



## INTELLIGENT NETWORKS

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Intelligent Networks is a fully managed service that enables you to connect your customers to your data centre or cloud services with a focus on the performance of their applications.

The service continually evaluates traffic and assigns network resources in order to maximise the performance of your most important applications.

With a wide range of deployment scenarios, you can choose between options starting from adding a single site to your existing IPVPN network, right up to building entirely new networks using Intelligent Networks.

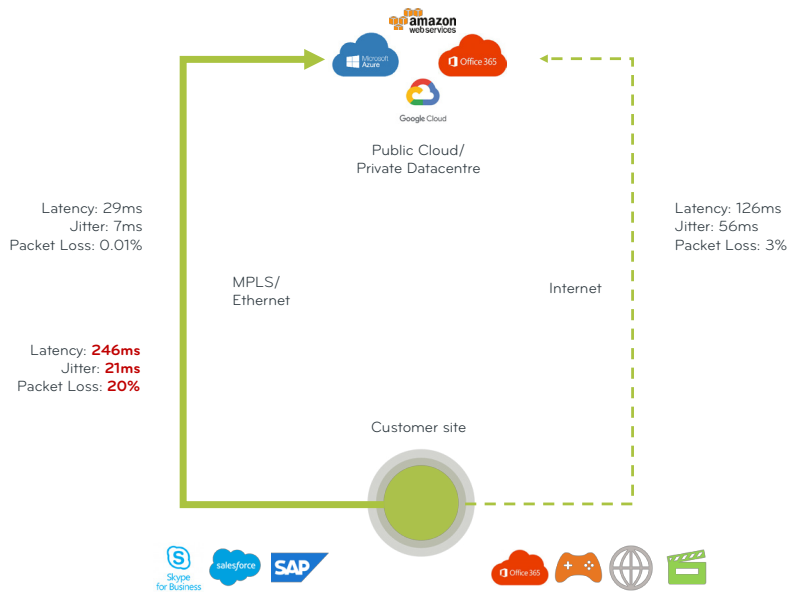
With a fully managed service, you can choose any of the options independently for each site so that you can match the solution according to the requirements and pay-as-you go without large capital investments.

There are five different options for the service:



## 1. DYNAMIC PATH CONTROL

This option evaluates each of the paths on a real-time basis and selects the path that satisfies the policy defined for each application. Critical applications such as voice, video, ERP, AWS and Microsoft 365 can be assigned high priority. Individual applications can also be configured to use only private paths for enhanced security. According to the policies you set, the service automatically selects the best path, ensuring that business-critical applications always have the best resources available. This option requires a minimum of two access links.



### BENEFITS:

- Ensure the performance of applications when you have different types of traffic running over WAN.
- Critical applications perform consistently.
- Scale bandwidth effectively and optimise cost by ensuring you are using all your links.
- Ensure that low priority traffic is using low cost links such as the Internet.
- Internet breakout from site, making your Internet apps more efficient

### WHAT YOU GET:

- Overlay service that automatically evaluates the quality of the link against application thresholds and switches if required.
- Configured and managed by Vector Comms.
- Changes can be made by contacting us.

### PREREQUISITES:

- A minimum of two access links.
- List of applications and thresholds.



## 2. SECURITY

### STATEFUL FIREWALL

Conventional firewall that blocks traffic from identified ports, protocols, and IP addresses.

### APPLICATION CONTROL

Uses Deep Packet Inspection policies created to allow, deny, or restrict access to applications or entire categories of applications. Application Control helps to keep malicious, risky, and unwanted applications out of their networks through control points at the perimeter, in the data centre.

### INTRUSION PREVENTION SYSTEM (IPS)

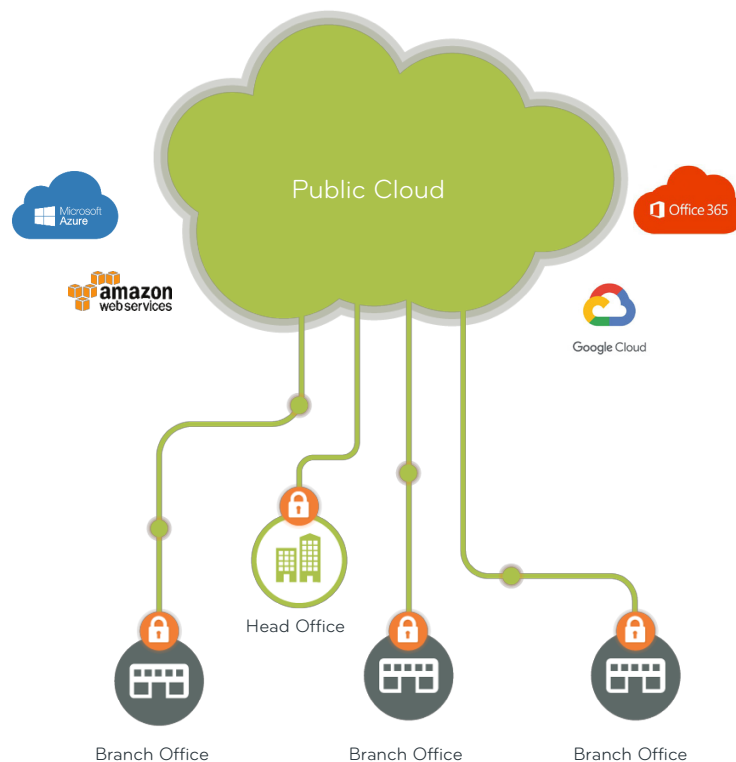
The service provides defence against network-based threats. You get the latest defence against stealthy network-level threats, a comprehensive IPS Library with thousands of signatures, flexible policies that enable full control of attack detection methods to suit complex security applications, resistance to evasion techniques proved by NSS Labs and the IPS signature lookup service.

### ADVANCED THREAT PROTECTION USING SANDBOX

Today's threats are increasingly sophisticated and often bypass traditional malware security by masking their malicious activity. A sandbox augments your security architecture by validating threats in a separate, secure environment. It offers a powerful combination of advanced detection, automated mitigation, actionable insight, and flexible deployment to stop targeted attacks and subsequent data loss.

### SSL INSPECTION

The service decrypts SSL packets to inspect them preventing attacks from within a secure connection.



### WEB FILTERING TO ENFORCE INTERNET SECURITY WITHOUT REQUIRING A SEPARATE SECURE WEB GATEWAY (SWG)

Block and monitor web activities to assist customers with the enforcement of corporate Internet usage policies. The service is based on a massive web-content rating database to power one of the industry's most accurate web-filtering services. Granular blocking and filtering provide web categories to allow, log or block. A comprehensive URL database provides rapid and comprehensive protection.

### ANTI-VIRUS

Features an automated content update and malware and heuristic detection engine, plus a proactive threat library to protect against all known threats and variants. It uses Content Pattern Recognition Language and code recognition software to protect against unknown variants and guaranteed SLAs to address severe malware threats.

### ANTI-BOT PROTECTION

Prevents botnets and other threats from communicating with command and control servers to exfiltrate data or download malware. It protects against malicious sources associated with web attacks, phishing activity, web scanning, scraping, and more. It also blocks large-scale DDoS attacks from known infected sources.

#### BENEFITS:

- Improves the security posture of the site by enabling the required functionality at each site and complementing any centralised security functions already available.
- Efficient public cloud access using secure Internet break-out.

#### WHAT YOU GET:

- Security functions at the site.

Please note that Intelligent Networks Security services provides protection services only and does not provide any detection of security issues. For additional service options, please contact your Account Manager.

#### ADDITIONAL OPTION:

- Security Operations Centre (SOC) for analysis and monitoring of logs and taking proactive and reactive measures. Please contact us for more details.

#### PREREQUISITES:

- Details of current security being provided at sites.



## 3. RESILIENCY

This option enables channel partners to build resiliency into the networks cost-effectively. The service automatically switches over to the next preferred link in case of failure of the primary link. Customers can use multiple links such as the Internet, 4G, Ethernet (Vector MetroEthernet, UFB Bitstream 2/3) and the service automatically switches between the accesses should one of them fail in the order of priority configured.

### BENEFITS:

- Resilience for your applications, especially when you are using low SLA access for your sites.

### WHAT YOU GET:

- Overlay service that automatically switches to the next priority.
- Configured and managed by Vector Communications.
- Alerting and proactive restoration of failed links.

### PREREQUISITES:

- This option requires a minimum of two access links.





## 4. SIMPLE CONNECT

Channel partners can connect easily through a secure VPN to your data centre or POP using Internet from Vector Communications or any other provider.

### BENEFITS:

- Easy and secure connection.

### WHAT YOU GET:

- Secure VPN to your existing ENNI over Internet or any other access available at each site.



## 5. QUICK INSTALL

Channel partners can also request for next day connectivity with the Quick Install option. The Internet connection can be from any existing provider. This way channel providers can quickly connect their customers to the data centre and provide start providing services immediately to realise their revenue and build trust and relationships.

### BENEFITS:

- Deliver value to your customers within a day.
- Be responsive by providing urgent connectivity.

### WHAT YOU GET:

- Secure VPN to your existing ENNI over Internet for two weeks or until your Vector Communications access service is in place.
- If you chose the Quick Install option, the service is installed within the next business day.

### PREREQUISITES:

- Existing Internet connection.

Note: The quality of service will depend on the quality of the third party Internet service of the customer.



## WHY INTELLIGENT NETWORKS



### A FULLY MANAGED SERVICE, AS-A-SERVICE

- No substantial capital investment – pay-as-you-go.
- Vector Communications manages all configurations.
- Templates to reduce time and effort required to get up and running.
- Access to continuously updated best practices for configurations and policies for security and application performance.
- Continuous automated update of security signatures from a leading security vendor.



### ENHANCED SUPPORT FOR YOUR TRICKY SOLUTIONS

- Professional services are available as an additional option to assist you with configuration and management or any other specific solutions.



### SINGLE PROVIDER

- When the network connectivity also provided by Vector Communications, we can resolve issues faster without additional layers of providers.
- When you choose a Vector Communications-provided Internet solution as one of your links to connect your customer site, it enhances site-to-site service between all sites as the traffic is not required to go out to the public Internet.



## DEPLOYMENT SCENARIOS

Intelligent Networks offers solutions for a wide range of deployment scenarios.

### HERE ARE FEW KEY SCENARIOS:

- Add an Intelligent Networks site to your existing IPHub service.
- Implement Intelligent Networks for your new customer.
- Connect your customer sites using just Internet.
- Add resilience to your existing Ethernet or IPVPN service by converting it to Intelligent Networks with additional access to improve resiliency.
- Provide Internet break-out at customer sites with full suite of preventive security features.

Please refer to Intelligent Networks – Deployment Scenarios document for additional information.

## CHOOSING OPTIONS

ROUTING (choose one)	Dynamic Path Control
	Resiliency
	Simple Connect
+	
SECURITY (optional)	Security
+	
INSTALLATION (optional)	Quick Install





## SERVICE SPECIFICATIONS

Categories	Options
Bandwidth Options	100 Mbit/s, 1 Gbit/s
<b>Resiliency</b>	
Prerequisites	At least two access types
Failover time between links	5 s
Access Links	MPLS, Ethernet, ADSL/VDSL, Mobile(4G)
<b>Dynamic Path Control</b>	
Prerequisites	At least two access types
Application categories	Business, eMail, Game, IM, Malware, Media, Network Service, P2P, Proxy, Remote Access, Social Networking, Storage Backup, Update, VoIP, Web
Performance metrics	One-way latency, one-way jitter, one-way packet loss, bandwidth utilisation
Access Links	MPLS, Ethernet, ADSL/VDSL, Mobile(4G)
Policy Parameters	Latency, Jitter, Packet Loss
Availability	99.9%
<b>Quick Connect</b>	
Prerequisites	Existing Internet connection.
<b>Security</b>	Stateful firewall, Application Control, IPS, SSL Inspection, Web Filtering, Anti-virus
<b>Availability</b>	99.9% Higher availability options can be provided on request



# INTELLIGENT NETWORKS

TECHNICAL  
PROFILE

Physical Medium	
Throughput	Type
Up to 100 Mbit/s	IEEE 802.3u 100Base – T* (Copper)
Up to 1 Gbit/s	IEEE 802.3ab 1000Base – T* (Copper)
	IEEE 802.3z 1000Base – LX
	IEEE 802.3z 1000Base – BX-U/D
Up to 10 Gbit/s	IEEE 802.3ae 10GBase – LR*

\* – Default values