DEVICE MANAGER

Comprehensive NMS and IoT Device Management System for the optimal performance and security

In the rapidly evolving landscape of industrial IoT, managing a vast number of connected devices efficiently and securely is paramount. Our robust Network Management System (NMS) ensures your devices are always connected, up-to-date, and secure. From provisioning and configuration to maintenance, diagnostics, and end-of-life management, we handle every aspect of the device lifecycle. Keep your modems, routers and concentrators, alarm transmitters performing at their absolute best.

FEATURES

SECURE AND REMOTE MONITORING

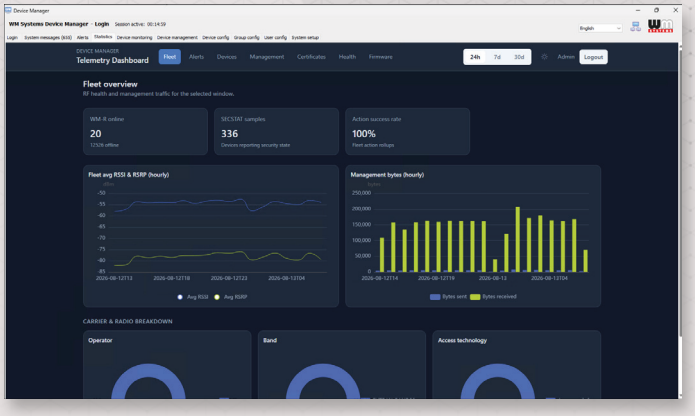
- **Monitor Device Fleet Health**: Securely and remotely track and visualize the health status of your devices. Analyze trends to foresee potential issues and address them proactively.
- **Find, track, troubleshoot issues and Push Updates**: Efficiently find issues and troubleshoot devices and deploy bugfixes at scale in a secure way, ensuring your IoT ecosystem runs smoothly.

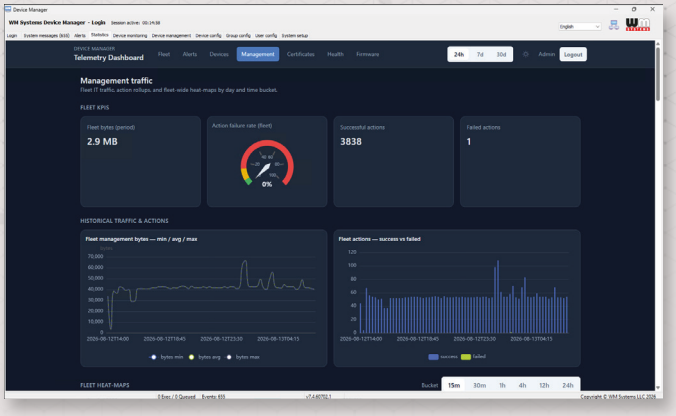


TELEMETRY DASHBOARD

Reduce device downtime and enhance the reliability with advanced status information and diagnostic features:

- **Fleet overview**: ■ KPI tiles of online devices ■ Charts (Fleet action success rate ■ Signal strength and Network Traffic, Carrier & radio breakdown) ■ Telemetry data: Push status info display
- **Alerts**: ■ Alert list (Certificate expiry, Resource stress, Power / battery, Offline, Security) ■ Consolidated alerts categories, colour-coded severities ■ Sort, CSV export
- **Devices**: ■ Device Inventory ■ Search ■ Sort and CSV export
- **Management Traffic**: ■ Fleet KPIs ■ Historical charts ■ Fleet heat-maps by day and time bucket
- **Fleet Health**: ■ Resource KPI tiles and triage list ■ Search ■ Sort and CSV export
- **Firmware Inventory**: ■ Firmware families and FW binaries ■ Chart of version distribution by device type (rollout progress / EOL detection) ■ Version breakdown list ■ CSV export



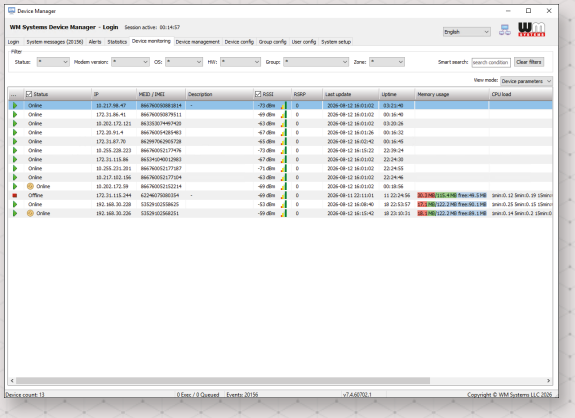


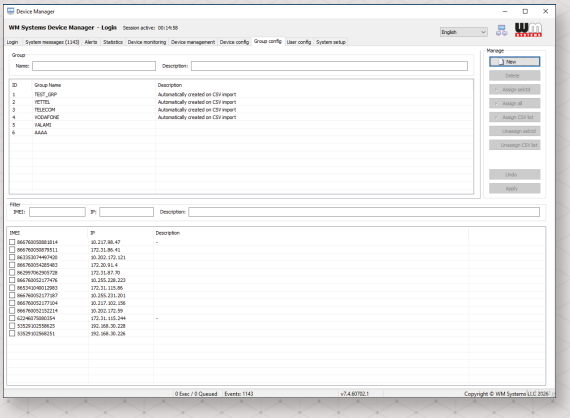
DEVICE MANAGER

ONBOARDING

Onboarding your devices is the first critical step. Our intelligent and secure provisioning process accelerates time-to-market and mitigates risks associated with hostile attacks. The onboarding process includes:

- **Secure Provisioning**: Establish a secure connection between devices and your IoT platform, ensuring safe data exchange from the outset.
- **Real-Time Actions**: Perform real-time actions (e.g. device reboots, configuration reset) from a single platform.
- **Device Authentication**: Authenticate devices using methods such as device certificates or pre-shared keys to guarantee that only trusted devices are connected.
- **Multi-Factor Authentication (MFA)**: Enhance security by implementing multiple layers of identity verification.
- **PKI or AES Option**: Ensure robust encryption and security with Public Key Infrastructure (PKI). Another way is the AES encryption.
- **mTLS v1.3 Compliance**: Transport Layer Security (mTLS) to guaranteed authenticated communication.

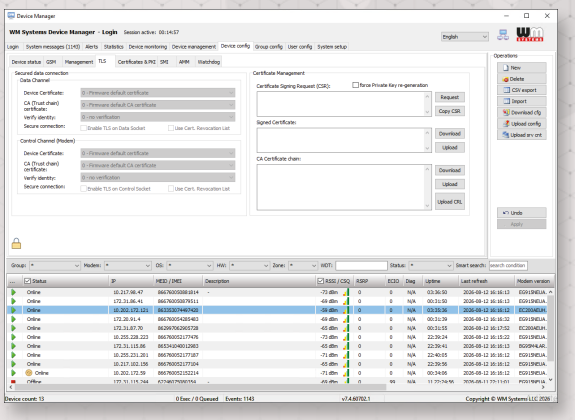


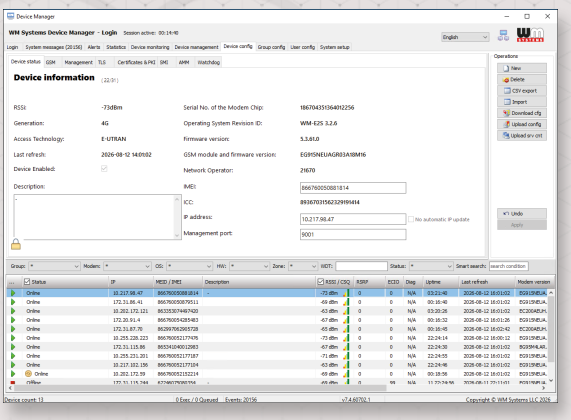


CONFIGURATION

Smart devices often come with generic preconfiguration from manufacturers. Device Manager s flexible and intuitive configuration mechanisms to fine-tune these devices according to your deployment needs:

- **Custom Configuration**: Configure devices based on their installation location and specific role within your IoT ecosystem.
- **Adaptive Settings**: Design device behavior for both standard operations and to respond dynamically to any failures or changes in the deployment environment.
- **Role-Based Access Control (RBAC)**: Manage user permissions and access levels securely.
- **Advanced Scheduler**: Automate device tasks, updates, and maintenance with flexible scheduling options.



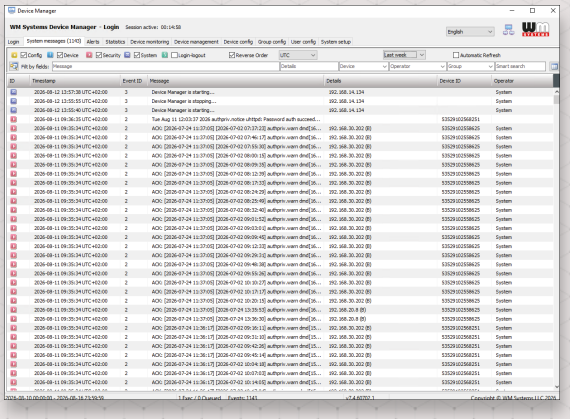


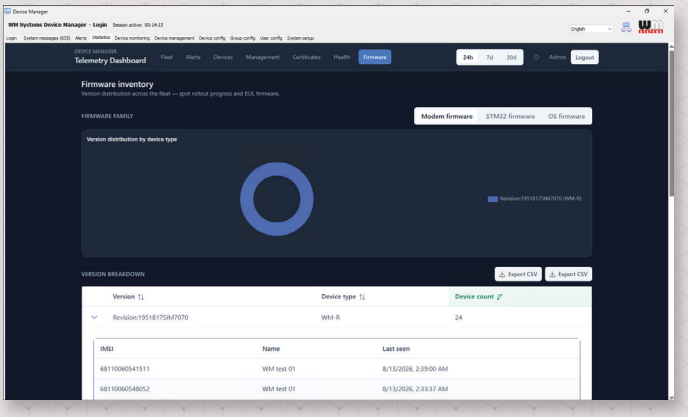
DEVICE MANAGER

SECURE FIRMWARE AND SOFTWARE UPDATES

Maintaining the functionality and security of your devices is crucial. Our Device Manager supports:

- **Firmware and Software Updates**: Utilize firmware over-the-air (FOTA) and software over-the-air (SOTA) updates to keep all devices secure, up-to-date, and performing optimally.
- **Update Campaign Manager**: Deploy updates securely via an encrypted SFTP and HTTPS protocol.
- **Bug Fixes and Enhancements**: Address bugs and introduce new functionalities as your project evolves, ensuring continuous improvement and security.

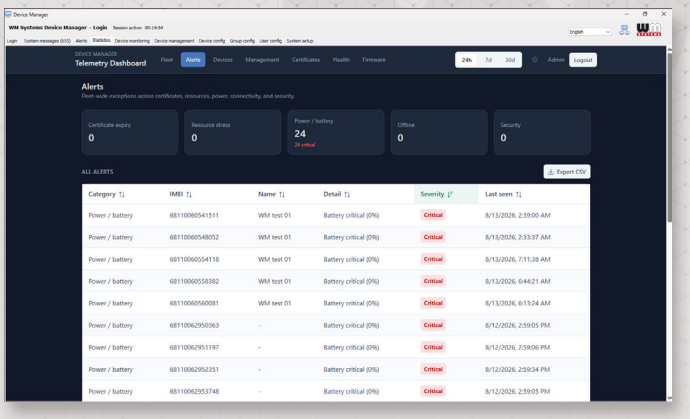


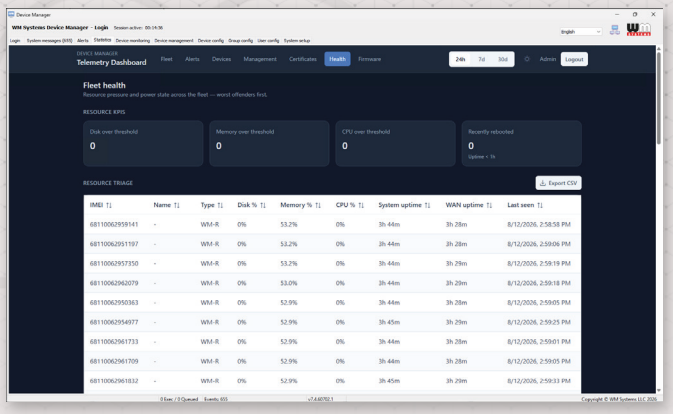


SCALABILITY AND DEPLOYMENT OPTIONS

Our Device Manager is designed to be secure, scalable, and adaptable to various deployment environments:

- **Utility-Environment Installation**: Offered as the primary hosting option for industrial IoT environments.
- **Cloud-Ready Alternative**: Deploy in a cloud-based infrastructure to ensure high availability and flexibility.
- **Protection Against DDoS Attacks**: Secure cloud deployments with built-in safeguards against distributed denial-of-service (DDoS) attacks.
- **Update Campaign Manager** server component: Ensure secure and efficient update management within the cloud environment.
- **Advanced Scheduler**: Automate and manage scheduled updates and maintenance tasks with precision. Deployment time can be reduced from 15-20 minutes per device to 1-2 minutes.
- **Secure, Scalable Infrastructure**: Ensures your device management solution grows with your needs while maintaining top-tier security.



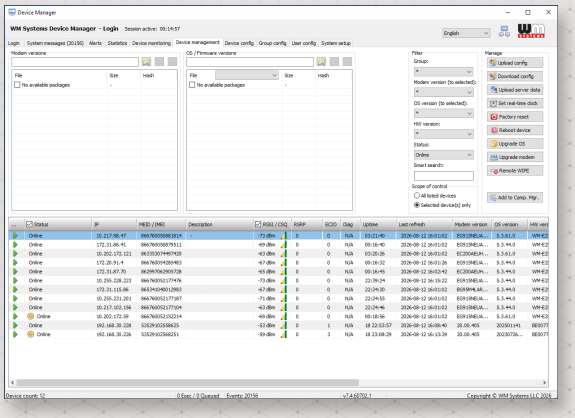


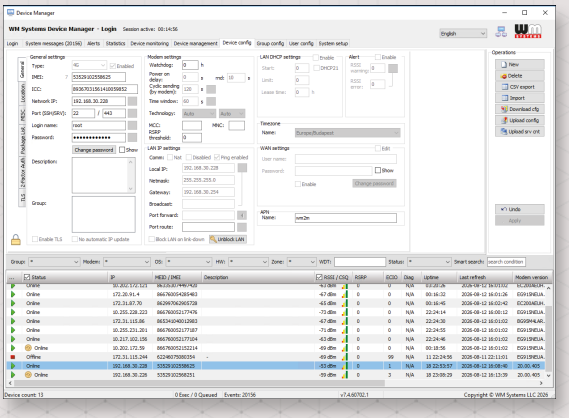
DEVICE MANAGER

SECURE MANAGEMENT AND COMMUNICATION

Security is paramount when managing critical infrastructure, such as smart grids. Our industrial routers in combination with the Device Manager to guaranteed the level of security required for mission-critical applications. The combined solution ensures:

- **End-to-End Protection**: Secure communication and data integrity across all connected devices.
- **Regulatory Compliance**: Meeting the highest security standards for utility and industrial environments.
- **Uncompromising Reliability:** Robust defense mechanisms against cyber threats and un-authorized access.
- **Token-Based License (JWT Token):** Enable time-limited access and authentication for improved security.
- **Logged communication, Device Syslog.**

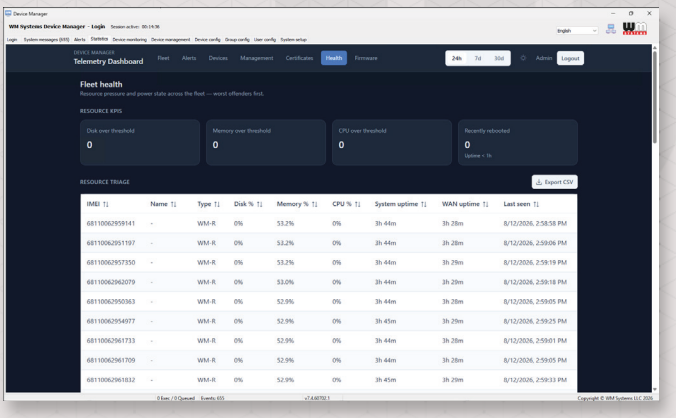


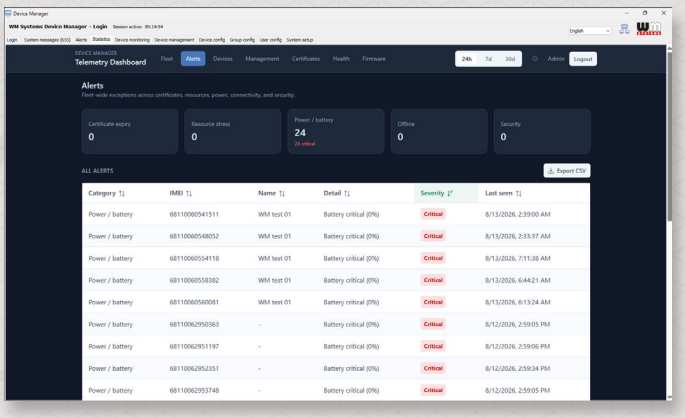


INSTALLATION AND LICENSING

The Microsoft® Windows® based application hosted on-premise for high security and continuous remote management of IoT devices (routers, DCUs, modems, transmitters, etc.). Ideal for enterprise or government deployments with strict ICT policies through End-of-Life Management.

- **Lite version**: limited software with a local SQLite database – for smaller device fleet, without supporting the Telemetry Dashboard feature.
- **Normal version:** a full feature platform with Microsoft SQL professional database – for thousands of devices in the fleet – with high-detailed Telemetry Dashboard.





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