



SALT RIVER PROJECT MIGRATES TO RED HAT ENTERPRISE LINUX ON IBM MAINFRAMES FOR FLEXIBILITY AND PERFORMANCE

FAST FACTS

Industry:	Utilities, Government
Geography:	Arizona
Challenge:	Searched for a replacement for proprietary software for its IBM mainframe servers that could provide greater flexibility, manageability, and utilization opportunities
Migration Path:	HP-UX to Red Hat® Enterprise Linux®
Software:	Red Hat Enterprise Linux, Red Hat Network Satellite
Hardware:	IBM® System z® mainframe servers
Benefits:	Experienced cost savings, boosted performance, stable and reliable management, consolidation, and valuable technical support after migrating to Red Hat Enterprise Linux on IBM System z



BACKGROUND

As one of Arizona's largest utilities providers, Salt River Project (SRP) has delivered low-cost, reliable power and water to Arizona customers for over 100 years. SRP includes two entities: the Salt River Project Agricultural Improvement and Power District, a political subdivision of the state of Arizona, and the Salt River Valley Water Users' Association, a private corporation.

The District provides electricity to more than 935,000 retail customers in the greater Phoenix metropolitan area. It operates or participates in 11 major power plants and numerous other generating stations, including thermal, nuclear, natural gas, and hydroelectric sources.

The mission of SRP is to deliver ever-improving contributions to the people it serves through the provision of low-cost, reliable water and power, and community programs, to ensure the vitality of the Salt River Valley.

CHALLENGE

SRP's Power division had been testing Linux in-house for approximately three years, but didn't have any Linux solutions in production environments at the time. There was little experience with Linux within SRP's IT team, though the utility company was interested in moving to a Linux-based environment in the future. In 2006, SRP upgraded its System z mainframe, and IBM offered incentives for use with a Linux operating system. This prompted SRP to accelerate its investigation of Linux® solutions.

"We had a long-standing desire to look for solutions outside of our current environment," said Kevin Masaryk, Senior Linux/UNIX Administrator at SRP. "We were very interested in Linux on the mainframe for the enhanced utilization, flexibility, workload consolidation, and management capabilities offered there. Above all, it could help us mitigate the risk of the server sprawl which had plagued us. In fact, whether on the mainframe or a distributed architecture, Linux would allow us to run more workloads per server than our traditional environment."



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– Kevin Masaryk, Senior Linux/UNIX Administrator at SRP

SOLUTION

After deciding to evaluate various Linux solutions for the mainframe, SRP selected Red Hat Enterprise Linux, which the SRP IT team had been evaluating during its in-house Linux testing. SRP decided it would prefer to use one reliable Linux distribution in both its mainframe and distributed environments.

“When evaluating Linux mainframe solutions, we experimented with SUSE® because it had an early relationship with IBM for that architecture, but Red Hat had become very mature in the mainframe environment, too. Since we were already leaning toward Red Hat in our distributed environment, choosing Red Hat on the mainframe coincided perfectly with our desire to have one corporate standard for Linux,” said Masaryk.

“The implementation of Red Hat Enterprise Linux on our IBM System z mainframe was straightforward and didn’t take long at all,” said Masaryk. Today, SRP has nearly 50 Red Hat Enterprise Linux-based servers and the implementation is on going. To manage its Red Hat Enterprise Linux systems, SRP uses Red Hat Network Satellite.

“We use RHN Satellite, which is a key component to the management of all of our Red Hat servers, whether on the mainframe or in our distributed environments. Our use of Satellite has grown with us, and we’re pleased with how much time it has saved us and how efficient it has made our administrators. I’d recommend setting up RHN Satellite as

soon as possible for others who want to go down that road; it pays off very quickly,” said Masaryk.

In addition, SRP has leveraged Red Hat Training offerings to expand internal knowledge of Red Hat’s products and solutions in production environments. “Red Hat Training has proven to be very valuable to us. Some of our system administrators who came from a more traditional mainframe background or proprietary UNIX background had little experience with Linux. The courses that Red Hat provided got them up-to-speed very quickly and easily,” said Masaryk.

BENEFITS

Red Hat Enterprise Linux on IBM System z mainframe servers has provided SRP with a very stable and predictable solution that can be easily managed via Red Hat Network Satellite. It has enabled cost savings through the elimination of licensing costs, and has also provided boosted performance for its servers.

“A key success for us is the ability to consolidate multiple workloads into one instance of Red Hat Enterprise Linux as opposed to running in our traditional environment, where each workload would have to run on a separate server; that’s a huge benefit for us,” said Masaryk.

With reliable Red Hat support offerings, SRP has also benefited from the ability to access support straight from Red Hat engineers and developers who have written the code behind its solutions. “The support that we’ve received from Red Hat has been very valuable, and we’ve been happy with it all along. As we continue to deploy more Red Hat solutions at SRP, we feel confident in the related support from knowledgeable professionals who know the products so well,” said Masaryk.

For the future, SRP has plans to continue to expand its use of Red Hat solutions. “We’re planning to move forward with implementing additional Red Hat Enterprise Linux-based machines as fast as we can. We’re also investigating the use of JBoss solutions,” said Masaryk.

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