

Flexible, modular, feature-rich IP address management

IP address management (IPAM) is very complex technology, but it's the foundation of your IP network. We offer the industry's most flexible, adaptable and broadest IPAM portfolio so you can simplify your address management tasks and manage them on your own terms. Our IPControl software provides sophisticated business logic to enable you to manage IPAM the way you want. And our Sapphire Cloud Automation Appliance (CAA) provides simple, scalable cloud IPAM automation to enable you to track cloud IP and DNS assignments with your overall address space holistically.

IPControl software

IPControl™ is an advanced, centralised IPAM system that enables you to take control of your IP address space and manage it according to your own policies and procedures. This can help you make vast improvements in operational efficiency by simplifying and automating IPAM processes, reducing network downtime and creating a more stable and robust IP infrastructure to support the full breadth of IP services.

IPControl provides centralised, full lifecycle management of mission-critical IPAM functions, including IPv4 and IPv6 address space allocation/reallocation, assignment, pool monitoring and utilisation tracking, inventory assurance with layers 2 and 3 discovery, address and subnet reclaim, and deployment of multi-vendor DNS and DHCP configurations.

Comprehensive IPAM

By integrating with your existing DNS and DHCP environment, IPControl provides support for native Internet Systems Consortium (ISC DHCP and BIND DNS), Microsoft, Cisco Network Registrar (CNR), and Sapphire appliances. In addition, IPControl's extensive REST API provides integration points between IPControl and external systems for advanced automation and workflow of IPAM tasks and processes.

With an intuitive user interface, extensible templates and built-in validation features IPControl enables accurate configuration, consistent policy deployment and centralised management of IP address space and distributed DNS/DHCP servers even by non-expert users.

A fully integrated software solution

IPControl runs on a variety of platforms including Microsoft® Windows™, RedHat, CentOS and various virtual platforms.

Address planning

- one-click multi-allocations of IPv4 and IPv6 networks allocated to any CIDR size or prefix length with ability to configure individual IP addresses, ranges or address pools within networks automatically
- automated and manual IP address and subnet reclaim maximise address utilisation efficiencies
- user-defined policies determine which block and device types are permitted within the hierarchy and who can administer them
- address utilisation trending and forecasting enables proactive address capacity management
- simplified address renumbering allows movement of address space to where it's needed.

Multi-vendor DNS/DHCP server configuration

- server templates streamline the server configuration process
- support for DHCP failover, multi-tiered addressing, multi homed hosts, DNS views, DHCP client classes, transaction signatures, MAC address processing, client ID, dynamic DNS, DNS firewall, DNSSEC and more
- advanced features configuration via the GUI for views, TSIG/GSS-TSIG, logging, address match lists, options and more
- integrated support for BT, ISC, CNR, and Microsoft DNS and DHCP servers.

Accountability and control

- patented container structure enables address management according to your topology, geography or other user-defined hierarchy.
- layer 2 switch, Layer 3 router, ARP and IP discovery provides IPv4 and IPv6 inventory assurance.
- advanced IPv6 address management enables automated block allocation, ip6.arpa domain creation, AAAA/PTR resource record automation.
- audit reporting promotes accountability and history tracking for administrators, subnets, devices, IP addresses and containers.

Sapphire Cloud Automation Appliance

Streamline cloud provisioning

Reap the benefits of rapid network, computing and services provisioning with flexibility, efficiency and elasticity with core network services automation. These benefits are realised primarily through the cloud's characteristic use of virtualisation technologies, which enable them to rapidly instantiate additional capacity for a required service element within minutes. Whether in your public or private cloud platform, if capacity demands fluctuate over time, capacity can just as quickly be withdrawn or allocated elsewhere. This elasticity affords organisations agility and cost efficiencies in offering network, computing and services resources dynamically sized to dynamic capacity needs over time.

Core cloud network services

Core network services are so named in that they are network services, initialising network and computing elements with their respective IP configurations to enable communications on the IP network and core in the sense that without which, such IP communications would be impossible.

Cloud network initialisation

Virtualised network functions (VNFs) or generically, virtual machines (VMs), require provisioning of basic IP network information upon instantiation as would any network device upon deployment on the network. As such, core network services are critical for virtual environments. Certainly each VNF/VM requiring network connectivity will require assignment of an IP address, perhaps multiple IP addresses.

In most cases, the VM will be assigned a hostname such that it can be referenced by name instead of its IP address. This name reference is necessary not only to simplify navigation by humans, being able to connect to a VM using its name, but also potentially by other VMs.

Elastic IPAM in step with your cloud

As particular network function capacity demands fluctuate, you can reliably instantiate and destroy VNF/VMs to grow and shrink network capacity accordingly, leveraging private and public cloud services. Along the way, Diamond IP solutions enable you to automate the address and DNS assignment tasks during instantiation, as well as freeing up addresses and DNS entries with the destruction process. This integrated process streamlines the provisioning and de-provisioning process for your cloud while accurately tracking your IP address and DNS assignments within a centralised consistent database.

What could IPControl and Sapphire cloud automation do for you?

Visit globalservices.bt.com/en/solutions/products/diamond-ip

Key features

Cloud DDI automation

Diamond IP helps you automate your cloud management tasks in key ways:

- the Sapphire Cloud Automation Appliance (CAA) streamlines cloud orchestration by automating DHCP/DNS/IPAM (DDI) assignments required for new VNF/VMs
- cloud orchestrator plug-in modules automate IP address and DNS assignment for all VNF/VMs created and destroyed via your orchestrator, e.g., vRealize or OpenStack
- virtual Sapphire DHCP/DNS appliances serve as core network services VNF/VMs.

Sapphire Cloud Automation

The Sapphire Cloud Automation Appliance (CAA) in conjunction with system orchestration plug-ins enables simple, scalable cloud automation. Build automation flows to call the CAA appliance within your cloud orchestration workflows to electronically automate IP address and name assignment.

- eliminate the IP address spreadsheet and manual updates with automated assignment
- keep your IP address plan of record updated with rapidly fluctuating VNF/VM instantiation and decommissioning
- instantiate on demand on AWS, Azure, BT Cloud Compute, VMware or Oracle VM platforms.

Adaptable cloud workflows

The Sapphire CAA ships with pre-built workflows for managing subnets, IP addresses and DNS names as well as discovery and reconciliation functions to keep your IPControl IPAM database in step with your public/private/hybrid cloud IP address assignments. Leverage provided workflows as native workflows, modify flows to your liking, or incorporate into broader workflows that you design.

Centralised cloud/hybrid IPAM

- centrally manage your IP address space for all VNF/VMs and all enterprise devices alike with IPControl software from Diamond IP
- upgrade your virtual Sapphire systems centrally from IPControl.

Why choose BT?

Take advantage of our experience

Members of our Diamond IP team were among those who founded the IPAM industry over twenty years ago. We've worked with ever evolving DHCP, DNS and IPv6 technologies over the years. We've also authored books on IPAM and IPv6 topics and have contributed to Internet standards as well.

Diamond IP from BT is the only major IPAM industry supplier that offers the most flexible and scalable solutions for today's complex IP networks. Our solutions help you reduce costs, enhance productivity and gain efficiencies while improving the management and security of multiple IP infrastructure devices and services. Our products adhere to open standards, providing maximum interoperability within your existing network, including cloud and hybrid networks. BT IPAM also provides full IP address visibility spanning your traditional multi-premises and multi-cloud networks.