

# Intel® Select Solutions for Secure Access Service Edge (SASE)

## The Challenge

Processing data at the network edge, close to its point of origin, enables low-latency apps and services while also reducing backhaul bandwidth costs. Enterprise architects must meet the following challenges when designing edge computing solutions:

- **Provide robust, scalable compute** at remote locations, including demanding edge workloads such as artificial intelligence (AI)/deep learning and analytics
- **Protect the expanded attack surface** created by distributed services and work-from-home scenarios that operate outside any network perimeter
- **Deliver a cloud-native implementation** that supports transformation with ease of use and agility through cloudification of the edge

## Use Cases



Edge Compute with AI Inference



SASE Architecture / Cloud-Hosted Security



Cloud-Native Edge Implementation

## Overview + Benefits

Converging software-defined WAN (SD-WAN) network services with cloud-hosted security services, Intel® Select Solutions for SASE provide pre-validated blueprints for edge compute points of presence based on Intel® Xeon® D-2700 processors that lower the barriers to implementation.

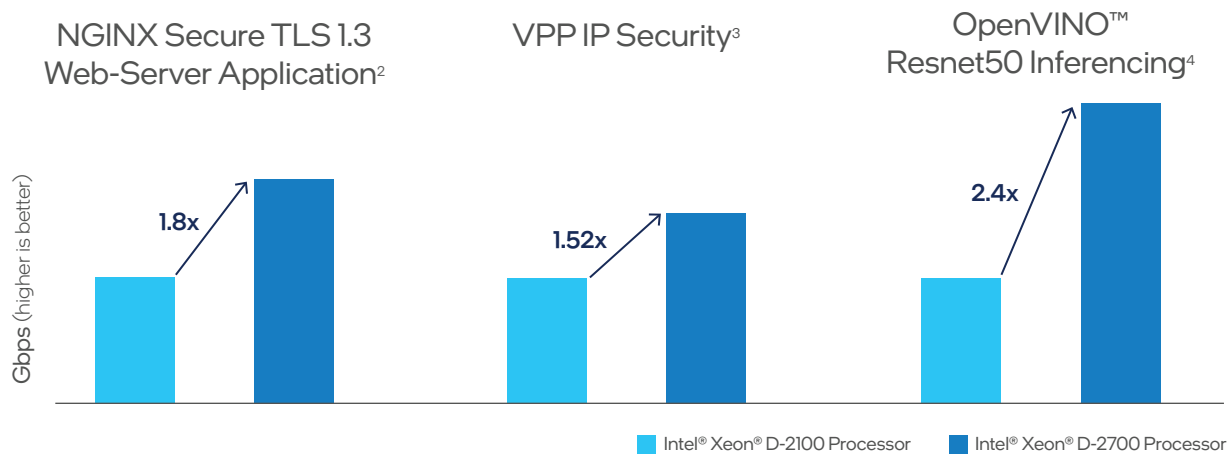
- **High core counts and per-core performance** to ensure that remote workloads have reliable, optimized computational throughput with agility, flexibility, and excellent ROI.
- **Compact, power-efficient system-on-chip (SoC) platform** with integrated accelerators and Ethernet, with networking accelerated by Remote Direct Memory Access (RDMA) and Dynamic Device Personalization (DDP).

- **Streamlined path to cloud-native operations**, replacing hub-and-spoke topologies that made data centers into choke points with multi-cloud ones that embrace modern approaches such as microservices and DevOps.
- **Accelerated AI inference** using Intel® Deep Learning Boost (Intel® DL Boost), which eliminates unneeded precision in calculations so they can be completed more quickly.
- **Accelerated encryption and compression** to reduce workload overhead with enhanced Intel® AES New Instructions (Intel® AES-NI) and integrated Intel® QuickAssist Technology (Intel® QAT).
- **Platform-level security enhancements** to help protect highly distributed data while in use, including Intel® Software Guard Extensions (Intel® SGX) hardened execution enclaves and memory encryption.

“SASE will be the dominant consumption model for WAN edge for new and refresh deployment by 2023.”

– Gartner<sup>1</sup>

## Proof Points (versus Prior Generation)



## Why Intel® Select Solutions for SASE?

Intel® Select Solutions for SASE provide a pre-validated solution blueprint that accelerates the time to production for robust cloud-first initiatives that combine enterprise distributed networking and security services.

- **Superior performance for crypto and AI inference**, boosting throughput with Intel® QAT for public key exchange & cryptography acceleration, and crypto and AI inference instruction set architecture enhancements, silicon-integrated accelerators, and PCI Express add-in accelerator cards.
- **Distributed, cloud hosted security services** based on containerized network functions that are bound to individual workloads as they traverse private, public, and hybrid clouds.
- **Enabler of cloudification at the edge**, creating a converged, standards-based infrastructure based on containers and microservices that maintains high levels of performance and security.
- **Software consistency with Intel Atom® and Intel Xeon® Scalable Processors**, with back-compatibility and a single standard architecture for Cloud Native and network functions virtualization infrastructure (NFVI).
- **Breadth of ecosystem** for validated, optimized solutions, including Intel® Network Builders programs and investment in industry standards organizations and the open source community.

<sup>1</sup> Source: Gartner, Inc., Forecast Analysis: Gartner's Initial Secure Access Service Edge Forecast, by Analyst Joe Skorupa, Nat Smith, Published 26 August 2020.

<sup>2</sup> See [6] at [www.intel.com/processorclaims](http://www.intel.com/processorclaims) - Intel® Xeon® D. Results may vary.

<sup>3</sup> See [3] at [www.intel.com/processorclaims](http://www.intel.com/processorclaims) - Intel® Xeon® D. Results may vary.

<sup>4</sup> See [9] at [www.intel.com/processorclaims](http://www.intel.com/processorclaims) - Intel® Xeon® D. Results may vary.

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Your costs and results may vary.

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## Want More Information?

### What are Intel® Select Solutions?

Workload-optimized configurations designed to minimize the challenges of infrastructure evaluation and deployment. These solutions are benchmark-tested and verified by Intel for performance and reliability.

### Resources:

[Intel Select Solutions for SASE](#)

[Intel® Network Builders Webinar: SD-WAN and SASE](#)

[Intel Xeon® D Processors](#)

[Video: Creating Frictionless and Secure Virtual Workspaces with SASE](#)