Cisco IT Lays the Foundation for High-Visibility, Analytics-Driven Supply Chain

Cisco IT Insights

What

Cisco has a complex, global supply chain with multiple partners and many nodes, the majority of them outsourced. Data exchange, communication, and collaboration across this ecosystem are vital. Like many other enterprises, however, the operational efficiency and performance of our supply chain is fettered by the lack of real-time, multi-tier visibility, and compounded by limited workload portability and data latency. We aim to obliterate these limitations using Cisco Intercloud Fabric, a solution currently in proof of concept (POC) within our supply chain.

"Intercloud Fabric enables spontaneous, immediate connection with all the supply chain nodes. It provides real-time visibility into data and inventory movement," says Shanthi Iyer, Director, IS, Supply Chain Management at Cisco. "With this information, we'll be able to make delivery, demand, and customer service decisions faster, in real time, across the entire supply chain ecosystem."

Using Cisco Intercloud Fabric, we are deploying a hybrid environment that is open, highly secure, and operates in one unified cloud outside our data center boundary. We manage it. We're in control of it. Because private and public clouds merge seamlessly using Intercloud Fabric, we can apply the same network security, quality of service (QoS), and access control policies in the public clouds that we enforce in our data centers.

The Proof Is in the Intercloud

In our existing (pre-POC) supply chain, partners connect to Cisco through a business-to-business (B2B) cloud. All data travels from the Cisco private cloud through the B2B cloud, and then to partners and supply chain nodes. This arrangement entails multiple hops and contributes to data latency.

For the POC, we're deploying Intercloud Fabric within the supply chain ecosystem, focusing on data exchange with partners. We'll select a logistics partner and an Electronics Manufacturing Services (EMS) partner to participate in phase two. Launched in November 2014, the POC will run through April 2015.

For phase one, completed in early January 2015, we used Intercloud Fabric to move XMLGen workload from the Cisco private cloud to a provider cloud (see Figure 1). The provider cloud is also a platform for compute power. Because Intercloud Fabric establishes direct connections to all our supply chain nodes, if someone changes an order (the quantity, where it's being shipped, etc.), data is instantaneously updated to the cloud platform directly from the affected node or nodes. Multiple hops and transmissions are eliminated.

In phase two of the POC, partners will be able to access the provider cloud directly and exchange data in real time. Throughout the POC, we're keeping the B2B cloud enabled for partners who can't access the provider cloud.

In our target end state, Intercloud Fabric will move data from the Cisco private cloud to multiple provider clouds (partners or in-region service providers) that will host XMLGen in real time. Our partners and supply chain nodes will have secure, direct access to the cloud platform based on their needs (see Figure 2).

Figure 1.   Cisco Supply Chain: Intercloud Fabric Proof of Concept
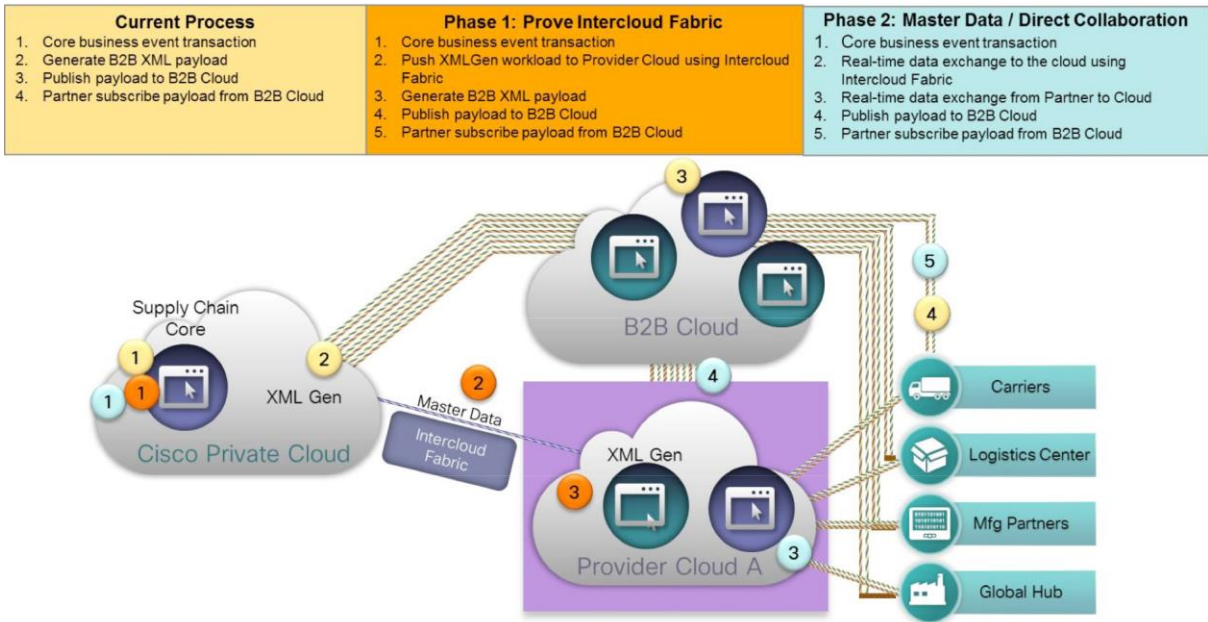
Figure 2.   Cisco Supply Chain: Intercloud Fabric Target End State

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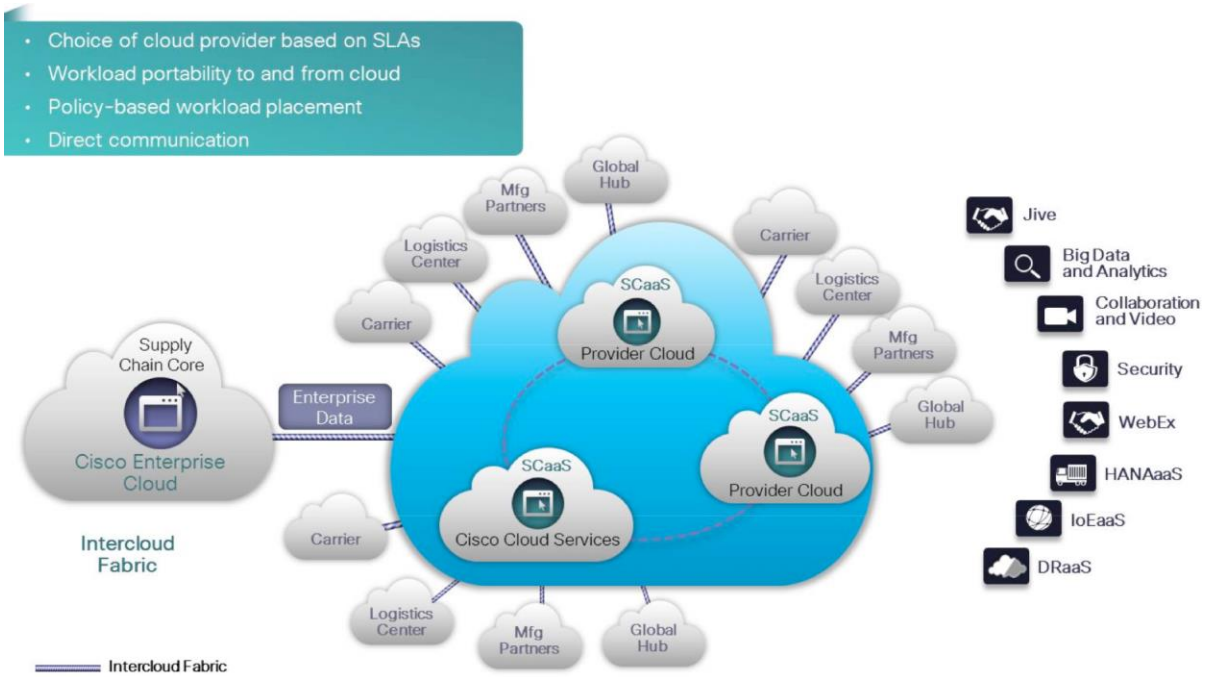
PRODUCT LIST

Cisco Intercloud Fabric for Business

- **Intercloud Fabric Director** is a web-based end-user and IT admin self-service portal for lifecycle management of physical, virtual, and cloud workloads.
- **Intercloud Fabric Secure Extender** creates highly secure connectivity across multiple clouds, and helps ensure secure workload migration by maintaining all network and security policies specific to each workload.

  The solution is supported by the Cisco Virtual Security Gateway and Cisco Cloud Services Router.

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Why

The Intercloud Fabric POC is a significant step forward on our journey to a high-visibility, analytics-driven supply chain. We'll see visibility improvements quickly. In order booking, for example, real-time, more granular visibility will help us increase on-time shipments, and react to lead time attainment, lead time as scheduled, and other key performance indicators faster.

Product delivery milestones will improve. Everyone across the supply chain, including Cisco customers with access to data in the cloud, will know when and where a shipment is throughout the delivery lifecycle. This visibility will boost productivity at our regional locations and lower logistics planning costs for both Cisco and our partners.

We'll also see data management gains. Multiple layers of data are exchanged between Cisco and our partners, and the data is aggregated in a central location (Cisco cloud or the provider cloud).

"The frequency of that data will be much faster than we currently see it," says Yogee Katbamna, Director, IS, Supply Chain Management at Cisco. "The accuracy of the data can be validated, updated, and changed quicker. This will give us more accurate, clean, and timely data to act on."

We anticipate other benefits from using Intercloud Fabric, in data management and process innovation, for example. We'll become more adept at harnessing intelligence from all the data being collected, and using analytics to move from reactive to proactive to predictive capabilities and faster decision making throughout the supply chain ecosystem.

Supply Chain Powered by the Internet of Everything

The supply chain and logistics are tremendous areas of opportunity for the Internet of Everything (IoE). Technology trends such as cloud and mobility only broaden the opportunities further. Intercloud Fabric provides seamless connections across the supply chain, serving as a backbone for the IoE. When the IoE works, the entire supply chain can react in real time to changes in inventory, delivery, and demand.

For More Information

[Cisco Intercloud Fabric](#)

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Note

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