

Lesson Learned

Telecommunications — Redundant Communications

Primary Interest Groups

Balancing Authorities
Reliability Coordinators
Transmission Operators

Problem Statement

A registered entity had communications interrupted during maintenance work as a result of their redundant communications providers subcontracting their back-up systems to a common third-party provider.

Details

Prior to the incident, the registered entity believed it had structured its external broadband communication to be both redundant and diverse. It had separately contracted broadband capacity from multiple telecommunications providers. (To avoid confusion, these contractors will be referred to as direct communications providers.) Unknown to the entity however, these direct communications providers were relying on the same underlying infrastructure provider with respect to their final connections to the facility. (To avoid confusion, this underlying provider will be referred to as the wires vendor.)

The wires vendor interrupted service on the common switch supporting the registered entity office's telephone, Internet, and external data transfer communications to perform upgrades. It did so without prior notice to the registered entity or its direct communications providers. The wires vendor's interruption of service cut off the capacity provided to the office by direct communications providers.

Corrective Actions

- Contracts with communications providers should be reviewed to ensure there is no common equipment in what is supposed to be a redundant and diversely routed communications system.
 - This review should extend all the way to third party providers such as wires vendors.
- The registered entity should work with their communications providers to ensure that no one single point of failure could cause an outage.

Lesson Learned

When awarding communication provider contracts to multiple vendors for the purposes of establishing redundant and diverse communication paths, it should be verified that each path, where possible, is reviewed at a component level to ensure the paths do not share any elements. Additionally, it should be specified in the contract that the path should not be changed without a review by the registered entity to confirm that the change will not result in a single point of failure.

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