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1.2 Advanced Network Features

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mCloud BGP and bring your own IPv4 and IPv6 Address space support

For any organisation wanting to consume our mCloud service who own their own IPv4 and IPv6 address space Micron21 fully supports BGP for any service so that you can advertise your own AS through Micron21 via BGP or we can advertise your IP address space via AS38880.

For those customers who want to advertise using their own AS number you will need a hardware or virtual device which supports BGP.

The hardware device can be colocated within our tier IV datacentre and or a virtual appliance can run within our mCloud platform.

All IP addresses advertised via Micron21 receive by default our base DDoS protection service, please note this is a paid service to advertise your network and the cost is dependent on how many routable IP ranges you will be advertising please contact sales@micron21.com for more information on pricing.

mCloud Software Defined Networking (SDN)

Our mCloud platform provides our customers with Software Defined networking capabilities including distributed Firewall as a service FWaaS, Distributed Layer 4 Load Balancing, Native VPN IPsec site to site connections and floating IP address which are dynamically mapped to a virtual machine instance.

Making Your mCloud Services Accessible and Secure

In today's digital age, businesses often need their cloud-based applications to be accessible over the internet while keeping them secure from

unwanted access. Micron21's mCloud platform offers two powerful features to help you achieve this balance: Floating IPs and Virtual Routers.

These tools are easy to manage through the mCloud portal and can enhance both the accessibility and security of your cloud services. These features provide port forwarding and Network Address Translation (NAT)

functionalities, enhancing both accessibility and security for cloud instances.

When you create a virtual machine instance (VM) in mCloud, it's placed in a private network by default. This means it's protected from the outside world, like having a computer locked safely inside your office. While this setup provides excellent security, it also means that your VM can't communicate with the internet. This isn't ideal if you want to host a website or allow users to access your services remotely.

Floating IPs act like a bridge between your private VM and the internet. Assigning a Floating IP to your VM gives it a public address on the internet, allowing it to send and receive data. The great thing about Floating IPs is that they don't change your VM's private settings, and you can assign or remove them without restarting the VM. Plus, you can move a Floating IP from one VM to another as your needs change, providing flexibility.

Virtual Routers in mCloud function like traffic directors for your network. They control how data moves between your private network and the internet, ensuring that everything goes to the right place while keeping your network secure. Virtual Routers help manage incoming and outgoing data effectively, and you can easily adjust their settings as your network grows.

Private VLANs are used for internal virtual machine Instance to virtual machine Instance communication designed so that each and every virtual instance can securely and safely communicate with internal assets.

External Private VLAN

Our External Private VLAN service which is an add-on paid service provides a dedicated private VLAN which can span anywhere across Micron21 infrastructure or across different services, i.e. directly communicate with a co-located or dedicated servers, physical firewall and switches or even your office via a layer 2 point-to-point service.

Internal Private VLAN

Our Internal Private VLAN service is powered by our mCloud SDN platform which allows mCloud customers to create private VLANs using our mCloud portal for VM-to-VM communication. These VLANs are only internal to our mCloud platform and can not communicate with networks outside from your mCloud project and are included for free with any mCloud VDC.

Public Access VLAN

When you require direct public access to your virtual machine instance you can take advantage of mCloud Public Access VLAN where we supply you a direct public IP address directly onto the network interface of your virtual machine instance. Depending on your networking security requirements we can supply you a single /32 IPv4 or /128 IPv6 addresses within a shared allocation range on a shared VLAN or if required we can provide you a dedicated routable IPv4 or IPv6 subnet within your own dedicated public VLAN.

Both methods take advantage of our Cisco AnyCast gateway which allows your public assigned IP address to be simultaneously available in any Micron21 mCloud availability zones, allowing any public IP address to instantly fail over between physically diverse datacentres providing endless high availability opportunities.