Carrier-collaboration-based Post-disaster Recovery

For the quick and low-cost recovery against the huge disaster, we investigate the approach for the inter-carrier collaboration in the post-disaster recovery. Multiple carriers and a third-party organization can collaborate to design, construct and share a common emergency sharable packet exchange network (ESEN) without the leakage of the confidential information (e.g., carriers' network topologies).

ESEN-based Inter-Carrier Connection for Important Traffic Recovery

In this showcase, we experimentally demonstrate the quick creation and control of ESEN between carriers to convey the highest priority traffic, i.e., the important traffic for victim relief after disasters.

Quickly established emergency flow for victim relief with ESEN-based carriers collaboration

Packet network layer

Optical network layer

City 1

City 2

City 3

Carrier A side

Carrier B side

Emergency sharable exchange network (ESEN)

ESEN Orchestrate

Network Orchestrate

Network Orchestrate