

Integrated Subscriber Data Management Solution (I-SDM)

Smarter, simpler identity services for the Multi-G future

HPE 
GreenLake



Why continue using dedicated Subscriber Data Management (SDM) frameworks for each access network and vendor in your environment? Now, you can lower costs and simplify operations by migrating to a single, unified multigenerational (Multi-G) SDM solution from Hewlett Packard Enterprise.

The growing identity challenge

There are now more than 12 billion mobile network connections worldwide, and every single one of them starts the same way—with SDM systems authenticating the subscriber’s identity against back-end databases. But while the basic SDM process stays the same, communication service providers (CSPs) rely on a sprawling mix of technologies to perform it, often within the same network.

For years, SDM frameworks have been tightly linked to specific access networks and vendors. So, if you were moving to a new network generation (or **G**), you’d deploy new core network functions (NFs), along with back-end policy and control stacks, as a single solution from that vendor (Figure 1).

That’s not a bad approach—if networks always stayed the same. But they don’t. Instead, as the network evolves, adding 3G, 4G, Wi-Fi, and now 5G, you end up with an ever-growing collection of SDM infrastructures. Each is tied to a different part of the network, and each requires its own specialized software and core data repositories. The results:

- **High operating expenses (OpEx)**, since SDM fragmentation creates proliferating technology infrastructures that must be deployed, powered, and maintained
- **High complexity**, since network teams must use multiple redundant operational models for different subsets of devices bound to different access networks
- **Higher risk of provisioning delays and broken services**, since there is no persistent cross-network identity or handover, and more opportunities for errors

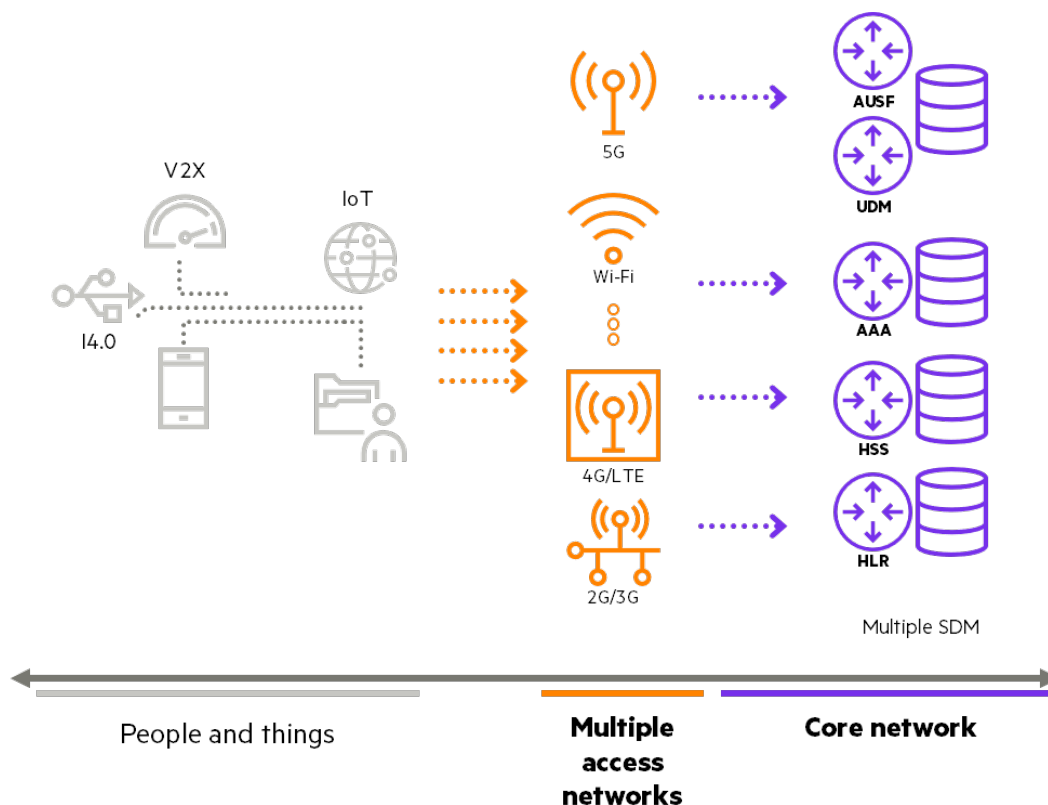


Figure 1. Fragmented SDM infrastructures



Barriers to monetization

This model was never ideal, but as CSPs look to emerging revenue opportunities like the Internet of Things (IoT), it becomes a major barrier to success. Analysts [project](#) that the global IoT market will eclipse \$4 trillion by 2032, growing at a compound annual rate (CAGR) of 24.3 percent. How can you efficiently support hundreds of millions of newly connected **things** when the basic mechanism for getting onto the network is fragmented across multiple complex, redundant, vendor-specific systems?

As you move into the next phase of network evolution, migrating to 5G Core (5GC) and 5G stand-alone (SA), perpetuating this antiquated approach to identity just doesn't make sense. It's time to recognize SDM for what it is—a fundamental capability that underpins all network services that should be treated as a distinct operational domain.

HPE I-SDM

Now, you can break the SDM fragmentation cycle by migrating to a converged, cloud-native Multi-G SDM solution. HPE I-SDM unifies all networks and equipment vendors within a single, consolidated SDM framework. For the first time, you can support all users and things, across all network generations, with a single set of operations. You can create a simpler, more agile environment, where users and things can register to the network once and be instantly provisioned everywhere—across 3G, 4G, 5G, Wi-Fi, and beyond.

HPE I-SDM is a cloud-native software solution that provides consistent, comprehensive support for all users and things connecting to your environment, across all networks and vendor technologies. It combines simplified Multi-G management and operations with the flexibility, resiliency, and unlimited scalability of cloud-native software. And it's available as an as-a-service (aaS) solution that dynamically scales with your business, with consumption-based pricing.¹



¹ May be subject to minimums or reserve capacity may apply

Key benefits

HPE can help you build a modern, flexible foundation to support new mass-scale IoT deployments and 5G SA, as well as tomorrow's 6G networks and services. When you migrate to a converged HPE I-SDM, you can tap into significant operational and economic benefits. You can:

- **Provide seamless cross-network service experiences:** With user identity, session, and control information shared among 3G, 4G, 5G, and Wi-Fi networks, subscriber application sessions carry over smoothly across every network, using the same consistent routing strategy.
- **Simplify operations:** Staff no longer need to use different tools and skills for different access networks and subscribers. Instead, they can apply common provisioning, observability, assurance integration, automation, and orchestration for all subscribers across all networks.



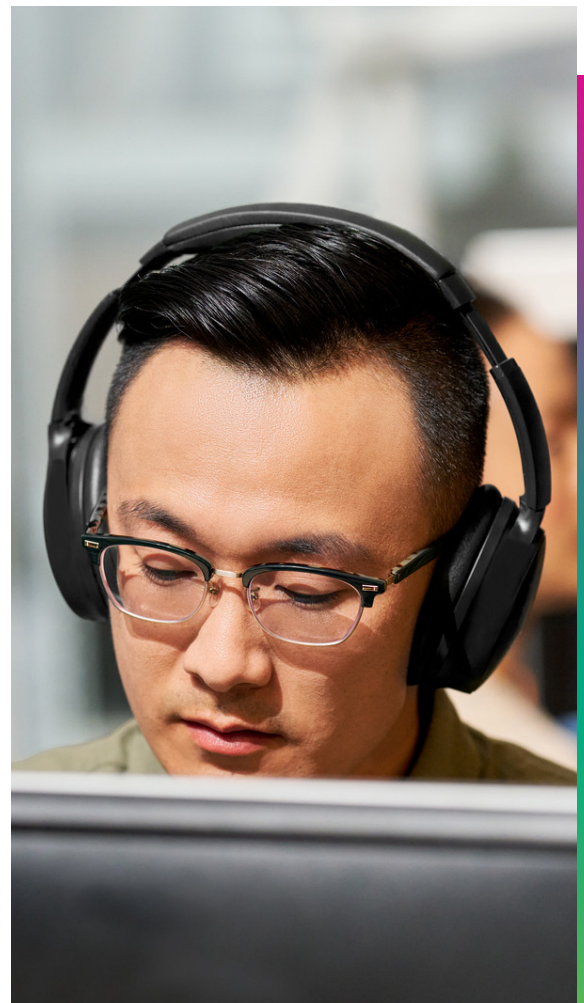
- **Use once-and-for-all provisioning:** Register users or devices once, no matter which access they use to connect, and the system automatically provisions them across all networks, regardless of technology or vendor.
- **Support next-generation IoT services:** Use an SDM that makes it easy to monetize emerging vertical use cases by supporting both conventional end points and new, cutting-edge IoT devices, such as those connecting over RedCap or eRedCap, at massive scales.
- **Accelerate implementation with a pretested, preintegrated, cloud-agnostic solution:** Unify operations for all front-end and back-end SDM systems, and all vendor- and technology-specific NFs in your environment. HPE I-SDM solution comes preintegrated with a wide range of radio and network technologies (from Samsung, Nokia, Ericsson, and many others) and supports all major cloud infrastructure and orchestration platforms.
- **Scale and optimize dynamically:** Tap into the same dynamic resource scaling used in hyperscale data centers with a cloud-native SDM solution. HPE I-SDM continually monitors traffic and usage volumes and automatically scales SDM resources as needed, on demand.
- **Increase agility and flexibility:** Use our cloud-native software deployment and change management tools to commission an entire network in under an hour and make ongoing incremental software changes without disrupting users.
- **Pay as you grow:** Why invest in maintaining in-house infrastructure and continually overprovisioning to stay ahead of demand? With the HPE GreenLake edge-to-cloud platform, you can consume SDM cloud resources as a service, scaling with demand and paying for only what you use.

Migration made painless

For most CSPs, migrating from a traditional fragmented environment to Multi-G SDM won't happen overnight. It's a process that will be managed over time depending on your unique 5G evolution strategy, future use case targets, legacy solutions, and other considerations. Fortunately, HPE provides a comprehensive toolset, backed by decades of real-world SDM migration experience, to assist at every step in the journey.

Our SDM solution is designed to enable all network technologies to coexist within a single framework. That includes not just multiple network generations and vendors, but multiple architectures and operational frameworks as well. As you transition to cloud-native architectures and operations, you can support both new and legacy environments simultaneously, for as long as you need to, using the same SDM solution.

We also know how to help CSPs succeed with SDM migration. Our comprehensive approach has been validated for millions of subscribers in CSP environments around the globe. As a longtime industry leader in SDM, we've helped migrate more than 250 million subscribers—including migrating up to 10 million in one evening. We've worked across almost every type of SDM, including legacy HPE systems and solutions from Ericsson, Nokia, Huawei, Mavenir, and many others. And we're helping large and innovative service providers, such as AT&T, achieve new levels of agility and scalability.





The HPE difference

Why choose HPE to help you transition to smarter, simpler, Multi-G SDM? Because we combine the right cloud-native technology with a global track record of SDM leadership and a proven commitment to helping CSPs succeed.

HPE has sold more than 1 billion SDM licenses worldwide for more than 80 carriers. We combine expertise in the latest cloud-native software innovations with decades of leadership in carrier-grade telecom solutions. We can help you move to cloud-native Multi-G SDM efficiently and cost effectively, without disrupting your customers. Together, we can build a more scalable, resilient, and agile network foundation for the future.

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