



NetAbstraction™ Network Privacy as a Service

“If they can’t find you, they can’t attack you”™

THE PROBLEM

Enterprise level cyber attacks continue to increase dramatically. Adversaries are targeting your network right now and are becoming increasingly more sophisticated and persistent – so it’s no longer a question of *if* they will get your valuable data and communications, it’s a *matter* of *when*. You must protect your network first, it is too late when they are already through the front door.

THE CHALLENGE

You need to be proactive. The “build a bigger fortress, dig a deeper moat” model doesn’t work. In today’s environment, your network cannot be a fixed target. Network connections need to be temporary, dynamically shifting, and layered with additional protections to keep your network safe.

THE FUNDAMENTALS

Anyone directly using the Internet exposes their IP address, location, and network identity. Any external connection that your company has is a potential source of attack on your data and your systems, and even more problematically, typical networks are fixed, static, and easily located. If you notice a breach, you’ve already lost the battle. Your adversaries have found your network; they know who you are and where you are.

THE SOLUTION

NetAbstraction’s “carrier class” Network Privacy as a Service that protects your identity and provides additional security for your communications on the Internet. NetAbstraction’s patented design obscures and varies network pathways while protecting customer identities and systems via implementation of Software Defined Network (SDN) virtualization across multiple cloud providers.

NETABSTRACTION AT A GLANCE

- Disguises network communications pathway.
- Dynamically shifts activity without affecting ongoing communications.
- Protects subscriber information held in commercial provider’s databases – which expose who you are.
- Increases layers of security in the network – to augment security protections of traditional commercial service providers.
- Leverages agility within cloud technology with the ability to quickly stand up and bring down resources.

WHY NETABSTRACTION?

NetAbstraction transparently distributes the communications within and across multiple clouds and regularly churns the underlying network infrastructure. The dynamic shifting of communications across multiple commercial providers and use of multi-hop transport makes actual user information and origination location and identities a very difficult target for hackers, search engine optimization companies, or other privacy threats.

WHAT NETABSTRACTION CAN DO THAT OTHERS CAN'T

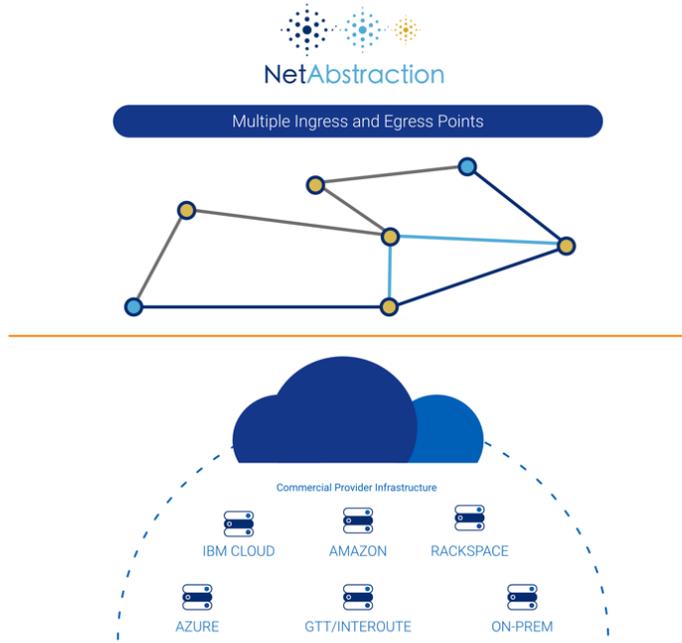
NetAbstraction is the future of networking for businesses. Leased lines are expensive, they are also fixed and limit the ability to elastically meet bandwidth demands. When considering the use of the Internet, there are significant cost savings, but performance and security are equally important.

Software Defined Networking provides the opportunity for businesses to leverage the Internet while providing an additional layer of security protection. However, SDN is still in its maturation process. NetAbstraction’s patented design addresses key fundamental deficiencies in SDN. We improve performance, increase security, and increase agility to provide better resiliency and a reduced cyber attack vector.

Innovative deployment of patented SDN technology that allows users to	Extensive operational protections and identity management tradecraft	Superior network performance, industry application, and domain
<ul style="list-style-type: none"> Stay “hidden” within commercial provider infrastructure Create a logically separated network that insulates each customer from vulnerabilities in the commercial providers’ physical infrastructure Leverage the NetAbstraction shared service and dedicated infrastructure to compartment user communication activities 	<ul style="list-style-type: none"> Network architecture has been implemented using multiple commercial providers Multiple intermediary nodes (“hops”) provide additional layers of obfuscation Use of surrogates to acquire and maintain network infrastructure Exit (egress) nodes globally implemented using multiple providers both foreign and domestic Masked billing and disguised and/or hidden routing 	<ul style="list-style-type: none"> Carrier class speed and performance Network that has been extensively “red teamed” by both USG and commercial organizations for tradecraft, security, and performance— approved for full range of cyber operations. Choice of globally distributed egress nodes across multiple providers NetAbstraction is NOT a proxy

NETABSTRACTION SECURITY FEATURES

- NetAbstraction augments the security capabilities of commercial cloud providers by:
- Dynamically shifting the network on the fly, without impacting customer communications
- Frequently rotating and replacing the commercial cloud infrastructure and identities
- Independently controlled end-to-end logically separated tunnels with end-to-end encryption
- Additional layer of virtualization within the commercial cloud providers’ infrastructure to provide an independent layer of protection for our servers
- New tunneling protocol that is identified as normal TCP traffic enabling the tunnels to hide within the traffic of commercial provider networks and control over information within them.
- Access to a range of identity (persona) options



NETWORK PRIVACY AS A SERVICE – SECURING DIGITAL TRANSFORMATION

NetAbstraction’s carrier class Network Privacy as a Service offering disguises and protects your online identity providing additional security for your communications on the Internet and in the cloud. NetAbstraction provides secure, varied, and non-apparent network connectivity, and a range of identity

management and persona attribution options to alter or reduce the cyber attack profile of your network. NetAbstraction's Network Privacy as a Service offering provides the ability to replace or augment and/or replace legacy MPLS and leased lines:

- Disguise and protect WAN communications by reducing your organizations attack surface
- Improve performance with intelligent network routing decisions on a global basis
- Significantly reduce your overall WAN expenditures and associated implementation and maintenance costs
- Increase agility and create redundancy within your network – dynamically shift network connections on a global basis within and across multiple providers
- Manage your network and data with complete insight, access, and control – meet GDPR and other data governance requirements effortlessly.

NETABSTRACTION SOLUTIONS

1. **Network Privacy as a Service:** Securing digital transformation – augment or replace existing WAN connections to reduce cost, while increasing overall network privacy, security and agility.
2. **NetEnclave™ - Isolated Protected Hosting:** Secure sensitive data and host applications in a disguised fashion within and across multiple public/private clouds. Control access with granular end-user policies and utilize non-traceable connectivity to protected hosting sites.
3. **Crisis Communication & Business Continuity Networks:** Provide protected, highly resilient, and non-affiliated communications during crisis events: cyber incidents, natural disasters, and catastrophic events. Leverage disguised, out-of-band network infrastructure to lower your cyber profile and stay communicating.
4. **Privacy Protected Internet Access:** Identity and location protected access to the Internet to securely examine cyber threats, conduct online research and investigations, enable cyber activities without attribution to you. Suite of interface options for: malware protected browsing, OpenVPN, virtual desktop solutions, and custom user-defined interfaces.

HOW NETABSTRACTION WORKS

NetAbstraction is a subscription network service. We have implemented a shared service offering that provides basic network infrastructure that can be augmented to support customer specific requirements.

The NetAbstraction service is only available to organization users, not private individuals.

NETABSTRACTION INTERFACE'S & OPTIONS TO CONNECT

NetAbstraction works with multiple devices (computers, tablets, and smartphones) and provides several options to connect.

1. Software based VPN that provides full device functionality and dynamic route selection capabilities
2. Hardware based configurations: servers, routers, hardware-based VPN's, etc.
3. Number of lightweight browser-based solutions that provide protection from malware
4. Complete interoperability with Software-Defined-WAN (SD-WAN) and Software-Defined-Perimeter (SDP) capabilities
5. Custom interfaces based on customer requirements

Set it up and forget it." NetAbstraction is simple to use and doesn't require any specialized training or complicated steps to initiate Internet access.

ABOUT US



NetAbstraction

NetAbstraction, Inc. is an Internet and cyber security firm that offers services that lower your organization's systems "visibility" as a target on the Internet. Our management comes from backgrounds working for the federal government, enabling capabilities to support several Intelligence Community missions.

With substantial experience in offensive cyber operations and in designing, creating, and implementing non-traditional, non-attributable, telecommunications networks, we have a deep understanding of the current state of the art technologies. We are innovating and providing the next generation of privacy and identity protection capabilities while understanding, first hand, the challenges our customers face when meeting today's cyber and privacy needs.

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