



QuantTalk

QUANTUM NETWORKS QUARTERLY DIALOGUE

Inside Networking

Certificate-Based Authentication

How does it work?

Not every 802.1X login works the same way. Some methods still use usernames and passwords. Certificate-based authentication takes a different approach.

Instead of entering a password, every approved user or device is issued a digital certificate. When it connects to the network, the certificate is verified before access is granted. This removes the need to share passwords and makes every connection individually identifiable.



Why are organizations moving to certificates?

- No passwords to remember or share
- Every user and device has a unique identity
- Faster and more secure network access
- Better visibility of connected users
- Works across wired and wireless networks

Where does QAM fit in?

Quantum Access Manager (QAM) supports certificate-based authentication using EAP-TLS. It can issue and manage digital certificates through its built-in PKI to help organizations replace shared passwords with trusted user and device authentication.

In simple words

Think of it this way:

A shared password is like giving everyone the same key. A digital certificate is like issuing each person their own access card. Only the person with the right card gets in.

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It feels harmless. A quick login. A temporary workaround. A convenient way to get something done.

But what happens when that shared password is used by someone it was never meant for?

This is exactly where the problem begins. Once credentials are shared, accountability starts to disappear.

In many organizations, shared passwords are still common across employees, temporary users and devices. What seems convenient at first can quickly create visibility gaps, unauthorized access and serious operational risks.

The biggest security risk in many environments is not always a hacker. Sometimes, it is a shared password.

When multiple users access the network using the same credentials:

- Limited User Visibility
- Unauthorized Access Goes Unnoticed
- Weak Access Control
- Difficult Security Investigations

The issue is no longer just about passwords. It is about knowing who is actually connected to the network.

Businesses now require identity-based access in which every user session is authenticated, monitored and managed individually.

Once a password is shared, accountability becomes difficult to trace.



Designed to bring accountability back to network access.

What's New?

QUANTUM
NMS
Network Monitoring System

Meet QNMS, our Network Monitoring System

QNMS brings monitoring and management into one place, making it easier to keep track of devices, servers and IT assets across heterogeneous network environments. With a single dashboard, administrators gain better visibility and control across their network.

Why Wi-Fi 7 Is Required in 2027

The number of connected devices isn't slowing down. Phones, laptops, cameras, IoT devices and collaboration tools are all competing for network resources every day. At the same time, users expect faster applications, smoother video calls and uninterrupted connectivity wherever they work. This is where Wi-Fi 7 comes in. It is built to handle growing device density and increasing network traffic more efficiently.

Wi-Fi 7 offers:

- Better performance in crowded environments
- Lower latency for real-time applications
- Improved handling of high device density
- More consistent connectivity during busy hours

As organizations plan their next network upgrade, the focus is shifting from meeting today's needs to preparing for the demands of 2027 and beyond. Because waiting for the network to become a bottleneck is rarely the right time to upgrade.



CUSTOMER STORY

Devices Managed Daily

2000+

SOCIAL is a popular neighbourhood café and collaborative workspace where people come to work, meet and unwind.

 **VERTICAL**
Retail Hospitality

 **LOCATIONS**
66 outlets across India



Quantum Networks powers the infrastructure across SOCIAL locations using: Access Points, Switches, Gateways and Q-Services.

With multiple outlets and a large number of daily visitors, the network must support both guest connectivity and internal operations.

This setup supports back-office systems while providing smooth network access for visitors and teams across all outlets. The result is a stable network that keeps operations running while supporting thousands of connected devices every day.

What's Next for Quantum Networks?

There's plenty happening across the Quantum ecosystem.

Here's a look at what's coming:

- NDCPP-compliant Quantum Switches
- New features with QNMS
- Enhancements to real-time network management
- Expansion of the Starlight IoT platform
- A new partner engagement program
- New Classroom sessions on QNMS, wireless sizing and site surveys

We're looking forward to sharing more with our partners and customers in the months ahead.

QUANTUM™ CLASSROOM

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Where Learning Begins

More than 3,000 professionals have already been part of the Quantum Classroom journey through certifications, technical sessions and hands-on learning.

From wireless fundamentals to troubleshooting and deployment best practices, Classroom continues to bring practical networking knowledge closer to the Quantum community.

Have you started your Classroom journey yet?

Stay Informed with QN Blogs:

OpenRoaming: What If Wi-Fi Just Connected?

Public Wi-Fi shouldn't mean logging in every time you visit a new location.

OpenRoaming replaces repeated captive portals with trusted, identity-based authentication..

Why OpenRoaming Matters

- Automatic connection to trusted Wi-Fi networks
- Secure identity-based authentication
- Fewer captive portal logins
- A more consistent user experience
- Faster, safer, and more reliable connectivity for users and

Read the full blog here: <https://www.qntmnet.com/openroaming>

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