BNG Service Manager for Cisco Prime

General

Q. What is Cisco Prime™?

A. The Cisco Prime portfolio of enterprise and service provider management offerings empowers IT organizations to more effectively manage their networks and the services they deliver. Built on a service-centered foundation, the Cisco Prime portfolio of products supports integrated lifecycle management through an intuitive workflow-oriented user experience.

The portfolio of Cisco Prime solutions for service providers provides A-to-Z management for IP next-generation networks, mobility, video, and managed services.

Q. What is the BNG Service Manager for Cisco Prime?

A. The BNG Service Manager for Cisco Prime is carrier-grade policy and subscriber data management software that helps enable service providers to control, monetize, and personalize their broadband offerings on their networks. The BNG Service Manager for Cisco Prime is developed by BroadHop and is a unique Cisco® offering available through the Solutions Plus program.

Q. Why does broadband need policy control?

A. The broadband paradigm has undergone a fundamental shift. Subscriber demands for new video, voice-over-IP, and data applications are accelerating, and data transfers over broadband connections are reaching unprecedented levels. Users are generating and sharing more and more content. All of this has put tremendous pressure on service providers' business models, especially with respect to all-you-can-eat, flat-rate pricing. To stay competitive in today's fast-moving market, service providers must be able to rapidly develop and roll out new services.

Q. Why has Cisco partnered with BroadHop for this product?

A. Cisco has partnered with BroadHop, the leader in policy management, in order to offer its customers a policy and subscriber data management software solution that easily integrates with a variety of Cisco network management software and hardware, including Cisco Intelligent Services Gateway (ISG) and Cisco Service Control Engine (SCE) platforms. By combining the robust network control, service differentiation, and deep packet inspection capabilities of the Cisco ISG and SCE platforms with the BNG Service Manager for Cisco Prime, service providers are able to:

- Rapidly roll out new services and promotions for events
- Deploy resource and admission control, validate available bandwidth, and automatically allocate real-time service
- Dynamically manage broadband performance
- Integrate advanced broadband, value-added, and third-party services

Use Cases

Q. What use cases are supported?

A. With the BNG Service Manager for Cisco Prime, service providers can quickly deploy value-added use cases such as:

- **Residential Broadband Base Package**
  - Tiered services and per user quality of service (QoS) that facilitates subscriber base segmentation to offer differentiated services and pricing - for example, premium, high-speed access targeted at business users and gamers versus basic access speeds for email and browsing users
  - Bandwidth on demand/turbo boost that allows subscribers to increase their bandwidth either on a preschedule or an on-demand basis - for example, for a streaming video session or business demonstration
  - Session usage data record generation
  - Subscriber data management including subaccount/user group management and identity management
  - Subscriber account creation and service selection portal API that interfaces with a service provider's portal, helping enable users to create accounts and control their service experience

- **Metered Broadband Package**
  - Tracking of subscriber session- and/or application-specific usage against daily, weekly, or monthly billing cycle fair use usage limits; provides the ability to block, downgrade, or restrict subscriber usage when exceeding usage limits
  - Alerts for subscribers when they are approaching limits based on user-personalized (or plan default) threshold
  - Offer options to extend a user's quotas, including Pay as You Go (PAYG) top-ups
  - Incentivize users to perform data-intensive transfers, such as online backups, during off-peak hours using time-of-day windows
  - Upsell subscribers with premium, value-added options, for example, exemptions of specific traffic, such as social networking, from plan usage limits
  - Subscriber usage balance management, including daily, weekly, monthly recurring, rollover and single use plans, and top-ups
  - Quota management portal API that allows subscribers to view their quota usage and prevent bill shock by tracking subscriber usage and extending their quotas

- **Charging Package**
  - Flexible charging detail record (CDR) generation with rules-based filters, for example, to strip out non-billing-related fields or augment accounting records with data from other sources
  - Aggregation of partial CDRs and correlation of CDRs from multiple sources
  - Dynamically charge services based on real-time rating rules
  - Real-time and/or offline charging and policy enforcement
  - Prepaid, postpaid, and hybrid payment models

Q. What's the difference between session usage data record and charging detail record generation?

A. The collection of RADIUS accounting records from the Broadband Network Gateway is included in the base BNG Service Manager for Cisco Prime offering. Accounting records may be handed off to downstream systems in a flat-file format. With the optional BNG Charging Package, the BNG Service Manager for Cisco Prime supports:

- Flexible CDR generation with rule-based filters, for example, to strip out non-billing-related fields or augment accounting records with data from other sources

- Aggregate partial CDRs and correlate CDRs from multiple sources

- Dynamically charge services based on real-time rating rules

Portal

Q. Does the BNG Service Manager for Cisco Prime include a customer-facing portal?

A. The BNG Service Manager for Cisco Prime solution does include web service portal APIs that help enable integration with customer-facing portals. Examples of capabilities facilitated by the APIs include:

- Subscriber service selection: Helps enable subscribers to control their service experience

- Quota management: Prevents bill shock by tracking subscriber usage and extending their quotas

- Self-service account management: Account creation and maintenance, including username/password creation, contact information, service provisioning, and more

An "out-of-the box" customer-facing portal is not included; however, one can be created through Cisco Advanced Services and its partners. Cisco and its partners provide a broad portfolio of end-to-end services and support that can help increase your network's business value and return on investment. This approach defines the minimum set of activities needed, by technology and by network complexity, to help you successfully deploy and operate Cisco technologies and optimize their performance throughout the lifecycle of your network.

Performance

Q. How does the BNG Service Manager for Cisco Prime scale?

A. The BNG Service Manager for Cisco Prime is based on an enhanced blade architecture designed to scale with the needs of the network. As a network grows, the BNG Service Manager for Cisco Prime keeps pace through the addition of blades to support the increasing number of policy transactions. Each blade in a Service Manager cluster functions as part of an integrated policy solution. As the solution is fully virtualized across the blade server, the system can scale linearly. Additional blade server chassis can be added to further increase the scale. The BNG Service Manager for Cisco Prime runs on Cisco Unified Computing System™ (Cisco UCS™) and other blade servers.

Redundancy

Q. Is the BNG Service Manager for Cisco Prime carrier grade?

A. Yes, the BNG Service Manager for Cisco Prime utilizes an innovative, three-tier virtual architecture that has been designed for scalability, system resilience, and robustness to achieve 99.999 percent carrier-grade system availability. Each module runs multiple virtual instances spread across multiple hardware blades for performance and resiliency.

Q. Does the BNG Service Manager for Cisco Prime support geographic redundancy?

A. Yes, the BNG Service Manager for Cisco Prime may optionally be deployed in multiple sites for geographic redundancy and disaster recovery. The BNG Service Manager for Cisco Prime may be deployed in either active/passive or active/active configurations across sites.

Licensing

Q. How is the BNG Service Manager licensed?

A. The BNG Service Manager for Cisco Prime is licensed based on functionality plus subscriber count. See Table 1 for details.

Table 1. Subscriber License Modules for BNG Service Manager for Cisco Prime

Functional Module	Subscriber License Module	Description
Residential Broadband Base Package	Includes 250,000 Subscriber Licenses	Designed to help enable service providers to implement differentiated service tier packages and per subscriber QoS. This sets the foundation for metered usage and charging capabilities
	Base Package - 100,000 Subscriber License Add-on	Adds 100,000 subscriber licenses to the Residential Broadband Base Package
	Base Package - 1,000,000 Subscriber License Add-on	Adds 1,000,000 subscriber licenses to the Residential Broadband Base Package
Metered Broadband Package	Includes 250,000 Subscriber Licenses	Designed to help enable service providers to meter the usage of their subscriber base, whether simply to educate their subscribers, to generate additional revenue for high consumption, or to create segmented service offerings to address the variable levels of usage their customers need
	Metered Broadband Package - 100,000 Subscriber License Add-on	Adds subscriber licenses to the Metered Broadband Package
	Metered Broadband Package - 1m Subscriber License Add-on	Adds 1M subscriber licenses to the Metered Broadband Package
Charging Package	Includes 250k Subscriber Licenses	Enables service providers to create real-time charging, rating, and policy enforcement services
	Charging Package - 100k Subscriber License Add-on	Adds 100k subscriber licenses to the Charging Package
	Charging Package - 1m Subscriber License Add-on	Adds 1M subscriber licenses to the Charging Package
Geographic Redundancy Module		Enables Geographic Redundancy across multiple sites
	Geo License - Up to 1M Subscribers	Based on the total number of subscriber licenses for the BNG Service Manager for Cisco Prime
	Geo License - Up to 2.5M Subscribers	Based on the total number of subscriber licenses for the BNG Service Manager for Cisco Prime
	Geo License - Up to 5M Subscribers	Based on the total number of subscriber licenses for the BNG Service Manager for Cisco Prime
	Geo License - Up to 10M Subscribers	Based on the total number of subscriber licenses for the BNG Service Manager for Cisco Prime

Q. What support is available with BNG Service Manager for Cisco Prime?

A. One year of support and maintenance is included with the initial purchase. Additional end user support and maintenance is available for purchase through BroadHop and will be offered to the customer as an option upon fulfillment of the order. Cisco SAS support is not available for the BNG Service Manager for Cisco Prime.

CISCO

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
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