

Secure and Reliable Private 5G/LTE Campus Connectivity

A RAD and OneLayer Solution

Private 5G/LTE networks are transforming campus connectivity by providing high-density coverage, seamless mobility, and wire-free industrial operations. As adoption grows, enterprises are evolving these networks into fully converged OT and IT infrastructures, streamlining policies and operations across the entire campus.

This means that connectivity to the private mobile network needs to be extended to a wide range of endpoints to meet the diverse requirements of business devices and applications. Such devices include legacy controllers with serial port interfaces, industrial machinery using Ethernet-based protocols to link to the campus cloud-hosted controllers, and newly deployed IoT sensors featuring Wi-Fi and LoRaWAN connectivity options.

The Challenge

As campuses are expanding their operations to include private 5G/LTE networks, they are required to maintain reliability and ensure seamless connectivity across campus for all end points – regardless of their connectivity options and protocol support.



Your Network's Edge®

Solution Brief

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Campus Connectivity

The Solution

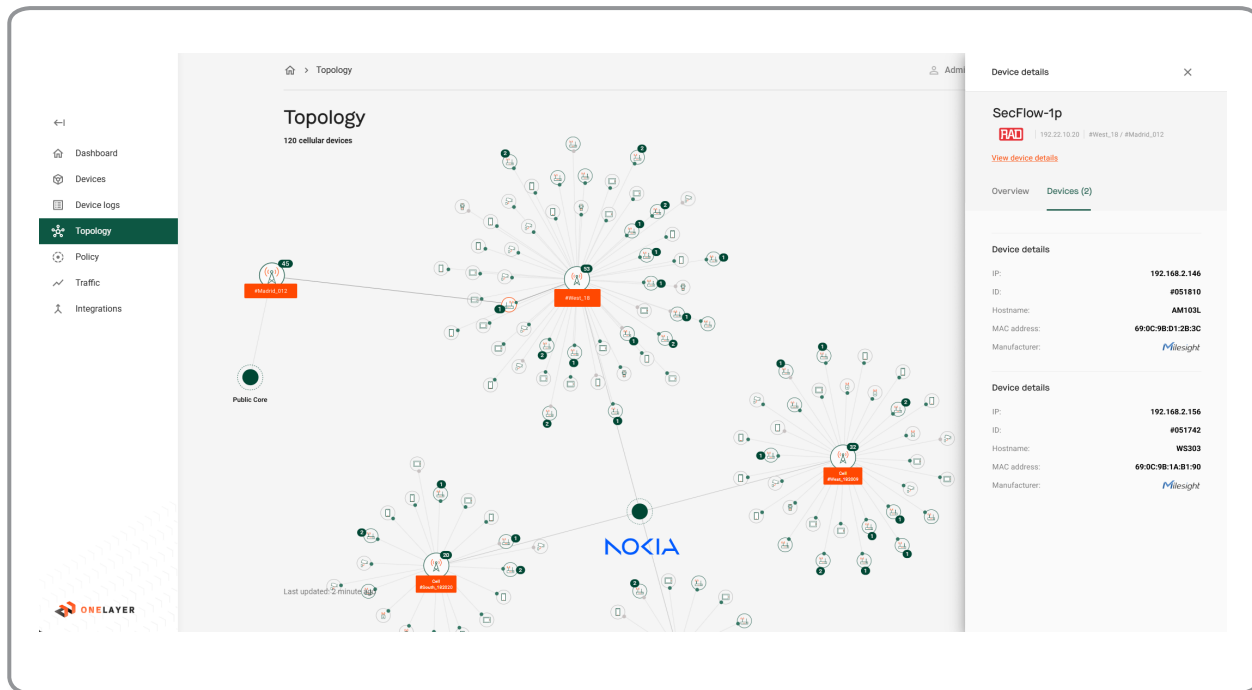
To meet campus requirements for reliability and resiliency, RAD's 5G/LTE gateways extend private mobile network connectivity to all endpoints on campus, while applying intelligent traffic steering and dynamic switchover between the private network and the public cellular network.

Leveraging their transport-agnostic technology, RAD's cellular gateways, further enhance reliability through intelligent load balancing and packet duplication across two network links. This ensures seamless connectivity by mitigating coverage gaps and adapting to deteriorating network conditions. OneLayer provides a comprehensive, unified view of all campus endpoints by seamlessly integrating data from mobile cores and RAD gateways. This enables effective security policy implementation and enforcement across networks, ensuring consistent protection for campus resources.

Key benefits of the joint solution

Industrial machinery visibility

By expanding campus visibility to brownfield equipment connected via cellular gateways to the campus network, users can streamline operations and security beyond 5G-enabled devices.

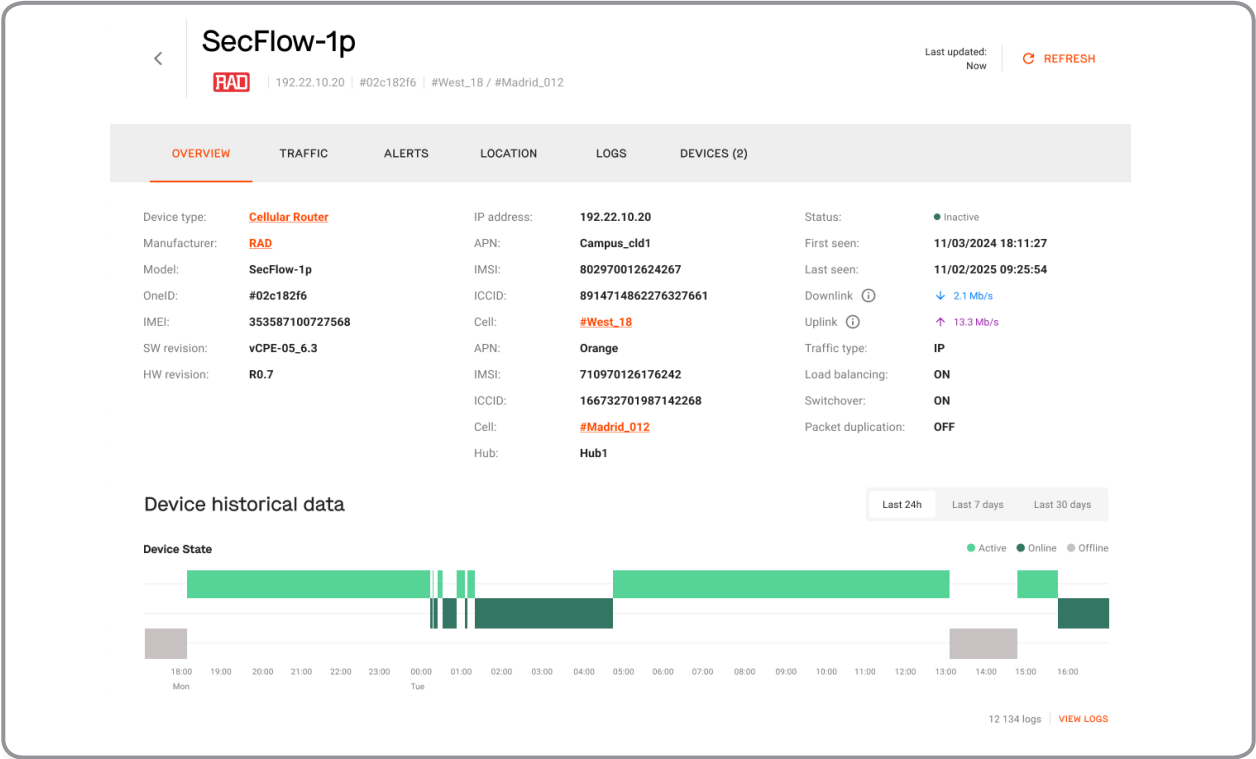


Topology view: One gateway connects to both the Private and the public networks

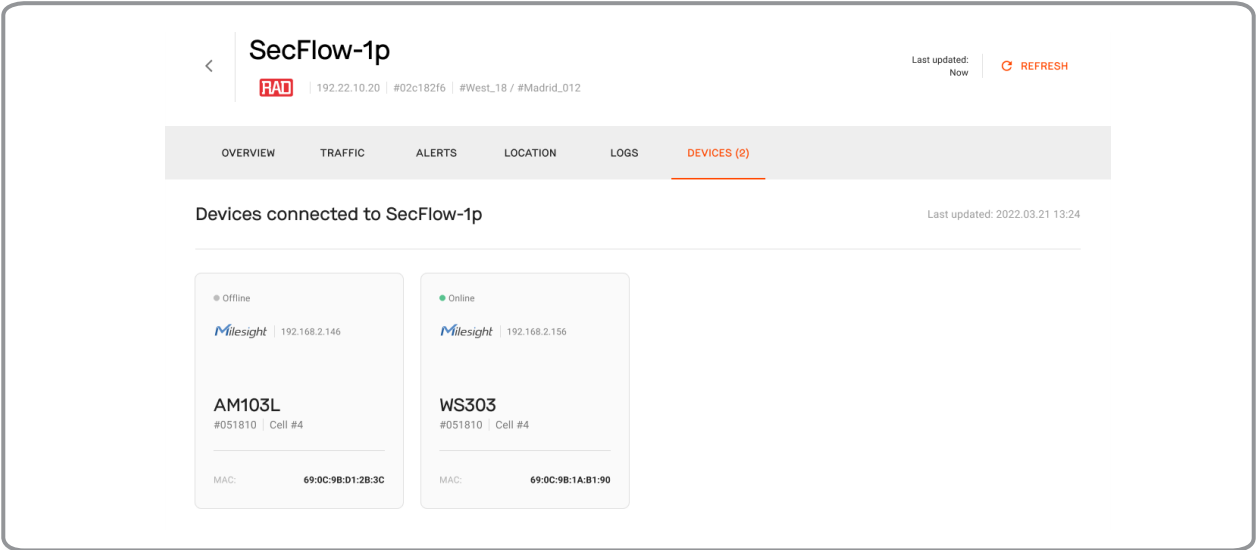


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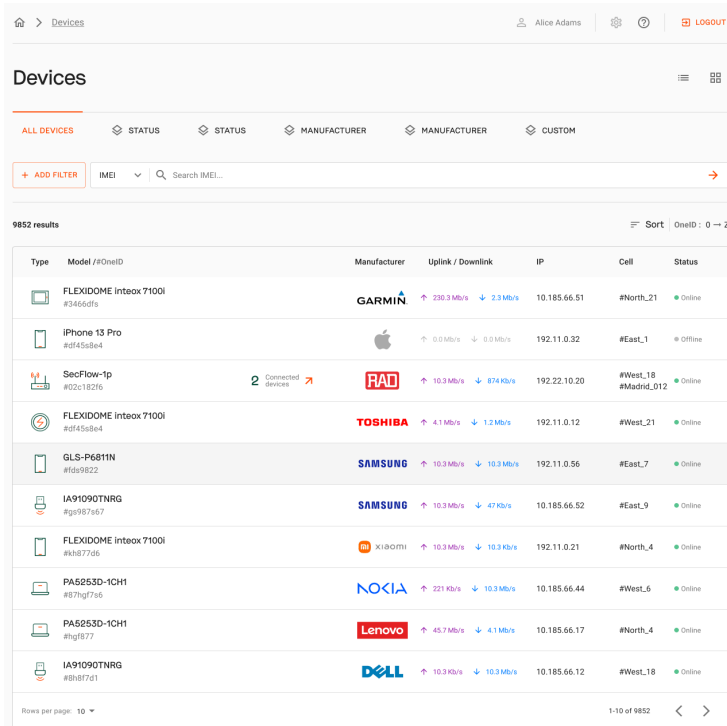
Device data view: Status and historical behavior over time



Cellular router view 1: Which devices are connected to it

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The screenshot displays the 'Devices' management page in the RAD network management system. The page shows a list of 9852 results, sorted by OneID. The table lists various devices connected to the network, including FLEXIDOME inteoX 7100i, iPhone 13 Pro, SecFlow-1p, and various laptops and tablets. Each row provides details on the device type, model, manufacturer, uplink/downlink speeds, IP address, cell ID, and status.

Type	Model / #OneID	Manufacturer	Uplink / Downlink	IP	Cell	Status
FLEXIDOME inteoX 7100i	#3466df8	GARMIN	↑ 280.3 Mb/s ↓ 2.3 Mb/s	10.185.66.51	#North_21	Online
iPhone 13 Pro	#d4f45d8e4	Apple	↑ 0.0 Mb/s ↓ 0.0 Mb/s	192.11.0.32	#East_1	Offline
SecFlow-1p	#02c18216	RAD	↑ 10.3 Mb/s ↓ 874 Kb/s	192.22.10.20	#West_18 #Madrid_012	Online
FLEXIDOME inteoX 7100i	#d8f45d8e4	TOSHIBA	↑ 4.1 Mb/s ↓ 1.2 Mb/s	192.11.0.12	#West_21	Online
GLS-P6811N	#fda89822	SAMSUNG	↑ 10.3 Mb/s ↓ 10.3 Mb/s	192.11.0.56	#East_7	Online
IA91090TNRG	#g9876767	SAMSUNG	↑ 10.3 Mb/s ↓ 47 Kb/s	10.185.66.52	#East_9	Online
FLEXIDOME inteoX 7100i	#b3d7726	Xiaomi	↑ 10.3 Mb/s ↓ 10.3 Kb/s	192.11.0.21	#North_4	Online
PA5253D-1CH1	#87hg756	NOKIA	↑ 221 Kb/s ↓ 10.3 Mb/s	10.185.66.44	#West_6	Online
PA5253D-1CH1	#hg1877	Lenovo	↑ 45.7 Mb/s ↓ 4.1 Mb/s	10.185.66.17	#North_4	Online
IA91090TNRG	#b187761	DELL	↑ 10.3 Kb/s ↓ 10.3 Mb/s	10.185.66.12	#West_18	Online

Cellular router view 2: Which router has devices connected to it

Uniform security policy across networks

Enterprises utilize public connectivity alongside campus networks to enhance reliability, reinforce mission-critical traffic resiliency, and ensure secure, seamless campus-wide connectivity. OneLayer and RAD deliver unified visibility and consistent zero-trust security for devices connected to private and public 5G/LTE networks, whether simultaneously or alternately.

Ethernet traffic security

Ethernet-based industrial protocols, such as Profinet and EtherCAT, are widely used in industrial networks and are now extending to private cellular networks. OneLayer and RAD ensure zero-trust security for both IP-based and Ethernet-based traffic, safeguarding industrial communications across the entire network.

In summary, the joint solution from RAD and OneLayer strengthens campus network reliability while maintaining secure access policies across all campus endpoints and networks.

For more information on Secure and Reliable Private 5G/LTE Campus Connectivity, contact us at: market@rad.com.



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