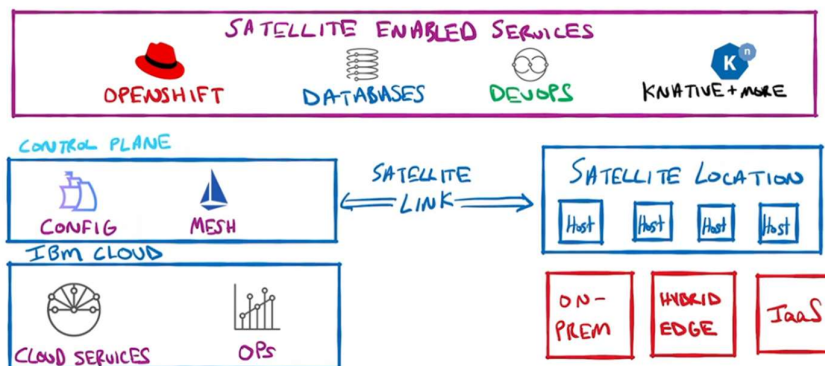


IBM Cloud Satellite and ADVA Ensemble Connector

Bringing the cloud to the customer



IBM recently announced its [Cloud Satellite](#) offering, which enables its customers “to deploy and run applications consistently across all on-premises, edge computing and public cloud environments from any cloud vendor. It standardizes a core set of Kubernetes, data, AI and security services to be centrally managed as a service by IBM Cloud, with full visibility across all environments through a single pane of glass.”

Cloud Satellite creates a distributed cloud environment that empowers customers to run their workloads in the optimum location, based on latency, security, bandwidth, data sovereignty and other considerations. The image above shows how services can run on centralized IBM cloud servers, or at a satellite location, or a mix.

What’s in the satellite location?

In the image above, the satellite location on the right is powered by virtual machines (VMs) that can run on infrastructure as a service (IaaS) or dedicated servers. The VMs host both the Cloud Satellite control plane as well as the end-user workloads. The “Satellite Link” shown above is a Layer 4 connection back to the central cloud, and it carries communications for both control and applications.

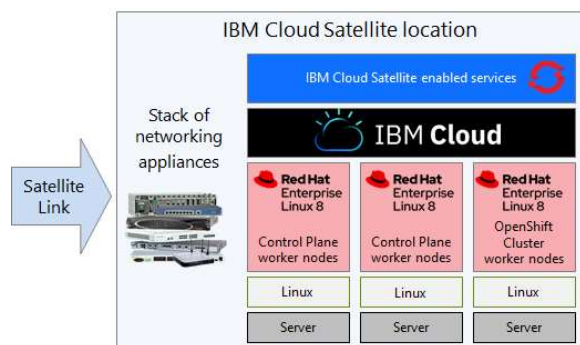
Now, let’s look more closely at the case where the satellite location is on-prem. IBM or one of its partners could stand up a set of servers to host the VMs for the satellite location. And they could provide basic connectivity using routers, firewalls, and/or SD-WAN appliances. They would then have to organize the delivery and installation of all that equipment.

But what if there were a better way?

Optimizing the satellite location

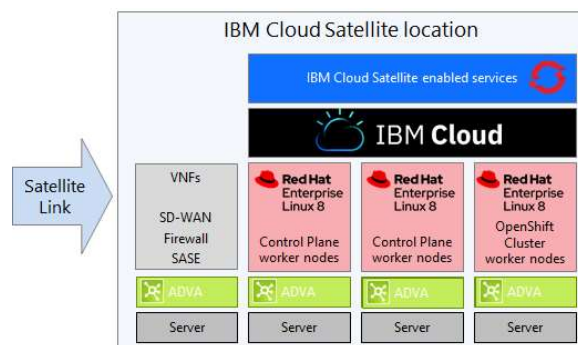
ADVA’s Ensemble Connector is a network operating system and hosting platform. It runs on a wide variety of standard servers, ranging from low-end units with small Atom CPUs up to multi-socket Xeon platforms. It can host a wide variety of virtual network functions (VNFs) as well as custom applications. Optimized for networking, operations and choice at the edge of the network, it’s an ideal platform for powering universal CPE (uCPE) deployments. What’s more, Ensemble Connector is also the basis for edge cloud applications such as IBM’s Cloud Satellite.

Ensemble Connector simplifies the deployment, operation, and management of edge cloud installations. Its operational features such as zero-touch provisioning (ZTP) support wired and wireless deployment models, and maintenance features all simplify deployment at scale.



Satellite location with appliances

As shown above, the traditional approach to connecting and securing compute at an enterprise location relies on deploying a stack of networking appliances (e.g., routers, firewalls, SD-WAN, WAN optimization, etc.) on the site. Then an adjacent stack of servers running a generic Linux distribution is installed. Finally, VMs are created and the IBM Cloud Satellite VMs are instantiated. The connect and compute equipment is completely separated, and not designed for easy operation and upgrades. And it is not designed for unmanned and automated installation and turnup.



Satellite location with ADVA Ensemble Connector

With ADVA's Ensemble Connector software, the installation of IBM Cloud Satellite can be radically simplified. All the required communications functions can be implemented as VNFs running on a standard server that is drop-shipped to the end site, with no pre-configuration required. Likewise, the VMs for IBM Cloud Satellite can be instantiated and populated using the Ensemble management and orchestration (MANO) suite. And all of this can be done remotely using ADVA's zero-touch provisioning technology. That means service providers and end users can get all the benefits of Cloud Satellite with no hassle.

Deployment models

IBM Cloud Satellite hosted on ADVA Ensemble Connector is a natural fit for both enterprises and service providers.

- **Enterprises** can use the combined IBM/ADVA solution to consolidate their IT infrastructure. This is especially valuable at smaller sites that may not have an IT staff available.
- **Service providers** can deploy servers on customer sites to host an array of managed services, including SD-WAN and firewall, along with hosting for IBM Cloud Satellite. Doing so provides a natural extension of their move to cloud-centric and value-added services.

IBM and ADVA: better together

With ADVA's Ensemble Connector and MANO software, deployment of IBM Cloud Satellite becomes a natural extension of IBM's cloud services. Enterprises and service providers can easily deploy a combination of managed connectivity services (e.g., SD-WAN, firewall, and SASE) along with hosting for IBM Cloud Satellite – all on the same infrastructure.

Learn more

IBM Cloud Satellite: <https://www.ibm.com/cloud/satellite>

ADVA Ensemble Connector: <https://www.adva.com/en/products/network-virtualization/ensemble-connector>