

SMHI SEES LARGE PROFITS WITH RED HAT ENTERPRISE LINUX

SMHI selects Red Hat for reduced cost, enhanced security, and more efficient operation.



FAST FACTS

Industry:	Meteorology, hydrology, and oceanography
Geography:	Head office in Norrköping, Sweden with offices all over Sweden
Aim:	To standardize from VMS, Tru64, SGI, and Solaris to Linux, cutting costs and enhancing efficiency within the organization
Solution Platform:	Red Hat Enterprise Linux
Hardware:	Intel
Applications:	Include JBoss, MySQL, J2EE applications developed in-house
Advantages:	Substantial reduction in costs and simpler operation compared to proprietary operating systems

BACKGROUND

SMHI is Sweden's meteorological and hydrological institute and the country's expert authority on meteorology, hydrology, and oceanography, as well as a resource for many types of environmental work. Many public and private companies rely on SMHI to deliver reliable information on time.

There is a massive quantity of data gathered around the clock from ground stations, balloons, vehicles, buoys, aircraft, weather radar, satellites, and lightening localization systems. Powerful computers process all the information from these sources. Advanced computation models carry out analyses and forecasts, which are the basis for the information supplied to SMHI's clients.

MIGRATING TO A NEW STRATEGIC PLATFORM

In 2004, SMHI wanted to reduce the number of platforms (operating systems) and update the environment for their web servers. Linux® was chosen after an environmental analysis confirmed that Linux equalled UNIX® systems in terms of technical function and features. The analysis also saw significant potential to increase Linux expertise over the long-term. Linux was tried and tested and, in short, the natural choice.

There were a number of criteria for selecting a provider. The length of the product life cycle, the potential for commercial support, and the application providers' support/choice of OS were all critical components. Red Hat® Enterprise Linux was chosen over other Linux alternatives based on the evaluation of these criteria.

SMHI migrated from VMS, Tru64, SGI, Solaris, and other Linux distributions to Red Hat Enterprise Linux. Today, the applications that run on Red Hat Enterprise Linux include receiving and

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processing for satellite and radar data web systems, print servers, serial servers for archiving, JBoss application servers, and batch calculation programs that generate maps from, for example, radar information.

GETTING RESULTS

The migration to Red Hat Enterprise Linux resulted in the following gains for SMHI:

- lower costs
- simpler administration
- higher operational security and accessibility
- better performance and lower requirements for resources
- standardization of the existing Linux desktop environment

"Thanks to the package system Red Hat Enterprise Linux uses, we have a more straightforward administration with full control over what is installed on our servers as well as the ability to move applications between different servers. This means an even load and high accessibility," says Magnus Runesson, system administrator for the Linux environment at SMHI.

"We see a great need for Linux-based solutions within the public sector in Sweden. Linux and open source codes offer enormous potential savings along with an efficient, secure, and easily administered IT infrastructure. The fact that SMHI has obtained direct business benefits and reduced IT costs shows the way forward for other players in the public sector," says Magnus Svensson, Scandinavian Manager at Red Hat.

EFFICIENT AND SECURE OPERATION

Today, Linux is one of the strategic platforms within SMHI. The number of Linux machines has doubled and the trend is set to continue. Above all, the Elin (Establishing LINux) project aims to increase the cost efficiency per life

cycle. Elin has also resulted in a standard operating environment that makes operating key production applications—like client products—more efficient and more secure.

A standardized environment is particularly important for SMHI, which has a very extensive server park. Almost all of SMHI's Linux servers now run on standard installations and standard operating systems thanks to Red Hat Enterprise Linux. This is a unique solution where the configurations are centrally controlled—something that was not possible previously. The Elin project has meant that the majority of the Linux machines are now adapted to the new standards. A documented process makes it easy to roll out new configurations quickly with guidance for further development.

"We reckon that we can now do more for the same amount of money because it is both simpler and quicker to roll out new configurations, partly due to a stricter process. We have also obtained a less labor-intensive IT environment and a clearer boundary between test and production. A new machine might have taken us 4 hours to set up, but now it goes a good bit faster," says Magnus Runesson at SMHI.

SMHI WINS ENTERPRISE SERVICE AWARD FROM IIR

Last spring, SMHI received an Enterprise Service Award, an annual distinction from the Institute for International Research (IIR). This prize was awarded for Elin solutions. The citation was "Best network installation for Windows or open source".

There is also great satisfaction in-house, according to the project's final report. The results were exceptionally successful due to the fact that SMHI had highly competent staff that did not aim for an unnecessarily tight schedule, but planned instead for a solid result. And the results speak for themselves. Developers needing to test new applications now have a pool of machines to hire for the purpose. There is a clear plan for future development of the Elin platform and existing Linux desktops will be standardized in a similar way.

The new Linux environment is a very important component in SMHI IT's secure, rational operation, now and in the future.

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