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Intelligent Edge & Private Networks Center of Excellence

Whitepaper

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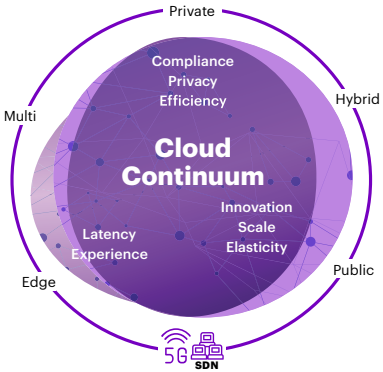
The Accenture Cisco Center of Excellence

The Accenture Cisco Center of Excellence

Accenture and Cisco created together an Intelligent Edge & Network Center of Excellence (CoE) (both a physical place and a team of expertise) focused on:

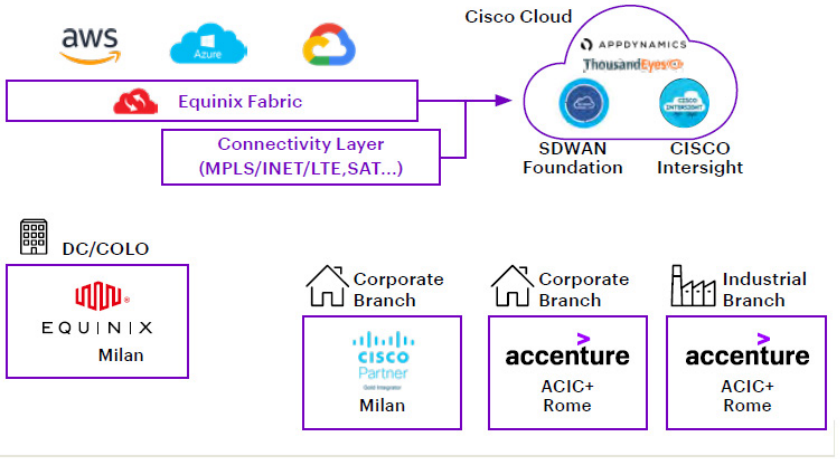
- Secure Private and Industrial Networks (Multi-cloud ready Enterprise networks);
- Network and Application observability for Large Enterprises;
- Edge Computing and IoT.

CoE aims at concretizing Accenture Cloud Continuum vision leveraging best of breed of available technologies.



As a medium-term objective, the Accenture-Cisco Center of Excellence should be an aggregation point of companies and entities interested in the topics.
CoE will include main and bold Cisco technologies related to Networks (WAN, LAN, Wireless), Data Center Security, Full Stack Observability, IoT, chain them together and with a multi-cloud environment, leveraging Equinix, to showcase value in a realistic enterprise scenario.

The Accenture-Cisco Center of Excellence is an international center integrated with ACIC+ and its catalogue with a hub in Rome in the Accenture Cloud Innovation Center and one in Milan, in the Cisco Cybersecurity Co-Innovation Center as well as a Demo Center at Equinix's datacenter ML5.
The Center will leverage Market leader software-defined solutions for DC, WAN and LAN, Security for both corporate and industrial sites, to establish, based on Equinix Fabric and network edge catalog, a direct and low latency cloud interconnection through its resilient facilities to main cloud providers (MAG).
The benefits of having Equinix in this architecture are numerous in terms of lower IT costs thanks to consumption-based billing, faster time-to-market and rapid innovation that supports large scale-up with fluid and real-time service enablement, plus monitoring from a single portal.

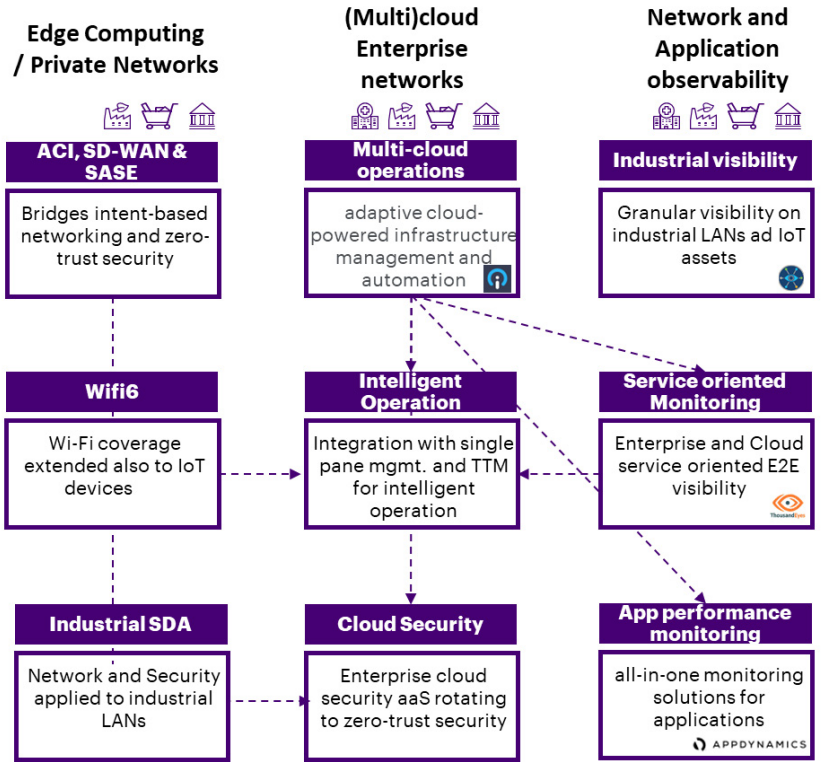


SASE	Wi-Fi 6	pLTE/ 5G
ACI	Full Stack Observability	
SD-A	IoT	

CoE key topics and catalogue

CoE key topics and Catalogue

The Center will focus its activities on building use cases by integrating the best technologies from Cisco around Edge, IoT, Networks and applications observ-ability, multi-cloud enterprise network topics.
A catalogue puts together on one side technologies and focus of interest topics and on the other a set of use cases gathered on the field and based on our clients' pain points and needs.
The COE catalogue is illustrated on the right (further topics such as 5G private networks and IoT will be onboarded in a second phase in the catalogue).

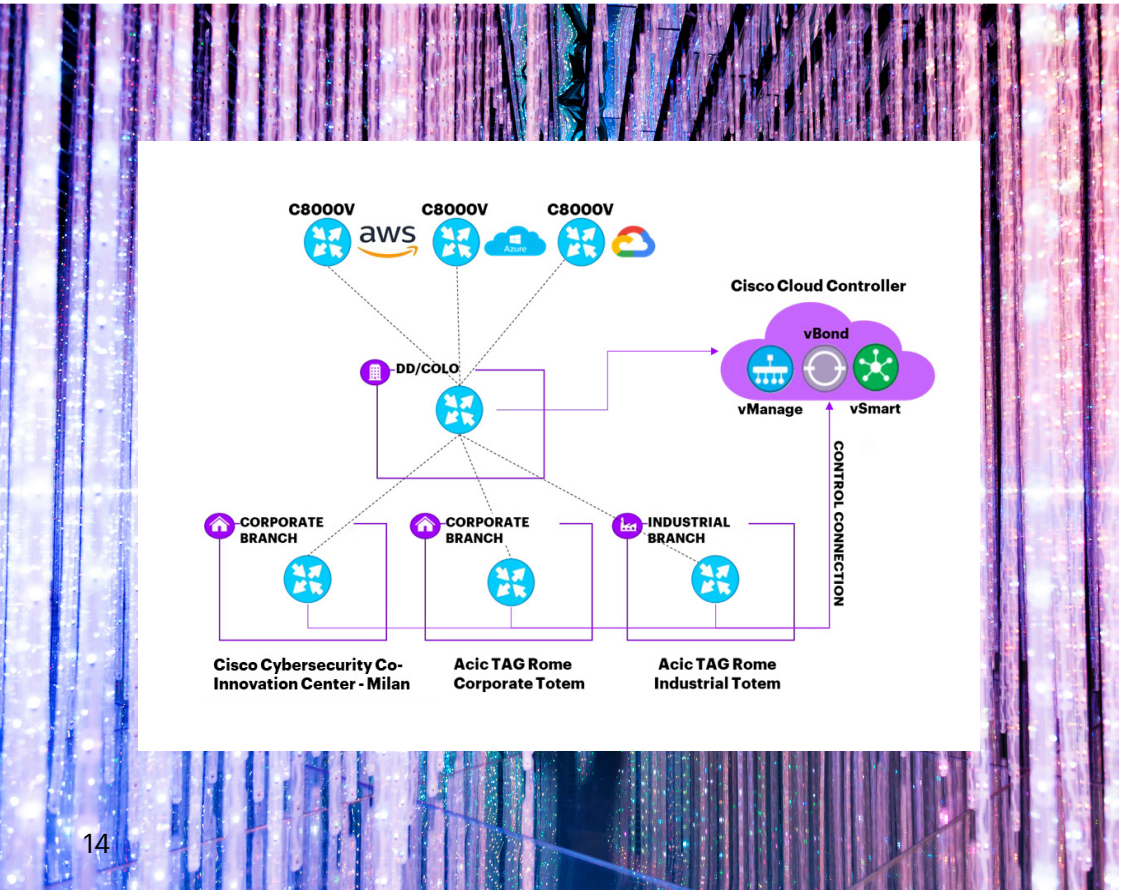


Selection of use cases

Below a selection of use cases leveraging Cisco technologies and Equinix and highlighting main benefits for our clients.

1 Multi-hybrid Cloud interconnection leveraging Cisco SD-WAN

Leveraging SD-WAN technology to interconnect enterprise branches, DCs, Equinix sites, and cloud providers offer several benefits like service resiliency as numerous and heterogeneous public and private (both wired and wireless) links can be actively used at same time, security thanks to network segmentation, complete visibility and control on application traffic thanks to links performance continuous monitoring, quality of service and application aware routing that allow to move specific application traffic from one link to another in certain condition.

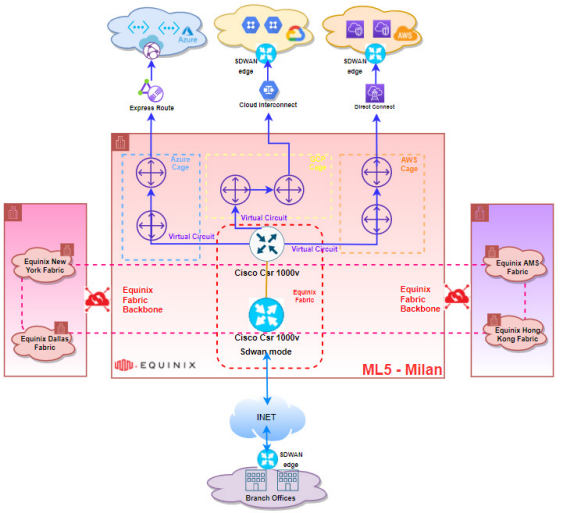


2 Multi-Cloud interconnection and Network edge as-a-service leveraging Equinix Fabric

Multi-cloud design leveraging the Equinix backbone and the flexibility of Cisco SDWAN towards AWS and GCP, and ACI on Azure. A multi-cloud technology strategy involves two or more cloud computing platforms or providers to handle various business tasks. A business might perform some tasks that use AWS, another set of tasks with Google Cloud Platform, and yet other tasks with Microsoft Azure.

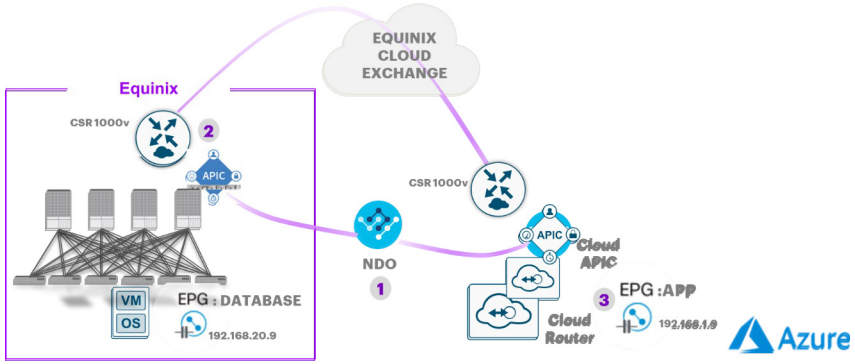
Cloud-based solutions offer organizations the power to run off the cloud or restore crucial data and systems to any location. They help get these systems back online much quicker during an IT disaster, minimizing the manual processes of traditional recovery methods. Organizations using cloud-based disaster recovery solutions can take advantage of the common pay-as-you-grow model, aligning costs with the size and complexity of IT disaster recovery needs. Lower price points, flexible contract terms, and scalability allows to protect applications and data with controlled, predictable investments while improving business resiliency.

The great advantage of having your devices in the Equinix Datacenter is that you have direct access to Cloud Providers and the Internet instantly directly from their portal. In addition, an option is to extend the Cisco SDWAN directly in the Equinix Datacenter, with simplified configuration from the same portal. It is also possible to use network edge catalogue from Equinix, providing virtual appliance instead of physical appliance installation to lower furtherly time to market. Another great flexibility to interconnect your Datacenter via the Equinix backbone worldwide.



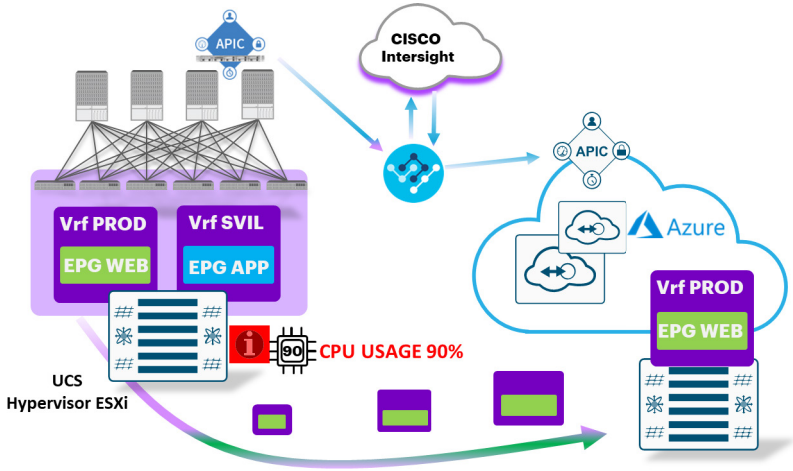
3 Service Resiliency leveraging Software Defined Network of Cisco ACI

Active / Active is a data resilience architecture in which client workloads are spread across two or more nodes in a cluster to keep data safe and available in the event of an unexpected component failure.
The term active-active refers to the use of at least two data centers where both can service an application at any time, so each functions as an active application site. The clients can perform their transactions at any active data center, and the design and operation of each data center can be much simpler than trying to create a single, super-reliable data center, the resilience should be built into the application and not the network and IT infrastructure.
This means the application continues to be accessible even if parts of the network or servers fail unexpectedly.
In this scenario, the service resiliency is ensured between a hybrid cloud architecture having one node on premise in Equinix and another one in a public cloud such as Microsoft Azure.



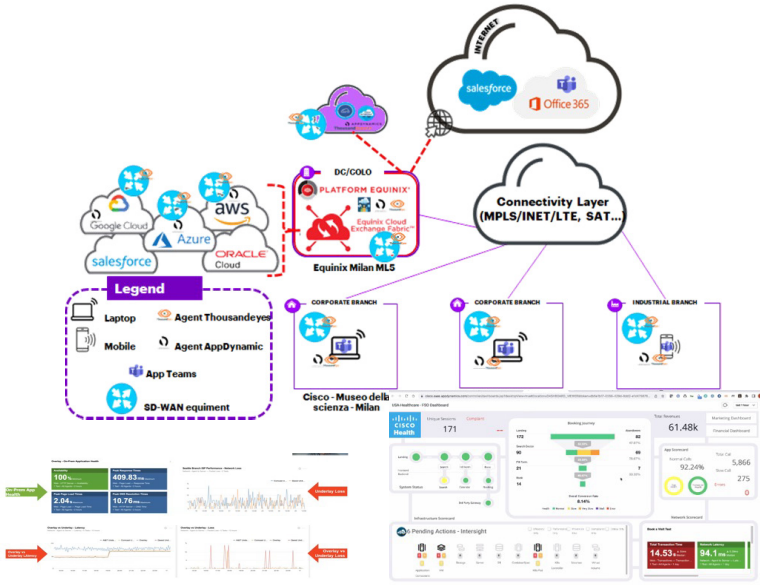
4 Automatic upscaling of Hyper-flex infrastructure leveraging Cisco Intersight

The advantage of upscaling an existing service rather than recreating a new service is that you can keep the configuration settings on your existing event broker service. You have no need to re-configure connectivity on existing client applications connected to your service: creating an Auto Scaling group, you have to specify a number of parameters, including the minimum and maximum number of instances to have in the clusters, and a criterion for triggering adding or removing an instance from the cluster.
The choice of parameter values will determine the cost of running the cluster, when the workload exceeds the thresholds set for adding an instance, such as CPU utilization exceeding 90% for more than three minutes, another instance of the same time is added to the cluster.
Cisco Intersight is the tool managing the autoscale feature on hyperflex infrastructure that is hosted in Equinix.



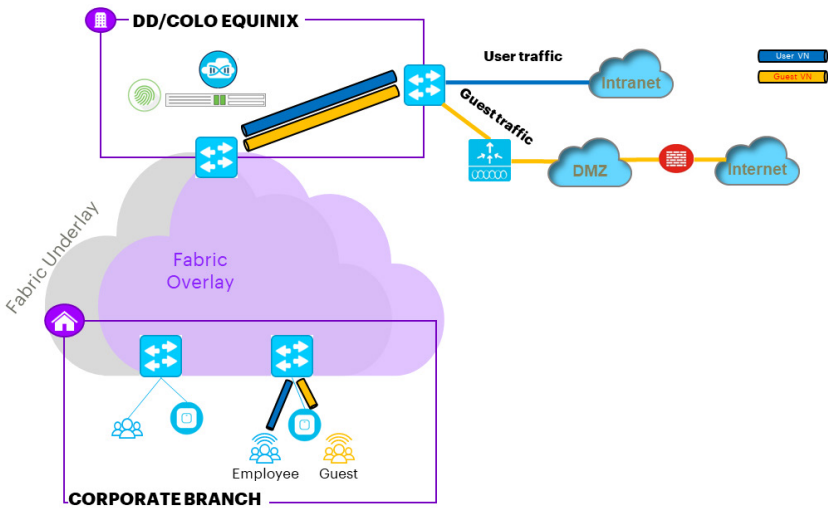
5 Full-Stack Observability leveraging Thousandeyes, Appdynamics and Intersight

Full-Stack Observability (FSO) includes infrastructure and network metrics, such as the Internet, performance metrics for backend applications and security, and performance data for the end-user experience. Then it can extract a common context from the collected data (Insights). This helps to quickly identify the root cause of a problem and at the same time to optimize the user experience as it gives insights into the entire application landscape by correlating and presenting metrics from infrastructure to application traces and end-user experiences.
FSO include Thousandeyes, AppDynamics and Intersight; it will be used to monitor the service, the application stack, and the infrastructure of distributed applications in the hybrid cloud.



6 Network segmentation leveraging Cisco Software Defined Access (SDA)

Cisco SD-Access provides zero-trust security in workplace by securing access by all users, all devices, and from all locations across applications and network environments. Another important aspect is the standardization and centralization of equipment configuration ensure both operational efficiency and security against breaches.
In this context, macro and micro segmentation are used to create two main areas (Corporate and Industrial) and to segment traffic within the same areas leveraging also Fabric enabled Wireless.
Segmentation within SD-Access takes place at both a macro and a micro level through virtual networks and Security Group Tags (SGTs), respectively. Virtual networks (VNs) are completely isolated from one another within the SD-Access fabric, providing macro-segmentation between endpoints within one VN from other VNs.
Segregation of industrial, corporate and guest networks is crucial for all organizations to secure core business networks.



Conclusions

Cloud has become an urgent imperative for creating a sustainable advantage for organizations, something that can enable resilience, new experiences and products, trust, speed and structural cost reduction.
Accenture with Cisco and Equinix can support the enterprises in their Cloud adoption enabling Multi and Hybrid Cloud scenarios and critical application moving while ensuring full observability and seamless operability.

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Learn more
Find out about Accenture-Cisco Center of Excellence
www.accenture.com/it-it/services/cloud/innovation-center-roma

About Accenture

Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Technology and Operations services and Accenture Song—all powered by the world's largest network of Advanced Technology and Intelligent Operations centers. Our 721,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities.

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About Cisco

Cisco is the worldwide leader in IT that helps companies seize the opportunities of tomorrow by proving that amazing things can happen when you connect the previously unconnected. Cisco's mission statement is to shape the future of the Internet, by creating unprecedent value and opportunity for our customers, employees, investors and ecosystem partner.
The company, led by CEO Chuck Robbins, was founded in 1984; its headquarters are in San Josè (California) and employs about 70.000 people worldwide. In FY2022, Cisco reported net revenues for 51,6 billion dollars.
In 38 years of history, Cisco has been driving the evolution of networking technologies. Today, the company sells solutions, services and business architectures that enable digital transformation, with technologies that make it possible to securely connect everything.
Digitization creates huge opportunities for our world, as it allows to face some of the big challenges, we have in front of us: education, healthcare, quality of life, sustainability, human rights. With the help of technology, we can create a more inclusive society and Cisco is determined to use technology to multiply the positive impact of its social responsibility initiatives. Cisco Networking Academy is one of these initiatives: an education program that the company launched in 1997 that allowed millions of people to acquire digital skills.

www.cisco.com

About Equinix

Equinix (Nasdaq: EQIX) is the world's digital infrastructure company. Digital leaders harness Equinix's trusted platform to bring together and interconnect foundational infrastructure at software speed. Equinix enables organizations to access all the right places, partners and possibilities to scale with agility, speed the launch of digital services, deliver world-class experiences and multiply their value, while supporting their sustainability goals. With 10,000+ customers in 240+ data centers in 71 markets, 32 countries and 6 continents Platform Equinix® is the trusted foundation for digital infrastructure at software speed. In Italy Equinix operates 4 data centers in Milan and 1 data center in Genoa.

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