SCION-Internet and Anapaya software

Secure communication is critical for many B2B data transmissions

Today's internet is flexible and low cost, but lacks protection against cyber risks such as denial of service attacks and traffic hijacks. While private, leased-line connections are secure, they are expensive and inflexible - precluding open, community-based communication.

SCION, a protocol developed at ETH Zurich, addresses these issues by enabling telecom providers, and realizes the vision of a global, public, and highly secure internet.

What is SCION?

SCION is the most secure and reliable open inter-domain routing protocol designed from inception to provide control to the senders of information. By its very nature, SCION offers three unique properties critical for business communication in the form of control, reliability and security.

SCION is control

SCION is designed to provide path-control, failure isolation, and explicit trust information for end-to-end communication.

It offers end-users strong control over their traffic, providing meaningful and enforceable trust, and enabling high path-awareness.

Policy-based path selection
Select how your information is transmitted based on policies you select. They optimise for location, speed, cost, and quality.

Geo-fencing
Set-up pathing rules to avoid certain jurisdictions or regions to boost security and reliability.

SCION is reliability

The SCION protocol enables multi-path communication, which is essential for high availability, rapid failover in case of network failures, reserved global bandwidth, dynamic traffic optimisation, and resilience to attacks.

Multi pathing
The SCION protocol gives you all the pathing options available and there is always a networking solution, and never down-time.

Fast fail-over
With access to multiple paths, the SCION protocol enables users to switch paths in sub-seconds in the case of a pathing failure.

SCION is security

The SCION architecture provides strong resilience and security properties as an intrinsic consequence of its design preventing many attacks by design.

Routing attack immunity
Select how your information is transmitted based on policies you select. They optimise for location, speed, cost and quality.

DDoS protection
By its very nature, SCION is immune to a large array of routing attacks (e.g. prefix hijacking).

What is the SCION-Internet?

The **SCION-Internet is an international ecosystem** of internet, telecom and cloud service providers that collaborate to create a **new B2B-oriented internet**, enabling businesses to connect their users, partners and customers to their applications and resources, wherever they are hosted (datacenter or cloud) using the SCIONway: **a path-aware, more available, performant and secure way.**

Accessing and **using the SCION-Internet helps organisations** increase their **business continuity,** their **global performance**, and reliably access and use the network with virtually **no risk of noticeable connection drops or security problems.**
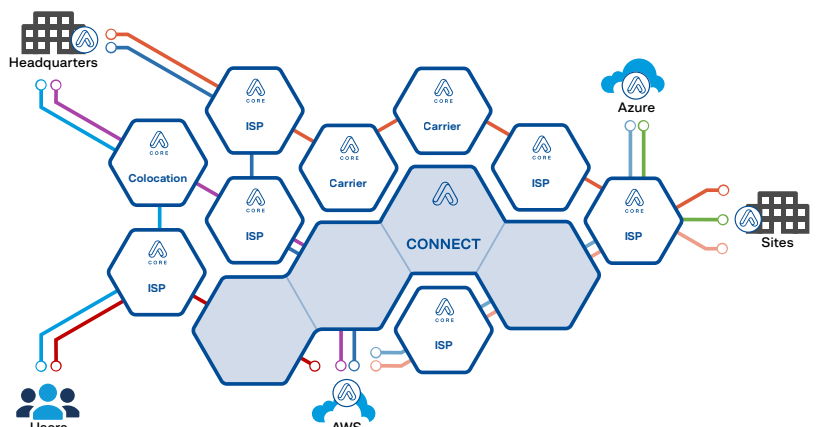
To participate in the SCION-Internet, **Service Providers** are required to deploy **Anapaya CORE and interconnect** with other participants in colocations, IXP or via a SCION-transit provider. Anapaya helps Service Providers to maximize their interconnections and reach.

To benefit from the SCION-Internet's properties, **End-Customers** install **Anapaya EDGE on their premises and connect** to the nearest SCION-connectivity provider.

The EDGE may be provided by the Service Provider as part of its service, or by Anapaya Systems.
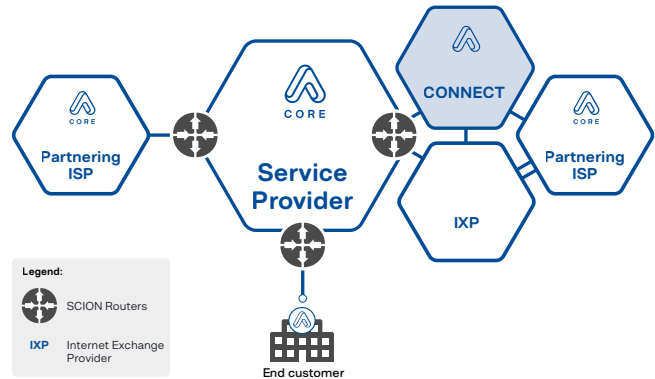
Anapaya CORE: enabling Service Providers

Service Providers: enable your network with Anapaya CORE and take your connectivity to the next level. Offer your clients the best in networking reliability and security, for example to augment your underlay's properties for clients deploying SDWAN.

Anapaya CORE is your key to the SCION-Internet. It supercharges your network using the world class SCION infrastructure and converts your business network into a world class service with industrial grade components.

Anapaya CORE software is required to be installed by service providers in order to access the SCION-Internet. Anapaya CORE is built around border routers serving as the data-plane and control services operating on the control-plane. Where possible, it reuses any existing internal network assets.

The control services are installed on your physical or virtual data center while the border routers are installed at specific interconnection points with other SCION-enabled providers.


Once Anapaya CORE is installed within a service provider, any clients can access and use the SCION-Internet via Anapaya EDGE, the end-user gateway to access the SCION-Internet.

Anapaya EDGE: the gateway to the SCION-Internet

The Anapaya EDGE is the gateway to the SCION-Internet. It gives businesses the ability to connect their users, partners and customers to their apps and resources in a more available, efficient and secure way than previously imaginable.

Available as a virtual or physical appliance and designed to be easy to integrate with existing infrastructure, the EDGE allows organisations to select the most appropriate paths across the Fabric, depending on their business policies.
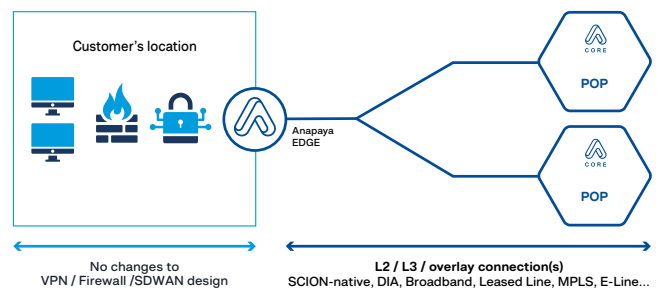
Anapaya CONNECT: benefit from SCION in other parts of the world

Anapaya operates its own SCION-native backbone, part of the SCION-Internet. Anapaya CONNECT is the SCION-Transit product offered to interconnect Service Providers and End-Customers in Europe and Asia (extensions planned for 2020).

To communicate with other participants to the Fabric, you just need to connect to the nearest POP via a private or Internet port and chose the bandwidth level of SCION-connectivity you want to commit on!
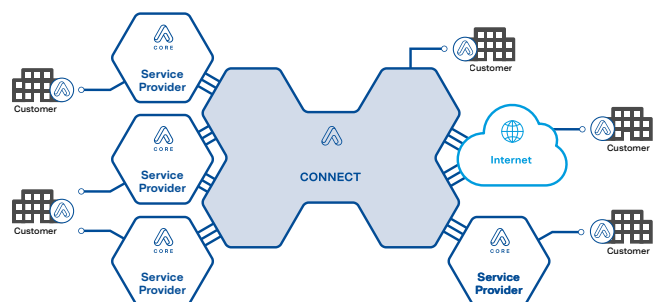
Contact us at JoinTheFabric@anapaya.net or visit www.anapaya.net

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