UNITAS GLOBAL

# UNITAS IP SERVICES

## *INTERNET ARCHITECTED FOR HIGH PERFORMANCE*

The way businesses use the Internet is changing. As more business applications are being moved to the cloud or delivered as a SaaS model, Internet performance has become more important than ever before. Users expect the same consistent high-performance experience they get with on-premise software or dedicated systems from SaaS applications.

Whether transporting data, connecting subscribers, accessing workflows, or improving day-to-day collaboration, Unitas' dedicated high performance Internet Access services are designed for content and applications that require the highest level of performance and resiliency. Unitas' unique combination of route optimized transit and direct connection to SaaS and content providers offers a high quality, cost efficient alternative to traditional public Internet services and multi homed networks.

Unitas Reach™, the first global software defined network (SDN) to offer automated ubiquitous edge access to any cloud location, enables Unitas to provide unparalleled IP access for its customers. Unitas has built its IP network (AS1828) by creating efficient direct connections with SaaS providers, content providers and other Internet providers to ensure the best possible and shortest routing for our customers. Wherever possible, Unitas bypasses handing traffic off to other Internet transport networks entirely, in order to deliver content and streaming media more efficiently for and between our customers. The result is that Internet traffic takes a shorter route to its destination, over an Internet network that Unitas controls allowing stringent Service Level Agreement (SLA) that guarantee the route and available bandwidth.

### BYPASSING PUBLIC INTERNET

Not all IP providers are the same. The global Internet is a collection of separate, but interconnected networks, each of which is managed as a single administrative domain called an Autonomous Systems (AS). There are over sixty thousand AS numbers assigned to a wide variety of companies, education, governments, and Internet service providers.

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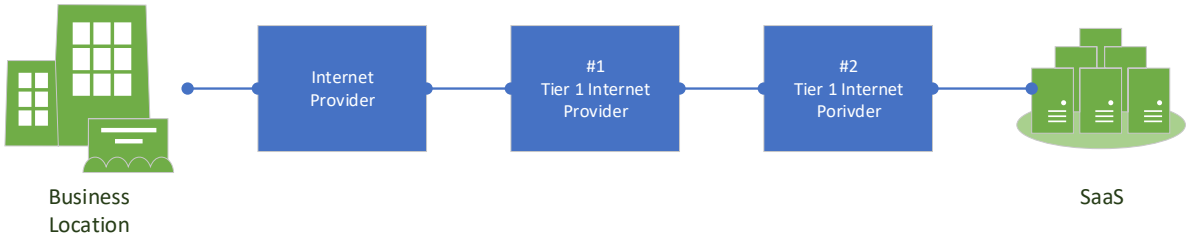
In the past, the Internet was dominated by a small number of “Tier 1” Internet service providers providing the Internet backbone. Tier 1 Internet providers operate as an exclusive club, agreeing to share routes only with other Tier 1 providers, but charging others to connect. Traditionally getting access to the Internet meant buying bandwidth from one or more of these Tier 1 backbone providers.

Today there are thousands of SaaS providers, content providers, and broadband networks that comprise the Internet. High demand content and SaaS providers – like AWS, Zoom, Netflix, and Microsoft 365 - are not directly connected to Tier 1 backbone networks, but are on other Tier 2 and 3 networks “circling around” the interconnected Tier 1 backbone at the center or core. These other providers buy bandwidth from the Tier 1 providers and rely on them to route traffic between the different sources and destinations that are outside of the Tier 1 core. Since most content and SaaS providers do not buy from all of the Tier 1 Internet providers, traffic between different destinations often must transit over multiple provider networks to route from users in one location to content in another. This means longer routes, more network handoffs, potential delays, and less ability to guarantee a consistent experience to users.




The Unitas difference is that we built our IP network to bypasses the Tier 1 core entirely, wherever possible, and take customer traffic directly to its destination, traversing the fewest number networks and interconnections. Unitas aggressively connects to improve performance for our clients. Private direct peering is an interconnection that allows two networks to connect and exchange traffic directly without having to pay a third party to carry traffic across the Internet. Unitas directly peers with over 5300 IP networks to access over 6000 SaaS providers, content providers, and broadband networks, over links that Unitas controls and can guarantee the route, available bandwidth, and performance.

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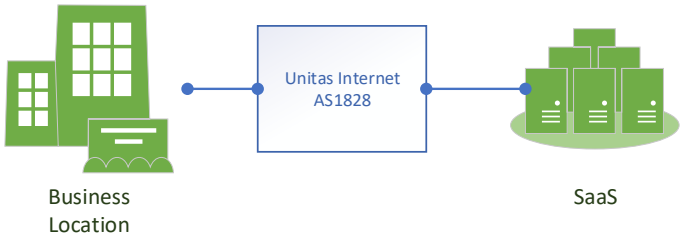


*Figure 1 Unitas Aggressively Connects to SaaS, Content, and Tier 2 & 3 Internet Providers Creating Shorter Routes that Bypasses Tier 1 Internet Backbone.*

Unlike Internet providers with restrictive peering policies that have little diversity in their routing tables, Unitas has a large number of options by which to route its customers' traffic. Unitas still maintains connectivity to multiple Tier 1 Internet providers as well as to many of the other Tier 2 Internet providers, ensuring there are no holes in our network routing table; rather, there are multiple ways to get to every destination on the Internet.

## PURPOSE BUILT FOR RESILIENCY

Enterprises require and value reliable Internet access to keep their business connected and operating. Internet routing is exceptionally complex and ever-changing. This means constant policy analysis and adaptation, responding to security threats, and ongoing route optimization. Because of our direct peering model, Unitas' has far greater routing table diversity which translates into large number of options by which to route its customers' traffic. Continuous analysis of Internet traffic enables Unitas to understand traffic flows and improve routing as well as improve network with new interconnects and peering. Our software defined interconnection architecture enables Unitas to establish new peering points and expand into new markets rapidly.

As part of Unitas Reach™, Unitas has designed a fault-tolerant backbone network over a software defined Ethernet transport network, with diverse points of presence (PoPs) and peering points. Each Unitas Internet point of presence is fully redundant. This means diverse routers, with diverse transit providers and peering making it independently survivable if there is a backbone-level outage.

Between its global PoPs, Unitas maintains diverse, redundant paths for greater control and visibility into routing and best performance to more locations. Our SDN network, Unitas Reach™, is engineered to move IP traffic to and from end-users as quickly as possible. From North America to Europe, Asia to Africa, Unitas provides high performance Internet services to any location using a flexible range of access technologies.

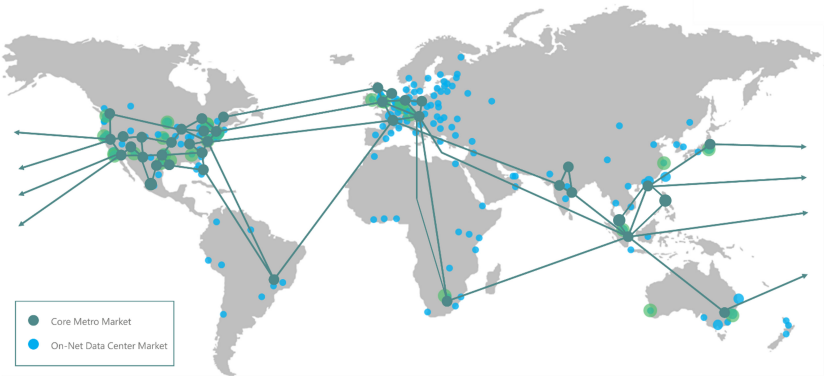


*Figure 2 Unitas Reach™ enables direct peering with 6000+ SaaS providers, content providers, & broadband networks in 133+ countries.*

Local Internet Access extends dedicated IP services to customer offices locations. Unitas uses intelligent automation via its software platform, Unitas Nexus™, to design and build the most cost-effective and reliable local Internet access connecting people, devices, data, and applications. When enterprises demand the highest level of availability and resiliency, Unitas ensures that routes and entrances into buildings and data centers are fully diverse. Unitas utilizes customer premise network interface devices (NIDs) to extend the network edge to the customer premise and provide end-to-end network monitoring of all connectivity services offered. As a neutral provider of networks and technology, Unitas delivers transport over diverse routes across different network carriers, unique physical routes, diverse cloud-on ramps in different cities, and different data centers to provide a level of reliability that is unmatched in the market.

Unitas Internet Access includes:

- Performance optimized routing
- Aggressive private interconnect policy provides direct data delivery with SaaS and content providers
- Automated edge access to 30 million enterprise locations including 900 carrier-neutral data centers worldwide
- Non-oversubscribed bandwidth
- Highly resilient fully redundant architecture, built on top of dedicated Layer 2 SDN
- Automatic detection and re-routing around network failures
- Redundancy options include diverse ports, diverse PoPs, and diverse route
- Multi service connections deliver Layer 3 IP and Layer 2 Ethernet on the same port
- Fast and accurate DDoS attack detection and sophisticated traffic and security analytics

## MANAGEMENT CENTER & PLATFORM

Unitas uses its Unitas Atlas™ management platform to support client environments through a single pane of glass view into end-to-end infrastructure. In turn, clients rely on Unitas Atlas™ to gain insights and transparency into their services that they have never had before. The platform replaces what is traditionally a set of disparate tools, providing unprecedented monitoring, analytics, and visibility into application and data infrastructure.

Managed Internet services include:

- Dedicated, experienced BGP engineers
- 24x7x365 Customer Management Center (CMC)
- Monitoring, management, and reporting with Unitas Atlas
- Uptime guarantee and stringent Service Level Agreement (SLA)
- Configuration and management of network security services, including network address translate and advanced VPN configuration and management

Unitas Atlas™ is designed to ensure the ultimate availability and performance of Internet services. The platform offers several features to accomplish this:

- Visibility and performance analytics into traffic flows, network peering and interconnection
- Predictive and responsive thresholds for key infrastructure and application metrics
- Event based ticketing and automated escalation policies
- Integration with leading security incident and event management solutions
- Advanced layer 2 and layer 3 networking administration options

As an extension of a client's IT team, listening to and providing for the customer is a top priority at Unitas. Our engineers work as an extension of corporate IT resources and capabilities. A single partner to manage the network environment for all operation and growth needs.

## USE CASES

Every use case is different. By allowing the Unitas team of experts to design and manage the best solution for your company's specific business requirements, your IT teams can focus on core innovation and workflow objectives.

| Local Internet Access Deploy & Manage | Internet Access Agility | Internet Access Reliability | Internet Access Scalability | SD-WAN Deploy, Optimize& Manage |
|---|---|---|---|---|
| Unitas delivers local IP Access services to multi-tenant buildings. Direct peering with content providers (such as gaming services and Netflix), reduces latency in the network to provide positive customer experiences. | Unitas connects virtual private cloud environment in Azure public cloud to high performance internet providing reliable and scalable access of software to customers. | Unitas connects hosted private cloud in data center to high performance internet to provide reliable and secure access of content to subscribers. | Delivered increased Internet bandwidth in 3 days, leveraging virtual router to shorten time to market and eliminate expense and delay of equipment. | Architected and deployed a software-defined, secure, virtual, IP network overlay. Achieve advanced levels of visibility and control over application traffic by aggregate traffic in local markets and route SaaS and internet traffic from the branches. |
|  |  |  |  |  |
| Managed Service Provider | Platform Application Provider | Healthcare Application Provider | Manufacturing Company | Global Business Services Company |

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## WHY CHOOSE UNITAS?

Unitas Global has built our business over the past 11 years through an intense focus on understanding the design, performance and pricing of data network infrastructure better than our competitors and leveraging a rich set of software tools to analyze and deliver the right network across that wide spectrum of service technology.

Unitas Global is setting the standard for efficient access service qualification and operations with:

- Global SDN enabling automated ubiquitous edge access to any cloud location and providing connectivity that delivers agile, cost-effective, low-latency connections to optimize application performance;
- Single point of execution allows us unmatched visibility to put our clients first;
- Engineered for performance in a digital data centric era;
- Timely design and quoting of dedicated IP services using Unitas Nexus™.
- Timely and efficient provisioning, turn-up and management of end-to-end connectivity, delivering services with predictable results and focused feedback throughout the process;
- End to end service orchestration, SLA, and service performance reporting
- Access to sophisticated network management & monitoring platform, Unitas Atlas™ for visibility and control; and
- 24x7x365 proactive monitoring and management of IP services from our CMC.

There is no other company in the market today that uses this type of real-time network availability assessment, orchestrated service delivery, diverse intelligent routing, and proactive end-to-end management to connect business to where they need to go.

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