Deployment Models
RFID Asset & Inventory Management

This brief outlines Software-as-a-Service (SaaS), On-Premises, and Hybrid deployment models for RFID-based asset and inventory management. It is designed to support government agencies in selecting a model that aligns with security, compliance, IT staffing, budget structure, and operational requirements under DES Contract 04618.

Area	SaaS (Cloud-Hosted)	On-Prem (Agency-Hosted)
Hosting	AWS/Azure Government regions	Agency data center/private cloud
Infrastructure	Vendor-owned/managed	Agency-owned/managed
Access	Secure web/VPN	Internal network
Upgrades & Patches	Automatic, vendor-managed	Scheduled, agency-managed
Typical Need	Fast pilot, low IT burden	Maximum control, deep customization

Horizon IoT supports three deployment approaches: SaaS (cloud-hosted), On-Premises (agency-hosted), and Hybrid (shared responsibility). Each model provides the same core RFID capabilities while differing in infrastructure ownership, operational responsibilities, and speed to value. Agencies commonly choose SaaS to accelerate pilots and reduce IT burden, On-Premises to maximize data control and customization, and Hybrid to balance modernization with local governance.

Overview of Deployment Models

Implementation Phases	Duration
Infra provisioning	0–2 days
Security/governance	2–4 weeks
Reader configuration	Standard
UAT & validation	1–2 weeks

The SaaS model provides a secure, cloud-hosted platform in AWS or Azure Government regions, removing the need for server procurement, OS/database upkeep, and routine maintenance. Agencies benefit from automatic feature releases, security patching, high availability, and vendor-managed monitoring. This approach is well suited to pilot programs and phased rollouts where speed and predictable OpEx are priorities. Typical timelines for SaaS deployments range from four to eight weeks, inclusive of security/governance review, reader configuration, user acceptance testing, and go-live validation. By avoiding infrastructure provisioning, agencies shorten timeframes and reduce risk, enabling faster validation of outcomes before broader expansion.

SaaS: Fastest Time-to-Value with Managed Operations

Operations Area	SaaS	On-Prem
Patch management	Vendor-managed	Agency-managed
Backups & DR	Included	Agency-managed
Custom workflows	Limited	Full
Direct DB access	No	Yes

The On-Premises model deploys the platform within the agency's own data center or private cloud, providing full control over data residency, system configuration, and integration depth. This model is well suited for environments that require local data storage or extensive workflow customization, including operations subject to HIPAA or CJIS where local governance and justification are easier. On-Premises deployments require dedicated internal IT resources for server, operating system, and database management, as well as backups, monitoring, and patching. Implementation timelines typically range from ten to twenty or more weeks due to hardware procurement, environment preparation, security reviews, and coordinated change windows. On-Prem also supports native offline operation for locations where network connectivity may be intermittent or unavailable.

On-Premises: Maximum Control and Customization

Readers → Local Gateway → Cloud Application → Dashboards / Analytics (Optional On Prem Data Store)

Hybrid combines local control of RFID readers and secure gateways with cloud-delivered dashboards, reporting, and analytics. Agencies can optionally retain an on-premises data replica for sensitive domains and maintain a migration path in either direction (SaaS to On-Prem or On-Prem to Hybrid) as policies evolve. This approach balances modernization with local governance and operational continuity.

Hybrid: Cloud Management with Local Control

Cost Category	SaaS (Cloud-Hosted)	On-Prem (Agency-Hosted)
Upfront cost	Low (OpEx)	High (CapEx)
Licensing	Annual / multi-year	Perpetual or term
Infrastructure	Included (cloud hosting, storage, compute)	Servers, storage, OS/DB
IT labor	Minimal (vendor-managed)	Significant (agency-managed)
Upgrade & patch costs	Included	Customer-funded
Long-term profile	Predictable OpEx	Mixed CapEx + OpEx

Public-sector teams evaluate deployment models through cost predictability and internal labor needs.
SaaS avoids capital expenses for servers, storage, OS/DB licensing, and maintenance by using a subscription model with vendor-managed upgrades and patches, resulting in predictable OpEx.
On-Premises requires higher upfront CapEx and ongoing internal IT labor for hardware, operating systems, database administration, backups, monitoring, and patch management, leading to a mixed CapEx + OpEx profile over time.

Cost Structure (OpEx vs CapEx)

Summary & Contact

Horizon IoT offers flexible deployment models—SaaS, On-Premises, and Hybrid— designed to meet the security, compliance, and operational requirements of agencies across Washington and Oregon under DES Contract 04618. Each model supports scalable RFID asset and inventory management while allowing organizations to choose the level of control, customization, and IT responsibility that aligns with their environment.

We are happy to walk through deployment options with our clients and help determine the best path based on their workflows, data governance policies, and operational goals.

Please feel free to reach out at any time.

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