each site.

In addition, operator stations at the airports run Java-based human machine interface (HMI) software from Harris, which gives users push-button systems management capabilities and easy configuration for role-based voice communication between controllers and aircraft. The HMI software also supports system diagnostics and displays system faults, alerting administrators to take action. For airports that boast stringent operational specifications, a pair of System x servers allows administrators to run their management application in a virtual environment that provides the redundancy to achieve the required higher availability.

Meeting industry and client needs to help keep the traveling public safe

Deploying the System x Reliability Solution for Stratus everRun with applications for voice communication and virtualization enabled Harris to meet its clients' requirements for demanding airport and air traffic control functions. For air traffic and system management personnel, however, the high-powered combination of sophisticated capabilities was smooth and seamless, and the user experience is the same as with a familiar PC interface.

In the event of a system failure, the user experiences no interruption or perceptible change, because the Liberty-STAR management application co-exists on two virtual machines. If one machine fails, the application continues to run on the other machine with no interruptions or data loss.

Solution components

Hardware

System x3250 class servers with
Intel® Xeon® E3 family of processors

Software

Harris Liberty-STAR Voice
Communication System
Stratus everRun MX high-availability
software
XenServer virtualization software



The reliable, high-performing Intel® Xeon® chipsets in the System x servers help ensure that the solution meets both industry standards and the requirements of individual airport clients for continuous availability systems and operations.

This industry-leading combination enables Harris to satisfy clients, play a significant role in helping keep the traveling public safe and pursue new business opportunities that would not be available with lower-performing solutions.

Notes Francis Deault, Air Traffic Control Systems Engineer with Harris: “Whenever we need the Stratus solution, we use System x servers—and we don’t plan to change that.”

For more information

To learn more about Lenovo Data Center Systems solutions, contact your Lenovo Sales Representative or Lenovo Business Partner, or visit: lenovo.com/systems

To learn more about the everRun software solution from Stratus Technologies, Inc., visit: www.stratus.com/solutions/software/everrun-enterprise-express

For more information about Harris Corporation, visit: www.harris.com, connect with them at www.facebook.com/HarrisCorp, watch a video at www.youtube.com/user/HarrisCorporation or follow them on Twitter @harriscorp

“If a failure were to occur on one of our servers, the System x Reliability Solution for Stratus everRun will keep operation running smoothly as though no failure had occurred at all.”

— Francis Deault,
Air Traffic Control Systems Engineer,
Harris Corporation



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