
NIAGARA
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2026
SEAMLESS CONNECTIVITY,
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Cybersecurity: Is Your Organization Next?

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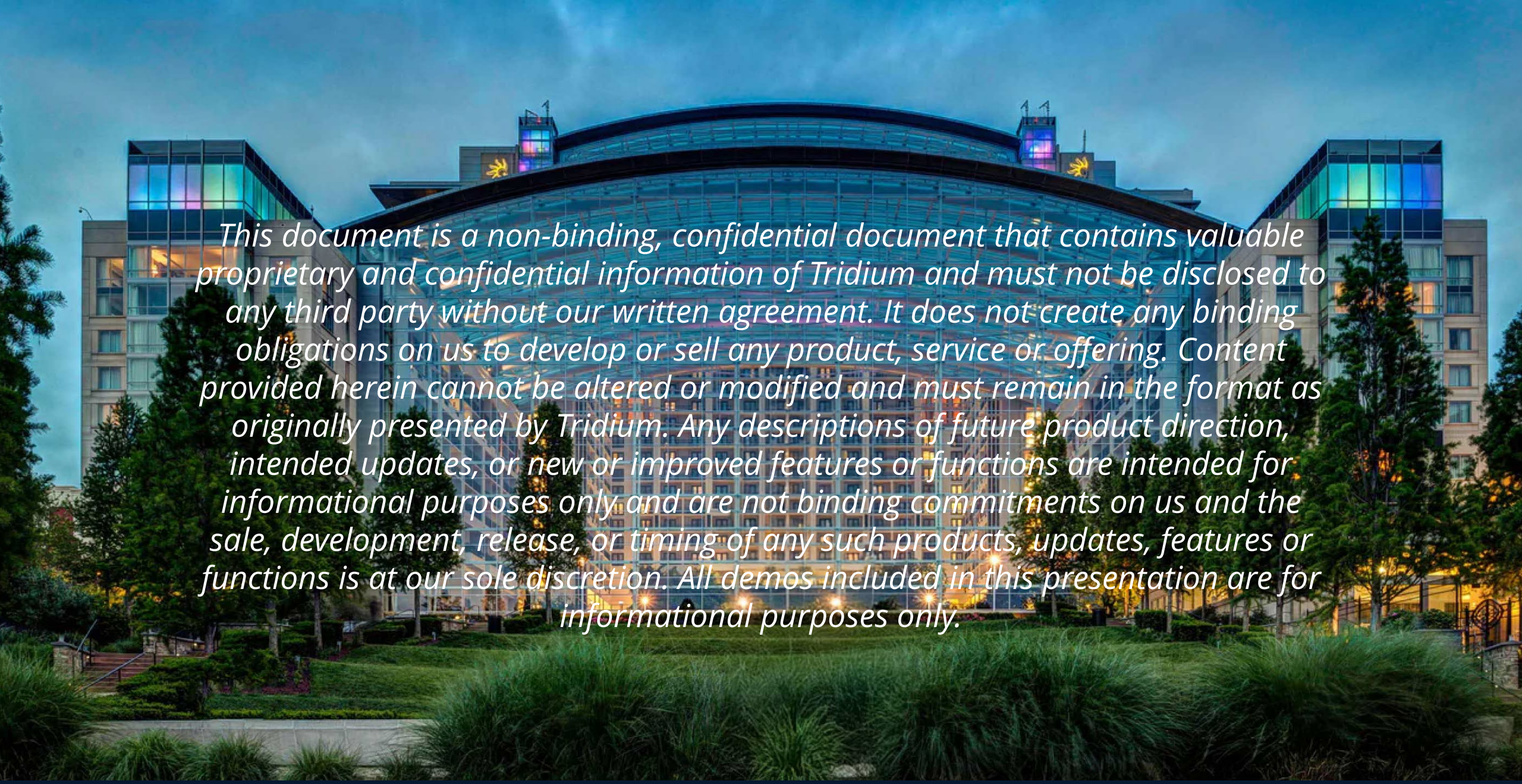
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Cybersecurity | Is Your Organization Next?

- IT + OT Reality Check
- Data Breaches & Headlines
- What We Can — and Are — DoingSecurity Dashboard
- Certificates | What They Are & Why They Matter
- Certificate Management in Niagara 4.15
- Syslog Integration
- Code Signing | What It Is & Why It Matters
- Provisioning | Secure by Default at Scale
- The Secure-by-Default Workflow

IT + OT Reality Check

- **IT and OT used to be separate worlds.**
  - IT cared about data, apps, users, and networks
  - OT cared about HVAC, lighting, access control, and equipment

- **That separation is gone.**
  - BAS now rides on the same networks as corporate IT
  - talk over IP, Wi-Fi, cloud, APIs, and mobile apps
  - Attackers don't care if it's "IT" or "OT" — it's all an entry point

- **The result:**
- Buildings are now part of the cybersecurity attack surface
- And most BAS were never designed with modern cyber threats in mind

Data Breaches & Headlines

- Ransomware, supply-chain compromise, credential theft, and remote-access attacks continue to impact organizations across OT environments

- OT systems — including HVAC, access control, lighting, water, and manufacturing — are increasingly targeted by attackers

- Connected building systems are routinely scanned, indexed, and probed by automated tools and threat actors

- The next major breach could easily involve a BAS — this is the reality of connected OT

- The urgency is real — but Niagara gives us the tools to help manage it

Sources:
SecurityWeek – *Building Automation Protocols Increasingly Targeted in OT Attacks* (Forescout Threat Roundup data).
Waterfall Security – *2024 Threat Report: OT Cyberattacks with Physical Consequences* (ransomware + vendor compromise trends).
CyberSec Magazine – *Case Study: Real-World OT Cyberattacks and Lessons Learned* (HVAC/OT remote-access exploitation).
BitSight – *ICS/OT Exposure Report* (180,000+ exposed ICS/OT devices monthly).

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What We *Can* and *Are* Doing

- **Secure by Default**: designing Niagara so the secure choice is the easy — and often only — choice
- **Stronger platform & station security** in Niagara 4.15: TLS improvements, encrypted bog files, better certificate workflows
- **Improved code signing & Syslog integration** for integrity and visibility
- **Secure Boot on JACE hardware** ensures only Tridium-signed software can run
- **End-to-end ecosystem hardening:** platform, station, certificates, TLS, code signing, Syslog, provisioning, and hardware
- **Deprecation of non-secure Web and Fox in future versions of N5** to enforce TLS-only communication

Security Dashboard

- Provides a unified view of a station’s overall security posture
- Surfaces certificate issues, weak credentials, and insecure configurations
- Breaks visibility into clear layers — Platform, Station, and Services — for faster diagnosis
- Highlights items that may need attention and offers guided remediation steps
- Helps operators validate trust chains, service settings, and secure-by-default configurations
- Scales from single stations to multi-site deployments with consistent posture reporting

Security Dashboard

Video Demo

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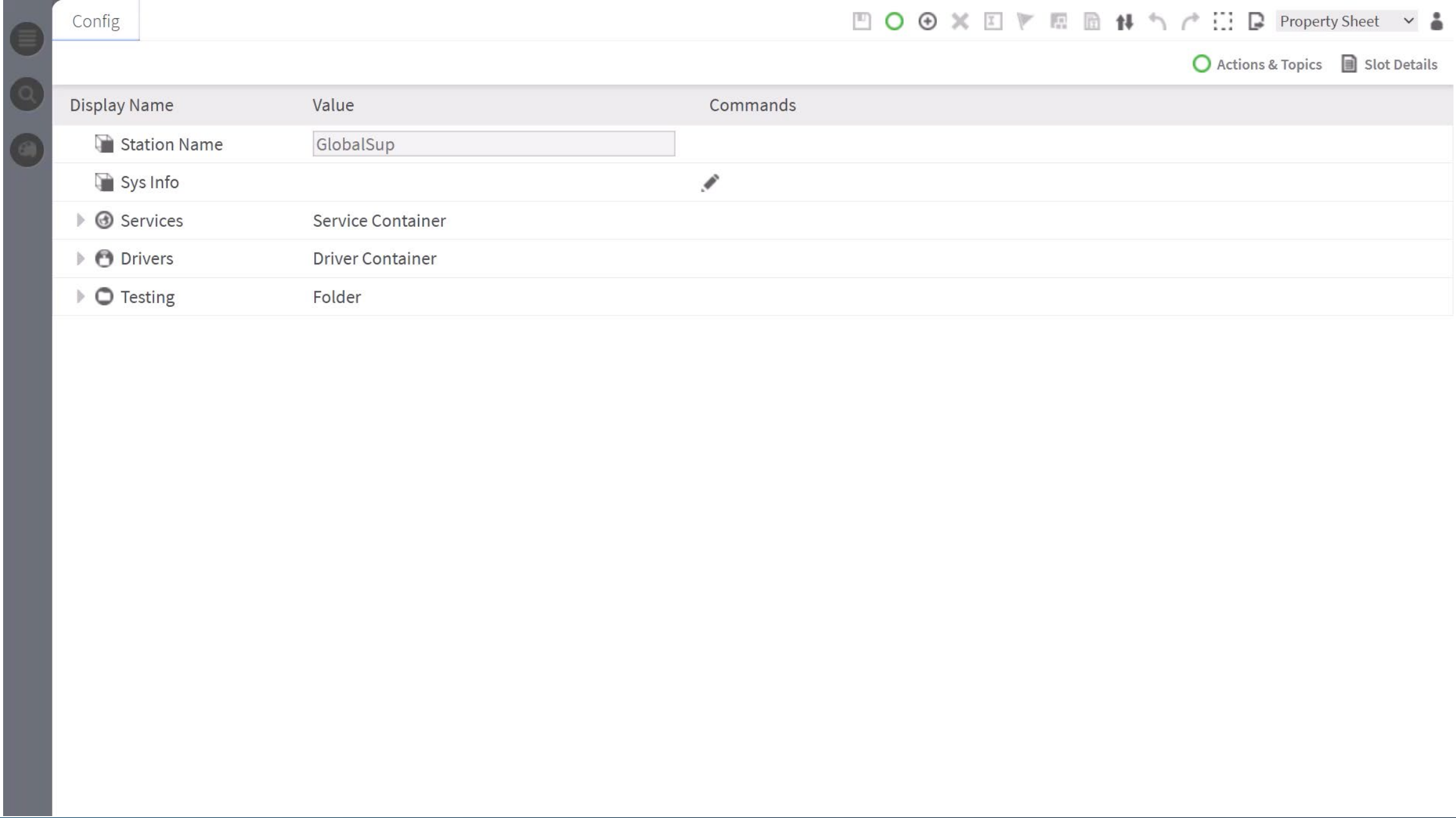
Config
Property Sheet
Actions & Topics
Slot Details
Display Name
Value
Commands
Station Name
GlobalSup
Sys Info
Services
Service Container
Drivers
Driver Container
Testing
Folder

Multi-Tiered Security Dashboard & Reachable Stations

Video Demo

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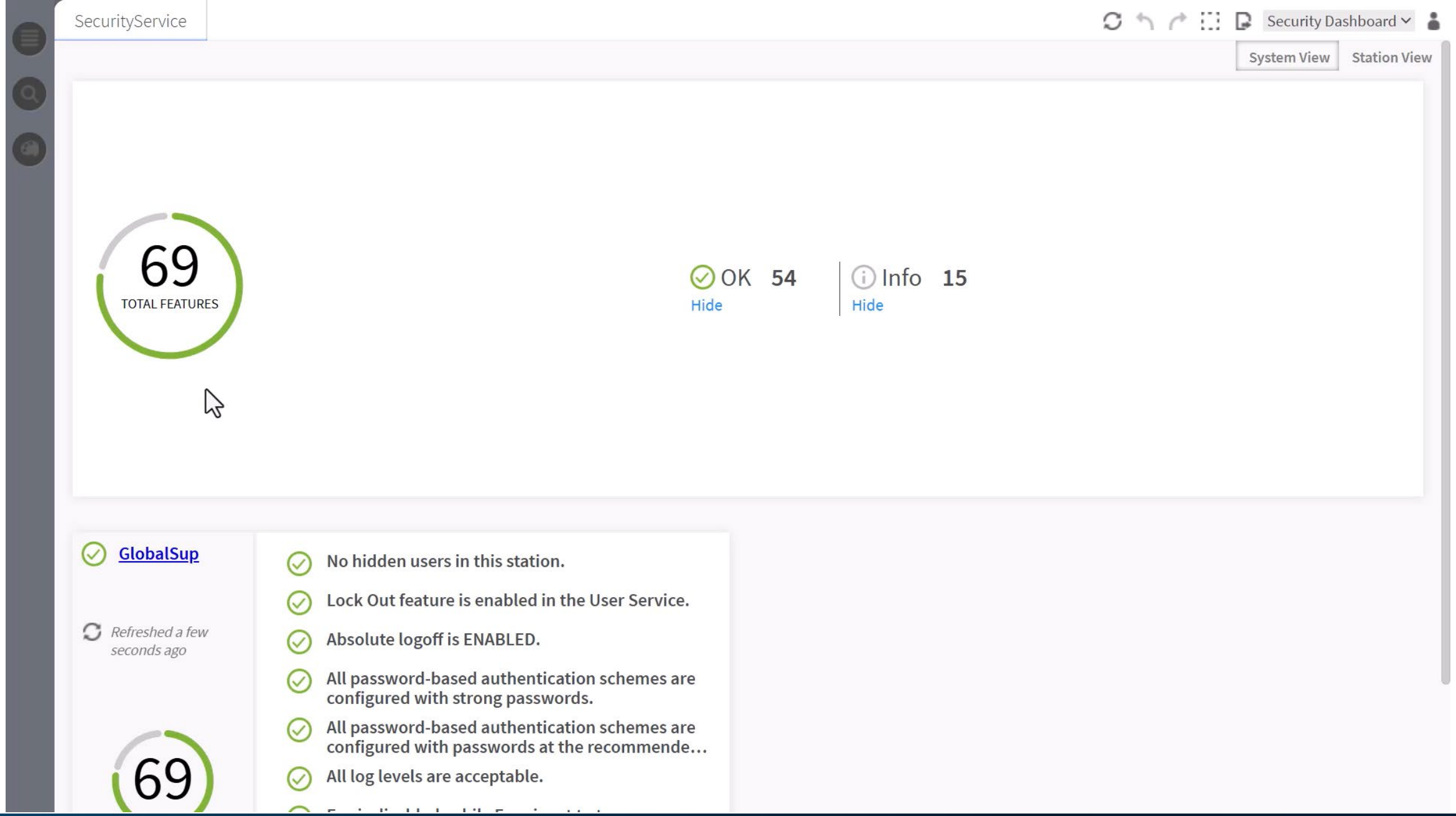
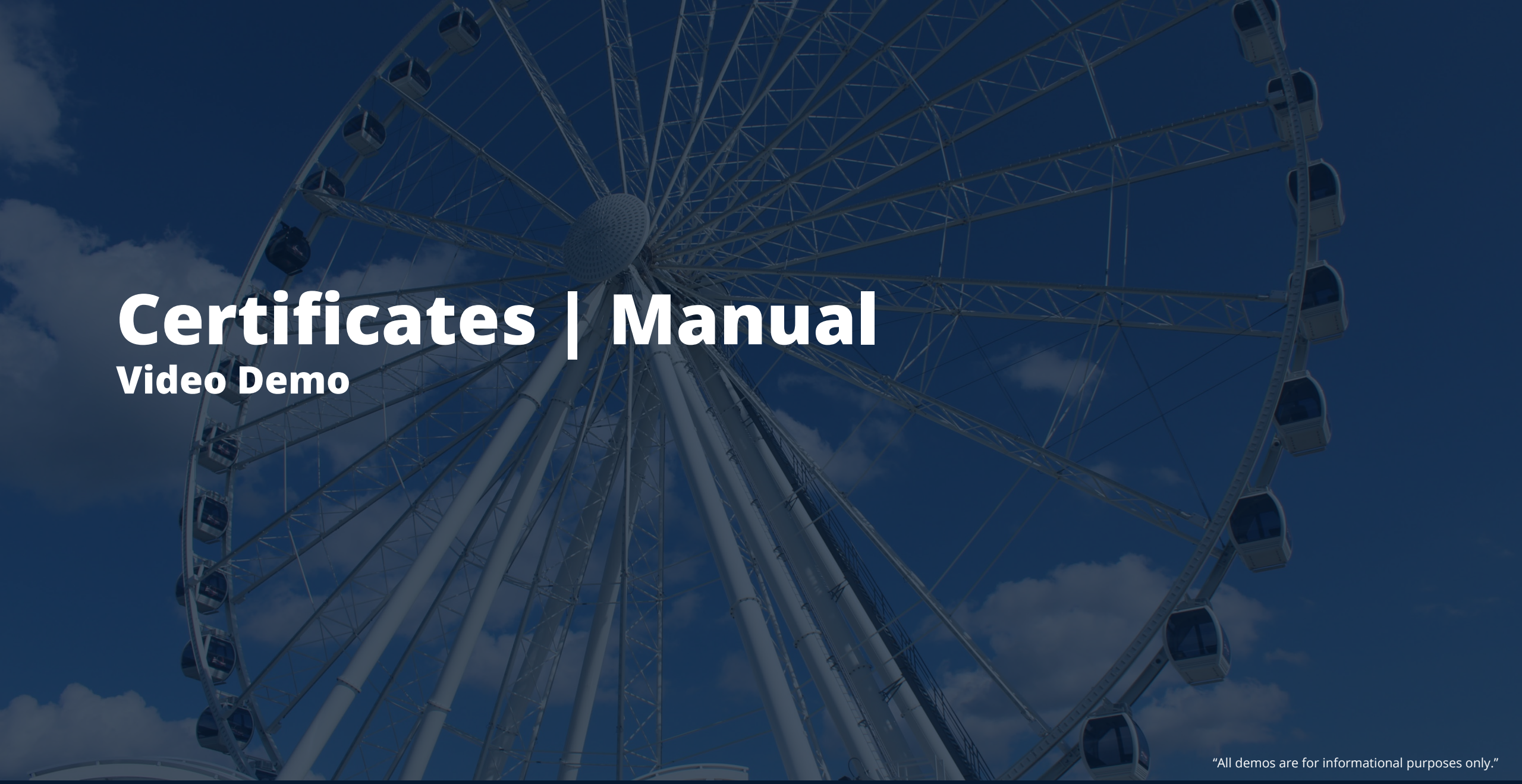

SecurityService
Security Dashboard
System View
Station View
69
TOTAL FEATURES
OK 54
Hide
Info 15
Hide
GlobalSup
Refreshed a few seconds ago
No hidden users in this station.
Lock Out feature is enabled in the User Service.
Absolute logoff is ENABLED.
All password-based authentication schemes are configured with strong passwords.
All password-based authentication schemes are configured with passwords at the recommende…
All log levels are acceptable.
69

Certificate Management in Niagara 4.15

- A certificate acts like a digital ID — it helps confirm a device's identity
- It supports creating an encrypted connection, so data is protected in transit
- It helps reduce impersonation risk — attackers have a harder time posing as trusted devices
- Every Niagara station benefits from having a valid certificate for secure communication
- TLS and certificates will be required going forward as non-secure Web and Fox are being deprecated in future versions of N5

Certificates | Manual

- Generate a CSR on the station for the Platform, WebService, FoxService, or combined
- Export the CSR and have it signed by your Certificate Authority
- Import the signed certificate back into Niagara
- Configure the Platform, WebService, and FoxService services to use the new certificate
- Validate the chain and confirm everything is healthy in the Security Dashboard
- Repeat the process for every station — consistent but time-intensive at scale



Certificates | Manual

Video Demo

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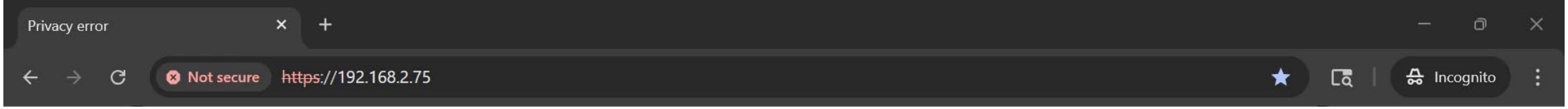

Your connection is not private

Attackers might be trying to steal your information from **192.168.2.75** (for example, passwords, messages, or credit cards). Learn more about this warning

NET::ERR_CERT_AUTHORITY_INVALID

Advanced

Back to safety

Certificates | Signing Service

- Automatically generate CSRs for multiple stations in a single provisioning job
- Certificate Signing Service signs them centrally using your trusted CA
- Provisioning deploys the signed certs, aliases, and trust chains at scale
- Drives consistent, repeatable certificate management across fleets
- Ideal for multi-site, enterprise, and Secure-by-Default deployments

Certificates —Signing Service

Video Demo

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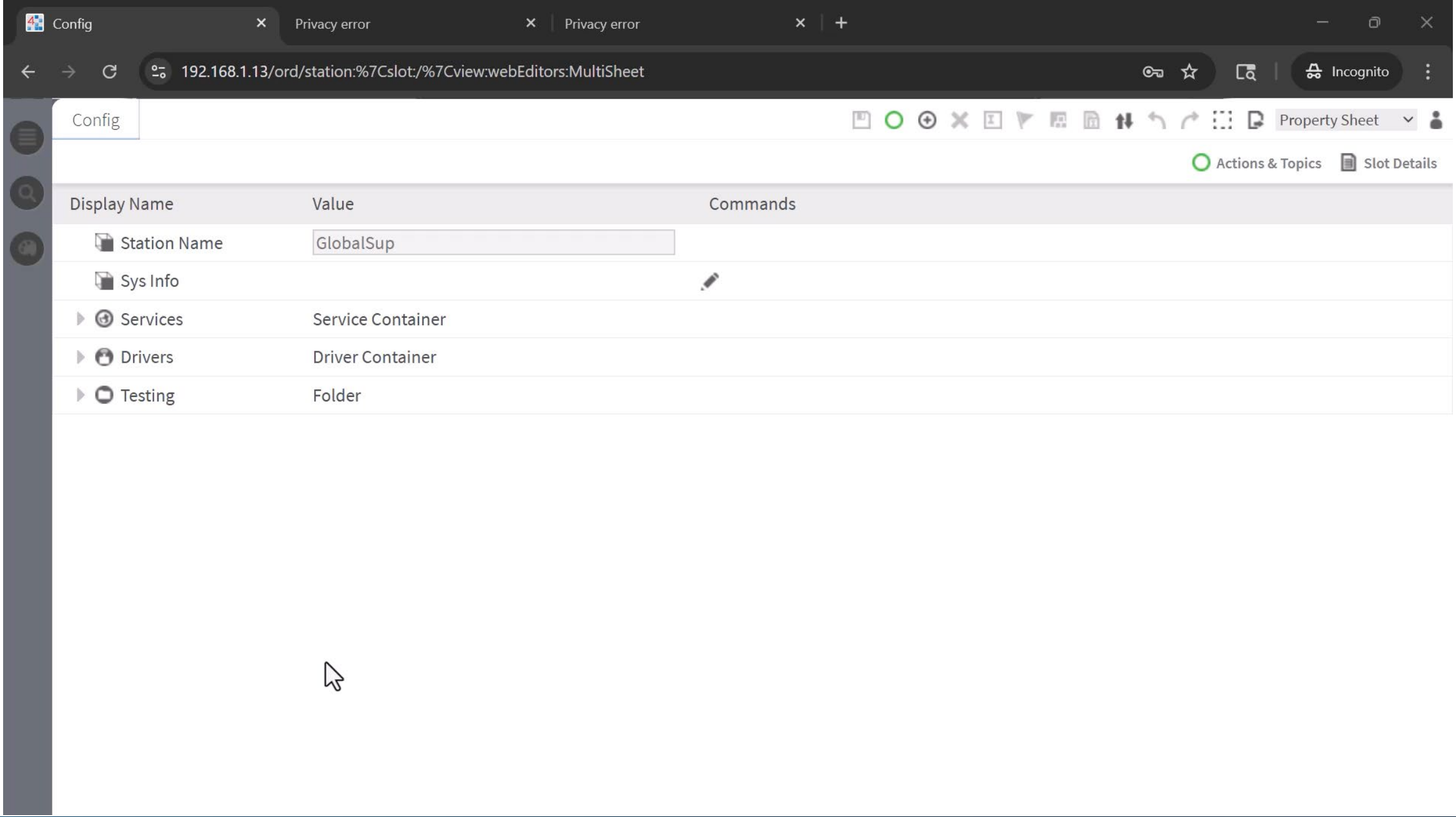
Config
Privacy error
Privacy error
192.168.1.13/ord/station:%7Cslot:/%7Cview:webEditors:MultiSheet
Incognito
Config
Property Sheet
Actions & Topics
Slot Details
Display Name
Value
Commands
Station Name
GlobalSup
Sys Info
Services
Service Container
Drivers
Driver Container
Testing
Folder

Code Signing

Ensures integrity | signed code lets Niagara verify nothing has been altered

Blocks tampering | unsigned or modified logic won't run

Verifies authorship | signatures and trusted timestamps confirm who signed and when

Supports TSA | timestamping authority records allow validation of signature time

Protects modules | all Tridium modules are signed; third-party modules and program objects may also be signed

Secure Boot | JACE hardware loads only Tridium-signed firmware

N5-aligned | signed program objects become the expected model going forward

Code Signing

Video Demo

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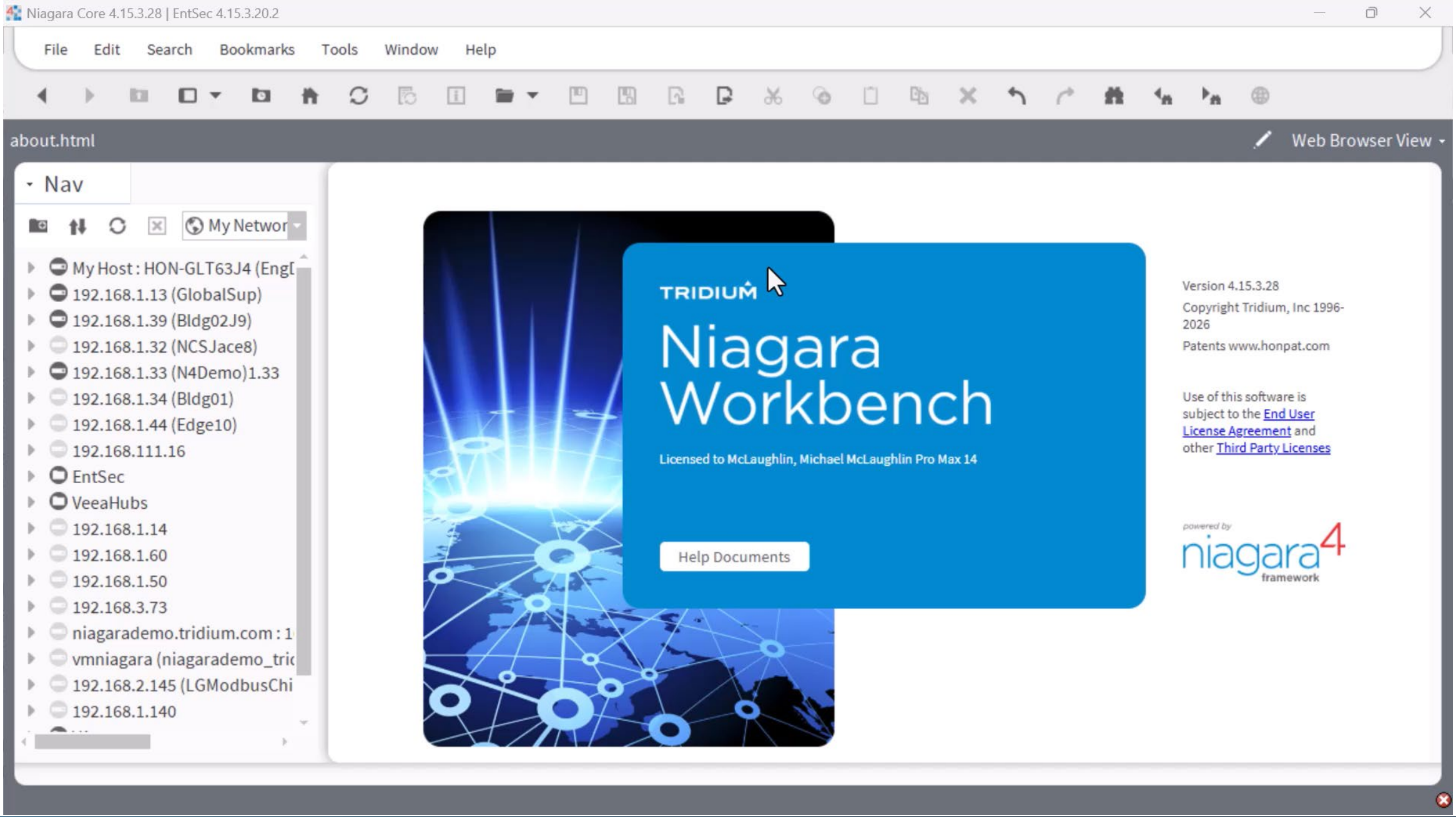
Niagara Core 4.15.3.28 | EntSec 4.15.3.20.2
File Edit Search Bookmarks Tools Window Help
about.html
Web Browser View
Nav
My Networ
My Host : HON-GLT63J4 (Engl
192.168.1.13 (GlobalSup)
192.168.1.39 (Bldg02J9)
192.168.1.32 (NCSJace8)
192.168.1.33 (N4Demo)1.33
192.168.1.34 (Bldg01)
192.168.1.44 (Edge10)
192.168.111.16
EntSec
VeeaHubs
192.168.1.14
192.168.1.60
192.168.1.50
192.168.3.73
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vmniagara (niagarademo_tric
192.168.2.145 (LGModbusChi
192.168.1.140
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Niagara Workbench
Licensed to McLaughlin, Michael McLaughlin Pro Max 14
Help Documents
Version 4.15.3.28
Copyright Tridium, Inc 1996-2026
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powered by niagara4 framework

Encrypted Hashed Passwords

- Passwords are not stored in plain text — they’re hashed, salted, and encrypted
- Even if the file is accessed, the hashed password is not directly recoverable
- Salting ensures every password hash is unique, even if two users choose the same password
- Encryption adds a second layer of protection on top of hashing
- In 4.15, Bog files use modern hashing and encryption, providing stronger security

Encrypted Hashed Passwords

Live Demo

"All demos are for informational purposes only."

Syslog Integration

- Centralized monitoring = faster detection and response
- Security events shared outside of the Niagara environment
- It closes the IT/OT visibility gap
- Helps security teams identify patterns that may not be visible in OT alone
- Helps organizations meet audit and compliance expectations

Syslog Integration
Video Demo

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Config

Property Sheet

Actions & Topics | Slot Details

Display Name	Value	Commands
Station Name	GlobalSup	
Sys Info		
Services	Service Container	
Drivers	Driver Container	
Testing	Folder	

Host Header Validation

- Validates approved hostnames and IP addresses
- Prevents spoofed or malicious web requests
- Enforces secure access
- Supports certificates, proxies, and cloud deployments
- Key component of Niagara’s modern security model

Securing Niagara

- TLS-only communication as non-secure Web and Fox are planned to be deprecated in future N5 versions
- Use the Niagara Hardening Guide for Platform and Station configuration expectations
- Apply role-based access with a least-permissions-necessary approach
- Use provisioning templates to support consistent secure deployments
- Maintain module integrity through signed modules and validated program objects
- Collaborate with IT teams to define responsibilities and align security practices

Niagara Cloud | Secure Remote Connectivity

- Supports secure remote access with two-factor authentication
- Uses mutual TLS (mTLS) for trusted, certificate-based connections
- Reduces reliance on VPNs that may require ongoing maintenance
- Provides centralized identity and device registration
- Native to the Niagara ecosystem
- Backups are encrypted with Niagara Recover
- N5-specific features coming in the future

Niagara Cloud | Secure Remote Connectivity

Live Demo

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Niagara Cloud | FoxC

Live Demo

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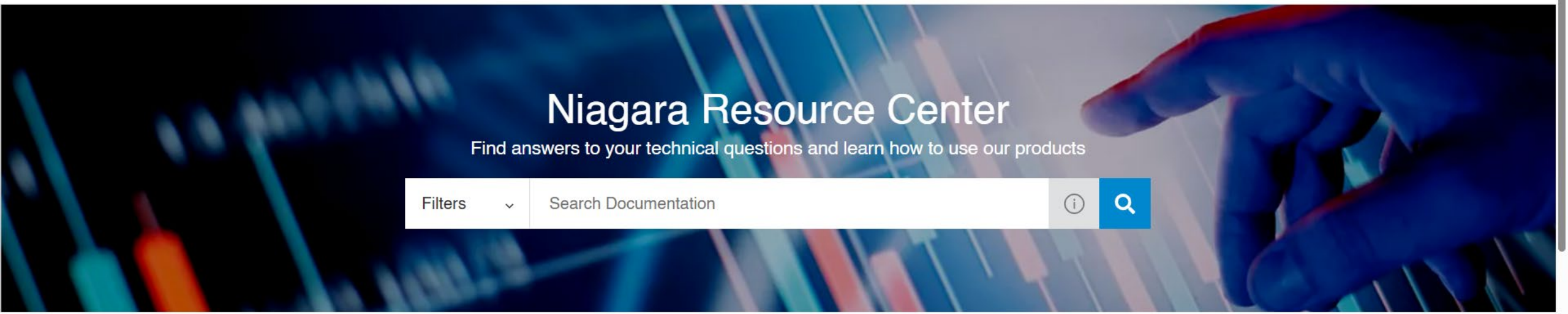

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Filters Search Documentation

Information Categories

Niagara

Niagara 5 - FAQ
Getting Started with Niagara
Installation Guide
Containerized Niagara Guide
Documentation Library

Features, Compatibility, and Releases

Niagara 4 Features Overview
Niagara Compatibility Statement (NiCS)
Niagara 4 Release Page

Niagara Security

Station Security Guide
Niagara Hardening Guide
Niagara 4 Security Page

Niagara Marketplace

Marcomm and Legal

Niagara Cloud

Thank You!

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