



Accelerate network service orchestration

IMC VAN Resource Automation



Real-world requirements for the business environment

Agility and simplification are increasingly critical for today’s networks because of the growing need to define and deploy services quickly and efficiently. Networks end up being bottlenecks because they are inflexible and unable to deliver rapid deployment of virtualized workloads or adapt to the needs of large-scale workload mobility thereby delaying the application lifecycle process. Rigid DNS and DHCP services or lack of automated, global and secure IP Address Management can be equally responsible for poor user experience or inability to accommodate changes in scale and business demand.

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Now, as the application lifecycle undergoes a major transformation and corporate campuses becomes increasingly mobile, the network needs to be able to constantly adapt and deliver an agile infrastructure that addresses the complexity and that can scale appropriately. Earlier, application constraints and development requirements were dictated by the capabilities of the network—i.e., the application had to accommodate the resources that the network could deliver. Today, the landscape is very different. Virtualization has fundamentally changed the application lifecycle, not only empowering applications to drive network requirements, but fostering change in application design to recommend component re-use across applications as well as distribution across data centers, private, and public clouds. Core to application development and deployment, the processes and tools used to allocate IP addresses and make the DNS changes necessary to enable your users to consume applications easily must be adapted to today’s requirement for agility and elasticity.

Manual changes are error prone and introduce unwanted delays that inevitably affect the availability of critical business applications. A large percentage of network outages are the result of human error such as incorrect input, mistimed, or incorrect workflow procedures. Also, IT operating models are bureaucratic and further delay application deployment. The compounded effect of constrained networks, mismatched IT operational models, the current complexity of IT is holding back applications.

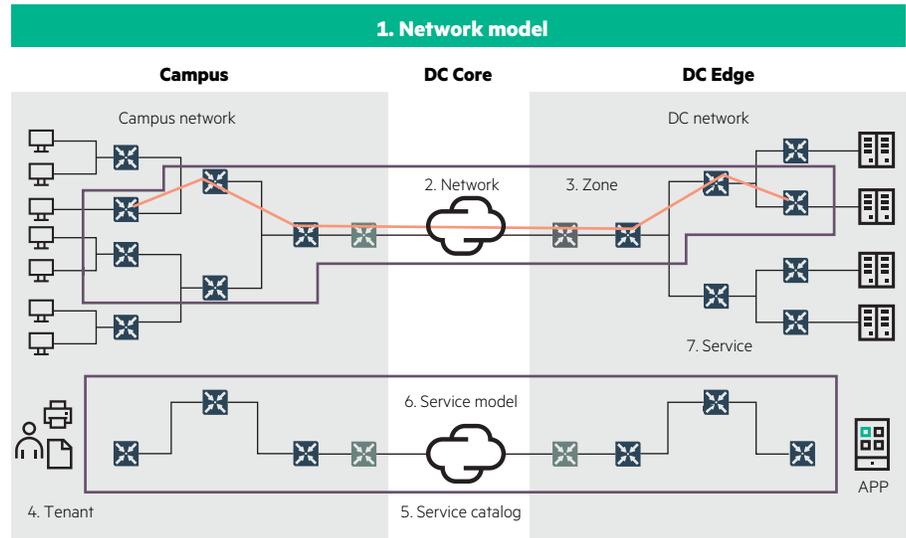


Figure 1. IMC VAN RAM getting started model

Orchestrating your physical and virtual networking with Resource Automation Manager

HPE Intelligent Management Center (IMC) is a flexible yet comprehensive management solution. It improves network availability and reliability, which results in fewer trouble tickets through automated configuration management and comprehensive auditing. IMC also monitors a multitude of systems, with over 6000 devices supported from over 220 vendors, simultaneously for quicker problem recognition and troubleshooting, enabling improved endpoint defense, control, and visibility. IMC can be integrated between wired and wireless networks, as well as traditional and SDN networks.

IMC solution benefits:

- Includes with fully tested reference designs, management integration, and global professional services
- Enables simplified automation and management with its efficient single-pane-of-glass management that lowers operational costs
- Extends the reach of the converged infrastructure value proposition into the data center networking and the enterprise

The IMC VAN Resource Automation Manager, a module that can be added to the IMC base platform, orchestrates a virtual network slice or path, tuned for a specific service or application through automated resource provisioning of network devices (multivendor supported).

IMC VAN Resource Automation Manager leverages a service model paradigm that assigns network component the desired network characteristics for a particular application. Network components includes L2 and L3 switches, routers, load balancers, DNS and more. The service models can be simulated onto an area of the network where the application will be delivered across the assigned devices for that particular application prior to actual provisioning. The end result is a tuned virtual slice for a specific application. These service models can be applied to other areas of the network to help ensure network performance, optimized resource utilization for applications. This paradigm also allows for component reuse adding flexibility and optimized resource utilization across applications.

The creation of these tuned virtual slices based on a particular service model is possible through manual methods, but it would take significant time to plan, test, and deploy. Automating these processes ultimately saves administrators time spent in troubleshooting deployment challenges and enables a good end-user application experience.

IMC allows IT to shift from swivel-chair management to centralized control and orchestration of the network. With IMC VAN RAM, enterprises can focus on connecting users to business applications and on the quality of experience—rather than on the details of configuring the network, device by device.

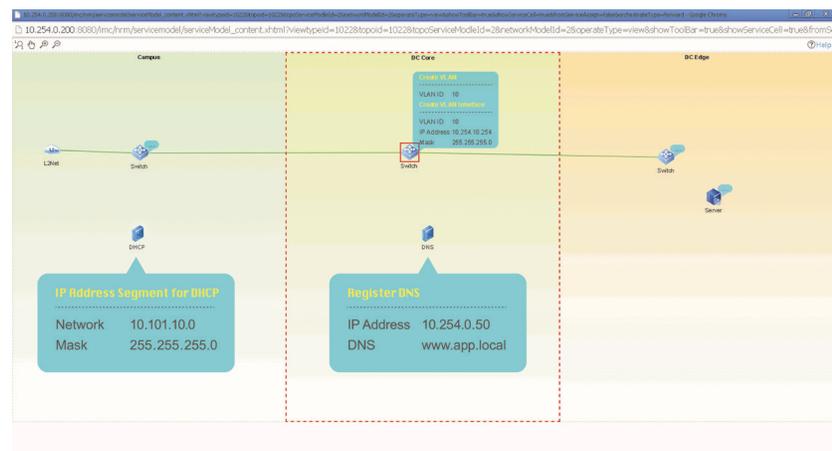


Figure 2. IMC RAM DNS/DHCP Service Model with BlueCat IPAM

Integrated DNS, DHCP, and IP Address Management with BlueCat

Network flexibility and agility are achieved through DNS, DHCP, and IP Address Management.

To manage growth and dynamics, your network needs to become elastic—able to constantly adapt to the changing needs of your business, users, and applications. Network elasticity spans beyond the infrastructure itself to include core services that fuel it, like DNS and DHCP.

DNS, DHCP, and IP Address Management empower your network to connect devices across campuses and data centers, as well as the applications you are running across data centers and in the cloud. With IP Address Management you can now centrally manage all devices and service connections, while ensuring the DNS and DHCP core network services are on 24x7 and available.

The integration of BlueCat's IP Address Management and the HPE Intelligent Management Center extends IMC's single-pane-of-glass to include "everything IP" and help eliminate unwanted delays and potential errors caused by manual processes. As you design and deploy service models from IMC, you can now automatically deploy and provision DNS and DHCP service units, designed to support your service model and all the devices and applications attached to it. This unified view keeps DNS and DHCP systems synchronized, relieving the burden of having to manually ensure data integrity. BlueCat's IP Address Management provides the necessary IP and DNS information to configure the service units in the model, in addition to delivering the DNS and DHCP services required to fuel your new network infrastructure.

The IMC Resource Automation Manager integration of BlueCat's DNS/DHCP ensures that your critical network infrastructure and business-critical core services are reliable, resilient, and highly available.

Intelligent networking for your evolving business needs

Increase the efficiency, agility, and resilience of your network as you:

- **Connect devices and applications**—The integration of BlueCat's IP Address Management with HPE IMC allows you to connect all service units in your service model, as well as the clients and apps that leverage it.
- **Map your network to the business**—As your infrastructure expands and contracts to support the deployment of new or phase out legacy applications and services, HPE IMC's integration with BlueCat's IP Address Management allows you to understand what is connected, including how application(s), user(s), devices, and components are mapped together and relate to your business.
- **Secure your infrastructure**—For an infrastructure to be secure, all components need to either contribute data or consume triggers from the security system, thus acting as enforcement points. BlueCat's DNS/DHCP and IP Address Management solution does both. With the integration of HPE IMC and BlueCat, you automatically benefit from an extra layer of security designed to provide complete visibility and insight into all devices and activity on the network and leverage DNS and DHCP core services to provide additional protection against malicious intent and infected devices.
- **Extend IMC's single-pane-of-glass**—HPE IMC is the central point of provisioning for your network—from infrastructure to services. With the integration of HPE IMC and BlueCat, IMC empowers you to design and deploy network infrastructures, including the DNS and DHCP services that fuel them, with a single click.

Choose IMC Resource Automation Network applications

With a consistent architecture for the data center, campus, and branch, and single-pane-of-glass management for the FlexNetwork architecture, HPE is in a position to virtualize the network from the data center to the campus and branch. This sounds like a tall order, but one that is already familiar.

IMC VAN Resource Automation Manager provides a fundamentally better operating model for IT. It allows for greater agility long demanded by the business, as well as tailored delivery of network connectivity, scalability, and security that is necessary for services. With IMC VAN Resource Automation Manager, IT agility can support changing business requirements, while automating and orchestrating management to lower costs. With HPE IMC solutions, IT can truly do more with less.

Learn more at
hpe.com/networking



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