

MOBILE DATA CENTER SGI/GI SECURITY EVALUATION

Service Overview

As network traffic increases and business initiatives evolve, network security requirements may change. Juniper Networks Mobile Data Center SGI/Gi Security Evaluation service enables wireless service providers to determine if the security statement and capabilities for their existing mobile data centers are sufficient for current and anticipated business requirements.

The service provides analysis and recommendations for enhancing alignment between the existing security statement and the security capabilities currently in place with regard to the SGI/Gi interface(s). Our expert security consultants provide guidance on how any identified deficiencies can be addressed and, where appropriate, make recommendations to consider when planning for future growth.

Service Description

Juniper Networks Mobile Data Center SGI/Gi Security Evaluation service is recommended for large wireless service providers who:

- Are deploying a Third-Generation Partnership Project (3GPP) Long Term Evolution (LTE) or universal mobile telecommunications system (UMTS)
- Have their own data center for mobile subscribers
- Have a formal security statement (a documented guide that describes the security posture including rules of engagement, log retention, who has change authorization, problem resolution process, and related topics)

It is particularly applicable for organizations in which data center security is essential for continued business operation, e.g., emerging or growing mobile carriers.

As network traffic increases and business initiatives evolve, the associated security requirements of the network may change. These requirements will often vary from zone to zone and even vary within a zone. In the 3GPP reference architecture, there are several major zones in the network:

- The evolved packet core (EPC) or mobile packet core (for UMTS) that handles the routing of packets, anchors the mobile network, and is interconnected by the Mobile Packet Network (MPN)
- Mobile subscriber services such as the Home Location Register (HLR) for UMTS or legacy 2G networks, or the Home Subscriber Server (HSS) for LTE and UMTS networks
- Operators' IP-based services typically provided through the IP Multimedia Subsystem (IMS), e.g., Voice over LTE delivered through IMS
- Connection to enterprise customers' services
- Connection to the open Internet

Each of these network connections is defined by the SGI (LTE) or Gi (UMTS) interfaces. The diagram below provides more details.

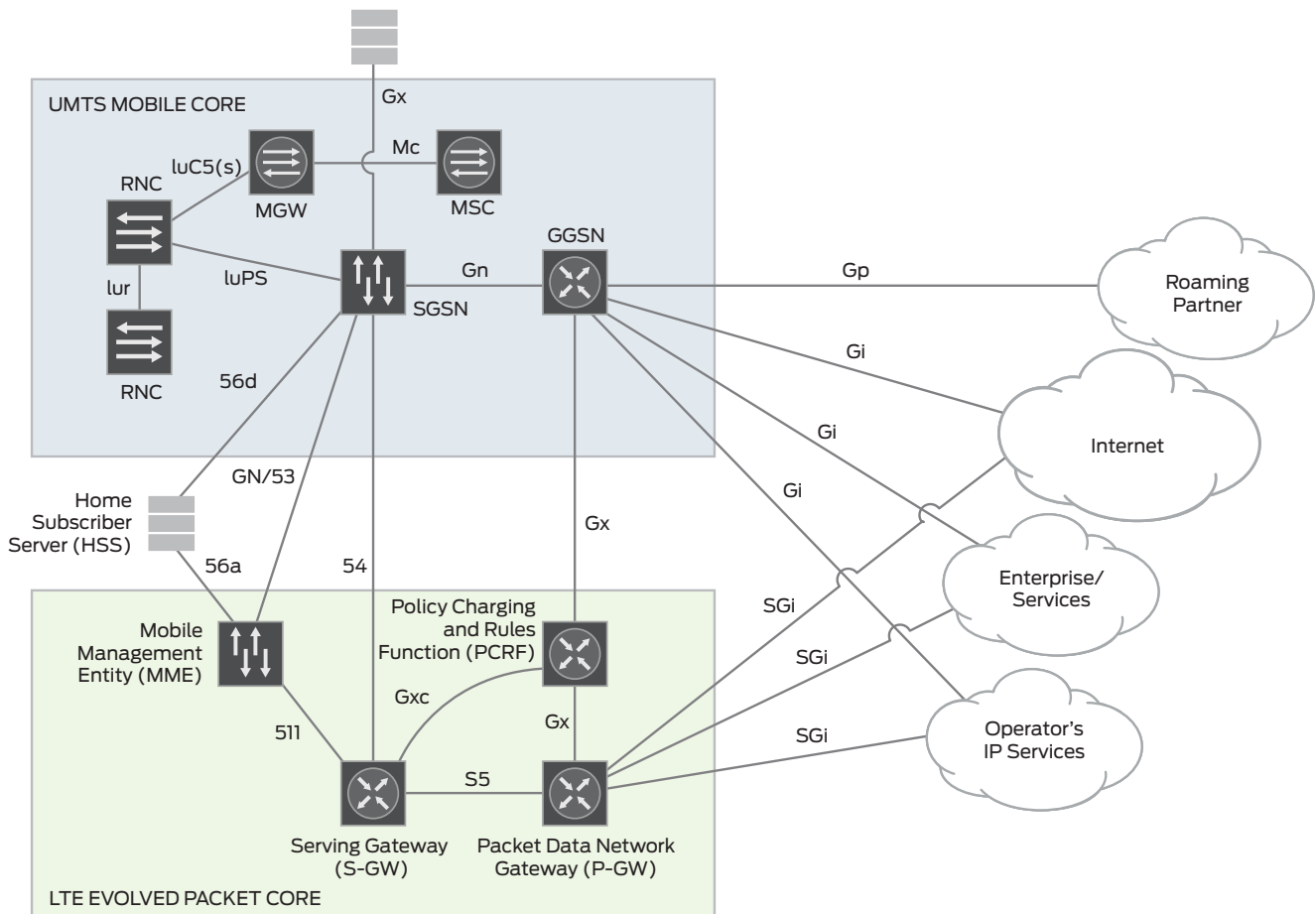


Figure 1: LTE and UMTS packet cores with SGi/Gi and Gi interfaces

The complexity of the environment makes it essential that there is frequent review and enhancement of both the security statement(s) and also the appliances in place to facilitate the security. Many service providers that use firewall appliances plan for a refresh cycle of at least five years; however, the speed of change in business activities and traffic volume often initiate a more frequent review of firewalls and associated security policies.

Examples of the times when companies should consider this service include:

- The requirement for different security considerations has evolved since the security policy implementation, e.g., additional user environments are now required.
- The creation of a new security statement demands an audit of existing security capabilities to ensure alignment of the capabilities with the statement, e.g., the security statement is being enhanced to incorporate policies driven by social media.
- Anticipated increases in network traffic volume, or new business initiatives, require evaluation of the potential for the current environment to handle the expected changes and an understanding of the requirement for enhanced security capabilities.

Features and Benefits

Juniper Networks Mobile Data Center SGi/Gi Security Evaluation service helps ensure that a provider's enhanced security policies and security environment are optimized for business needs. Failure to revisit the segments or reconsidering the traffic processing needs of existing segments may result in a misallocation of resources such as over capacity for some segments and under capacity in others. If segments and resulting security policies are not optimized for business needs, the result can be security vulnerabilities, wasted CapEx (such as the wrong number of firewall appliances, or incorrect capacity planning resulting in a costly refresh sooner than needed); wasted OpEx (since each appliance requires power, cooling, and configuration); and even system outage.

In addition to the financial benefits, this service helps ensure greater protection of customer/company property, higher capacity limits, and dynamic capacity for protection of projected growth.

The service is available to all customers, regardless of their existing firewall vendor equipment. Our service delivery consultants have in-depth experience in the security field and across products from Juniper and other vendors.

The service takes 10 days to complete. During this time, the consultant will review the Security Statement and security configurations for up to four SGI/Gi environments (a customized service can be defined if evaluation is required for more than four environments). Included in the activities performed by the consultant are:

- Review the current traffic capacity and projected growth of transaction rate for the defined environments
- Review the security architecture to evaluate the number of firewall appliances, environments/zones, and external connections to the Internet compared to the projected needs of the network
- Develop recommendations for enhancement to current Security Statement and associated network design enhancements in regards to the SGI/Gi interface[s]

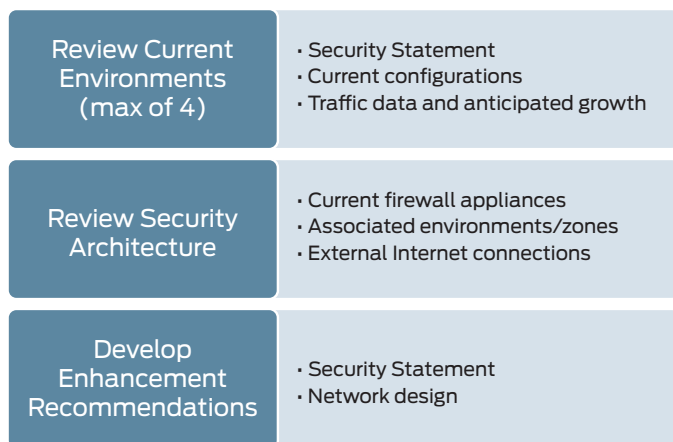


Figure 2: Service process steps

Service Deliverables

The Juniper consultant will provide a written report summarizing the review and providing suggestions for improvements in SGI/Gi environments. For example, the consultant will provide suggestions about where to combine environments or create additional environments, and recommend subsequent changes to the security policies for these environments to align to the Security Statement or to offer new services or additional protections.

Juniper Networks Professional Services

As leaders in networks and security, Juniper Networks Professional Services consultants and engineers are uniquely qualified to assist service providers in designing, implementing, and optimizing security solutions. Our team appreciates the complexities and the subtleties inherent in large-scale internetwork design and can assist service providers and enterprises, or provide customized and integrated “turn-key” solutions. Juniper’s mobile security solutions are a subset of the mobility solutions program.

Our process is to apply appropriate efforts and resources to analyze the mobile data center network from an end-to-end perspective. This initial phase is referred to as mobile data center security evaluation, and it allows the Juniper security consultants to review the existing network and give advice about security solutions or specific fixes to deploy. Once the assessment is complete, our Professional Services team can deliver and implement recommended security solutions.

Juniper Networks Professional Services helps accelerate your network’s time to value, bringing revenue generating capabilities online faster for bigger productivity gains, faster rollouts of new business models and ventures, greater market reach, and higher levels of customer satisfaction. Your onsite staff will work closely with Juniper specialists, building operational capabilities and reducing your exposure to IT risks. As a result of our previous experience involving hundreds of IP networks around the world, Juniper Networks Professional Services is uniquely qualified to help customers design, implement, and optimize their networks for confident operation and rapid returns on infrastructure investments. These professionals understand today’s Internet demands and those that are just around the corner—for bandwidth efficiency, best-in-class security, solid reliability, and cost-effective scaling.

The use of Juniper’s consultants avoids the requirement for you to have the necessary technical and security audit and evaluation skills internally. Also, the evaluation can be completed faster even when you are able to find the skills internally, as you are not forced to wait until they become available nor do you have to address the issue of conflicting project priorities.

Additional Services to Optimize Your Network

Juniper Networks provides additional consulting services that complement the Mobile Data Center SGI/Gi Security Evaluation. Services to consider in the early stages of your network review are:

- **Strategic Network Consulting:** In the planning stage of your project, this service will assist you in determining a strategy for your network architecture and a plan to translate such a strategy into an optimal solution. It is aimed at understanding your business requirements, determining the impact of the changes on your existing network infrastructure, and providing architectural guidance and recommendations to ensure that your network will be enhanced in a controlled manner.
- **High-Level Design:** Implementing a new network or security project starts with an evaluation of the requirements and a detailed rendering of the architecture to be used. The High-Level Design service defines the topology, protocols, and equipment required, mapping the design to your needs.
- **Low-Level Design:** Once the high-level design of a network is determined, the specifics need to be identified. The Low-Level Design service identifies the optimal configuration and equipment necessary to make your network a reality.
- **Testing Service:** Prior to implementation of a new network, Juniper Networks Testing Service give you an opportunity to combine your knowledge of your network’s specific performance requirements with Juniper’s sound foundation of network design methodology and products to create a customized test environment that simulates your unique end-to-end deployment scenario. This allows you to avoid the cost of creating and operating your own test labs, reduces your project risk, ensures a seamless implementation of new technology into your production environment, and accelerates your time to deployment.
- **Implementation Consulting:** Subsequent to lab testing, the Implementation Consulting service offers remote or onsite engineering assistance to support execution of a predefined implementation plan. The service is typically used to help you in implementation, migration, testing, and troubleshooting activities.

Juniper Networks Service and Support

Juniper Networks is the leader in performance-enabling services that are designed to accelerate, extend, and optimize your high-performance network. Our services allow you to maximize operational efficiency while reducing costs and minimizing risk, achieving a faster time to value for your network. Juniper Networks ensures operational excellence by optimizing the network to maintain required levels of performance, reliability, and availability. For more details, please visit www.juniper.net/us/en/products-services.

Ordering Information

The Juniper Networks Mobile Data Center SGI/Gi Security Evaluation service may be ordered using the part number identified in the table below. You can also contact your Juniper Account Manager for more details. For each engagement, a statement of work (SOW) will be established outlining the scope of effort to be performed.

Model Number	Name
PRO-MDC-SEC-EVAL	Mobile Data Center SGI/Gi Security Evaluation

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.

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