

Name: IT Operations 10 Gig Internet Upgrade

Completed: August 2023

Goal Alignment:

RESILIENT - Deliver viable IT solutions that are dynamic, scalable, and maintainable.

PARTNER - Create a citywide community of partnerships with citizens, businesses, communities, higher education, and a wide array of stakeholders.

Summary: With the City's adaptation of work from home and the increased integration of systems in the cloud to ones on the City's network, it became obvious that a 1 Gig connection to the Internet was not going to provide the bandwidth we would need. Since we provide fiber connectivity to the state over our city-owned fiber infrastructure, we took the opportunity to negotiate for an upgrade to 10 Gig when they needed to connect to new State facilities. To accommodate the increase in networking speed, we had to upgrade our routers and switches that interconnect the City, PD, FD, and the state's network.

After replacing the older equipment and changing out the fiber SFPs on all the connections we now have two 10 Gig links to the internet. Since we were replacing the routers that connect to the state, we took the time to add code to detect failure, notify us of the failure, and automatically reroute traffic to the appropriate link. This upgrade will allow us to continue to expand our presence in the cloud and use more bandwidth-hungry applications as they become available.

Benefits:

- Features:
 - We connected to that State's network from both City Data Centers. This resulted in diverse resilient internet paths. Additionally, we created a partnership with CDT that established direct lines of communication.
- Highlights:
 - In 2017 we established an MOU with CDT when we established our 1 Gig internet services. We renewed our MOU for 10 years and increased our internet speeds to 10 Gig, with the option to increase internet speeds later without renewing the contract.
 - We included Distributed Denial Of Service DDOS mitigation services at no cost.
 - We also benefit from CDT's established Security Operations Center services at no cost.
- Any savings to the city:
 - Savings to the city over the life of the contract are estimated to be \$ 2 million.