CoIP™ (Cloud over IP™) Virtual Network

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CoIP Addresses Today's Challenges in Connecting to the Cloud

The overwhelming business benefits of cloud adoption are driving the emerging cloud ecosystem, which is playing a key role in helping enterprises migrate their applications and datacenters to public or outsourced facilities. The cloud ecosystem and enterprises are facing multiple challenges, including the following:

- **How can enterprises easily set up connections** to the cloud without making significant changes to the corporate perimeter security and navigate quickly through InfoSec and Compliance requirements?
- **Enterprises are facing challenges from the complexities related to legacy networks and static IP addresses** when migrating applications to different datacenters, public or private.
- **How to dramatically speed up connecting to one or more separate cloud domains** given enterprise use of conventional network methodologies requiring re-engineering and customization?
- **How can enterprises maintain security** when physical infrastructure in the cloud is not managed and controlled directly by them?

CoIP™ Platform: An overlay virtual network that addresses enterprise challenges of cloud adoption

CoIP Virtual Network Features

- Enterprise-controlled virtual network across cloud ecosystems
- Reliable, high-performance, on-demand, overlay virtual network
- Unified network fabric that supports application portability
- Strong authentication and transport encryption
- Extremely fast overlay network deployment in days, rather than weeks or months

CoIP Protocol Implementation with Patent-Pending Technology

The CoIP Platform is the first CoIP protocol implementation. Like VoIP, CoIP is an L4/L5 session and transport layer protocol running on top of the IP network, using but not changing the underlying network infrastructure. Since applications run on top of CoIP, they see it as a unified L3 network. This design decouples the interdependency of the northbound and southbound network protocols and configurations.

CoIP provides a new layer of IP address assignment, allows enterprises to model in the cloud an application's legacy network settings and offers a dynamic overlay virtual network that is infrastructure agnostic. CoIP sits on top of the physical network plane and empowers enterprises to quickly enable hybrid cloud without compromising security and with no changes in the underlying network.

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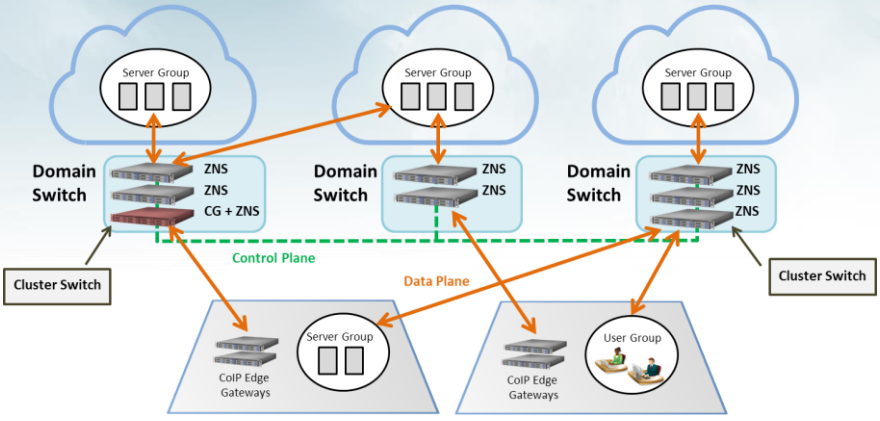
CoIP™ (Cloud over IP) Virtual Network

CoIP Architecture and Configurations

Decoupled from the underlying IP networks, CoIP involves no hardware. It is designed to be a simple add-on software network that can be implemented in days.

CoIP is architected to work with existing enterprise firewall policies without any change. CoIP is centrally controlled by the enterprise, and is a closed, private network that is securely shielded for specifically allowed applications. Additionally, it mitigates against the risk of the new remote cloud endpoint attack surface through application interlock, OS environment security and endpoint network settings monitoring/enforcement.



A large-scale CoIP configuration, with multiple cloud and enterprise domains, along with clustering of network switches (ZNS), managed by a master controller gateway (CG).

CoIP architecture supports a wide variety of virtual overlay networks, including the following:

CoIP LAN

Traffic between adjacent servers in a single domain may optionally be encrypted and routed on the CoIP plane instead of being routed by the cloud service provider.

CoIP WAN Type 1 – Server group to server group

In this connection between two server groups, every server in one server group will connect to every server in the other server group. The traffic between the two server groups is encrypted and will be routed on the CoIP plane.

CoIP WAN Type 2 – Server group to physical network plane

Some or all servers in a physical network plane can be connected to the CoIP plane by installing a CoIP Edge Gateway. These servers can then connect to server groups in the CoIP plane. A CoIP WAN Type 2 configuration is used when enterprises extend a subnet into the cloud or do not wish to bring those servers into the CoIP plane.

CoIP WAN Type 3 – Physical network plane to physical network plane

Two physical subnets can be connected to each other with the installation of a CoIP Edge Gateway in both planes. This configuration enables two networks to be combined quickly, even if they have overlapping IP address schemes.

About Zentera

Zentera Systems, Inc., enables companies to extend production datacenter operations to public, private and managed hosted network domains. The CoIP™ (Cloud over IP™) cross-cloud session solution offers enterprise-grade networking and security for the emerging cloud ecosystem, protecting the new attack surface exposed by remote cloud endpoints. CoIP creates a unified overlay network plane across multiple private and cloud domains that connects dispersed computers, virtual machines and containers. Its agnostic network virtualization can be provisioned in hours over existing IP infrastructure. Based in Silicon Valley, Zentera offers CoIP through select regional channel partners, managed cloud service providers and Ingram Micro. Visit us at www.zentera.net.

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