SYNOPSYS®

Synopsys and Cisco
Project schedule reduced from 3 months to 4 weeks using Synopsys Cloud

" Synopsys Cloud delivered enormous compute and EDA tool scalability to accelerate library characterization using Synopsys PrimeLib. These resources were deployed rapidly, reducing the schedule for re-characterization from 3 months to 1 month. "

~Jon Stahl, Senior Director of ASIC Development at Cisco
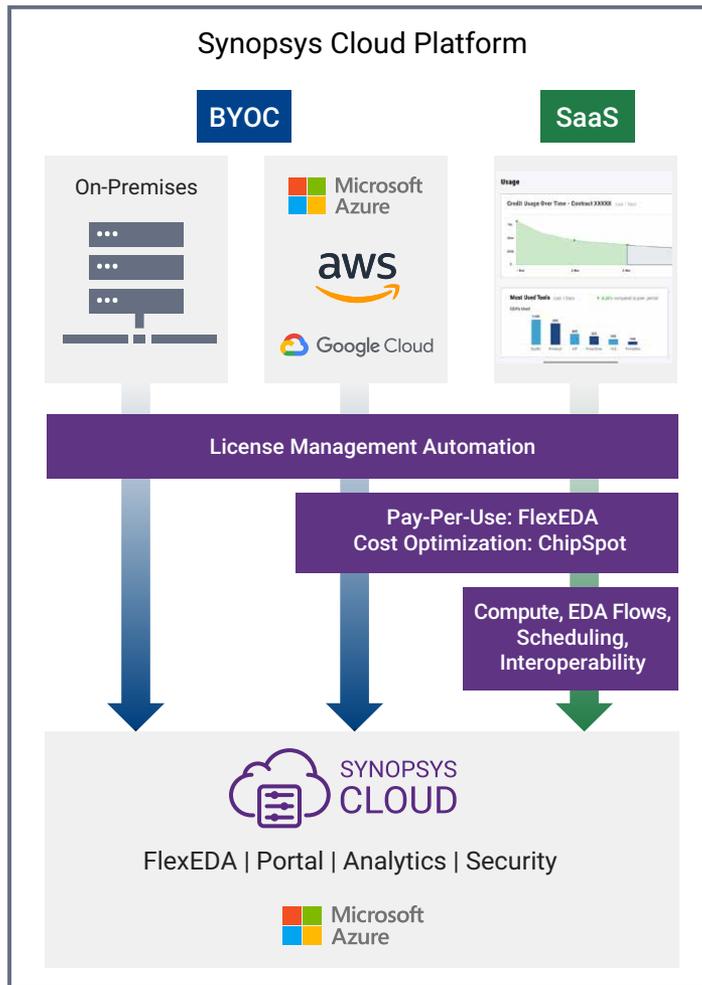
CISCO

Business

Cisco Systems, Inc., a worldwide leader in internet Protocol-based (IP) networking solutions, provides the foundation for the internet and most corporate, education, and government networks around the world. Cisco's leading products and key technologies include advanced routing and switching, voice and video over IP, optical networking, wireless, storage networking, security, broadband, and content networking, making the internet more dynamic and powerful.

Challenges

- **Time-critical project:** Needed to complete library characterization in three months to meet tape-out schedule
- **License constraints:** EDA licenses not scalable and not available on demand
- **Infrastructure deployment and access:** Long set-up times for EDA environment with limited compute capacity and scalability
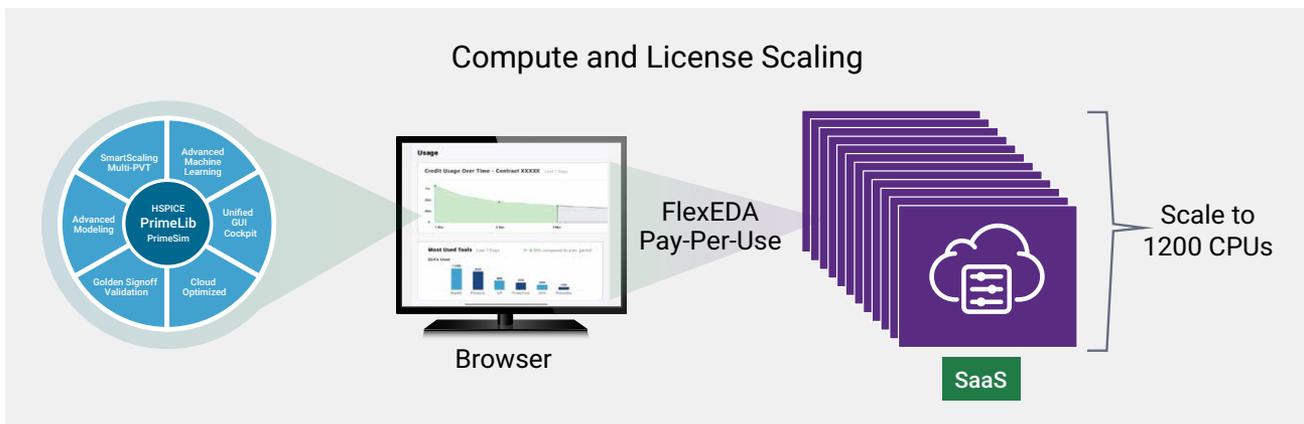
Synopsys Solution

Synopsys Cloud offered a unique solution for Cisco to finish characterization quickly by providing unlimited EDA tool licenses and compute. Using FlexEDA pay-per-use (PPU) licensing, Cisco got access to unlimited, on-demand Synopsys PrimeLib licenses for library characterization. In addition, because this was a Synopsys Cloud SaaS deployment, it also offered the latest scalable and elastic compute resources available through Microsoft Azure. The adoption of the Synopsys Cloud SaaS solution helped Cisco jumpstart the characterization flow project on a leading TSMC process within a few days, instead of weeks, and all with a single contract for both compute and EDA tools.

Benefits and Results

Within a week, Cisco scaled to a large number of cores with a peak utilization of 1,200 CPUs. Full utilization of compute was possible with unlimited, on-demand true pay-per-use licenses which removed licensing constraints. This helped Cisco to finish the characterization two months earlier than originally forecasted.

Peak Burst Using Synopsys Cloud SaaS Solution

CASPR Certification

Synopsys Cloud passed on all metrics for Cisco's Vendor Security Assessment (VSA) and was granted CASPR certification.

Conclusion

Synopsys Cloud was extremely successful for Cisco's project requirements. Cisco plans to explore how to further leverage Synopsys Cloud to help complete future time- and resource-constrained projects.

About Synopsys Cloud

Synopsys Cloud combines the availability of advanced computing and storage infrastructure with unlimited access to EDA software licenses on demand so you can focus on what you do best—design chips—faster. With cloud-native EDA tools and pre-optimized hardware platforms, an extremely flexible business model, and a modern customer experience, Synopsys has reimagined the future of chip design on the cloud that doesn't disrupt proven workflows.

The Synopsys Cloud FlexEDA business model offers two licensing options: pay-per-use (PPU) and cloud subscription license (CSL). PPU is an industry-first, true usage-based licensing approach for EDA tools. Synopsys Cloud FlexEDA provides access to unlimited, on-demand EDA software licenses, which is a transformational change compared to traditional EDA software licensing models. With Synopsys Cloud FlexEDA, many Synopsys tools are now available for use by the minute, providing customers with the granularity they need for peak usage bursts in the cloud. This helps reduce time to results significantly and deliver a better quality design ahead of time.

Users can choose from two deployment options: Bring-Your-Own-Cloud (BYOC) and Software-as-a-Service (SaaS). Synopsys Cloud offers the flexibility to use either one or both deployment options, depending on customer requirements.

" *Having experienced the flexibility that Synopsys Cloud offers to add EDA tools and compute instantaneously based on our needs, we are investigating how we can leverage Synopsys Cloud for future projects to speed time to market and enhance productivity* "

~Jon Stahl, Senior Director of ASIC Development at Cisco