e-Silicon Case Study

e-Silicon, Cloud-Native Silicon Design Workflow

About Customer

eSilicon, headquartered in San Jose, California, is a fabless semiconductor manufacturer for application-specific integrated circuit (ASIC) developer, designing and producing high-end semiconductors.

Key Challenges

- Changing the mindset of eSilicon executives from being just about an infrastructure upgrade to being about an overall improvement in operational capabilities.
- Match dynamic compute/storage demand for customers' semiconductor design workloads with fully scalable IT solution.

Key Benefits

- **Compute scalability proportionate to chip design demand**
- **Cost optimization —**significant cost savingsin the range of 20% lower TCO for IT
- **Utilization improved by 100% because of the automated orchestration engine**
- **Competitive edge —**the first company to design chips using public cloud (This delivery model helps eSilicon respond more quickly to customer design requirements and to any subsequent design change requests.)
- **Smart, scalable, secure, and cost-effective** cloud-based offshore execution model, managed by Wipro (Most of the migration was two weeks ahead of schedule.)

IDC

IDC CUSTOMER SPOTLIGHT

Sponsored by: Wipro

Moving to the cloud raises new issues about operating on the cloud — and it turns out a little bit of engineering discipline helps no matter what industry you are in.

Cloud-Native Transformation Through an Industrialized "As a Service" Model

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Written by: Gard Little, Vice President, Global Services Markets and Trends

Introduction

eSilicon, headquartered in San Jose, California, is an application-specific integrated circuit (ASIC) developer, designing and producing high-end semiconductors. It serves the high-bandwidth networking, high-performance computing, artificial intelligence, and 5G infrastructure markets. Its customers include Fortune 500 OEMs, with global operations and multiple worldwide locations.

The industry experiences large compute /storage variability (2–4x increase in compute and storage demand during peak time), and even a hybrid cloud delivery model did not meet eSilicon's elasticity requirements related to its ambition to provider faster time to market. eSilicon wanted its infrastructure to be more agile in order to respond to changing customer demands. eSilicon has been using a hybrid on-premises/cloud environment where its ASIC design platforms were running on-premises and IP design platforms were running on Google Cloud Platform (GCP).

The client wanted to move all of its ASIC and IP design to GCP and was looking for a partner that understood its industry and also had a strategic partnership with Google Cloud. To solve the problem of matching elastic compute and storage demands with variable customer demand for ASIC development, eSilicon chose to migrate all ASIC and IP design work to GCP.

Wipro had been managing eSilicon's hybrid cloud services delivery since 2018, and both management teams were aligned on the cloud strategy. Wipro is a managed service provider and also a premier partner with Google Cloud, so it was chosen as the preferred partner for this unique transformation journey, which was the first of its kind in the semiconductor industry.

SOLUTION SNAPSHOT

ORGANIZATION:
eSilicon, a fabless semiconductor manufacturer

ORGANIZATIONAL CHALLENGE:
- Match dynamic compute/storage demand for customers' semiconductor design workloads with fully scalable IT solution

SOLUTION:
Full migration to Google Cloud Platform, including exit from existing datacenter

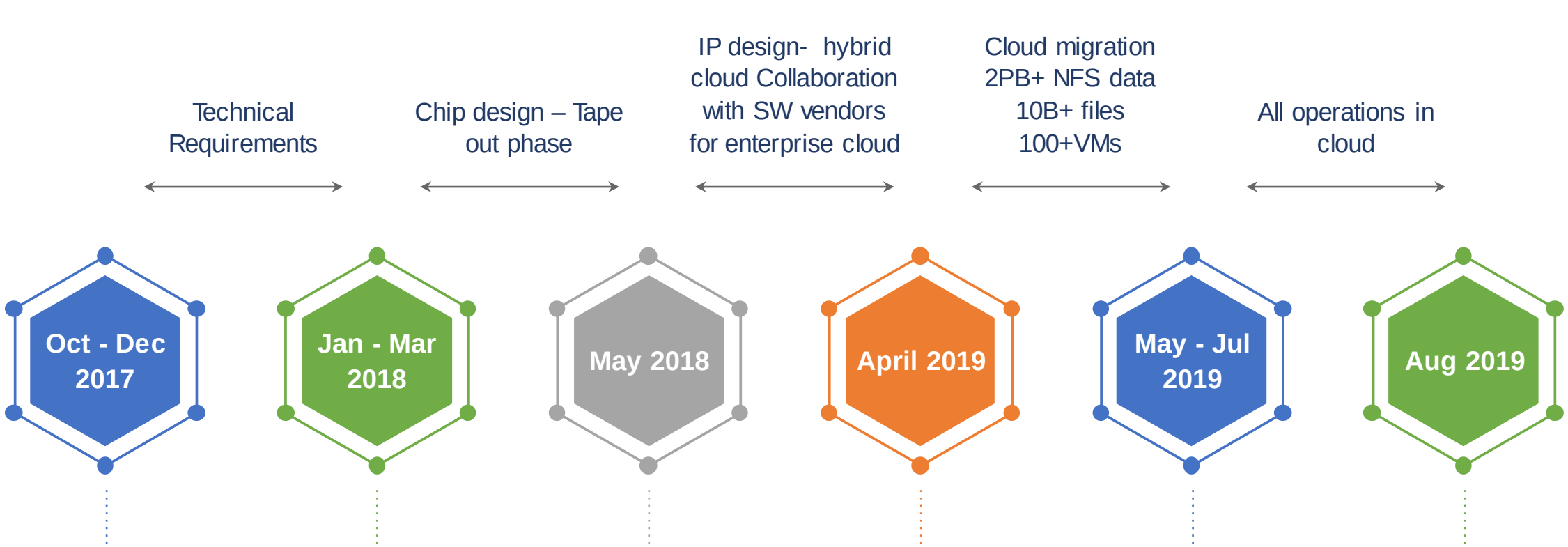
PROJECT DURATION:
3 months for Google Cloud Platform migration

PROJECT RESOURCES:
About 20 IT and business staff (not all full time) involved from eSilicon

BENEFIT:
- Accelerated time to market opens up more revenue opportunities
- More efficient scale up/down than previous datacenter compute/storage
- Industry bragging rights for being first to market

*"Wipro's **in-depth** domain knowledge and industrialized approach leveraging their Cloud Studio helped us to seamlessly move all our semiconductor design workloads that have been running on-premises to Google Cloud Platform. This is one of the first and fastest cloud migrations that will support semiconductor design with a full range of best-in-class design tools from multiple vendors."*

Transition Timelines



First company in the world to do complete end-to-end chip design in the cloud Accelerated all-in-cloud by 15 months