



## MULTI-HOMED INTERNET ACCESS SERVICES (ASN/BGP)

Many organizations are reliant on a single Internet Service Provider (ISP) for Internet access services such as IP addresses. This means the Internet connection is at risk of loss of availability under certain circumstances, such as BGP route hijacking, ISP-level routing outages/disruption or DDoS attack (either direct, or against the ISP). Reliance on a single ISP also makes it difficult to protect the network because the IP addresses being used by the client are not announced as belonging to the client.

### MULTI-HOMING SERVICES FOR HIGH-AVAILABILITY

By re-engineering the Internet access service to enable multi-homing (using more than one Internet Service Provider at the same time), organizations can reduce the risk of outage and at the same time, simplify any future implementation of DDoS Mitigation.

activerach is able to register customers with the Reseaux IP Européens (RIPE) European Internet Registry and obtain a unique Autonomous System Number on their behalf. This is used together with changes to the Internet access routers to make the organization concerned a significant routing entity on the global Internet, and enable a high availability architecture.

The solution combines Internet administration with router engineering and peering agreements; an area of expertise for activerach. Our cost-effective migration plans are designed to minimise the risk of changeover and introduce a new physical and logical architecture. This can deliver enhanced availability plus improved and simplified access for future security projects.

## ENABLE CLOUD-BASED DDOS MITIGATION

These changes simplify and enable cloud-based security services such as DDoS mitigation by making it possible to “announce” the organization to the public Internet through a third-party security network. The security network will perform filtering and cleaning services on traffic before it arrives at the customer network perimeter.

## TARGET ARCHITECTURE

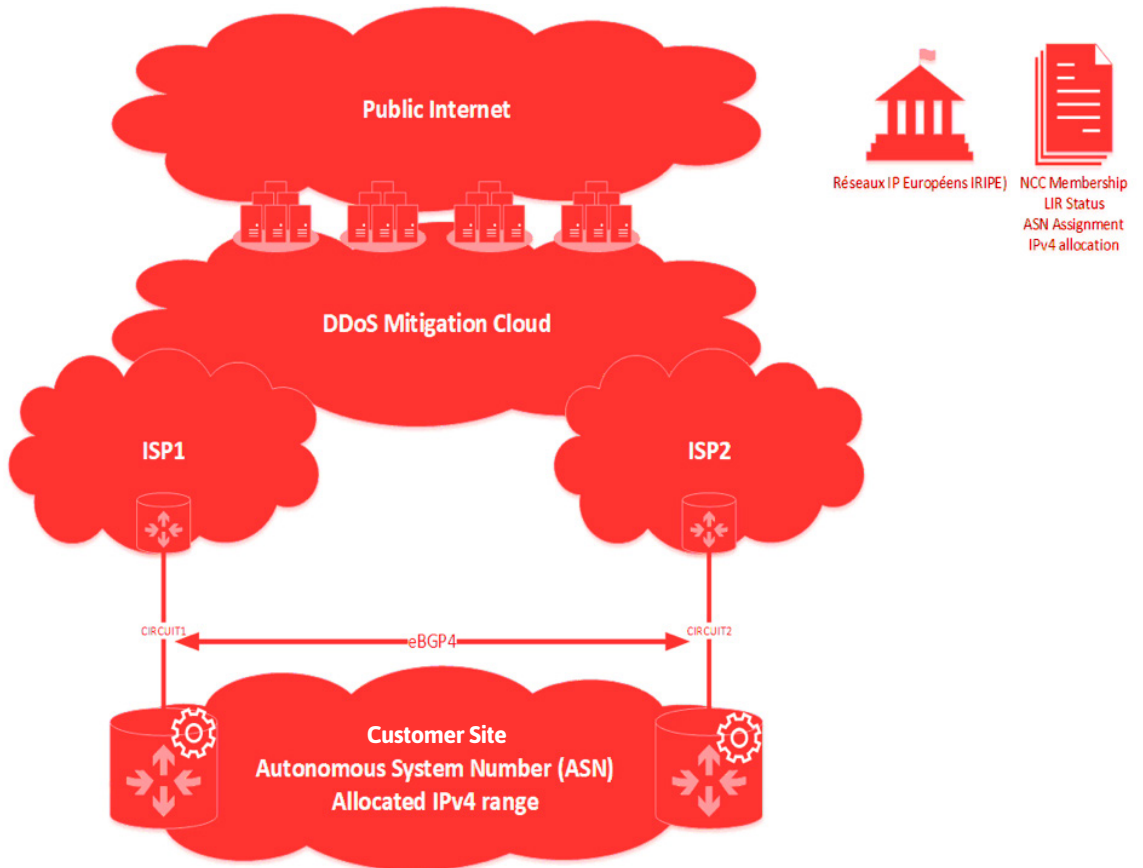


Figure 1: Typical architecture for multi-homed Internet access services

### SYSTEM REQUIREMENTS / ASSUMPTIONS

- RIPE NCC Membership
- Assignment of IPv4 address space for use with multiple transit ISPs
- Router specified suitable for 1Gbps circuit, full duplex
- eBGP4 routing, with enough memory for partial/
- full Internet routing table
- activereach Technical support cases for ongoing support
- Optional: Training on LIR administration, BGP, and peering

Note: Circuits, Internet access bandwidth or other Internet Service Provider transit charges are not included.

## WHY ACTIVEREACH?

activereach is a UK-based provider of network and security solutions to businesses - a specialist in high availability connectivity systems, DDoS mitigation and testing. We have been providing multi-homed Internet access services, and delivering DDoS mitigation solutions since 2009. Many of our employees worked together at a business Internet Service Provider during the 90s-00s. Our Technical Director was a former technical director of the London Internet Exchange (LINX) and continues to enjoy high levels of peer recognition for his skills in the UK Internet industry.

## PROJECT SCOPING

activereach will devise a migration plan designed to minimise the risk of changeover and introduce a new cost-effective network architecture and topology:

- Review of current architecture including DC/DMZ and LAN topology, upstream ISPs and transit services
- Specify and procure new transit service providers including capable routers
- Handle RIPE application for IP address space and BGP AS number
- Register assignments and routes with registries and reverse DNS creation
- Engineering time covering BGP routing, configuration and installation
- Cloud-based DDoS mitigation enablement, subject to contract

**Let Us Help You - Call: 0845 625 9025 or Email: [contactus@activereach.net](mailto:contactus@activereach.net)**

### About activereach

activereach® is a leading technology integrator providing bespoke IT solutions and professional services to customers in the areas of Security and Connectivity. Our independent consultative approach helps organizations maximise business value from their technology investments, providing a platform for businesses to grow, reinvent and transform.

Working in partnership with many of the world's leading technology vendors and software providers, we offer the most innovative hosted, on-premise and cloud based services. Our consultancy, technology and services have transformed hundreds of businesses across the UK, Europe & Middle East – ranging from FTSE 500 enterprises to corporates and SMEs. Operating across our activeNETWORKS™ and activeDEFENCE™ technology divisions, activereach is headquartered near London, UK.

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