

CloudEPN architecture

Huawei CloudEPN comprises the network connection layer, cloud management platform, and upper-layer application layer. The network connection layer includes virtual and physical customer-premises equipment (CPE) and firewalls, which bear the physical NEs that connect tenant networks to data centers. The cloud management platform controls and manages CPEs and data center devices, configuring services for them. The orchestration layer enables cross-overlay and WAN controller orchestration so tenant resources can collaborate between the enterprise side and the cloud and between CPEs and virtual network function (VNF) NEs. The upper-layer application layer provides a unified GUI that allows tenant and carrier administrators to customize CloudEPN services. Open protocols, such as RESTful and NETCONF, are used between all layers to interconnect southbound and northbound interfaces, guaranteeing an open network.

Interconnection services

Subscriptions: changes traditional offline in-store service to online self-service, allowing customers to enjoy a convenient, simple, and easy-to-use service experience.

Service provisioning: supports plug-and-play and rapid deployment, cutting service provisioning time from 30 days or more to 20 minutes.

O&M: supports cloud management of

multiple branches, improves O&M efficiency, and utilizes carriers' platform advantages.

Service adjustments: identifies applications and precisely detects performance to deliver intelligent service awareness and routing, preferentially forward key services, and dynamically adjusts paths.

Optimization: optimizes bandwidth online in real time by performing intelligent analysis based on applications, links, and traffic. Traditionally, fixed bandwidth is configured for leased lines based on service peaks, which is less cost-effective.

Business benefits

Huawei CloudEPN solution provides enterprises with application-aware, cost-effective, easy O&M and on-demand cloud-managed leased lines. It helps reduce the costs and accelerate service provisioning, empowering enterprises to quickly respond to market demands and changes in the cloud era.

Binds links to cut bandwidth costs by 50 percent

According to TeleGeography, the price of an MPLS leased line is several times higher than Internet links. The Huawei CloudEPN supports the widest range of CPE interface types in the industry, including LTE, 3G, G.fast, PON, and hybrid access, covering all enterprise access scenarios. The solution helps enterprises combine links, such as 3G/LTE links, MPLS leased lines, and xDSL links, using widely deployed and cost-effective Internet links, increasing WAN bandwidth and reducing bandwidth costs.

The Huawei CloudEPN helps carriers provide agile interconnection services on demand, meeting enterprises' requirements for innovative services and flexible service changes.

Cuts service provisioning time from months to days

Setting up traditional enterprise leased lines often involves many stages, such as in-store application, service commissioning, and onsite configuration. The entire process usually takes from one to three months, and requires skilled O&M personnel. Huawei CloudEPN provides carriers with one-stop services that are available on-demand, such as enterprise interconnection and value-added services (VAS). Enterprises can order or subscribe to enterprise interconnection services and VAS in real time on an e-commerce service platform, for example, applying for a new branch to have a network connection, create bandwidth adjustment policies, or order resources for cloud multimedia communication and audio and video conference calls. After subscribing, the customer's service requirements will be automatically divided and delivered.

In the past it took 30 days to deploy multiple services; now, online one-time package subscriptions and orders take 5 minutes and another 15 minutes to approve the order and pack the devices for delivery. All the customer needs to do is to connect Ethernet cables and power on the devices. These plug-and-play devices then automatically go online and obtain VPN service configurations from the cloud management platform, so carriers can quickly respond to enterprise service changes.

Application-driven link selection improves service experience

Traditional enterprise leased lines encounter burst traffic, especially entertainment-related

content such as videos and social media. This often congests key services, such as video conferencing and enterprise applications, worsening user experience. But, application-based smart traffic scheduling on the Huawei CloudEPN provides differentiated network services. For example, services requiring high link quality use leased lines, and other services use Internet links. When a link fails or is unstable, services using the link can flexibly switch to other links to improve user experience.

Cloud-based visualized O&M reduces OPEX by 90 percent

Traditional leased line services are usually provisioned and maintained onsite, but enterprise branches may be widely distributed. As the number of branches surge, maintenance becomes more difficult and expensive. The Huawei CloudEPN provides visual management for applications and links. Information about network-wide devices and applications is displayed on a GIS map, accelerating fault location and simplifying O&M. Carriers' network operations centers (NOCs) can remotely and automatically manage and maintain networks, reducing onsite maintenance costs by 90 percent.

The Huawei CloudEPN helps carriers provide agile interconnection services on demand, meeting enterprises' requirements for innovative services and flexible service changes. By leveraging the solution, carriers can sail on the blue ocean of B2B as enterprises digitally transform, quickly attract new enterprise users, retain high-value customers, and continuously increase revenue from the B2B market. 