

Best Practices for CSMS Migration

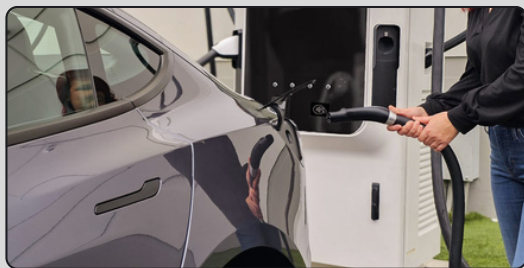
Drawing from this project and our years of experience, here are the top recommendations for a successful EV charging station network transition:

1 DESIGN FOR PORTABILITY: CHOOSE OCPP-COMPLIANT HARDWARE

“The ability to migrate charging stations with minimal disruption depends heavily on OCPP compliance.”

- **Use certified chargers and CSMS.** Certification ensures interoperability.
- **Avoid vendor lock-in.** Choose the right hardware and software combo for your needs.
- **Standardization saves time and cost** when switching CSMS or scaling your network.

2 ESTABLISH A DEDICATED PLANNING PHASE



Pro Tip: With OCPP 2.0.1, you can pre-load new network settings in a secondary slot (e.g., profile 2), test the connection, and reset the charger remotely, reducing site visits, overall project duration and cost.

- Allocate 2–4 weeks for stakeholder alignment before any on-site activity.
- Create a migration pre-requisite checklist to avoid preventable delays around common items like firmware version and OCPP compliance, SIM card transferability or eSIM provisioning, and connectivity tests to the new backend.
- Develop a shared understanding of:
 - Hardware and firmware readiness
 - SIM card provisioning
 - User account/data transfer
 - Physical signage and QR/NFC update needs

3 INVOLVE ALL VENDORS UPFRONT

- Include the hardware OEM early to confirm firmware compatibility and update paths.
- Align with both the old and new CSMS teams to validate protocol support.
- For OCPP chargers, confirm:
 - Firmware supports OCPP 1.6 or 2.0.1
 - Necessary configuration keys are exposed
 - Remote commands are accepted and executed correctly

4 USE REMOTE CONFIGURATION WHERE POSSIBLE

OCPP enables remote migration methods, such as `SetNetworkProfile` (OCPP 2.x), `ChangeConfiguration` (OCPP 1.6), and `InstallCertificate & SetVariablesRequest` for secure transitions.

5 PLAN FOR EDGE CASES AND MANUAL INTERVENTIONS

Even with OCPP, you may encounter:

- Chargers with hard-coded settings (older firmware)
- SIM cards tied to the old CPO's cellular contract
- Configuration keys named differently per manufacturer

Prepare your team with fallback strategies and manual override procedures. For particularly difficult chargers, site visits may still be required.

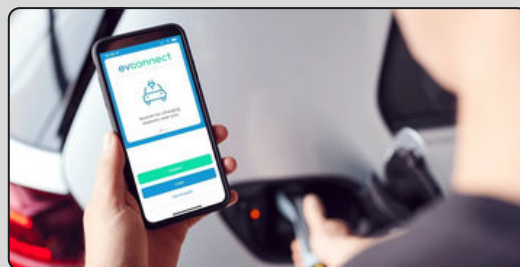
6 CONDUCT CONTROLLED BATCH MIGRATIONS

- Group chargers by model and firmware version
- Migrate in manageable waves during off hours to limit disruption
- Monitor real-time logs for errors or timeouts
- Ensure rollback capability where firmware updates are risky

From Case Study to Industry Standard

This project demonstrates how open standards like OCPP, and the right hardware and CSMS partners can ensure seamless and pain free network migrations.

EV networks face inevitable change: new CSMS platforms, new vendors, and evolving user expectations. This example, with EV Connect as the CSMS, ChargerHelp! as the field execution partner and BTC POWER as the hardware, serves as a model for how to execute migrations quickly, securely, and without major disruption.



By aligning around OCPP, clear governance, and phased execution, any network can position itself to adapt and scale—without re-inventing the wheel.

“This transition project proves that when you combine OCPP-compliant hardware with collaborative project execution and an open software platform like EV Connect, even urgent migrations can be fast, affordable, and scalable.”

Kameale C. Terry
Chief Executive Officer, ChargerHelp!