

## Subscriber Policy Broker: Overview

The Subscriber Policy Broker (SPB) is Sandvine's highly scalable subscriber profile repository and data warehouse, and hosts the Network Demographics reporting interface

The Subscriber Policy Broker (SPB) is a key component of Sandvine's platform, providing critical functions that enable both network policy control and business intelligence. The SPB enables the real-time application of business logic and policy enforcement that powers subscriber-centric network policy control use cases. The SPB also serves as the data warehouse for the entire Sandvine deployment, housing the granular data leveraged by both the Network Demographics and Network Analytics business intelligence products.

### A Subscriber Profile Repository for the Sandvine Deployment

The SPB stores all subscriber entitlements and session information for use by the Sandvine Policy Engine, which is embedded in Sandvine's PCEF (i.e., the Policy Traffic Switch, or PTS) and PCRF (i.e., the Service Delivery Engine, or SDE).

Much of this subscriber information is received from, and available to, other B/OSS systems, while much is also provided by the SDE and PTS as they each perform real-time policy control functions (e.g., subscriber mapping, usage monitoring, etc.)

### An Aggregate Data Warehouse

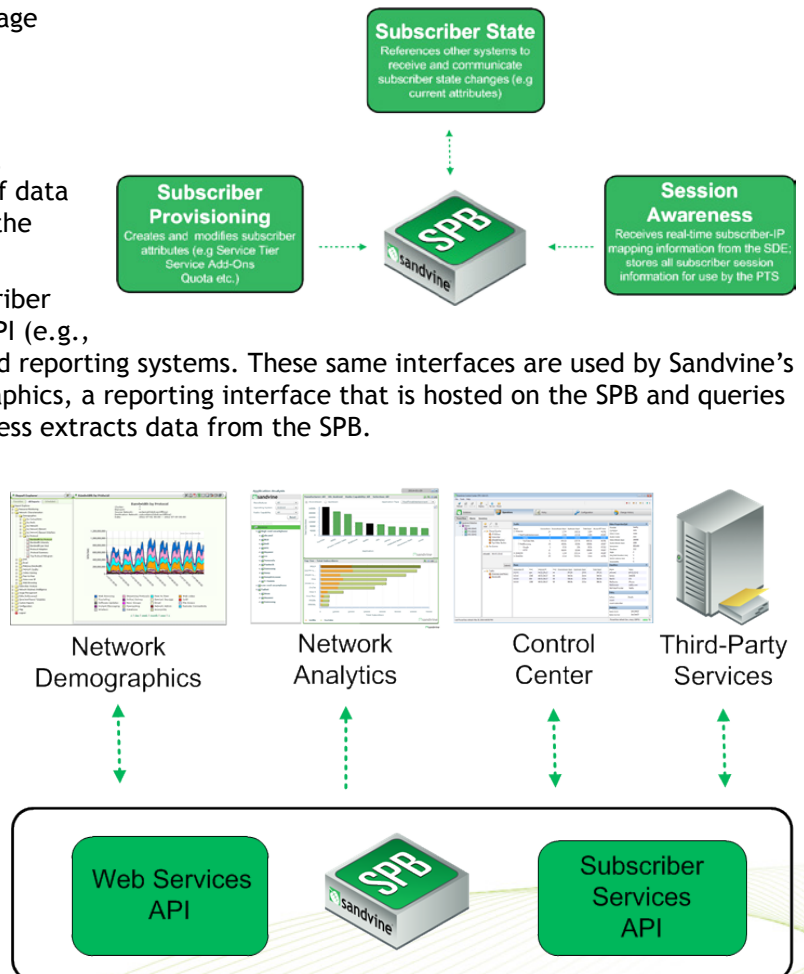
The SPB is a single point of collection of data from all Sandvine elements, and provides an aggregate view of data from both the control plane (i.e., from the SDE) and the data plane (i.e., from the PTS).

The SPB provides granular long-term storage of subscriber and network statistics, and provides a web services API (e.g., REST, SOAP) for integration to third-party business and reporting systems. These same interfaces are used by Sandvine's own business intelligence products: Network Demographics, a reporting interface that is hosted on the SPB and queries data directly; and Network Analytics, whose ETL process extracts data from the SPB.

### Enabling Value Added Applications

With the right solutions in place, CSPs can extract insightful business intelligence from the network to understand their customers' needs in detail.

The SPB enables CSPs to access this information by using powerful tools like Sandvine's Network Analytics and Network Demographics. The SPB provides the data that these applications rely on and, in the case of Network Demographics, the SPB actually hosts the application.



## Key Features of Subscriber Policy Broker

These features are common across all SPB versions.

Features	Customer Benefits
<b>Logically Centralized Subscriber Architecture</b>	<ul style="list-style-type: none"> <li>Delivers a common consumer profile service by aggregating data from a wide range of backend data stores</li> <li>Filters and authorizes specific attributes according to policy criteria</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>Managed via the Control Center policy and operations management graphical user interface</li> <li>Employs an extensive set of logging capabilities, auditing, through Control Center</li> <li>Control Center provides real-time detailed subscriber statistics and network-wide information to expedite diagnostics and troubleshooting</li> </ul>
<b>Policy-Driven</b>	<ul style="list-style-type: none"> <li>Utilizes SandScript for policy-based decisions for configuring subscriber attributes</li> <li>Control Center provides the interface for policy authoring and management</li> </ul>
<b>Automated Management &amp; Aggregation</b>	<ul style="list-style-type: none"> <li>The SPB is a zero-maintenance database, where data management and aggregation are completely automated, so no database administration is required</li> </ul>
<b>Multi-Home Hierarchy &amp; Distributed Statistics Architecture</b>	<ul style="list-style-type: none"> <li>A multi-home hierarchy allows SPB deployments to span markets, regions, countries, and even multiple countries</li> <li>Delivers extreme flexibility in the scale for storing and using subscriber statistics network-wide</li> </ul>
<b>Integration Flexibility</b>	<ul style="list-style-type: none"> <li>Provides APIs for integration with other systems; SOAP</li> </ul>
<b>Deployment Versatility</b>	<ul style="list-style-type: none"> <li>SPB can be deployed as Persistent Session mapping store, data warehouse, and subscriber profile repository on different SPBs in the same network, delivering deployment flexibility and scalability</li> </ul>

## Hardware and Technical Specifications

The SPB Virtual Series is Linux-based software that can be installed on x86-based hardware and is optimized for the demands of transactional data processing and low maintenance.

Features	SPB Virtual Series	
Hardware & Performance	Supported Hardware	Any x86-based hardware
	Operating System	Linux
	Row Inserts	16M/hour*
	Supported Subscribers	16M**
	Update Transactions Per Second	30,000
	Reporting Retention	Flexible, dependent upon storage
Virtualization	Hypervisor	KVM, ESX
	Cloud Platform	OpenStack
	Active Resource Utilization	Yes

\*Tested with SPC1000-E

\*\*Assumes 1 row per subscriber per hour