

Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023



Sarabjit Gosal

Sr. Director – Intel NEX Group



Michael Heffner

GM – Adtran Business Solutions



Keyur Patel

Founder and CTO – Arcus Inc.



Subramanian (Subbu)
Srinivasan

Senior Director of Engineering &
Innovation – Zscaler

intel®

Today's Host and Presenters



Sarabjit Gosal

Sr. Director – Intel NEX Group



Michael Heffner

GM – Adtran Business Solutions



Keyur Patel

Founder and CTO – Arrcus Inc.



Subramanian (Subbu)
Srinivasan

Senior Director of Engineering &
Innovation – Zscaler

Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023



Sarabjit Gosal

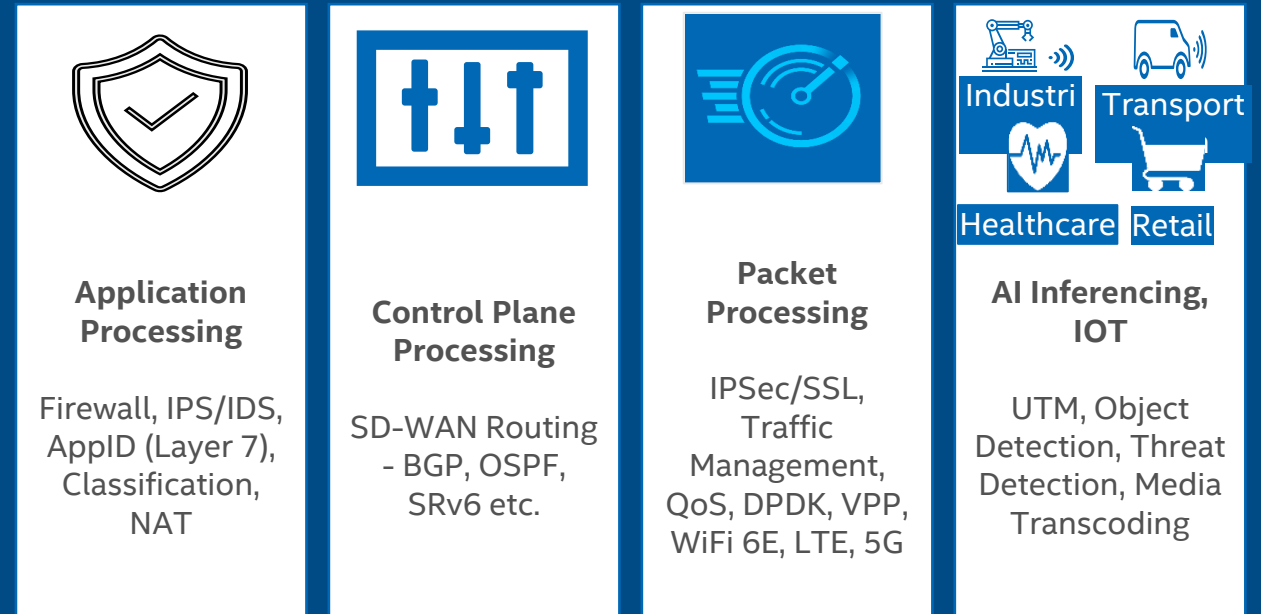
Sr. Director – Intel NEX Group

intel®

Transformation of the Network Edge

Enterprise workloads are driving need for scalable infrastructure at the edge to support latency, local data processing and security

- Enable workloads to be deployed where they are needed
- Shift towards micro-segmentation and distributed architectures - > edge cluster nodes
- Anchored on 5G and SDN with SASE/SSE becoming the security fabric



Intel® NetSec Accelerator Reference Design

....an autonomous server on a PCIe add-in card

- Server on a card: orchestration and mgmt. independent of the host
- Intel® Ethernet Network Adapter E810 + Intel SOC
 - Flexible compute augmentation for Host Platform
 - Workload migration from host to free up Cores
- Scalable Intel Architecture for common Network Functions
- Maintain Architectural Consistency with Intel Architecture
- Low software lift (if any) to on-board



Intel Atom: 8C, 16C
Production: NOW



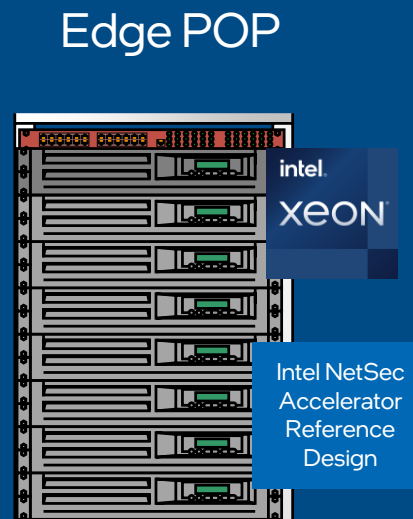
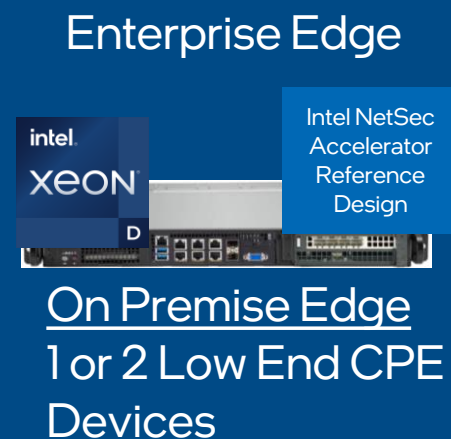
Intel Xeon-D: 4C, 8C, 10C
Coming Soon

Deployment Models	Use Cases and Workloads
Network Accelerator Aka Partial Application Offload	Network and Security Appliances Ipsec, SSL, IDS/IPS, NGFW
Full Application Offload Aka Distributed Appliance	SASE and Network Edge Connectivity SD-WAN, Head End and Far Edge

Intel® NetSec Accelerator Reference Design

Product Positioning

- Acceleration of Networking and security workloads
- Customers looking for Intel coherency
 - Same NIC/SOC as used on appliances
 - Ease of consumption; low software effort, if any
- Anchors on driving scale and TCO
 - Workload accel. -> platform scaling
 - Deployment of fully packaged apps/appliances in 3rd party hosts
 - ❑ Edge: enable scalable cluster nodes
 - ❑ 'Appliance on a card' that works autonomously in a host



Polling Question:

How much of your organization's resources - applications and data - run at the edge?

- A. More than 70%
- B. 40-70%
- C. Less than 40%
- D. None

Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023

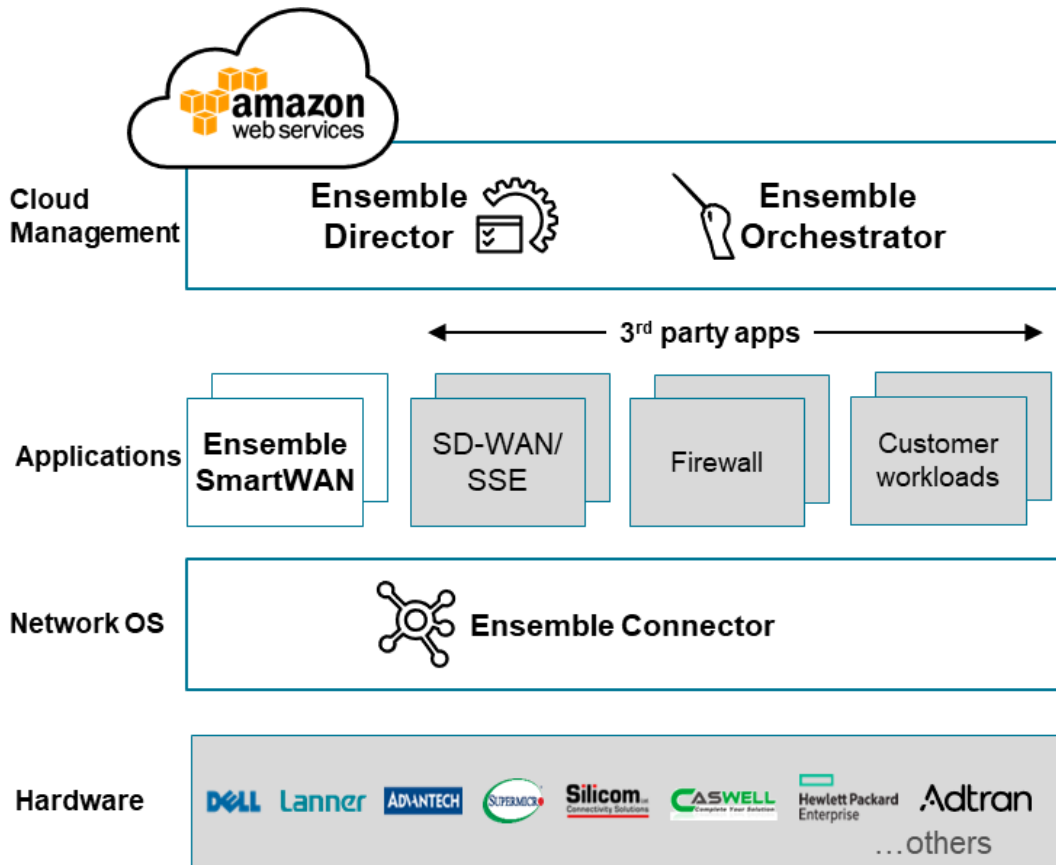


Michael Heffner

GM – Adtran Business Solutions

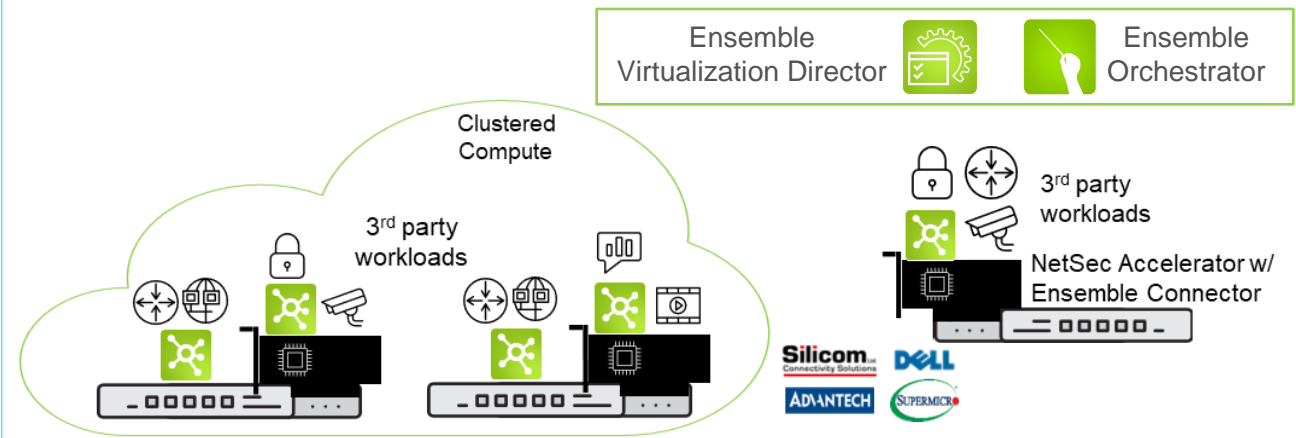
intel®

Ensemble Cloudlet: open edge compute architecture



Flexible Compute Expansion

- Extend existing server deployments with expanded compute capacity.
- Scale from single node to multi-node edge compute cluster – including across COTS server and NetSec.
- Choose best of breed networking and security components to deploy on NetSec card.
- Hardware offload for compute intensive applications.
- Support virtualized and containerized workloads.
- Advanced, cloud-based management environment.



Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023

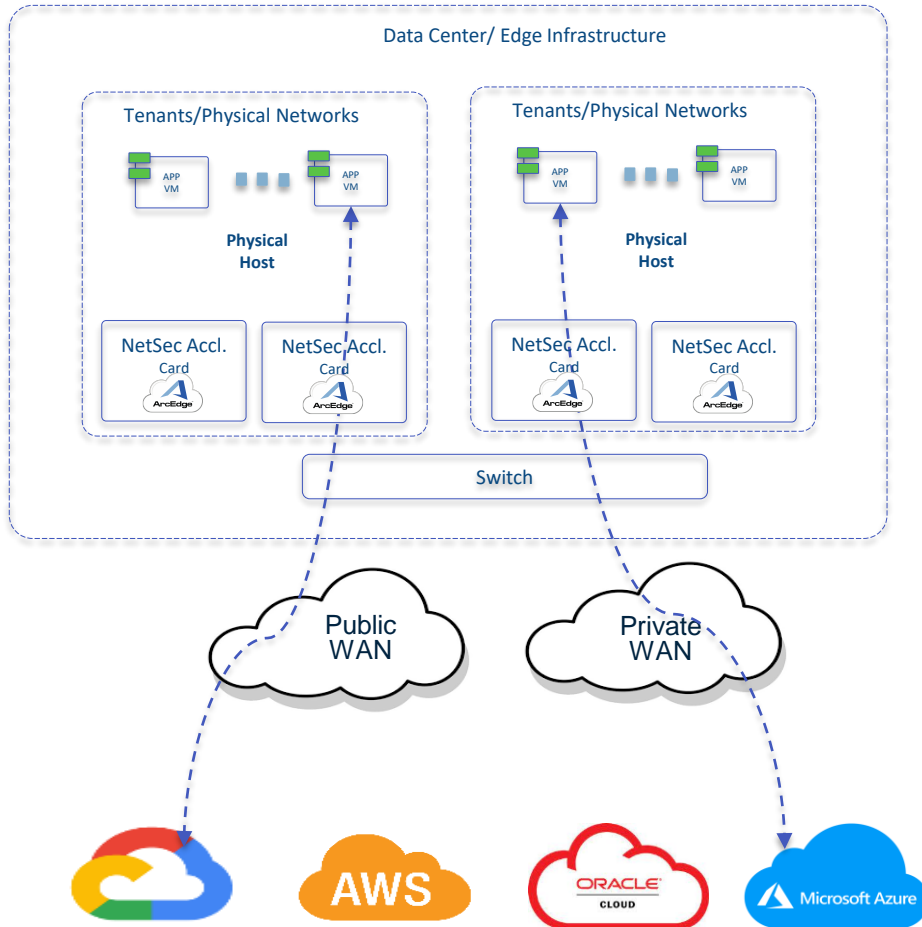


Keyur Patel

Founder and CTO – Arrcus Inc.

intel®

ArcEdge on NetSec Accelerator



Benefits

- ✓ **Offload** per tenant ArcEdge vRouter (NFVs) for networking to NetSec Accelerator card
- ✓ **Isolate** host CPU workload from high-speed networking on Add-in-card
- ✓ Tenant Isolation increases **security**
- ✓ **Capex Savings** - Scale out without adding new servers, Opex savings with heating/cooling costs

Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023

intel®

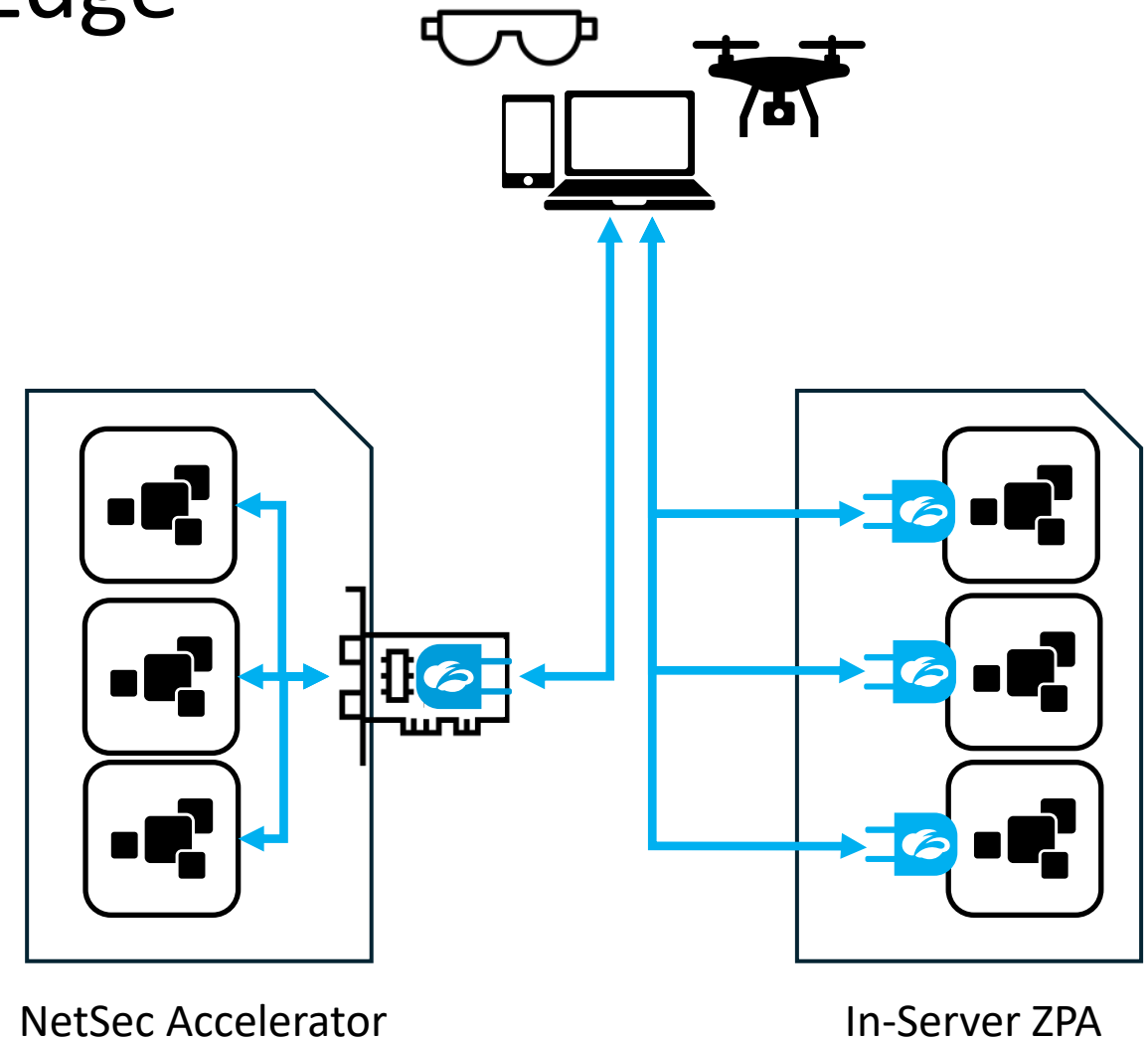


Subbu Srinivasan

Senior Director of Engineering &
Innovation – Zscaler

Zscaler Private Access for Edge

- Enables the most sensitive Enterprise workloads to run in environments, and over networks, whose cybersecurity cannot be fully verified (including environments shared with other organizations)
- Edge and local Data Center workloads can deliver near real-time computing at high-speed and low-latency to endpoints with Zero Trust protection
- Key use cases: AR/VR, AI inferences, 8K video, etc.
- The Zscaler reference design puts our key software components (ZPA, Z5G, and ZBC) onto Intel hardware



Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023



Michael Heffner

GM – Adtran Business Solutions

intel®

Unique business value

Operational Simplicity

Cloud-based management for platform and workload lifecycle across host platform and expansion cards.

Operational Flexibility

Choose from multiple vendor options for a given application.

Remotely modify/update services at the push of a button.

Modular Scalability

Supplements existing host platforms with targeted compute capabilities.

Expand legacy COTS infrastructure without have replace existing investment.



Improved Time to Market

Field-tested, pre-integrated solutions.
Broad ecosystem of networking and security partners.

Availability and Resiliency

Automated platform and workload recovery.

Workload migration between host and expansion cards.

Commercial Flexibility

Cost effective compared to public cloud.
Software licenses are portable - not “locked in” to an appliance.

Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023



Keyur Patel

Founder and CTO – Arrcus Inc.




intel®

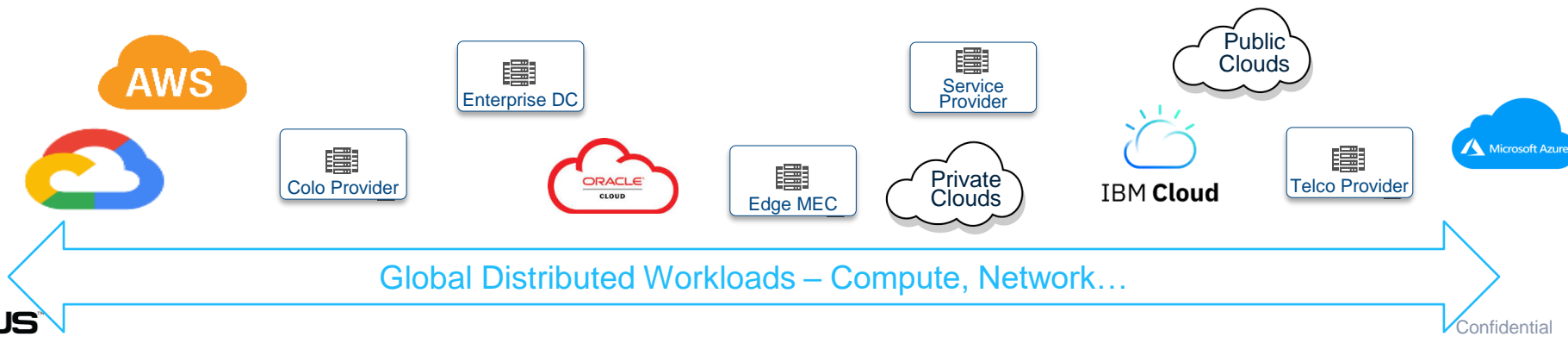
Global Distributed Cloud

Seamless Overlay from Edge to multi-cloud with consistent compute and network architecture

ArcEdge

NetSec Accelerator

 Network Consistency	Deploy the same routing stack in data center, Edge, Colo and multi-cloud	Maintain platform architecture across data center, Edge, Colo and multi-cloud
 Micro Segmentation	Extend DC Segmentation based on VRF, VLAN or SRv6 & MPLS to Edge and cloud	Segment the network tunnel processing from the host platform
 End-end security	FQDN Filtering, Secure encryption of all Control Plane, Data Plane and Management traffic by default	Create a security perimeter external to the host and Accelerate network function with zero host overhead



Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023

intel®



Subbu Srinivasan

Senior Director of Engineering &
Innovation – Zscaler

Intel® NetSec Accelerator Reference Design

- Add Zscaler Private Access by plugging in a card
- Zscaler AC and BC without impacting server resources
- High-perf Edge workloads on dedicated servers have True Zero Trust

Intel® Network Builders webinar

Network Edge Transformation using Intel® NetSec Accelerator Reference Design

Nov 14, 2023



Sarabjit Gosal

Sr. Director – Intel NEX Group



Michael Heffner

GM – Adtran Business Solutions



Keyur Patel

Founder and CTO – Arcus Inc.



Subramanian (Subbu)
Srinivasan

Senior Director of Engineering &
Innovation – Zscaler

intel®

The Intel logo is centered on a solid blue background. It consists of the word "intel" in a white, lowercase, sans-serif font. A small blue square is positioned above the letter 'i'. To the right of the word "intel" is a registered trademark symbol (®).

intel®