

HPE API Management Service Governance Framework

Expose, govern, and monetize APIs



Increase new services speed to market

Gain a competitive advantage by quickly packaging and promoting innovative new services to open additional revenue streams, seize emerging opportunities, and serve multiple markets.

Managing these expanded ecosystems for security, governance, analytics, and monetization is key.

- API management and governance
- Lifecycle
- Versioning
- Policy
- Security
- Authentication
- Authorization
- Throttling
- Analytics reporting
- Dashboard

Get opportunities to capture new revenue

The market for rich, converged services is rapidly expanding. Speed and quality are essential to thrive in this competitive marketplace. For communications service providers (CSPs), bringing new, high-quality services to market faster requires greater efficiency across all services lifecycles. In response, the services ecosystem is expanding to include many external third parties and consumer application developers—prosumers—who can help CSPs lower their risk.

Further intensifying the challenge is the increasing importance of Web 2.0 communities as sources of new and enhanced revenue. Forward-thinking operators leverage powerful digital service enablement frameworks to serve this community and establish new business models across multiple domains. These include digital content, unified communications, cloud, Big Data, machine-to-machine (M2M), the Internet of Things (IoT), network functions virtualization (NFV), and software-defined networking (SDN)—just to name a few.

Use the HPE Service Governance Framework

Get end-to-end governance and management for higher quality and greater revenues

The HPE API Management Service Governance Framework (HPE SGF) enables you to securely enable, manage, and govern network operator and third-party resources access across multiple user services. It brings the performance of service-oriented architecture (SOA) and the flexibility of representational state transfer (REST) with all kinds of business and deployment models to help you win in your market. HPE SGF offers extended features and benefits for Web 2.0 governance and management, including comprehensive run-time, service lifecycle, and design-time governance features.

Use HPE API Management solutions for on-premises, on-premises virtualized, or cloud deployments.

- Network and IT exposure eases operations, leverages, and monetizes key assets.
- Big Data API Management, combined with smart profiles, provides contextual real-time, in-session information and business rules.
- Mobile API Management, including apps enablement, leverages APIs in the mobile ecosystem, enhances users' experience with mobile apps, enables smart interactions, and lets you run a mobile Backend-as-a-Service offering for your customers.

Flexibly deploy HPE API Management components to provide customized solutions.

- HPE SGF—Securely expose, manage, and govern network and third-party resources access. With the optional HPE SGF Partner Relationship Management (HPE PRM), provide a partner and developer portal for easy and secured API leverage.
- HPE SOM—Orchestrate services with business rules, mash-ups creation, and a callable decision engine.
- HPE Smart Interaction Server (HPE SIS)—Enables mobile and web real-time, bidirectional, presence-based interactions for “everything.”

Through HPE SGF, outside developers can securely access and use simple web service enablers to create more sophisticated applications, Web 2.0 mashups, and services without detailed knowledge of underlying systems. It also enables service wholesalers and advanced consumers to offer their services in a controlled environment—an expanding ecosystem of third parties and subscribers.

HPE SGF is at the heart of the HPE API Management Platform—a standards-based, core-to-edge SOA solution for converged digital services environments.

With HPE SGF, you can expose resources and Application Program Interfaces (APIs) within minutes. And you get the right level of security to the right audience for the duration or quotas you set through the best set of protocols suiting the developers, partners, and web community you target.

This framework enables multitenancy for app developers and partner engagement, making it possible for you to define domains such as multiple API stores mapping to specific business types, segments, or strategic approaches. Developers and partners can be tied to one or several domains or stores with a specific set of APIs to be discovered, subscribed to, and used. This multitenancy aspect makes it possible to define environments dedicated to specific verticals, internal development, or premium partners only, for instance.

HPE SGF also enables defining of clusters so that API-related traffic going to specific service enablers goes through a dedicated set of API gateways. This can be very important to guarantee service-level agreements (SLAs) for important partners or sensitive services.

Review key benefits

Speed up new services to market—Gain a competitive advantage. Quickly package and promote innovative new services to open additional revenue streams, seize emerging opportunities, and serve niche markets.

Cut costs—Control operational expenses (OPEX) and capital expenditures (CAPEX) associated with developing, delivering, and managing thousands of new, rich services via standardized service development processes and workflows, service element reuse, reduced complexity of service validation, and automated change management.

Attract new customers, including the Web 2.0 community—Expose existing and third-party services as common Web 2.0-supported formats, to capture new customers and increase use of existing services and new third-party applications.

Capitalize on new business models—Leverage comprehensive capabilities for enablement, governance, and scalability for Web 2.0 services to create new business models, such as smart advertising-supported services, service marketplace, IoT, and other revenue-sharing models.

Quickly create multiple application offers—When connected to the HPE API Management Service Orchestration Manager (HPE SOM), you can quickly create products and offers tied to policy decision points in HPE SGF, such as cross-selling opportunities, adult content, privacy, promotions, advice of charge, and more. The proposed services can be modeled for operational and commercial viability—before full rollout.

Enhance the customer experience—Offer a vast service portfolio without sacrificing control, because new services can be quickly developed, tested, published, managed, and retired, so you keep customers happy and operator profitability high.

Table 1: Review key HP SGF features

GOVERNANCE FRAMEWORK AND GATEWAYS

Gateways supported and ability to add new gateways	HP SGF uses REST Access and Policy Enforcer Gateway for web services APIs. Multiple gateways can be used for high-availability configurations.
Distributed run-time governance	Through governance, HPE provides traffic shaping by allowing specific APIs to go through specific gateways—n APIs into m gateways.
Appliance-, gateway-, cloud-based implementation	API gateways center operational traffic management on appliances that come as hardware appliances or software virtual appliances, including cloud implementations.
Distributed multidomain governance framework	Specific groups of API consumers gain visibility and access to specific and similar API types that are isolated and exposed through specific API access points—access gateways implemented API proxies and runtime policies. With domains, a group of API consumers can be attached with clusters of access gateways and exposed APIs.
Open and composable architecture	Flexible architecture enables multiple services to be combined to compose new services.
High-availability architecture and scalability	Solution deployment ensures operational continuity and ability to scale based upon traffic demands.

SECURITY

API security—inbound	Multiple levels of support for Enhanced API Key, OAuth 2.0, Cross Origin Resource Sharing (CORS), 2-way SSL Encryption, PKI, TLS, X.509 certificates, forcible authentication, basic authentication are protected against XPath, OS command, SQL, and HTTP header injection, buffer overflow, directory traversal, session hijacking, and open redirect attacks, XSS (cross site scripting) and CSRF (cross site request forgeries) protection.
API security—outbound	OAuth 2.0, Enhanced API Key, basic authentication, or no authentication if not needed.

POLICY MANAGEMENT

Multiple protocols supported	Examples include SOAP, REST, XML, JSON, and as client, CSP, or enterprise needs change; new protocols can be supported.
Policy management for access control	Access management defines approval and security processes for application developers' authentication and authorization functions for accessing network assets and services.
Resource management policies	Traffic can be throttled at the northbound API consumer level and southbound network element level.
Manage policies for multiple consumer types	Centrally controlled, role-based access assignment and robust interfaces are delivered to manage activities related to internal, third-party, ISV, and Web 2.0 mashup services and their access to network assets.
Subscriber validation policies	Subscriber-specific policy enforcement includes subscriber validation based on subscriber profile, age check, blacklist, and charging credit check.
Class of service	This enables grouped services to be made available to particular API consumers.
Tier management	Partitioning usage traffic into multiple segments/levels—known as volume tiers—enables defining values to various volume tiers and enables overriding of them at a service level in the context of a package.

API LIFECYCLE

Complete API lifecycle management	HPE SGF provides a 360-degree view of services through development, management, and service use.
API diagnostics	HPE Diagnostics enable end-to-end topology, transaction visibility, root tracing, and consumption per entity.
API flavor flexibility	This provides the ability to manage many—network, IT, internal, Telco assets, Big Data, M2X, IoT, NFV—types of APIs.

STANDARDS AND INITIATIVES SUPPORTED

Supported standards include Parlay X, OMA, GSMA OneAPI, ETSI NFV standards.

Get seamless deployments

- HPE Solution Lifecycle Services help your communications and media industry organization realize the full value of your solutions, from planning and assessment to testing, deployment, operation, and nearly continuous improvement. Each service area leverages proven processes and best practices to balance CAPEX and OPEX and reduce risk, while keeping your projects on time and your operations running smoothly.
- HPE Solution Consulting Services help define business transformation and translate strategies into actionable solutions.
- HPE Solution Implementation Services offer a low-risk project lifecycle across design, development, customization, and network and system integration.
- HPE Solutions Management Services increase the operational efficiency of your existing solutions, including reactive, proactive, operational, and enhancement services.
- HPE Outsourcing options are designed to improve business agility while reducing your OPEX; options include IT and infrastructure outsourcing, application management, and business process outsourcing.

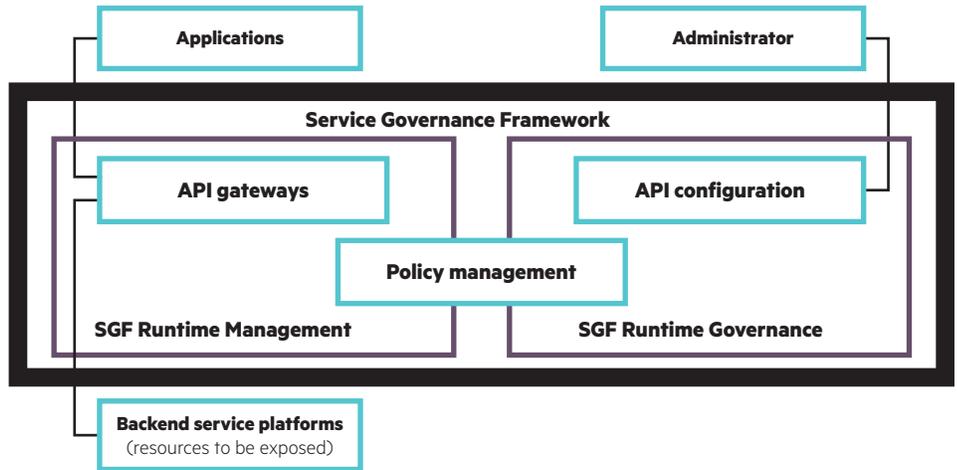


Figure 1: HPE SGF architecture

Rely on HPE expertise

HPE SGF offers unmatched flexibility in the service delivery platform (SDP) and API management industry, offering support for a wide range of API sources—internal, external, social, and other. Protocols include web-services, REST, XML and JSON, large sets of policies, complete analytics, and top security schemas at all levels.

Hewlett Packard Enterprise (HPE) has years of experience and success in SDP and API management space, has more than 15 major wins in API management, and has represented Tier 1 operators in every geography. We offer an extensive set of use cases for API management, developed and delivered as a combination of product and solution offers through Big Data, network exposure, and mobile API management. With the combined value of HPE intellectual property and products, we can offer an end-to-end value proposition for any challenge your business faces. Through API management, we can help you realize new revenue streams, present an opportunity to establish your own over the top (OTT) offers, or collaborate with OTT players, and provide tools needed to better understand your users for a vastly improved customer experience.

Boost your business. Simplify your life. Satisfy your customers. All with HPE API Management Service Governance Framework.

Learn more at hp.com/go/APImanagement



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