tw telecom℠

National Operations Center

National Operations Center

Network Connectivity

tw telecom offers a wide range of data networking services to support your business continuity plans, including Internet access, Storage Transport, Private Line, Metro Ethernet, and IP VPN. We'll work with you to design and customize a network solution to best fit your business continuity and recovery needs.

Diversify Your Communications Providers

tw telecom's disaster recovery programs provide you with the opportunity to diversify your telecommunications providers and build redundancy into your networks. One of the most critical aspects of your business continuity plan should address the loss of service from your primary communications provider. By tapping into **tw telecom**'s business continuity solutions, you not only mitigate the risks of losing your communications if your provider's network is impacted, but you leverage the superior reliability of **tw telecom**'s national fiber network.

Steps to Successful Continuity Planning

1. Protect your data.
Backup data regularly at an off-site location so that you'll always have your most critical information.

2. Implement a plan.
Develop, test and maintain a disaster preparedness/business continuity plan.

3. Identify a back-up site.
Secure an alternate location where your IT operations can resume in the event your physical location is destroyed or damaged.

4. Make communications part of your plan.
Determine in advance how technology will play a role in your organization's plans to communicate with employees, local authorities, customers and others during and after a disaster.

Business Continuity Solutions

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Communications are critical to the productivity of your business. Whether you're trying to protect sensitive data, stay connected with remote employees, or simply want to stay in touch with your customers, you know that losing your communications, even for a short time, can mean the difference between success and failure.

Planning is Key

News reports of major natural or man-made disasters are common. While the effects of these events may be obvious, communications systems can be vulnerable to even the smallest of problems. Whether large or small, without proper preparation, the impact to your business can be devastating.

Mitigating the effects of an emergency with a detailed business continuity and disaster recovery plan can help you stay connected to your employees, your customers, and your communities—when it matters most.

Effective Business Continuity Plans:

- Provide direction and leadership in the midst of chaotic events.
- Minimize financial losses, regulatory fines, loss of market share, damage to equipment or products, or business interruption.
- Ensure regulatory compliance.
- Enhance your company's image and credibility with employees, customers, suppliers and other stakeholders.

We understand that preparing to protect your IT assets against disaster is a challenge. **tw telecom** works with you to simplify the process by developing protection alternatives.
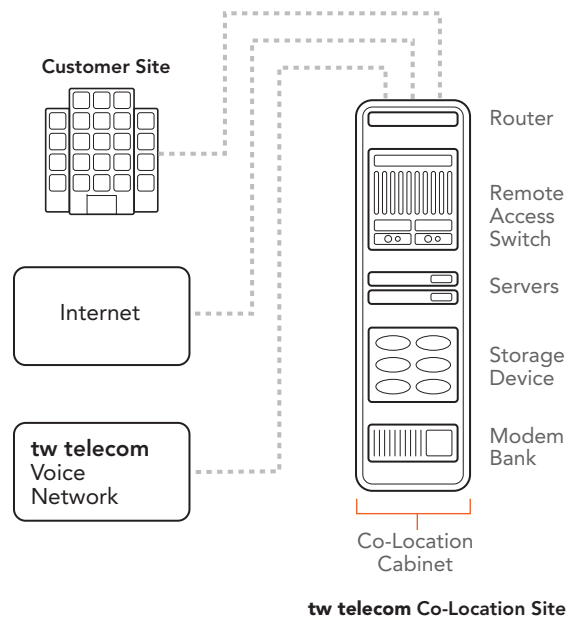
About tw telecom

tw telecom delivers the most advanced telecommunications solutions on the market to a wide spectrum of businesses and organizations across the United States. Since 1993, we have built a legacy of success through exceptional customer care, remarkable products and powerful networks. These strengths enable us to deliver scalable solutions that help customers improve their business metrics. For more information, please visit **www.twtelecom.com**.

Business Continuity Products and Services

Co-Location

tw telecom's co-location facilities support business continuity needs with a secure environment, and provide dedicated space for your equipment and data storage. Our co-location service helps to free up your staff and resources and lets you remain focused on keeping your business running. When you store your equipment or house your company's data in one of our co-location facilities, you receive a back-up site for your mission critical data as well as a gateway to the industry's most robust local and regional optical networks.
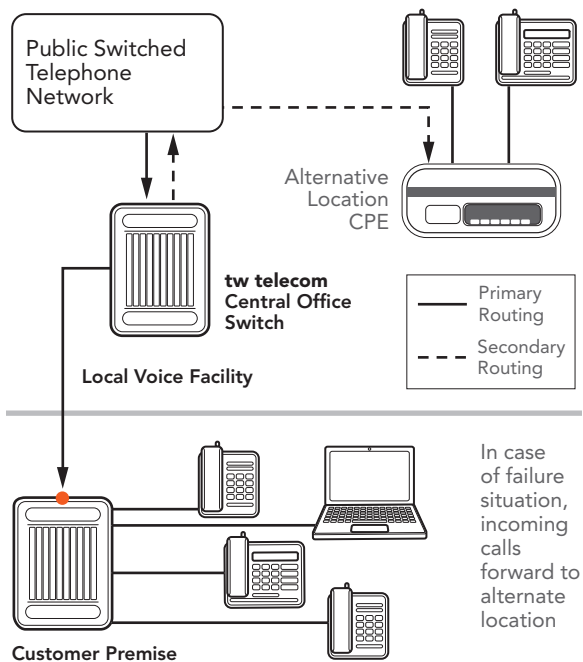
tw telecom Customer Site and Co-Location Cabinet

Customer Site

Internet

tw telecom Voice Network

Router

Remote Access Switch

Servers

Storage Device

Modem Bank

Co-Location Cabinet

tw telecom Co-Location Site

Voice Disaster Routing

When you purchase traditional voice services from **tw telecom**, you can add disaster routing functionality for a small monthly fee. In the event of a failure, your trunk group will be automatically forwarded to a pre-determined alternate location. You may also make a request directly to our National Operations Center to redirect inbound calls to a location you specify.

tw telecom Disaster Routing

Public Switched Telephone Network

Alternative Location CPE

tw telecom Central Office Switch

Local Voice Facility

— Primary Routing

--- Secondary Routing

In case of failure situation, incoming calls forward to alternate location
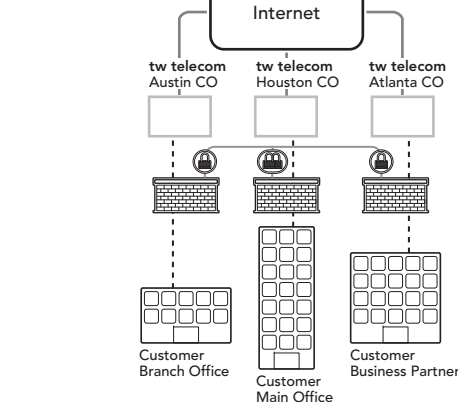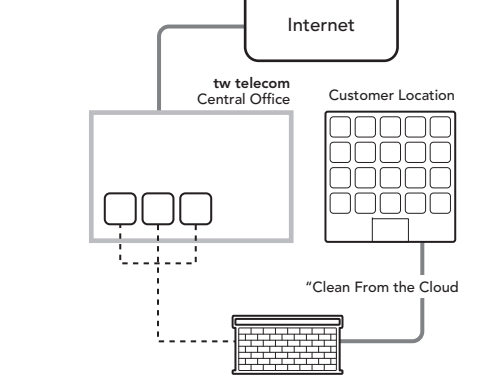
Customer Premise

Managed Security

Our reliable, customizable and scalable Managed Security Services monitor and secure your network to prevent security breaches or network attacks. Choose from a network-based firewall managed from **tw telecom**' central offices, or a local firewall situated on your premises.

tw telecom offers a proactive Distributed Denial of Service (DDoS) Mitigation Service, which monitors and mitigates potentially harmful network attacks. **tw telecom** monitors your Internet traffic patterns for deviations from your normal traffic baseline. Our dedicated staff will alert you of any deviations to confirm their validity. Upon your consent, a block will be placed in our network to relieve that traffic before it ever reaches your connection.
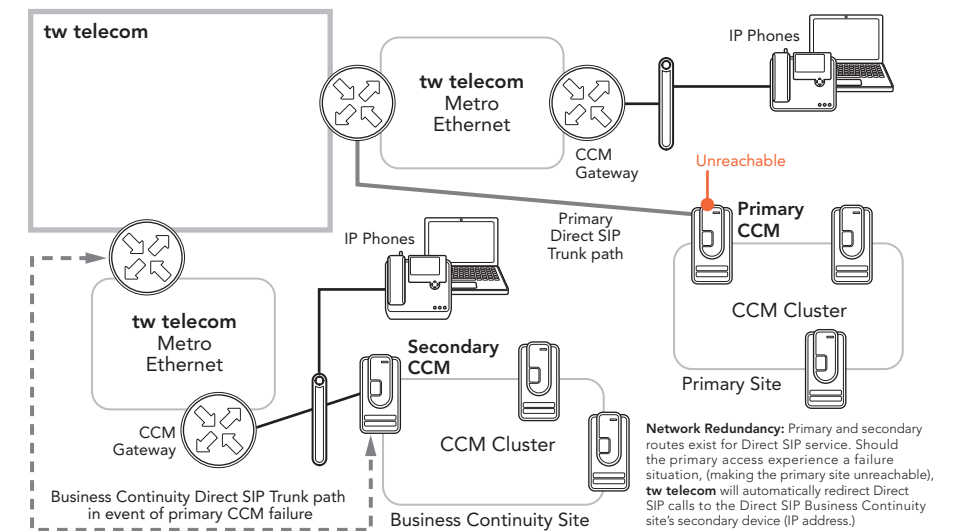
CPE Based

Internet

tw telecom Austin CO

tw telecom Houston CO

tw telecom Atlanta CO

Customer Branch Office

Customer Main Office

Customer Business Partner

Network Based

Internet

tw telecom Central Office

Customer Location

"Clean From the Cloud"

VoIP — Direct SIP Site Redundancy

As part of **tw telecom**'s Direct SIP product, you can take advantage of device or site redundancy. In the event of a failure, calls will be automatically re-directed from your primary IP address to a secondary IP address. This provides uninterrupted VoIP service.

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tw telecom Metro Ethernet

IP Phones

CCM Gateway

Unreachable

Primary Direct SIP Trunk path

Primary CCM

CCM Cluster

Primary Site

tw telecom Metro Ethernet

IP Phones

Secondary CCM

CCM Gateway

CCM Cluster

Business Continuity Direct SIP Trunk path in event of primary CCM failure

Business Continuity Site

Network Redundancy: Primary and secondary routes exist for Direct SIP service. Should the primary access experience a failure situation, (making the primary site unreachable), **tw telecom** will automatically redirect Direct SIP calls to the Direct SIP Business Continuity site's secondary device (IP address.)