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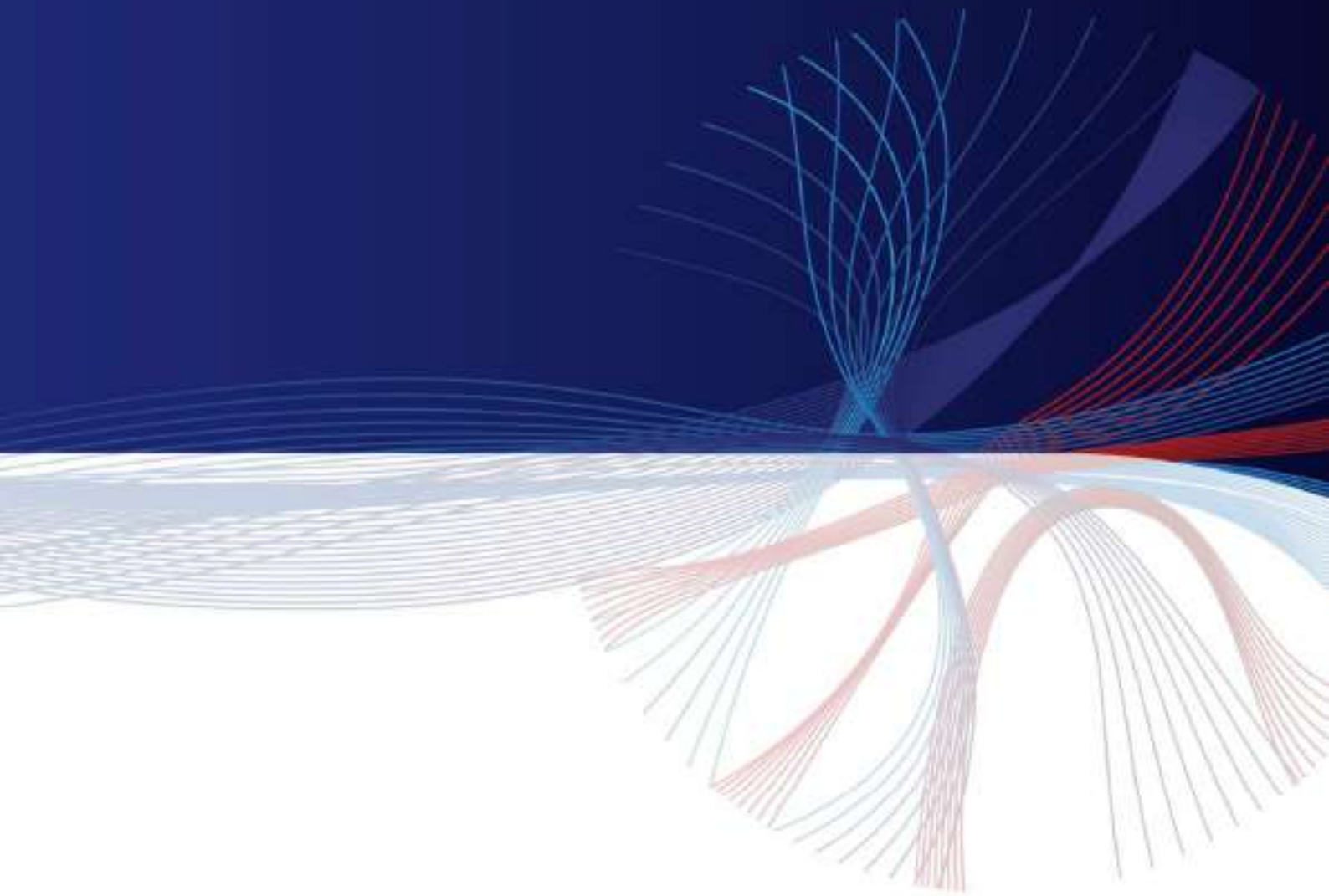
Technical Whitepaper

OT Remote Access Security



Securing Remote Access for OT Networks

SCADAfence and Barracuda Networks have joined forces to take the remote access security connections into OT Infrastructure once step further. Organizations can now gain visibility into remote access sessions inside their OT networks, accessing PLCs and controlling ICS processes. This enables them to get the full picture on all remote user activities.

Due to the COVID-19 situation, most of the global workforce has transitioned to working remotely. However, process availability and safety remain a major concern, while the attack surface is growing dramatically due to remote connections. Organizations that rely on industrial infrastructure have sent a large portion of their employees to work from home, while enabling them to continue their operations at the cost of operating under substantially higher cyber risk.

The Benefits for Your Organization:

- Enable safe remote access to critical OT environments.
- Increased visibility into remote users' activities in the OT network.
- Correlate between OT device level actions and remote connections.
- Detect unauthorized actions.
- Get detailed activity reports.

THE ONBOARDING PROCESS

Diagram #1: The onboarding process for a remote access security solution takes less than 2 days

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The Challenge of Working Remotely

Working remotely means opening networks up to exponentially more external access – networks which were previously never opened to such access, or had very limited remote access to them.

In an instant, the exposure of OT networks has increased dramatically:

- **Increased Exposure** – The number of external connections, in addition to the fact that workstations used in remote access are also connected to the internet and can be compromised. This can give attackers access to critical assets - such as this cyber-attack that we discovered on a remote server.
- **Hard Perimeter, Soft Belly Approach** – Once remote users log in, they can often access a wide range of critical hosts, without further access control.
- **Lack of Correlation Between Remote Users & Process Manipulation** – After initial authentication at the gateway, there is no way to associate OT sessions with the logged-in users. This lack of association and attribution creates substantial risk that is a challenge to manage.
- **Increased Complexity -** People accessing from home means more remote locations and end-devices. This adds complexity and thus further increases exposure.

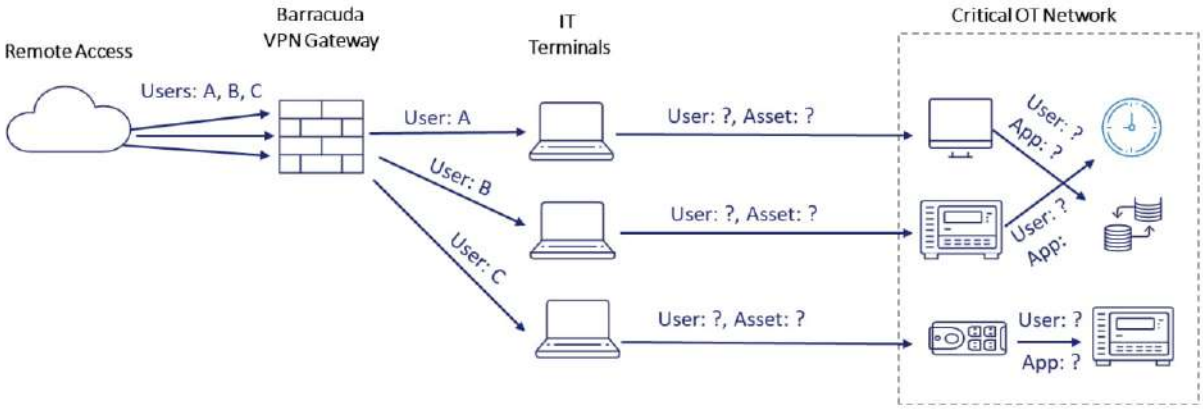

Diagram #2: Internal sessions are not attributed to remote access sessions and no logging is kept

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How SCADAfence and Barracuda Networks Can Help

The SCADAfence Platform integrates with the Barracuda VPN gateway to increase the security of OT networks in the era of intensive remote access connectivity / mode of operations.

Full Attribution & Correlation Between Remote Users & Internal Actions

- The SCADAfence Platform interfaces with Barracuda's VPN gateway to classify and identify remote access connections. This adds an additional layer of security that correlates between the end-users and their activities in the network. The SCADAfence Platform also provides the security staff with correlation between their users and their activities while performing remote work.
- In addition, the SCADAfence Platform creates a forensics log containing internal actions, users and timestamps, all attributed to the remote session. This allows for an investigation in retrospect.

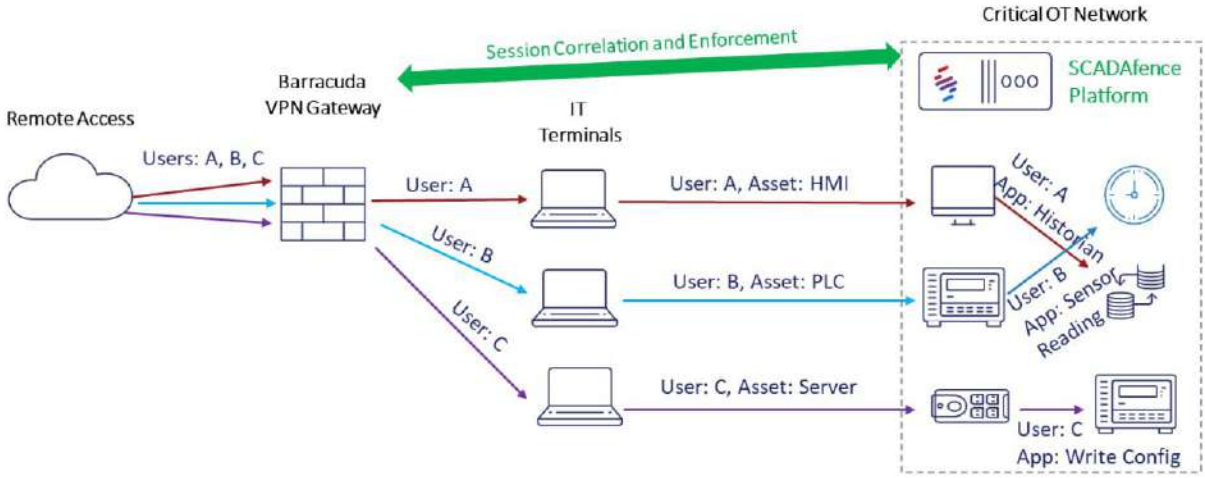

Diagram #3: The integrated solution understands remote user activities inside the OT network

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Identifying the Accessed Asset

The SCADAfence Platform automatically creates a detailed asset inventory, including OT asset profiling – providing insights on the target devices that are accessed by the remote users.

Understanding the Activities Performed

The SCADAfence Platform's DPI engine, enables security teams to understand the activities performed on the industrial devices. The analysis provides insight on logins and logouts as well as on the industrial protocol activities, down to the industrial protocol command.

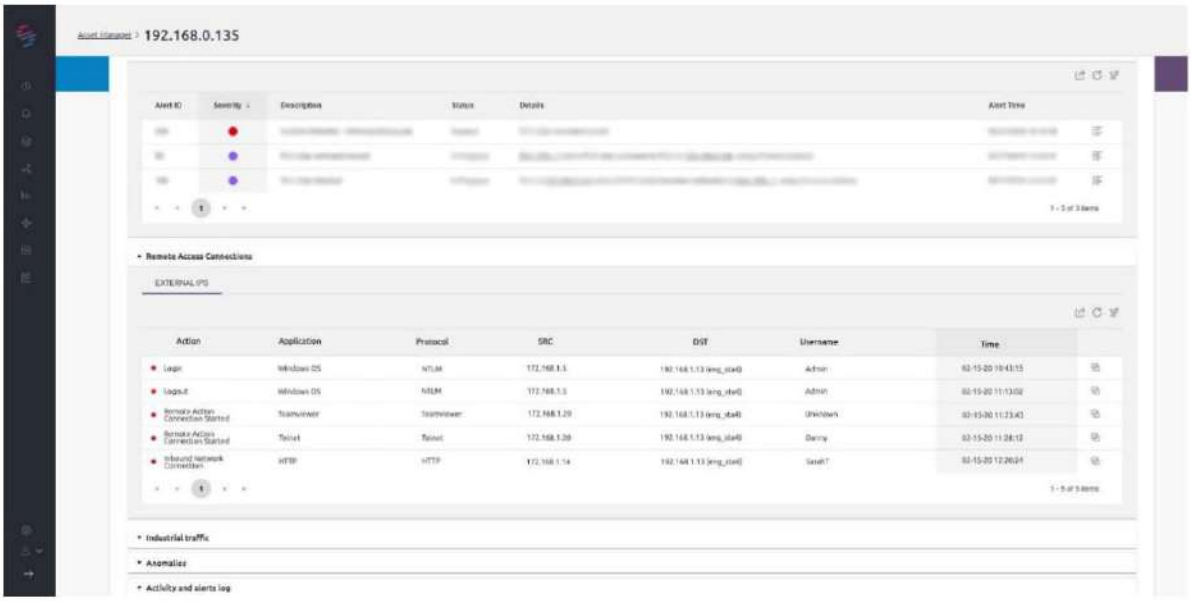

Diagram #4: The SCADAfence Platform provides insights on all remote access activities

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Detection and Response

- The SCADAfence Platform detects and alerts on anomalous or unauthorized actions in the OT network and provides security teams with the association to the user names, originating workstations and applications.
- The Barracuda VPN gateway is informed on the breach, and it can immediately disconnect the malicious user/s from the network.

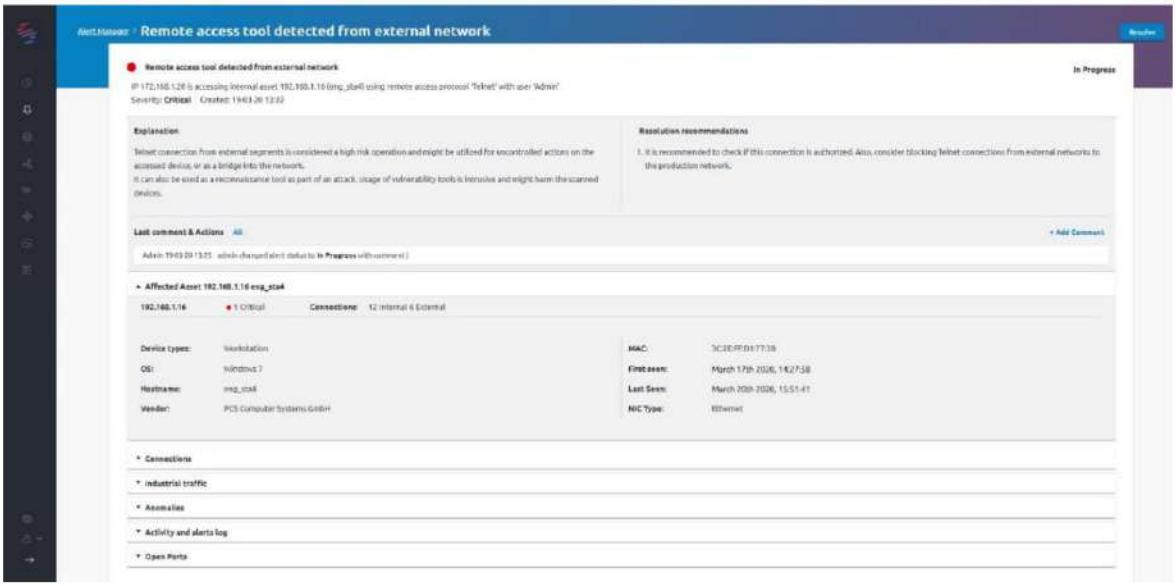

Diagram #5: The SCADAfence Platform detects & alerts on anomalous or unauthorized actions in the OT network

About SCADAfence

SCADAfence is the global technology leader in OT & IoT cyber security. The SCADAfence platform enables organizations with complex OT networks to embrace the benefits of industrial IoT by reducing cyber risks and mitigating operational threats. The non-intrusive platform provides full coverage of large-scale networks, offering best-in-class detection accuracy, asset discovery and governance with minimal false-positives. SCADAfence delivers proactive security and visibility to some of the world's most complex OT networks, including the largest manufacturing facility in Europe. SCADAfence enables organizations in manufacturing, building management and critical infrastructure industries to operate securely, reliably and efficiently. To learn more, go to www.scadafence.com

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