

# Precision Time & Secure Operations

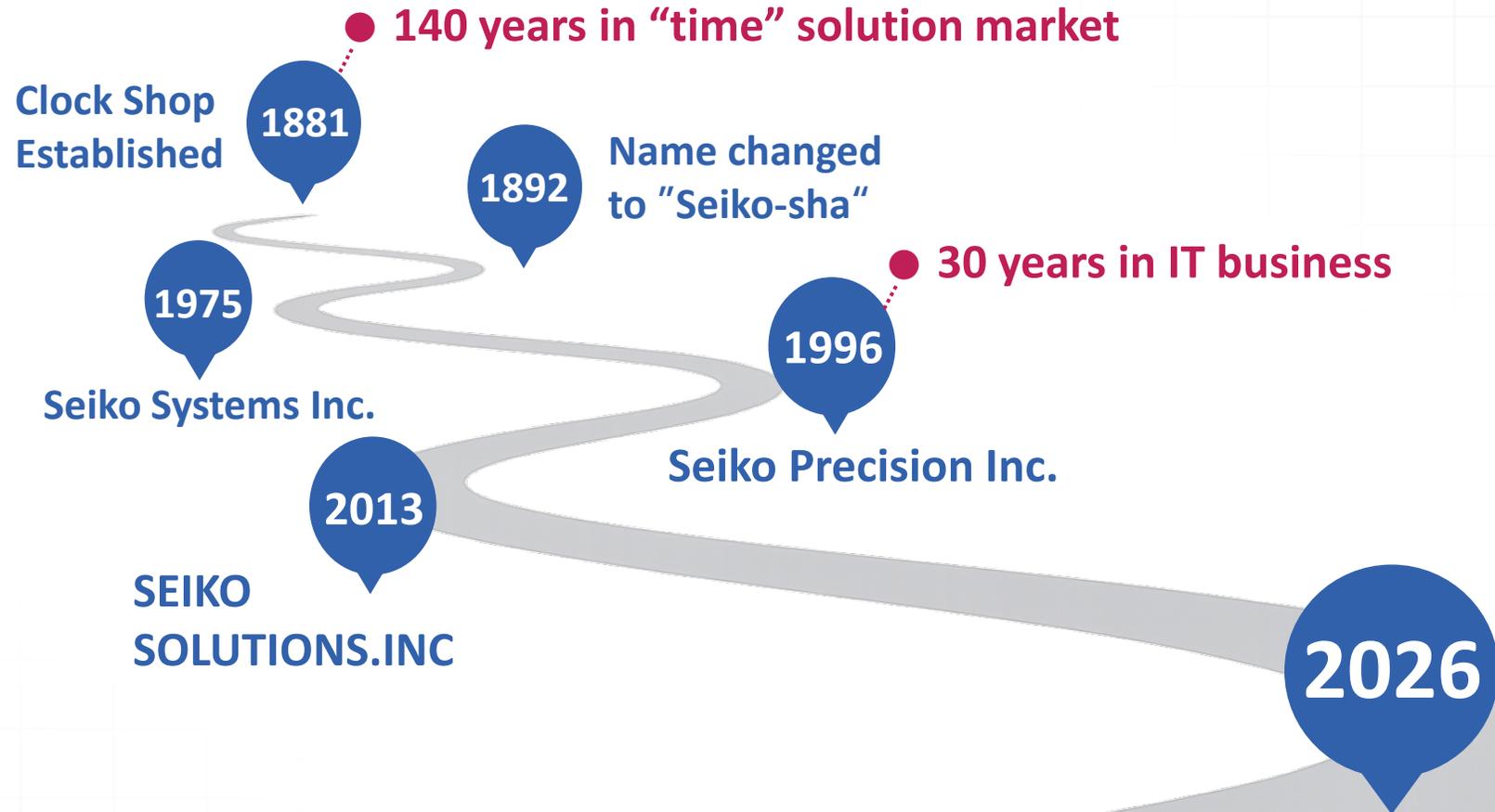
Product Overview | MWC Barcelona 2026 Edition



# SEIKO GROUP

SEIKO

More than 140 years of history providing precise time solution with cutting edge products such as clock, watch and electronic devices since the establishment of clock shop by K. Hattori in 1881



**Company split out due to business diversification**



SEIKO HOLDINGS CORPORATION

- SEIKO WATCH CORPORATION
- SEIKO INSTRUMENTS INC.
- SEIKO PRECISION INC.
- SEIKO NPC CORPORATION.
- SEIKO CLOCK INC.
- **SEIKO SOLUTIONS INC.**
- SEIKO OPTICAL PRODUCTS CO., LTD.
- WAKO CO., LTD.
- SEIKO TIME SYSTEMS INC.
- SEIKO NEXTAGE CO., LTD.
- SEIKO SERVICE CENTER CO., LTD.

We provide safety and satisfaction based on "reliable quality."



Company	SEIKO SOLUTIONS INC.
Established	December 13, 2012
Business Starting Date	April 1, 2013
Location	1-8 Nakase, Mihama-ku, Chiba City
Capital	500 million yen
Stockholder	100% by Seiko Holdings Corporation
Employee	Approx. 700
CEO	President Mr. Jun Sekine

## Business Lines

Network Solution

System Integration

Payment Solution

Mobile Solution

# PRODUCT LINES

## Time Synchronization Products

### PTP Grand Master Clock



**Time Server**  
Pro. ■

### NTP Time Server



**Time Server**

### NTP Clock



## Operation Management Products

### Console Server



**SmartCS**

### Jump Server



# Time Server

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Pro. ■

## SEIKO's Approach to the PTP Telecom Market With "Time Server Pro"

Since the release of TS-2910 series as a GM for the mobile telecom industry in 2015 SEIKO has been improving products and conducting connectivity validation.

- 2015 July : Released the **TS-2910 series** for the mobile telecom market
- 2018 July : Introduced the TS-2950-01 OCXO model
- 2019 April : Participated in **EANTC PTP Multi-Vendor Interoperability Testing**  
September: Made the TS-2910 series 5G-ready (**G.8272 PRTC B**) and entered the local 5G market
- 2020 April : Released the outdoor-installable **TS-2914** (DC power model)  
November: Made the TS-2910 series **IEEE802.1AS compatible** for the industrial Ethernet market
- 2021 October : Enhanced the TS-2910 series with PTP support profiles (**Default compatible**)  
April : Launched the outdoor-installable **TS-2924** (10G compatible/DC power model)
- 2022 June : Released the **TS-2922** (10G compatible/DC power model)
- 2023 September : Participated in the **IEEE Plugfest (ISPCS 2023)** for interoperability testing
- 2024 October : **ISPCS 2024 in Japan SEIKO supported Organizing Plug-Fest and event itself.**

# PRODUCT LINES



## Time Server **TS-2910/2920 Series**

### Indoor model

### Outdoor model

1G



I/F : CU or SFP  
Power : AC or DC

TS-2910/2912



I/F : SFP  
Power : AC or DC

TS-2914

10G



I/F : SFP+  
Power : AC or DC

TS-2922



I/F : SFP+  
Power : AC or DC

TS-2924

SEIKO's GM for telecom is focusing on the mobile market

# Latest model



## Synchronization Accuracy

- Accuracy : Less than **UTC±40ns**
- Supports the following profiles
  - Default Profile (IEEE1588v2)
  - Telecom Profile (G.8265.1, G.8275.1, G.8275.2)
  - IEEE802.1AS-2011 (gPTP)
- Compliance with **PRTC-B**

We adopted a GNSS receiver that supports various GNSS (GPS, QZSS, Galileo, and GLONASS) to meet PRTC-B

Model	Holdover Stability with OCXO
2910-10/20 2912-10/20	1.5μsec/2h 50μsec/24h
2910-12 2912-12 2922-12	400ns/5h 1.5μsec/24h

# *SmartCS*

Console server

# Serial console server SmartCS

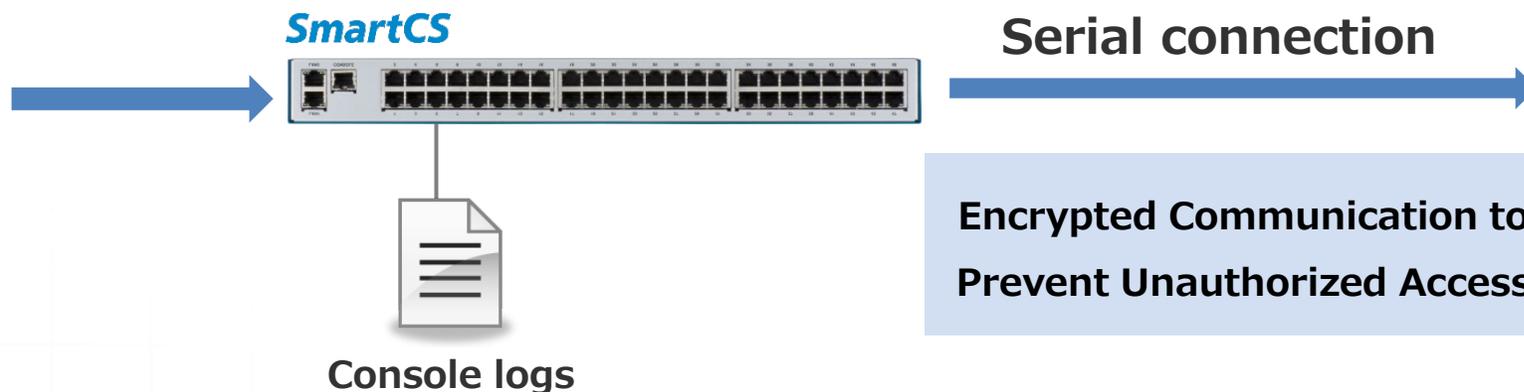
## SmartCS



- Aggregates console ports of the devices and enables operators to access them remotely
- Allows access to console ports from a telnet/SSH client on the network.
- Serial ports: 16/32/48 port model



Operator



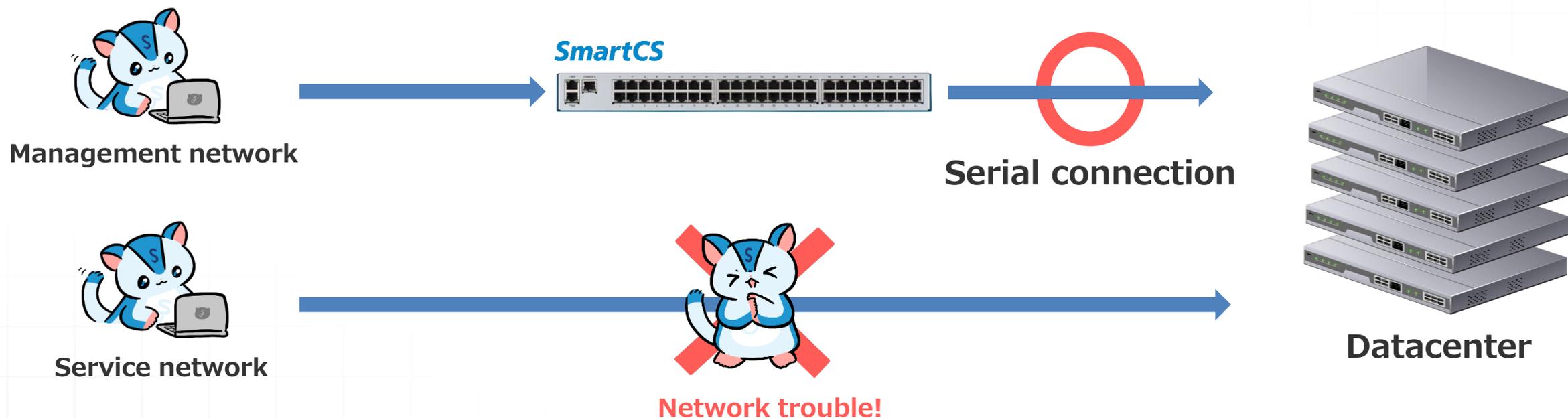
Store and transfer console logs

Target devices

# Serial console server SmartCS

## SmartCS

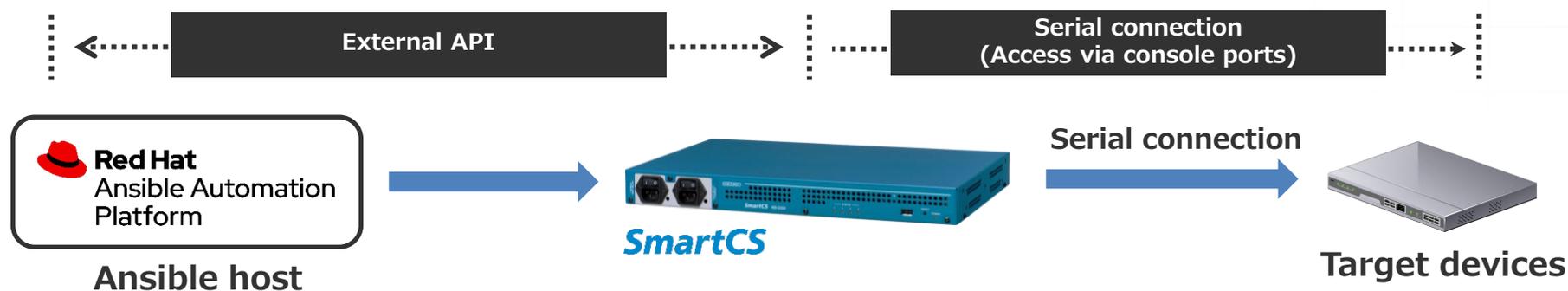
- Offers a unified, maintainable environment.
- Console access remains available via redundant management network in case of trouble.



# Serial console server SmartCS

## SmartCS × RedHat Ansible Automation Platform

Operators can access to devices via console ports using **Ansible** 🧢



- Any device not supporting external API can apply Ansible by using SmartCS
- Any device without IP can be accessed via Ansible

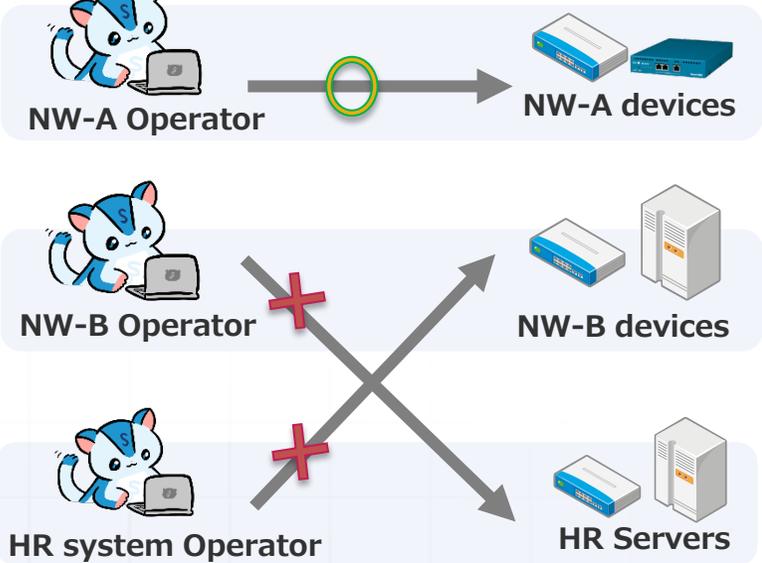


***Smart Jumper***

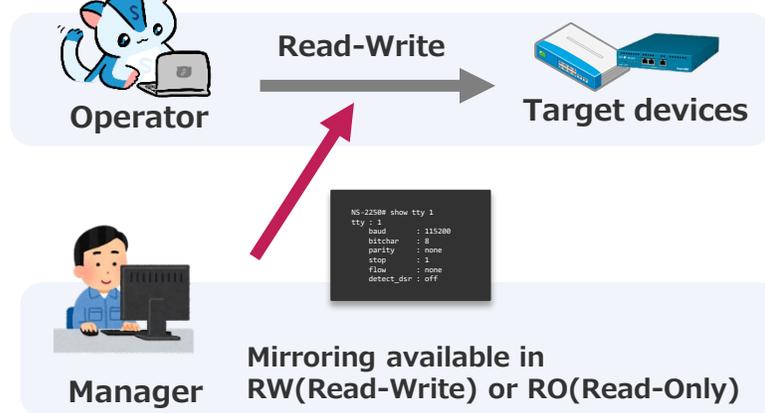
# Access Management Software - Smart Jumper

## Enhances **security** of equipment operation

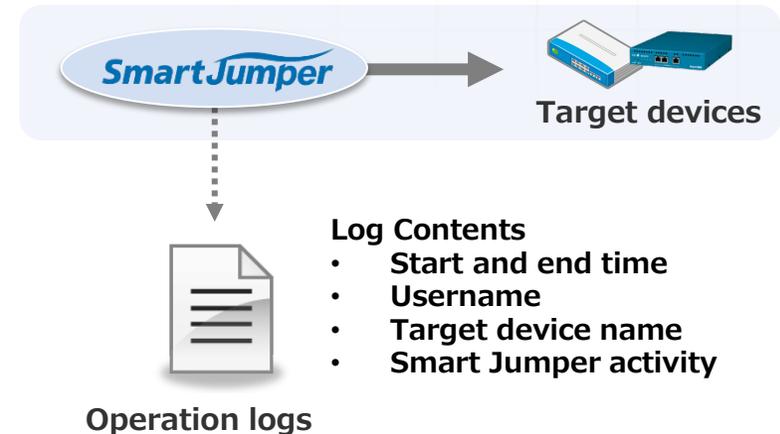
### Access control Prevent access mistakes



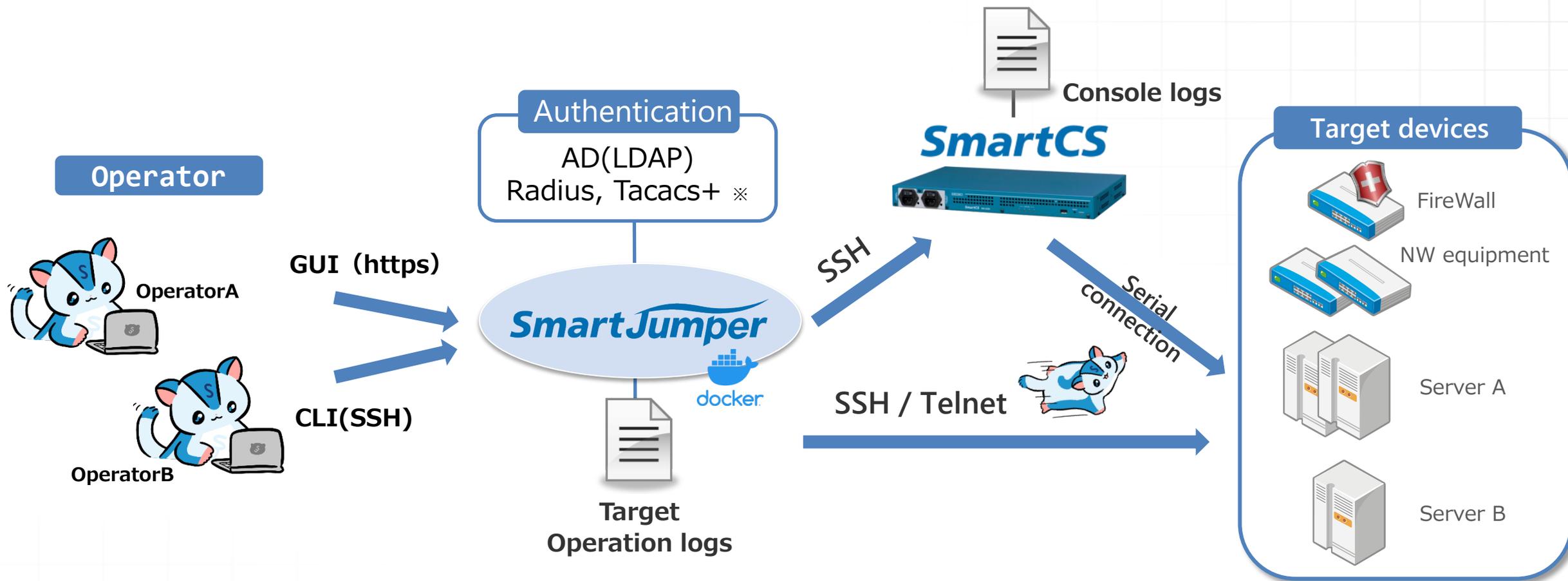
### Operation Monitoring Prevent operational mistakes



### Audit Log Recording Enhances audit trails



# Access Management Software - Smart Jumper

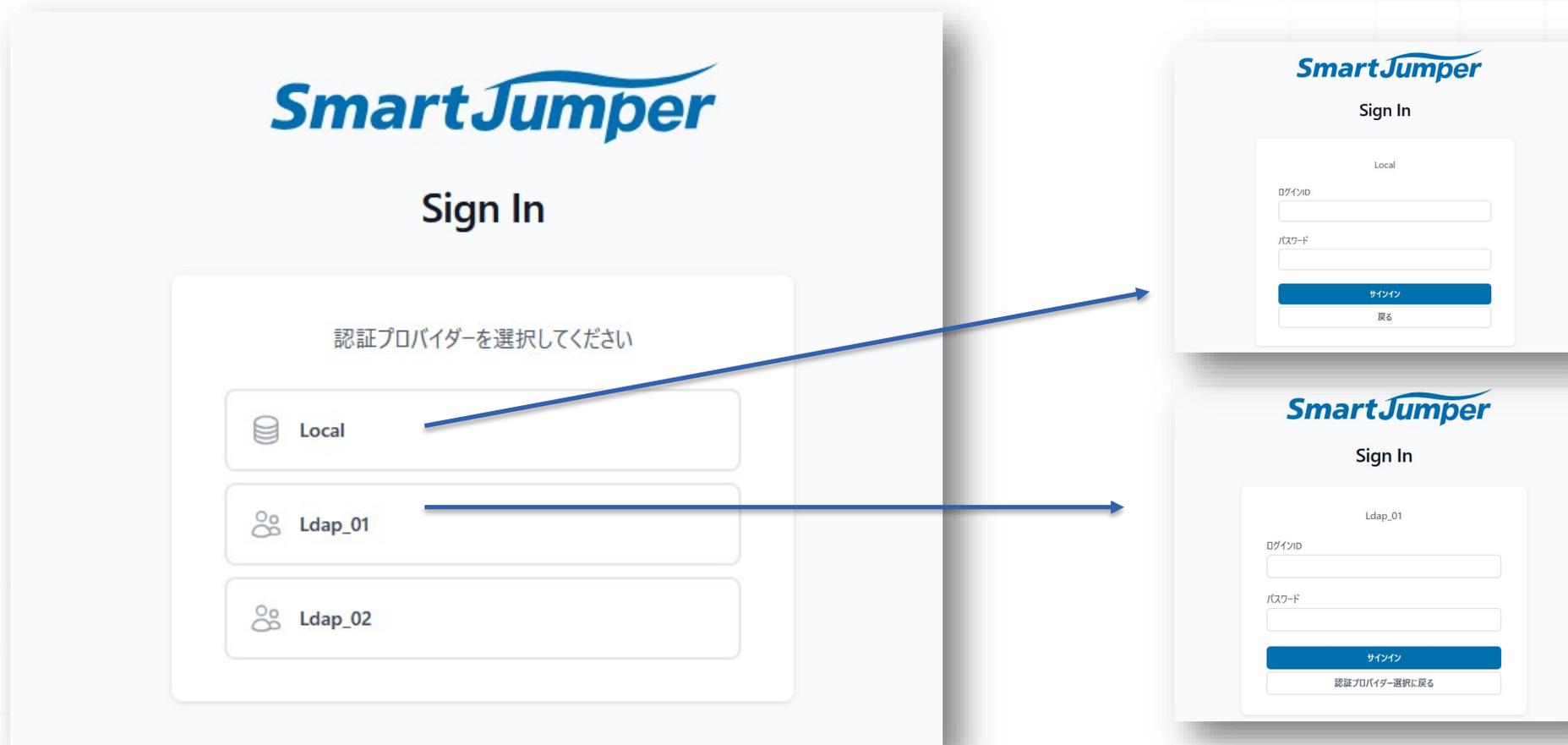


- Centralized user and device management via a simple browser-based GUI.
- No dedicated client software required.

※ RADIUS/ Tacacs+ support is planned for next year.

# Access Management Software - Smart Jumper

- 1 Log in using each operator's account  
Select the authentication method and enter Account ID/Password



The diagram illustrates the login process for Smart Jumper. It starts with a main 'Sign In' screen where users select an authentication provider. Two paths are shown: one for 'Local' authentication leading to a 'Local' login form, and one for 'Ldap\_01' authentication leading to an 'Ldap\_01' login form. Both forms include fields for 'ログインID' (Login ID) and 'パスワード' (Password), a 'サインイン' (Sign In) button, and a '戻る' (Back) button. The 'Ldap\_01' form also includes a '認証プロバイダー選択に戻る' (Return to authentication provider selection) button.

**Smart Jumper Sign In**

認証プロバイダーを選択してください

- Local
- Ldap\_01
- Ldap\_02

**Smart Jumper Sign In (Local)**

Local

ログインID

パスワード

サインイン

戻る

**Smart Jumper Sign In (Ldap\_01)**

Ldap\_01

ログインID

パスワード

サインイン

認証プロバイダー選択に戻る

# Access Management Software - Smart Jumper

The screenshot shows the Smart Jumper web interface. The top navigation bar includes 'Smart Jumper', 'Home', 'Log', 'Users', 'Targets', and 'Access Groups'. The main content area is titled 'Home' and features a search bar and a search button. A hierarchical menu on the left shows a tree structure: 'makuhari' > 'network' > 'SmartCS' > 'NS-2250\_1'. The main table displays a list of network devices with columns for Name, Address, Port, Protocol, and Description. A cartoon character is pointing at the 'Connect' buttons for the first three rows of the table.

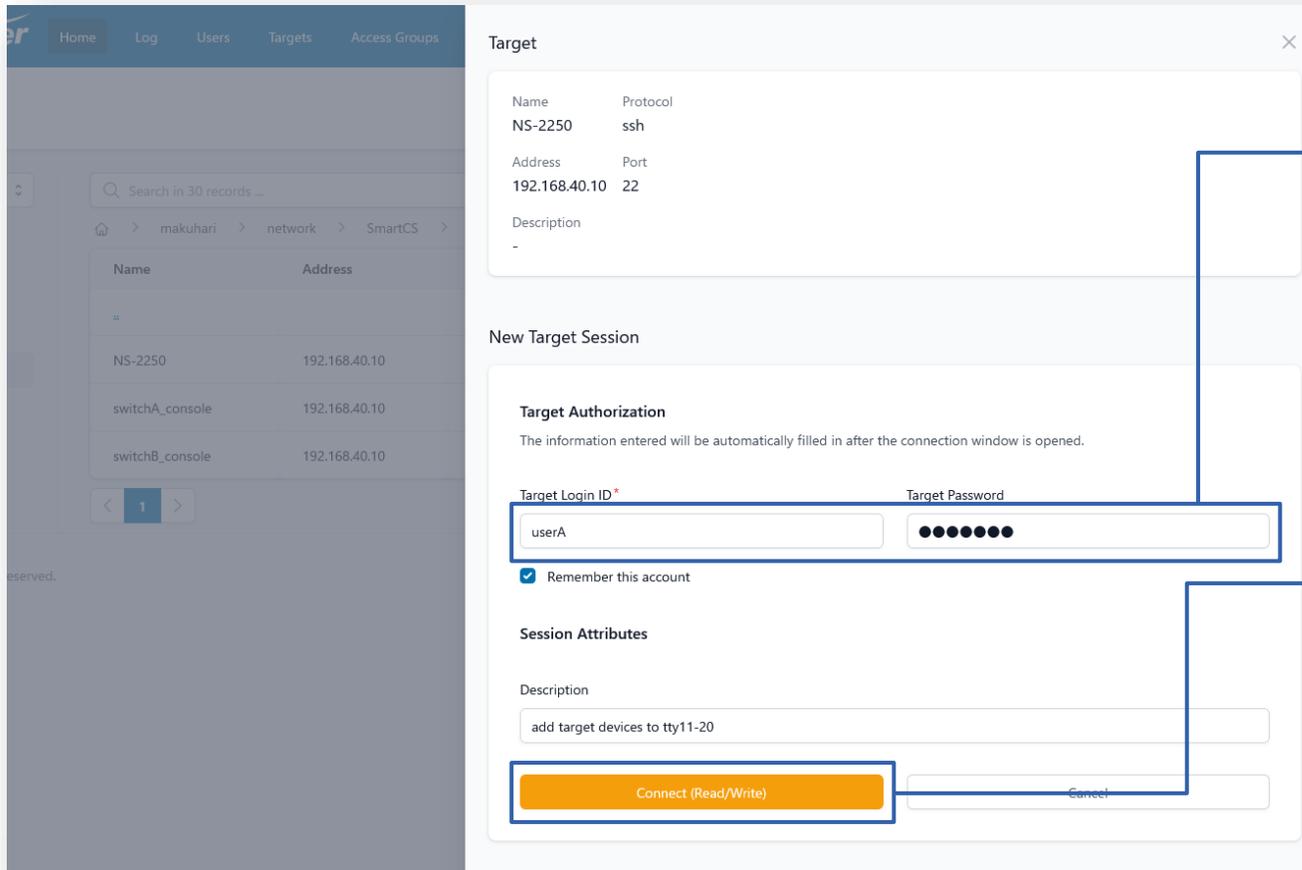
Name	Address	Port	Protocol	Description
NS-2250	192.168.40.10	22	ssh	
switchA_console	192.168.40.10	8101	telnet	
switchB_console	192.168.40.10	8102	telnet	

## 2 Hierarchical menu

Select a target device from the hierarchical management menu.

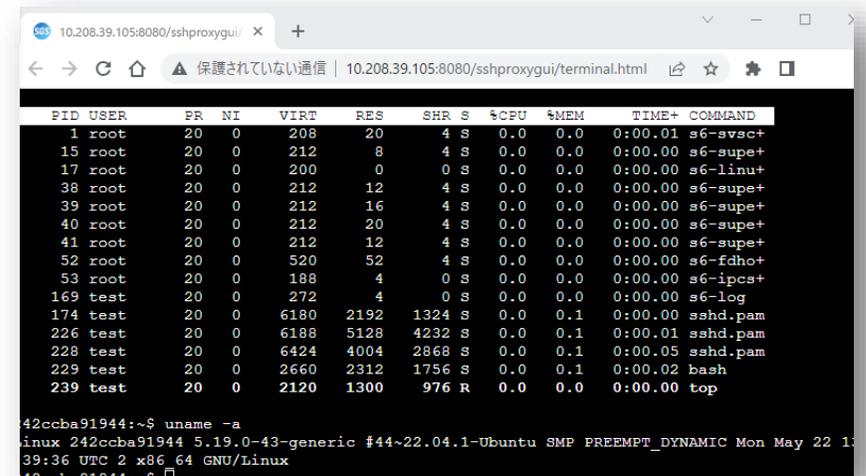
## 3 Connect

# Access Management Software - Smart Jumper



**4 Enter target ID / Password**  
- Select connection type

**5 Connect**  
- Launch terminal in browser  
- Operate the target directly



**SEIKO**