



Capacity Planning Analysis

Plan capacity expansion, coverage extension, and CDN investments



Sandvine's network intelligence and service innovation capabilities can be leveraged in 5G core and edge environments, delivering critical contextual and slice awareness to feed new service creation and strengthening a service provider's position in the 5G value chain for consumer and enterprise markets.

CAPACITY PLANNING ANALYSIS BENEFITS

- Reducing CAPEX and OPEX, since service providers will be investing in areas where upgrades are actually needed
- Increasing the ability to respond to changes in trends that will affect network quality and capacity
- Providing more visibility into how subscribers are using the network, specifically in terms of applications and services; this information helps service providers plan network strategy for both short and long-term needs
- Improving the ability to optimize available capacity with powerful traffic management capabilities at low additional investment

MARKET OVERVIEW

Customer demand for data and data-heavy services is constantly increasing. Service providers need to make informed decisions to improve capacity and customer experience; however, capacity planning and expansion is complicated. Today's networks are a complex mix of traditional network elements, caches, and content delivery networks, making it extremely difficult – and incredibly expensive – for service providers to adapt their existing infrastructure.

Service providers often determine how they'll add additional capacity to the network based on three metrics:

- An estimation of peak bandwidth demands or a measure of the number of subscribers at peak, without consideration for the percentage of time a resource spends in a congested state
- The level of quality that a resource is delivering
- The potential savings that exist on the network from deferring an upgrade decision that doesn't impact the quality of service the network delivers to the subscriber

However, these metrics are not very useful as effective capacity planning requires visibility and granular detail into what is happening in the network. Multiple layers of data are needed to produce the most accurate picture and inform the best deployment of new resources and infrastructure. While understanding traffic growth per sub-section and layer of the network is challenging, it is critical in order to plan capacity upgrades accordingly.

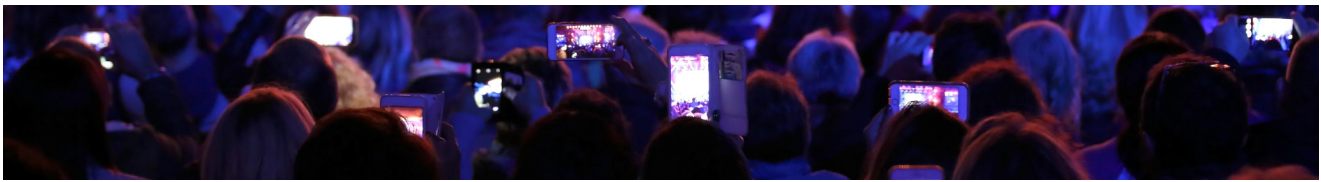
Understanding the most over-utilized and under-utilized network nodes requires monitoring key quality of experience (QoE) indicators: latency, packet loss, and throughput. Armed with this information, service providers know exactly where they are underperforming and can make key decisions to improve capacity and customer experience.

USE CASE OVERVIEW

Sandvine's Capacity Planning Analysis provides service providers with unmatched visibility into network traffic and trends, measuring all traffic, all the time, across all subscribers with the highest degree of granularity. Service providers can access anything from comprehensive measurements to advanced QoE metrics, with granular application visibility, user visibility, and network topology/hierarchy awareness.

This data, when aggregated and analyzed, whether visualized within Sandvine's Active Network Intelligence Portal or exported to a big data system, empowers service providers to make informed decisions.

More importantly, service providers can effectively plan investments regarding capacity expansions, coverage extensions, CDNs, cache locations, and peering relationships.

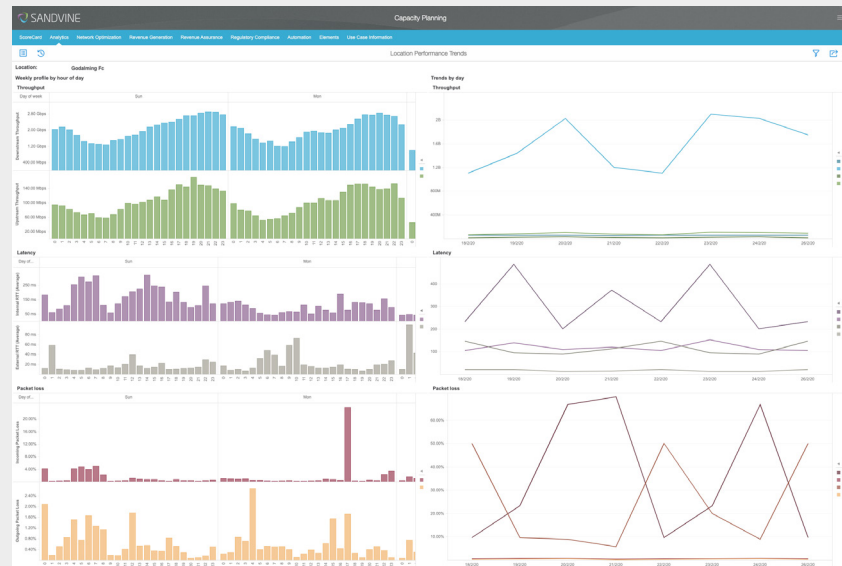


Location Performance

Service providers gain a detailed understanding of location-based QoE metrics: latency, packet loss, and throughput. This data allows them to complete what-if analysis with a high degree of accuracy.

Figure 1

Capacity Planning Analysis
Location Performance

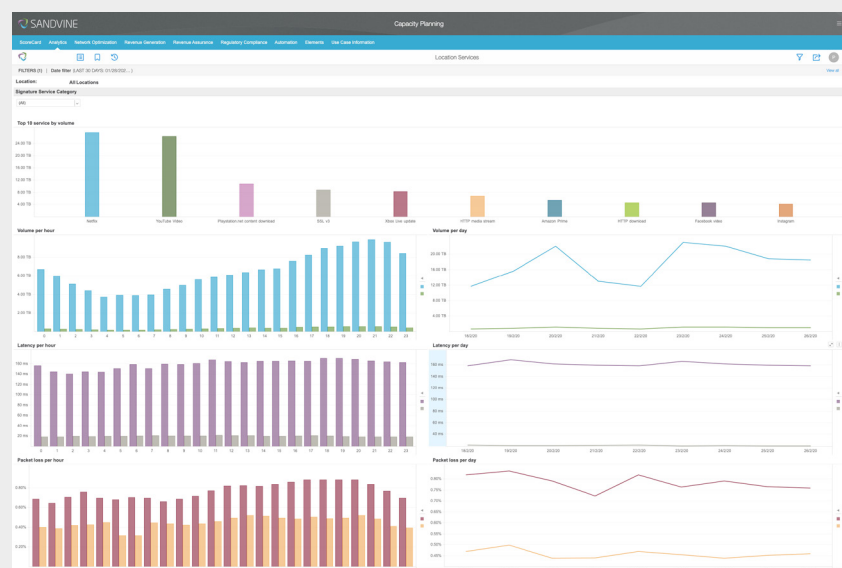


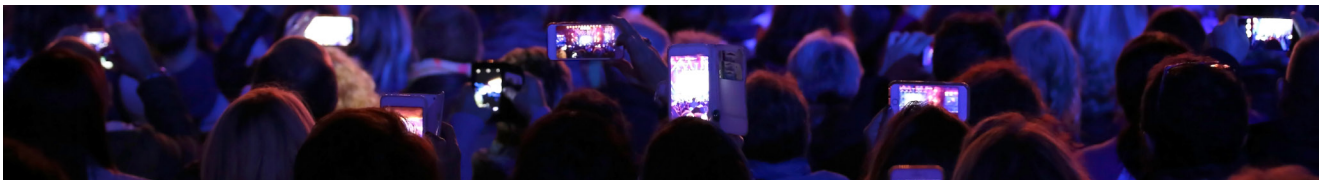
Location Services

Service providers benefit from an end-to-end view of the services that are driving demand by location. This data can also be broken down by Sandvine's QoE metrics, giving a full understanding of application trends over time.

Figure 2

Capacity Planning Analysis
Location Services





By using Sandvine's Capacity Planning Analysis use case, service providers can optimize their investments, ensuring that capital is spent where the maximum benefit is achieved on QoE.

ABOUT SANDVINE

Sandvine's cloud-based Application and Network Intelligence portfolio helps customers deliver high quality, optimized experiences to consumers and enterprises. Customers use our solutions to analyze, optimize, and monetize application experiences using contextual machine learning-based insights and real-time actions. Market-leading classification of more than 95% of traffic across mobile and fixed networks by user, application, device, and location creates uniquely rich, real-time data that significantly enhances interactions between users and applications and drives revenues. For more information visit <http://www.sandvine.com> or follow Sandvine on Twitter @Sandvine.



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