



SCION.

The Innovative solution for a secure Internet.

SCION (Scalability, Control, and Isolation On Next-Generation Networks) is a new, state of the art technology developed at ETH Zurich, in collaboration with Anapaya Systems. SCION provides a high-quality, secure and reliable networking solution that is based on Internet connections. The technology was developed through 10 years of university research with theoretical and practical validation.

SCION organizes existing Autonomous Systems* (AS) into groups of independent routing planes called Isolation Domains (ISD), allowing for trusted communication between its members in a more efficient way.

How an ISD works with SCION

An Isolation Domain is used to logically group multiple Autonomous Systems which contain country and industry specific IP addresses that can verifiably be trusted. Autonomous Systems that belong to the same ISD will trust each other more than AS from separate ISDs.

SCION primarily concerns itself with traffic between Autonomous Systems within the same ISD. The protocol outlines how paths are created within the ISD and helps to identify the most useful and efficient traffic paths. Traffic path segments can be combined to build paths between any source and destination within the same ISD. For end users, this means that they can find a path to any other host within the same ISD.

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Advantages of an ISD using SCION

An ISD using the SCION protocol has many advantages:

- Greater sender control over data.
- More secure communications.
- Protection against cyber-attacks.
- Fast failover solutions.
- Stronger resilience and redundancy measures.
- Better performance based on cost or latency level rules.
- Single point of access for all other companies.

Additionally, ISDs combine the advantages of private and public networks. They offer a decentralized any-to-any architecture, extreme reliability, protection against network-level threats and clearly defined governance and trust anchors.

Some of the specific benefits of ISD using SCION in practice are:

- Central access control and governance provide additional security measures.
- Each user can communicate in a closed network efficiently with every other user with a flexible any-to-any architecture.
- Additional protection against cyber risks, such as DDoS attacks and hijacking, when compared to Internet connections.
- The connections have instant failover measures to keep application sessions going, even if a physical supply line or central resource fails.
- The network is based on legacy-free technology, with a constant flow of innovation from the SCION community and university research.
- SCION-based networks enable changes and rapid integrations. They use real-time, end-to-end path awareness, finding the most secure and reliable networking routes.

Other business benefits of using SCION include:

- Maximizing investments in connectivity.
- Enabling a shorter time to market through reduced complexity and increased flexibility.
- Future-proofing new digital businesses that rely on security.

* An Autonomous System is a collection of connected Internet Protocol (IP) routing prefixes under the control of one or more carriers on behalf of a single administrative entity or domain that presents a common, clearly defined routing policy to the Internet.

The information in this document does not constitute a binding offer. Subject to changes at any time.

Please don't hesitate to call us if you would like more information.

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