

Ensemble Edge Cloud

Ensemble Cloudlet single node

Digital transformation at the edge



Cloud managed



100 Gbps



5G Mobile



Zero-touch



Third party VMs managed

Benefits

- Ensemble offers a complete, ready-to-deploy edge cloud solution proven in tens of thousands of deployments
- Cloudlet OS installs on bare-metal servers, creating a high-performance compute node with built-in Layer 2, Layer 3 and 5G networking
- Ensemble Cloudlet runs on any x86 server and simplifies deployments
- Zero-touch provisioning
- Turn-key solution
- Lower total cost of ownership
- Advanced networking and security
- Deploy and host third-party VMs remotely

Overview

Communication service providers (CSPs) and enterprises are striving to become more efficient, innovative and agile at the network edge by consolidating workloads onto a single server or universal CPE (UCPE).

Our Ensemble Edge Cloud solution makes it happen seamlessly and efficiently. Ensemble hosts virtualized, containerized workloads on almost any x86 hardware, simplifying deployments and eliminating stacks of dedicated appliances. This lowers cost, reduces power and space and increases agility. Fewer cables and interfaces mean fewer potential failure points.

Ensemble Edge Cloud consists of two software components, Ensemble Cloudlet and Ensemble EdgeView.

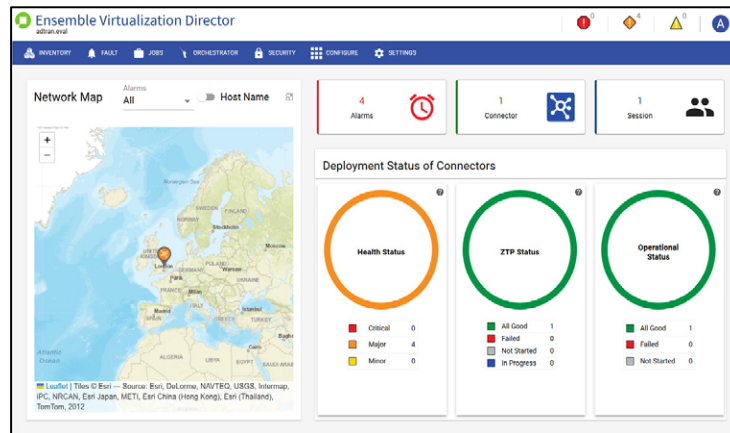
Ensemble Cloudlet transforms commercial servers into compact, high-performance compute nodes with built-in Layer 2 and Layer 3 networking. Cloudlet hosts networking, AI and IT workloads, supporting GPU/vGPU offloading, 100Gbit/s Ethernet interfaces and 5G wireless integration.

Ensemble EdgeView provides cloud-hosted orchestration with zero-touch provisioning for virtual machines and applications. Its automation lets you create custom GUI templates to configure workloads quickly and remotely – no on-site visits required. With EdgeView, you can change the workloads running on the Cloudlet server from anywhere. EdgeView also enables network-wide upgrades and configuration changes at scale.

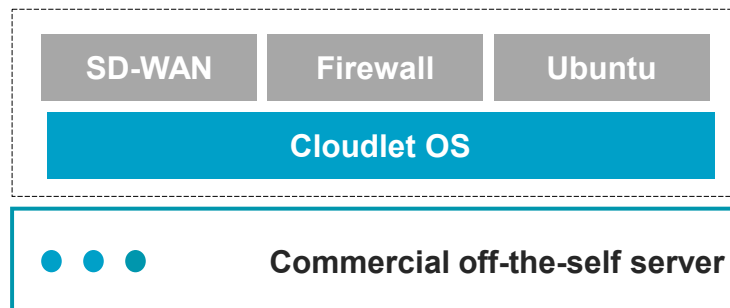
Transform your operations

Ensemble Cloudlet single node replaces racks of costly, legacy appliances with a single intelligent edge server. It simplifies deployment, reduces TCO and unlocks new flexibility for networking, IT, IoT and AI workloads. With a proven model used across tens of thousands of edge clouds, Ensemble helps you shift from fixed-function hardware to agile, cloud-hosted services. It's scalable, automated and ready for what's next, providing a repeatable model to modernize edge sites with speed, security and flexibility.

Ensemble Cloudlet single node



Ensemble EdgeView Dashboard



Example of Cloudlet Single-Node Workloads

Ensemble Cloudlet enables you to host a multi-vendor ecosystem of workloads on a single general-purpose server. This approach frees your network functions and workloads from being locked into dedicated hardware, giving you greater flexibility and efficiency.

Ensemble users can:

- Choose any x86 server hardware
- Reduce operational costs and the number of SKUs
- Remotely change managed virtualized services without truck rolls
- Deploy new sites with "point-and-click" ease
- Increase revenue by remotely adding hosted services

"Cloudlet single node reduces the cost and complexity of remote sites and consolidates workload on the servers."

Ensemble Cloudlet single node

Technical specifications

Solution highlights

- Hardware and workload agnostic
- True pay-as-you-grow infrastructure
- Simple deployment model proven at large scale
- Open northbound APIs for automation

Zero-touch deployment

- User-customized templated workload initialization
- Multi-factor authentication
- Zero-touch over fiber and 5G
- Site identity via secret unique identifier or server serial number

Ensemble EdgeView orchestration and management

- Provides a single pane of glass for onboarding workloads, zero-touch configuration, and service lifecycle management
- Delivered via a software-as-a-service model from shared or dedicated cloud-hosted instances
- Management of up to 20,000 nodes per instance
- Automated IPAM assigns management subnets to Cloudlet and its hosted workloads
- Service chain topology views for performance and fault management
- Online context-relevant help
- Upgrades and security patch delivery
- Encrypted management communication between EdgeView and each Cloudlet node
- Management tunnel EAP-RADIUS authentication
- Multi-domain and tenancy security
- Authentication via local, LDAP or SAML
- Role-based access
- Auto-lockout

Ensemble Cloudlet node software

- Node software providing hypervisor, cloud, networking and security infrastructure
- Zero-touch splashscreen for UID entry and zero-touch on-site monitoring
- Interface support for 1G, 2.5G, 10G, 25G, 100G and 5G wireless interfaces
- High-performance virtualized routing
- Authentication via local, TACACS+ or RADIUS
- DPDK libraries for data path acceleration
- GPU and vGPU for AI workload acceleration
- Intel QuickAssist (QAT) for encryption acceleration
- SR-IOV for virtual interface connectivity acceleration
- Checksum and segmentation offload for workload traffic acceleration
- CPU pinning and oversubscription options
- Role-based access
- Auto-lockout

Resiliency

- VM snapshots that archive VM running state
- Automatic redundancy of management paths
- Programmatic node replacement and disaster recovery operations
- Link loss forwarding triggers for application high availability protection

Ensemble Cloudlet single node

SD-WAN and SASE       	Routers and networking       	Firewall      
AI and IT     	Security      	Test probes      
Servers       		

Almost any application on almost any server

Ordering information

Description		Part No.
Cloudlet	4 Core - 36-month subscription	ENS CON-4C-WF-SUBS-36M
	8 Core - 36-month subscription	ENS CON-8C-WF-SUBS-36M
	12 Core - 36-month subscription	ENS CON-12C-WF-SUBS-36M
	16 Core - 36-month subscription	ENS CON-16C-WF-SUBS-36M
	24 Core - 36-month subscription	ENS CON-24C-WF-SUBS-36M
	36 Core - 36-month subscription	ENS CON-36C-WF-SUBS-36M
Cloudlet options	LTE/5G modem - 36-month subscription	ENS CON-WLESS-001-SUBS-36M
	10G SR-IOV acceleration - subscription	ENS CON-HIGH-SPEED-10G-36M
EdgeView	Standard EdgeView tenant account for one Cloudlet node - 36 month subscription	ENS SAAS MANO-TIER1-1-12M
EdgeView options	Dedicated EdgeView instances	Contact Adtran

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