# ANAPAYA

# The SCION Internet by Anapaya Systems

## A New Standard in Secure B2B Data Transmission

**This innovative protocol provides a highly secure way for telecom providers to transmit data, making it possible to create a flexible internet that is both open and secure without the need to build a new infrastructure.**

In today's interconnected world, secure communication is more important than ever. Most businesses rely on data transmissions for daily operations, where any breach can have serious consequences. While the internet is a powerful tool for communication, it leaves us vulnerable to cyber risks such as denial of service attacks and traffic hijacks.

**That's where SCION comes in.**

Developed at ETH Zurich, this innovative protocol provides a highly secure way for telecom providers to transmit data, making it possible to create a flexible, open, and secure internet without the need to build a new infrastructure.

## What is SCION?

SCION is an open-source inter-domain routing protocol designed from the ground up with one purpose: to provide unparalleled control, reliability, and security. Thanks to its advanced technology and innovative approach, SCION offers a level of protection and flexibility unmatched by any other solution on the market. It offers unparalleled control to the senders of information, ideal for businesses looking to safeguard their data and maintain a high level of trust with their partners and clients.

### SCION and control

SCION provides businesses with unparalleled control of their data in public networks, offering advanced capabilities such as path control, failure isolation, and explicit trust information for end-to-end communication. With SCION, businesses can enjoy strong control over their traffic, resulting in meaningful and enforceable trust with high path awareness.

### SCION and reliability

The SCION protocol unlocks multi-path communication, allowing traffic routing via multiple paths simultaneously. This guarantees high availability, reserved global bandwidth, and dynamic traffic optimization.

### SCION and security

SCION architecture is designed to provide excellent security and resilience. As a result of its design, it can prevent a wide range of attacks.

#### Policy-based path selection

SCION's policy-based path selection allows you to customize the transmission of your information, optimizing it for location, speed, cost, and quality. End-users can select the routing paths of their traffic based on their own policies.

#### Multi pathing

The SCION protocol offers multiple path options for uninterrupted network connectivity, minimizing the risk of downtime.

#### Routing attack immunity

SCION provides immunity to various types of attacks by giving you control over how your data is transmitted based on your policies. Now, you can optimize data transmission for location, speed, cost, and quality on the fly.

#### Geo-fencing

The SCION protocol and its geo-fencing capabilities enhance security and reliability through customizable pathing rules that avoid certain jurisdictions or regions.

#### Quick path switch

In the event of a path failure, the SCION protocol allows for sub-second path switching, ensuring minimal disruption to network operations.

#### Protection from DDoS attacks

Thanks to its unique design, SCION is resistant to many types of routing attacks and offers defense measures against DDoS attacks.

## What is the SCION-Internet?

The **SCION-Internet is a global ecosystem of internet, telecom, and cloud service providers** that work together to create a **new B2B-focused connectivity** experience. It allows businesses to connect their users, partners, and customers to their applications and resources from wherever they are hosted securely, whether that's in a data center or on the cloud.
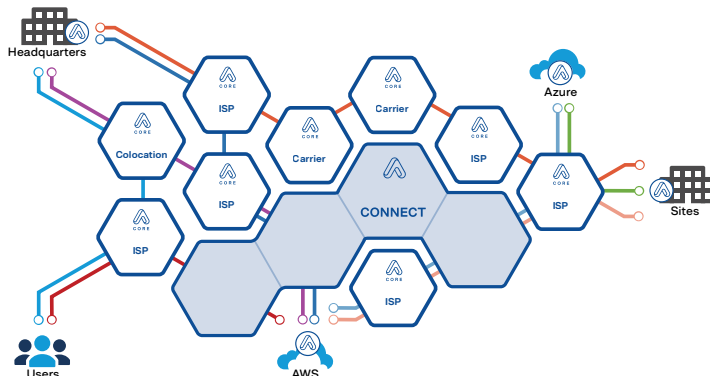


**Through SCION, organizations gain a path-aware, high-performance,** and **secure connectivity** solution, boosting their **business continuity** and **global performance.** They can access and use the network with virtually **no risk of noticeable connection drops or security issues the moment they connect.**

**To join the SCION-Internet, Service Providers** need **to deploy Anapaya CORE** and connect with other participants in a colocation, IXP, or through a SCION-transit provider. Anapaya helps Service Providers maximize their interconnections and reach, which in turn helps End-Customers benefit from the SCION-Internet.

**End-Customers** can install **Anapaya EDGE on their premises and connect** to the nearest SCION-connectivity provider to enjoy the benefits of the network.

The EDGE unit may be provided by the Service Provider as part of their service or by Anapaya Systems. Overall, the SCION-Internet is a collaborative effort by leading companies in the industry to provide a path-aware, more available, performant, and secure way of connecting businesses with their users, partners, and customers.

# Anapaya CORE: enabling Service Providers

Anapaya CORE is the gateway to the SCION-Internet, which uses industrial-grade infrastructure to convert your business network into a top-tier service. To access the SCION-Internet, service providers need to install Anapaya CORE. This software is built around border routers that serve as the data-plane and control services that operate on the control-plane.



**Legend:**
- SCiON Routers
- **IXP** Internet Exchange Provider
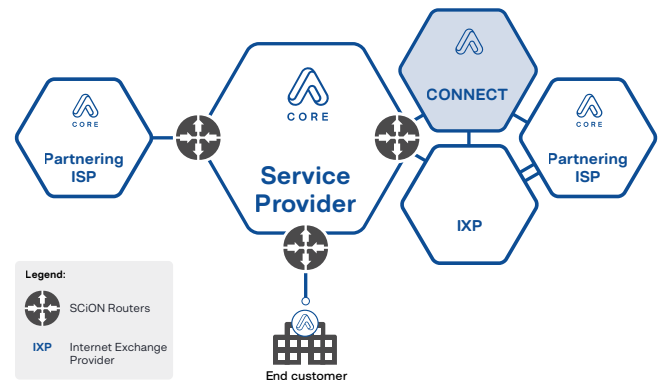
The CORE appliance includes both, the border router and the control service in one component, installed at specific interconnection points with other SCION-enabled providers. Once Anapaya CORE is installed within a service provider, their clients can access and use the SCION-Internet via Anapaya EDGE, which is the end-user gateway to access the SCION-Internet.

Anapaya CORE helps service providers maximize their interconnections and reach, ultimately leading to improved business continuity and global performance. With Anapaya CORE, service providers can take their network capabilities to the next level and offer their clients the very best in networking reliability and security.

# Anapaya EDGE: the gateway to the SCION-Internet

Anapaya EDGE is the gateway to unlocking the full potential of the SCION-Internet. It provides a user-friendly solution for businesses seeking to enhance their network capabilities and securely connect with their clients, partners, and users in a more efficient and cost-effective way.
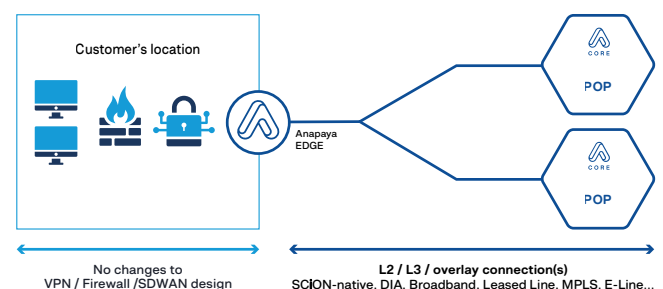


Available as a virtual or physical appliance, this versatile gateway is designed to seamlessly integrate with your existing infrastructure. By selecting the most appropriate paths based on your business policies, the EDGE empowers organizations to optimize their network performance and reliability.
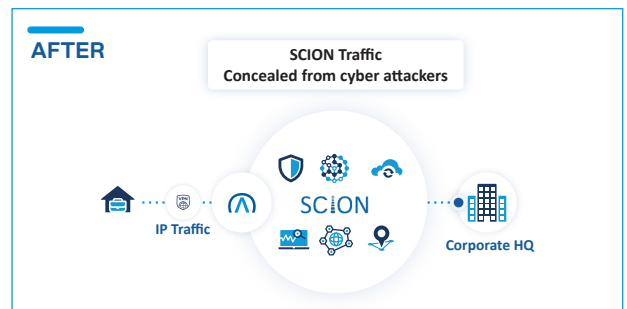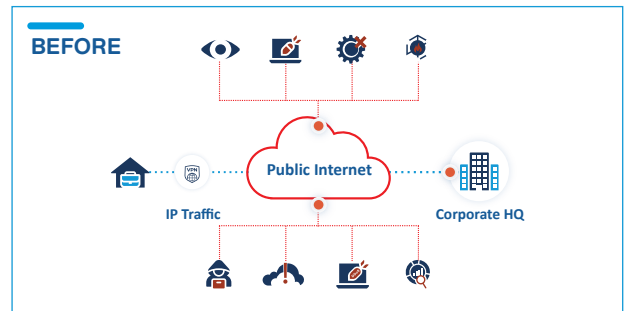
# Anapaya GATE: Secure your Business-critical Services

Anapaya GATE stands as the definitive solution to fortify the security and resilience of your critical business services. Serving as the gateway to the SCION Internet, Anapaya GATE unlocks a realm of possibilities tailored to safeguard your essential online operations within the specially fortified precincts of the Internet—meticulously designed for critical infrastructure.

The Anapaya GATE is a powerful gateway installed in the ISP backbone to collect traffic from diverse sources, including remote workforces. It offers a central point of control and visibility, which allows you to easily monitor, optimize, and secure remote connections by hiding VPN tunnels. Anapaya GATE enables businesses of any size to streamline network management and provide a safe and stable connection the moment they enter.

With real-time failover features, geofencing capabilities, and boosted cloud connections, Anapaya GATE guarantees business continuity and improves your data protection policies



**BEFORE**

Public Internet

IP Traffic        Corporate HQ

**AFTER**

SCION Traffic
Concealed from cyber attackers

SCION

IP Traffic        Corporate HQ

**Ready to experience unparalleled reliability, performance, and security with Anapaya's advanced solutions?**

**Schedule a free consultation and discover how Anapaya can revolutionize your network connectivity.**

Visit **www.anapaya.net** or email us at **sales@anpaya.net**