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# Client & Bundle Management System

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From Development Tooling to Runtime Deployment

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## **Defining the Needs**

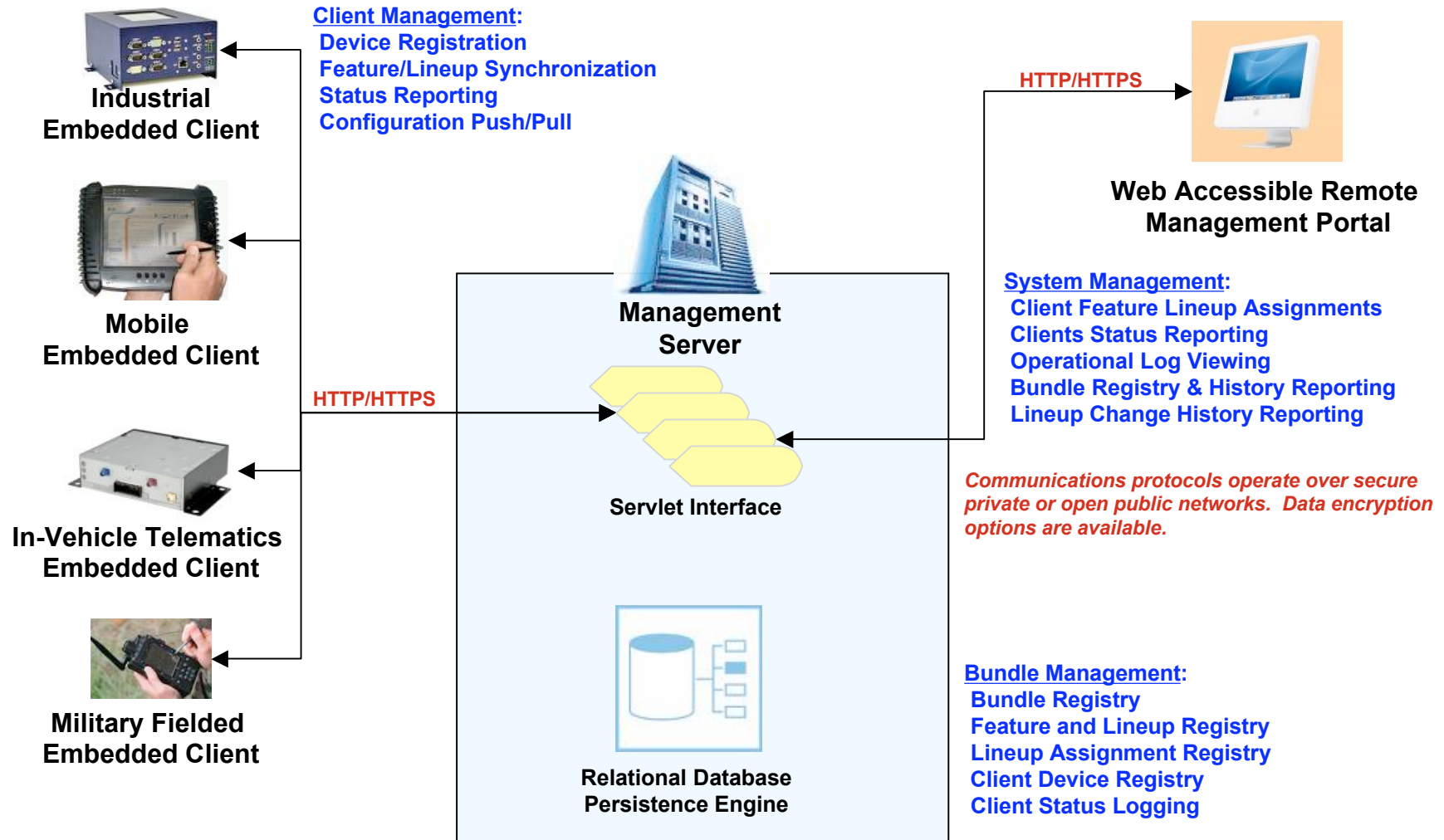
### **Runtime Client & Feature Management**

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- **Manage valid client identities and their status**
- **Assign bundle lineups to specific clients, track their updates**
- **Allow clients to check, load, and ghost their bundle lineups**
- **Allow for remote configuration of clients (or even servers)**



# The Runtime Solution





## “Real World” OSGi Deployments

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### ■ Bundles sometimes too fine-grained

- *“What level of firmware do I have installed?”*
- *Lineup: a versioned set of versioned bundles*

### ■ Clean system start-up and provisioning

- *Unique ID needed for querying assigned lineup*
- *Provision via network, USB key, etc*
- *“Base” feature bundles have necessary logic to detect and install assigned lineup(s)*

### ■ Updating bundles

- *Bundle lineups downloaded entirely before installation*
- *Base bundles require restart of system*
- *Application bundles hot swappable (watch synchronization issues)*

### ■ Remote APIs

- *Need standardized mechanism for controlling OSGi runtime, querying state*