Priority

WHITEPAPER

PRIORITY ACCESS AND PREEMPTION FOR CRITICAL COMMUNICATIONS.

Connectivity that puts public safety at the front of the line.

T-MOBILE FOR BUSINESS

Executive summary.

Critical service teams deserve the ultimate in-network performance. That's why we created T-Priority—built for tomorrow's emergencies, ready today.

T-Priority is purpose-built for the millions of workers in the U.S. who stand ready to help with everything, from emergency response efforts to the restoration of critical services following disasters. Critical service teams increasingly rely on smartphones, tablets, and IoT devices to communicate—both with dispatch and one another. But during emergencies, when cellular traffic spikes significantly, even a fast and reliable network can become congested.

With T-Priority—America's first network slice for public safety and critical services—you get more capacity for vital communications, faster speeds when every second counts, and better 5G coverage where you need it most, even during extreme traffic.

Another benefit T-Priority users receive is priority access and preemption, which moves your team's communications to the front of the line, keeping you connected when it matters most.

Learn how priority access and preemption work and how they can help your public safety and critical service teams:

- **Improve** operational continuity.
- **Optimize** resource allocation.
- **Enhance** team coordination.

> **In an emergency, staying connected is vital to delivering an effective response that protects public safety. Priority access and preemption with T-Mobile ensures critical communications are prioritized.**
>
> - Stuart Campbell, T-Mobile for Government

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Increasing network demands.

Each year in the U.S, 240 million calls[1] are made to 911. When everyone's trying to connect at once, you need a network that puts your communications first.

Today's critical service communications rely on smartphones, tablets, and IoT devices, so you need connectivity that goes beyond the limited coverage and capacity you get with Land Mobile Radio (LMR). You need a network built to handle the large amount of data generated by live land mobile radio video feeds, real-time GPS maps, large image files, and more.

T-Priority delivers America's best 5G experience for critical service providers. More capacity means your team can share crucial data more seamlessly.

Faster speeds help ensure your priority communications get through. And better coverage keeps you connected even in the most challenging situations.

During large public events or local emergencies, critical service providers compete with general traffic for bandwidth, at times causing networks to become overloaded. This extreme demand can challenge a network's ability to deliver consistent and reliable connectivity and can result in delays, dropped calls, or lack of access. For critical service teams, even minor delays can get in the way of an effective response. Priority and preemption makes all the difference by moving critical service providers to the front of the network line to ensure they have the most dependable access.

The impact of network congestion.

Without priority access and preemption, network congestion can cause:

Reduced situational awareness.

Network access challenges in data sharing and updates can impede decision making and impact safety.

Delayed response times.

Critical information may not reach the intended recipient and can compromise response effectiveness.

Inefficient resource allocation.

Overwhelmed networks can get in the way of clear communication, delaying deployment and leading to missallocation or underutilization of critical assets.

Keep information flowing smoothly.

Staying connected to the network keeps communication flowing. Your critical service teams need an advanced network that's ready to handle all data-intensive applications. One that's fast. Reliable. Ready.

Priority access and preemption services from T-Mobile for Business place critical communications before non-essential traffic. With it, your teams can keep talking and sharing information, even during peak network usage.

And because priority access and preemption complement existing LMR systems, organizations have a flexible, scalable way to transition to cellular-based communication without disrupting operations.

Automatic prioritization for authorized devices.

It's simple. Priority access and preemption gets to work when networks become extremely congested, like during a large public event or severe weather.

The T-Mobile network automatically detects and prioritizes calls from critical infrastructure organizations' requiring no action on their part. That helps ensure vital communications connect and are sent without delay.

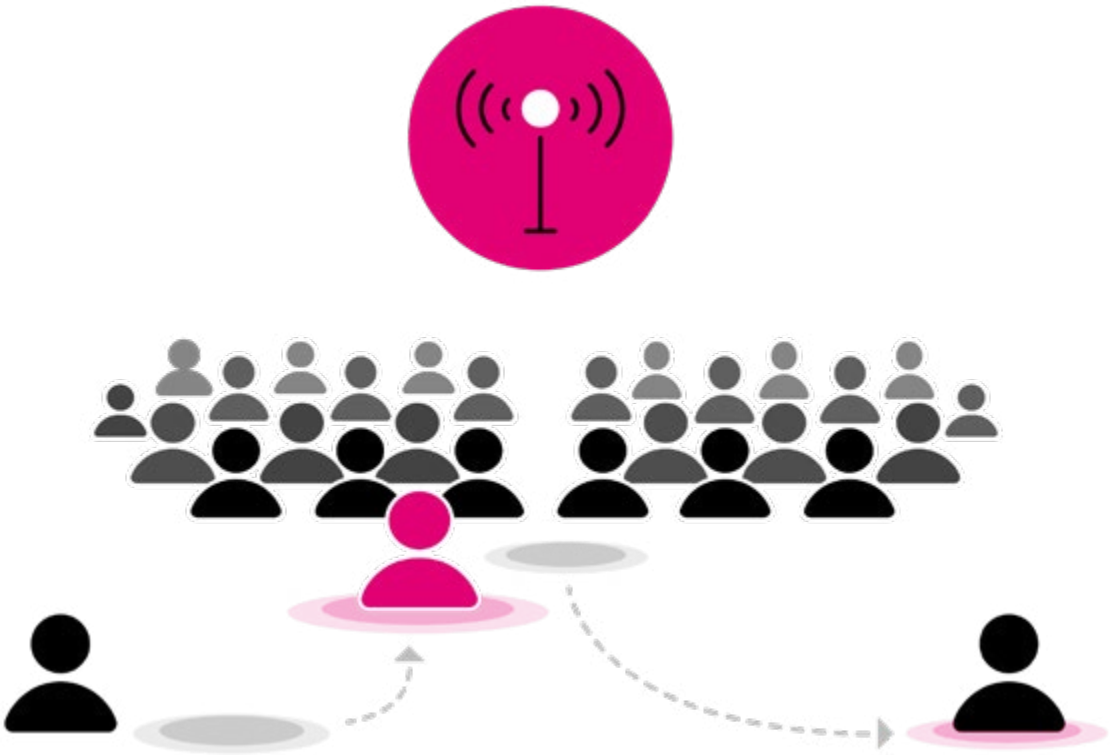
When a critical service worker's device tries to establish a radio connection to a nearby cell tower, priority access and preemption prioritizes that connection over others using information in that device's SIM card settings. Next, the prioritized device connects from the tower to the core network. Wireless Priority Service (WPS) prioritizes the traffic again, moving it to the front of the line if network restrictions exist.

Once connected, with T-Priority, established calls have priority to stay connected and share data during extreme congestion or poor radio coverage.

Meanwhile, non-priority users can be preempted from the network to make room for your team's connections. Sometimes, that means non-priority users will be removed from the network. However, that's rare since our 5G network's current capacity is robust enough to handle most scenarios.

In extreme network congestion—caused by a natural disaster or massive network disruption—the slice will dynamically expand to provide the extra capacity needed to maintain the performance baseline. So, critical service teams are first in line for both voice and data.

How priority access works.



Priority access:

Eligible customers move to the front of the communication line. They're also exempt from preemption during extreme congestion. All calls automatically receive priority access on the T-Mobile network.

Preemption:

Because the T-Mobile network is so robust, our need to preempt any communication is low. If necessary, non-priority access T-Mobile customers are dropped to make room for priority access users.

WPS end-to-end prioritization:

Eligible communications from T-Mobile customers are prioritized over other traffic with no need to dial *272. T-Mobile users can use WPS to prioritize calls on the receiving network by dialing *272 (or using the PTS dialer app) - a feature consistent with all cellular networks.

Supporting continuity and security.

When cellular networks are congested, priority access and preemption is there for you, helping your voice and data calls get through during emergencies and recovery efforts.

We provide priority access and preemption to all customers eligible for WPS, which is determined by criteria established by the Department of Homeland Security for the WPS program.

Qualified first responders and critical service providers get priority access and preemption service during emergency situations. With your critical communications prioritized on our nationwide 5G network, you can:

- **Improve operational continuity:** Maintain continuous operations, even in emergencies.
- **Optimize resource allocation:** Deploy assets and personnel where they are most needed.
- **Enhance team coordination:** Deliver critical communications without delay.

USE CASE

Keeping mission-critical services online and available.

During a storm surge, the traffic from users attempting to report outages en masse can strain the network due to the rapid increase in traffic. Simultaneously, utility workers need to use monitoring systems to help them keep track of grid performance in real time.

Priority access and preemption moves your utility teams' communications to the front of the line for the connectivity they need. And if the grid goes down, this network prioritization means supervisors can send maintenance teams where they are needed most, without delay. Now, your teams can quickly and efficiently respond to emergencies and maintain reliable service for their communities.

Priority

Built for tomorrow's emergencies. Ready today.

Like many critical service providers, you're likely using your smartphone in your recovery efforts. You might also be using drones and AR/VR tools. These data-intensive devices create a much larger need for network capacity, which may require extra network support.

Get the edge you need with T-Priority. Built on our 5G Standalone (SA) core, T-Priority is the America's first 5G slice for first responder and critical service teams. That means you'll get America's best 5G experience with:

- More network capacity for your critical communications.
- Faster speeds to support data-intensive applications.
- Better coverage.

With T-Mobile, you get premium access to network resources to deliver a target baseline level of service.

By using a target minimum bitrate (MBR), first responders and critical service teams can maintain a consistent quality of data transmission to complete critical communications. On the T-Priority slice, your teams receive 2x the standard WPS baseline downlink throughput, while those not on the slice receive a target minimum throughput of 512 kbps.

Combined, this means you'll have greater assurance that your calls and data will get through. Plus, you'll have a higher minimum bandwidth transfer speed during rare times of extreme congestion.

In times of congestion, we put critical service teams first. We commit network resources to help maintain threshold throughput - upload and download - for eligible customers in most situations.

The power of the T-Mobile 5G network.

To keep critical service calls and information flowing smoothly, today's smart devices require:

High capacity.

Lower latency.

5G

High-speed connectivity.

That's where 5G SA really makes a difference. With advanced features like ultra-low latency and network slicing, you'll experience superior benefits compared to Non-Standalone (NSA). That translates to faster speeds for a greater number of devices on less spectrum.

And, because 5G SA doesn't depend on 4G infrastructure, it optimizes 5G spectrum and resources for more efficiency.

It's also built for the long haul, laying the groundwork for future innovations and emerging technologies. So, devices purchased today will remain compatible with current and future technology for an extended period.

We're industry leaders in deploying 5G SA nationwide, and T-Priority was designed specifically for our 5G SA architecture. By comparison, the AT&T/FirstNet 4G LTE network is built on legacy infrastructure that's older and slower. FirstNet is a separate network with less capacity than AT&T's commercial network, and it must be upgraded and maintained separately.

With its 5G SA network core, T-Priority:

- **Delivers 2.5X faster** all-network speeds on average compared to other providers.
- **Offers 40% more** 5G capacity and more far-reaching
- 5G coverage than AT&T or Verizon, with T-Mobile covering 98% of Americans.
- **Provides enhanced security**, with access to a security slice from T-Mobile SASE that helps defend against cyber threats.

Plus, T-Priority prioritizes data for smartphones with data plans and data-only devices such as tablets and routers.

It also prioritizes Push-to-Talk (PTT) communications, including Mission-Critical Push-to-Talk (MCPTT) capabilities for seamless, reliable communication among critical service providers.

Virtual networks tailored for critical service providers' unique needs.

When you tap into the T-Priority network slice, you'll see a wide range of benefits. Prioritized traffic is one of them, which is possible using virtual networks tailored to critical service providers' specific needs.

Also, our dedicated network slice is designed to provide our highest priority on the network to your organization. And with T-Priority, you have priority data transmission to send and receive the critical information you need to serve the public.

This advanced network brings you even more important benefits, including:

More capacity.
Get reliable connectivity for your critical services teams, even in high-density environments.

Faster speeds.
Access and send large amounts of data quickly with higher transfer speeds.

Lower latency.
Support real-time communication during time-sensitive operations and innovative use cases.

More 5G coverage.
With the nation's largest 5G network, we cover 98% of Americans across more than 2 million square miles.

Enhanced security SASE.
Access a security slice from T-Mobile SASE that helps defend against cyber threats.

USE CASE

Coordinated power restoration during storm recovery.

After a powerful storm knocks down power lines across a city, utility workers use ruggedized mobile devices to access real-time infrastructure maps, view affected areas, and receive updates on outages. The storm leads to high network congestion, as residents and emergency responders flood the area with calls and data.

With priority access and preemption from T-Priority, utility teams can maintain clear communication and reliably retrieve details about the progress of restoration work.

USE CASE

Efficient coordination during equipment failure at a parade.

During a parade, a float's hydraulic failure blocks the route, delaying traffic and essential services. As attendees post live updates to social media and use GPS apps, the network becomes highly congested, making communication difficult. Despite this, logistics teams using T-Priority remain connected, allowing them to coordinate an efficient response. They use smartphones and tablets to access real-time maps, communicate with dispatch systems, and use fleet tracking to reroute vehicles. Drones provide aerial views of the blockage, helping teams assess the situation and deploy resources effectively.

Keeping critical service teams connected.

Priority access and preemption with T-Priority provides the reliable performance you deserve for recovery work. Through ongoing collaboration with government agencies and critical service organizations, our cutting-edge technologies help ensure your teams get ultimate priority on all communications—nationwide.

This is enhanced recovery and resilience with T-Mobile.

Explore solutions at T-Priority.com and see how we empower essential operations.

Disclaimer
For qualifying organizations on eligible rate plans. WPS enrollment with USDHS required for enhanced network functionality (including priority access, preemption, basic performance baseline, and T-Priority Slice features). Features available on our network; not available while roaming. T-Priority Slice features (data prioritization and enhanced downlink baseline) available in areas of Ultra Capacity 5G coverage with capable device and 5G Standalone settings; see T-Mobile.com/5Glayers. Baseline commits available network resources to help maintain threshold throughput; does not guarantee threshold speeds in all network conditions. Fastest all-network speeds based on Opensignal Awards – USA: Mobile Network Experience Report July 2024. Coverage not available in some areas and may be impacted by emergencies; check your response area. See 5G device, coverage, & access details at T-Mobile.com.

[1]U.S. Accountability Office, "NEXT GENERATION 911." September 2024. https://www.gao.gov/assets/gao-24–106783.pdf