NXP Semiconductors Empowers Global Engineering Workforce with OpenText Exceed™ VA TurboX

Unrivalled performance, ease of management, and effective remote working among top benefits for over 3,000 engineers

NXP Semiconductors N.V., headquartered in Eindhoven, The Netherlands, provides high-performance mixed signal and standard product solutions that leverage its leading RF, analog, power management, interface, security, and digital processing expertise. Their products are widely used in a range of automotive, identification, wireless infrastructure, lighting, industrial, mobile, consumer, and computing applications. In 2010, NXP posted global revenues of $4.4 billion.

Formerly a division of Philips, a company with a successful track record for over 50 years, NXP was established in 2006. Today, NXP has about 25,000 employees across the globe with operations in more than 25 countries, engineering design teams in 22 locations, and 11 manufacturing sites across Europe and the Far East. Over 33,000 customers use NXP's products, including Apple®, Bosch, Continental, Delphi, Ericsson, Harman Becker®, Huawei, Nokia, Nokia Siemens Networks, Oberthur, Panasonic, Philips, Samsung, Sony, and Visteon®.

Back in 2006, following the formation of NXP, there were some 25 design centers, each with their own work practices and high-performance IT infrastructure. Consolidation and streamlining of processes between the design centers, to bring them all in line, became a top priority.

Designing an effective and efficient infrastructure globally

As NXP set out to redefine its IT infrastructure, the company embarked on a project to design and build four data centers across the globe to support all design teams, regardless of their location. By doing so, NXP would be able to reduce costs and provide their engineers with consistent and reliable access to their complete Electronic Design Automation (EDA) application library and global design data management vaults.

By adopting a "login anywhere, design anywhere" approach, NXP would be able to reduce licensing costs by pooling application licenses, such as their EDA tools from Cadence®, Synopsys®, and Mentor Graphics®, rather than having each discrete location manage their own licenses. Collaboration would also become simpler, as teams would be able to collaborate on a common infrastructure across continents and time zones.

IINDUSTRY

Manufacturing

CUSTOMER

NXP

CHALLENGES

- *Consolidation of IT infrastructure into four data centers would result in increased remote access for design engineers*
- *About 3,000 employees in Research & Development*
- *Engineering design teams in 22 locations; central IT environment management was difficult*
- *Design simulations take from hours to weeks to run, meaning engineers would have to leave their computers running, unattended, for extended periods*

SOLUTION

- *OpenText Exceed onDemand® (now called Exceed™ VA TurboX)*

BENEFITS

- *Central management and upgrade implementations are now practical and effective*
- *Suspend and resume functionality allows engineers to log out of their computers and check on progress at home, while travelling, etc.*

> *"Our engineers are often under tight deadlines to deliver results and so any delay or interruption is extremely costly to us. Exceed onDemand's Suspend and Resume functionality overcomes this beautifully."*

HENK COENEN, MANAGER, R&D IT COMPETENCE CENTER, NXP SEMICONDUCTORS

Although the introduction of the four data centers would save costs and encourage collaboration, some additional challenges arose as some design engineers would now be further away from the servers than they had been previously. Because NXP uses intensive graphical user interfaces, based on the X Window System™, to render designs, simulate results, etc., issues around network latency were also introduced. These caused a heavier network load as traffic increased over a wide area network.

Addressing challenges with a single solution

NXP looked at a number of solutions in the market and, after an intensive feasibility study, selected OpenText Exceed onDemand®, (now called Exceed™ VA TurboX), one of two remote access solutions from OpenText, as the only solution that would meet their needs. NXP looked at a number of factors when selecting a solution to address the key areas of network latency for remote users, management of the solution from a central location, and support for a wide range of EDA applications. "During our evaluation, Exceed onDemand impressed us with its ability to compress graphical data over low latency networks. The fact that we can prioritize Exceed onDemand network traffic also means that engineers connecting remotely to one of our data centers are able to work effectively. We tested Exceed onDemand with a wide range of EDA tools, and were pleased that all worked seamlessly and we now successfully use more 1,200 applications. Exceed onDemand was a definite enabler in our rollout of the data centers," says Henk Coenen, Manager, R&D IT Competence Center, NXP Semiconductors.

NXP employs approximately 3,000 engineers, who are often required to work together on projects from any one of the 22 centers distributed around the world. Exceed onDemand addressed the collaborative challenges that such a distributed workforce presents. With many working from home, travelling, or just needing to move around their offices, the ability to "Suspend and Resume" proved to be a critical factor in selecting Exceed onDemand.

With projects that span from a few hours to a few weeks, being able to close a project without losing information is an advantage that NXP needed to reduce operation costs and allow employees to meet deadlines. Coenen explains the benefits of the "Suspend and Resume" function by adding, "Our engineers are often under tight deadlines to deliver results and so any delay or interruption is extremely costly to us. Exceed onDemand's Suspend and Resume functionality overcomes this beautifully. An engineer simply suspends a task, logs out, or shuts down, perhaps to travel home at the end of the day. At any time they can log in, resume the job to check progress, and suspend again. Whilst suspended, the task continues to progress unattended, saving us time and, consequently, money."

Saving money and time by streamlining administrative and maintenance tasks

By implementing a single global solution, NXP is now able to manage and administer the system with one small group from a single location. This has helped to further reduce costs, speed up deployments to new engineers, and aid migration of any new businesses that NXP acquires.

"Upgrades or configuration changes are so easy to roll out now. We test the changes on a small number of machines and can then roll out the changes overnight, automatically. The overhead on our IT department is a fraction of what it would have been previously," adds Coenen.

The original data center consolidation was a huge project for NXP over a period of three years. Since then, the company has been able to look at further ways to improve performance and make the best use of their investment in Exceed onDemand.

In September 2010, NXP embarked on an additional project to implement server side rendering, using dedicated graphic processing capacity. This was in support of 3D modeling, something that has become increasingly important to the company. OpenText was able to provide support throughout the project, providing access to the skilled resources necessary to fine tune the solution to support the OpenGL applications over the wide area network.

"Thanks to our close collaboration with OpenText, we were able to meet the requirements and the tight timescales required to meet the deadlines of the project. The support that OpenText has provided has been second to none," Coenen says.

The future

At NXP, Exceed onDemand is seen by the engineers as integral to achieving success in their jobs. Exceed onDemand features, such as "Suspend and Resume," have changed the way they work for the better. The strain on the IT department for support has reduced since centralizing administration and maintenance tasks. "As a progressive company, we're always looking for ways to improve the way we work; to improve efficiency, accuracy, and reliability. We have every confidence that Exceed onDemand will be central to our initiatives in the future and we see OpenText as a key, strategic technology partner to NXP," concludes Coenen.

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