SCION ASSOCIATION

SCION: THE NEXT-GENERATION INTERNET FOR SAFE, RELIABLE AND HIGH-PERFORMING DATA COMMUNICATION IN TODAY'S WORLD

Designed in the '80s, the current Internet – made up of more than 70,000 networks (or paths) through which data, such as pictures, videos, calls, financial and personal information, flows – can no longer meet the security, reliability, and performance needs of today's society. When data is sent from one device to another, the route it takes is determined automatically, without the sender having any control over it. Unfortunately, this default approach doesn't prioritise factors like safety, reliability, or performance. As a result, data can be routed through vulnerable, unsafe, or congested networks, which puts its integrity, availability, and performance at risk.

Enter SCION: a new, improved Internet that offers data senders complete control over the path their data travels, filling the gaps of today's Internet.

SCION @ a glance

SCION is a new Internet developed by computer scientists at ETH Zürich. Its design prioritises security, reliability and performance by giving data senders control over the path on which data flows, ultimately leading to the following benefits:

IMPROVED SECURITY

Data reaches its destination, safe and sound.

In today's Internet, data senders have to trust the entire Internet all the time. With SCION, senders know all entities in the network, and routing attacks (cyber attacks meant to intercept, modify or block data) are prevented by design.

ENHANCED RELIABILTY

Data reaches its destination, consistently.

SCION overcomes disruptions in network communication and ensures reliable data transmission by promptly re-directing data in case of network failures or outages.

HIGHER PERFORMANCE

Data reaches its destination, quickly, with quality and cost-efficiency.

With SCION, senders can select the optimal path that meets their performance requirements, including speed, quality and cost.

About the SCION Association

The SCION Association, a non-profit organization established in 2022, is unlocking the full potential of SCION and making it accessible to everyone through the development of the following:

- SCION specification: guidelines for developers to implement SCION in an interoperable manner.
- SCION open-source: freely available software for research, development and experimental and commercial deployments.
- SCION certification: a program to certify that SCION implementations, equipment and people working on SCION meet the required standard.
- SCION community: a networking and knowledge-sharing hub.

SCION ECOSYSTEM

RESEARCHERS

With over sixty researchers and hundreds of practitioners using SCION in real-world scenarios, the deployment of SCION's technology continues to expand.

USERS

SCION is the go-to solution for businesses that require secure and reliable online communication, especially when handling critical transactions or sensitive data. With SCION, enterprises in various verticals (such as finance and healthcare), non-profits, app developers and blockchain developers can have complete control over their online data flows, avoiding routing attacks and outages. By leveraging SCION's technology, businesses can also ensure a seamless and better experience for their end-users.

SERVICE PROVIDERS

Service providers play a crucial role in managing and maintaining the infrastructure that enables SCION. Telecommunication providers, Internet Exchange Points (IXPs), network equipment vendors and cloud service providers offer SCION services to the users, enabling SCION's use today.