SCALR

Case Study: Samsung Electronics

The Challenge

Samsung Electronics operates in the consumer electronics market where it faces fierce competition, particularly in the mobile electronics segment. In this environment, time to market is of paramount importance for Samsung, and the ability to release a new feature first is a major competitive advantage for the company.

But Samsung Electronics is more than a just a contender in the consumer electronics market, it is the market leader. Samsung customers expect the best, and the company's infrastructure services are therefore highly scrutinized. Ensuring those are highly-available and demonstrate robust performance is a competitive differentiator for Samsung.

In order to further improve its competitiveness in the marketplace, Samsung Electronics made the decision to adopt cloud, and more specifically Amazon Web Services and CloudStack. Doing so has provided Samsung developers with self-service access to infrastructure resources, which has removed the need for them to wait on lengthy approval processes.

But mere access to cloud resources was not enough for Samsung developers. Beyond self-service access to infrastructure resources, what they needed was:

- Self-service access to standardized operating environments, including automated application deployment and upgrades. This would let Samsung developers significantly reduce time to market.
- Built-in fault-tolerance and failover capabilities for infrastructure. This would let Samsung developers secure high-availability, and maximize the uptime on their services.

Hyok S. Choi, Project Leader, Systems Architect and Principal Engineer at Samsung Electronics led the effort to provide developers with the tooling they needed to further sharpen Samsung's competitive edge in the marketplace.

SAMSUNG ELECTRONICS

About Samsung Electronics

Korea-based Samsung Electronics is the world's largest technology company by revenue, as well as the world's leading manufacturer of mobile electronics. Samsung Electronics' brand portfolio includes some of the world's most popular smartphone product lines, such as Samsung Galaxy.

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The Solution

Choi understood that in order to provide Samsung developers with standardized highly-available operating environments, he would need to supply them with higher-level tooling than the existing cloud APIs.

Indeed, Cloud platforms such as Amazon Web Services, CloudStack or OpenStack are oriented towards the management of individual resources (e.g. a single virtual machine), and not towards the management of an entire operating environment complete with networking, load balancing, and storage.

Samsung Electronics had the option of building its own tooling and that of procuring a third party solution.

Building internal tooling would guarantee the solution could be deployed on Samsung premises and eliminate supplier risk. However, doing so would cost Samsung valuable developer time and redirect engineering effort away from the company's products, as well as significantly delay the availability of the solution. Ultimately, building the tooling Samsung needed was not a fully satisfactory option.

Choi found the solution he was looking for when he discovered Scalr. Scalr is a third party solution, but it meets Samsung's risk reduction requirements: it can be deployed on-premises for added security, and minimizes supplier risk by virtue of being an open source solution (like Linux).

Most importantly, Scalr could deliver on Choi's technological requirements.

The Standardized Operating Environments For Reduced Time To Market Solution

Scalr provides Samsung developers with self-service access to standardized operating environments to which they can deploy their applications.

Thanks to Scalr's Farm Designer and Orchestration Engine, Samsung developers are no longer encumbered with infrastructure management tasks. Using Scalr, deploying an application is as simple as picking the right infrastructure components from a library of templates and hitting launch.

Scalr's user interface is fully self-service, so Samsung developers do not have to go through slow and backlogged IT approval processes when they provision infrastructure. Nonetheless, automated authorization controls ensure that they don't inadvertently procure infrastructure that is too costly or insecure.

As a result, adopting Scalr has greatly reduced the time it takes for Samsung developers to go from idea to implementation, thus empowering Samsung to bring new products and services to market much faster.

Native High-Availability for Increased Uptime Service

Out of the box, Scalr provides infrastructure lifecycle management capabilities for all the infrastructure that is put under its control. In fact, infrastructure launched with Scalr is natively fault-tolerant, as failed infrastructure components are automatically retired and replaced.

Key Scalr Benefits

- **Increased agility.**
  Scalr automates and accelerates infrastructure provisioning and configuration, so Samsung developers can focus on building and shipping the next big thing, not on provisioning that one additional server.

- **Reduced Infrastructure Management Overhead.**
  Scalr automates infrastructure lifecycle management, so Samsung applications can deliver stellar performance and uptime day-in and day-out, with no human intervention required.

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Additionally, Scalr provides autoscaling, which lets Samsung developers ensure that their services scale according to end-user activity, and lets them prevent performance reduction when traffic peaks.

Naturally, these capabilities are available across the multiple clouds supported in Scalr, which lets Samsung developers leverage Scalr's capabilities across the company's hybrid AWS - CloudStack environment.

Using Scalr, Samsung developers were able to improve the uptime of their infrastructure and ensure that their mobile backends don't go down, even when faced with hardware failures or exceptional traffic.

Conclusion

After adopting Scalr, Choi's team was able to improve both developer productivity and service availability throughout Samsung Electronics.

Choi himself puts it better than we could:

"Since we adopted the solution in 2010, Scalr has played a pivotal role in Samsung Electronics' cloud strategy. Samsung developers have leveraged Scalr to deploy and operate the backends that power the company's mobile applications, including flagship social sharing and IM apps, and to process the production data generated by these apps using big data methods."

– Hyok S. Choi, Project Leader, Systems Architect and Principal Engineer at Samsung Electronics

"Using Scalr, our environment is truly multi-cloud. Any improvement we make on our AWS environment can be immediately and trivially ported to our CloudStack environment, and conversely. This has certainly helped us implement autoscaling and secure high-availability across Samsung's mobile applications."

– Hyok S. Choi, Project Leader, Systems Architect and Principal Engineer at Samsung Electronics

About Scalr

The Scalr Enterprise-Grade Cloud Management Platform enables today's enterprises to achieve cost-effective, automated and standardized application deployments across multi-cloud environments. Scalr utilizes a hierarchical, top-down approach to policy enforcement that empowers administrators to find the balance between the needs of finance, security, IT and development teams. Founded in 2007, leading global organizations have selected the Scalr platform, including Samsung, Expedia, NASA JPL, Gannett and Food & Drug Administration.