



Corporate Introduction

Executive Summary



Zander Technologies is a new age digital transformation solutions and services company



Formed by industry leaders who have decades of experience working on digital enablement solutions for industries such IOT, Mobility, Networking/ Communications, Travel & Hospitality and Cruise Lines



The company focusses on providing innovative solutions and services on customer experience, digital transformation & communication technologies, helping its customers to reduce time to market

Our Offerings

Been there.....!



Development



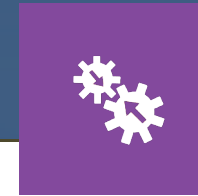
Maintenance



**Technology
Consulting**



**Quality
Assurance**



**Systems
Integration**

Portfolio

Communication

- 5G, Wi-Fi, LBS
- SDN, NFV, SON
- Edge Computing

Media Streaming

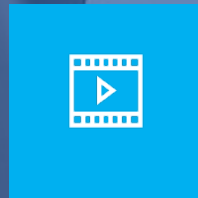
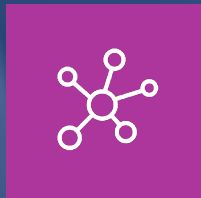
- OTT streaming
- Digital Signage

Applications

- Application server development
- Cloud and On-premise applications
- Machine Learning & Big Data
- AWS

IT Infrastructure Engineering

- Network Consulting
- Data Centre virtualization
- Security Services
- Enterprise Networking



Mobility

- Applications - Native & Hybrid
- IoT Controllers & Sensors
- Embedded and Android

Quality Assurance

- Test Automation
- Manual Testing

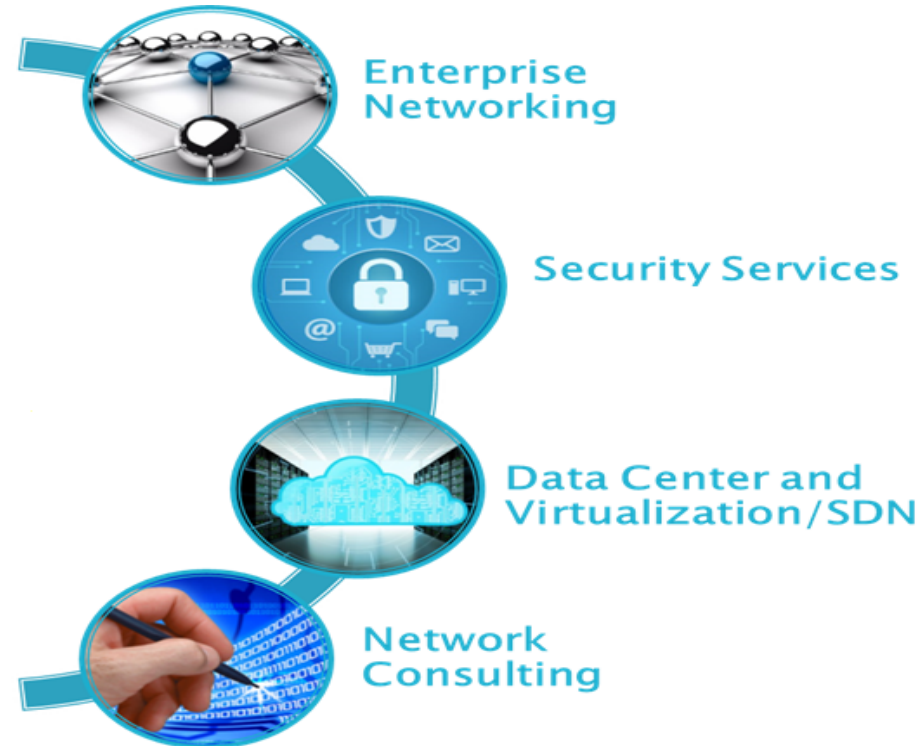
Analytics

- Real time or Batch processed
- Predictive & Prescriptive

Security

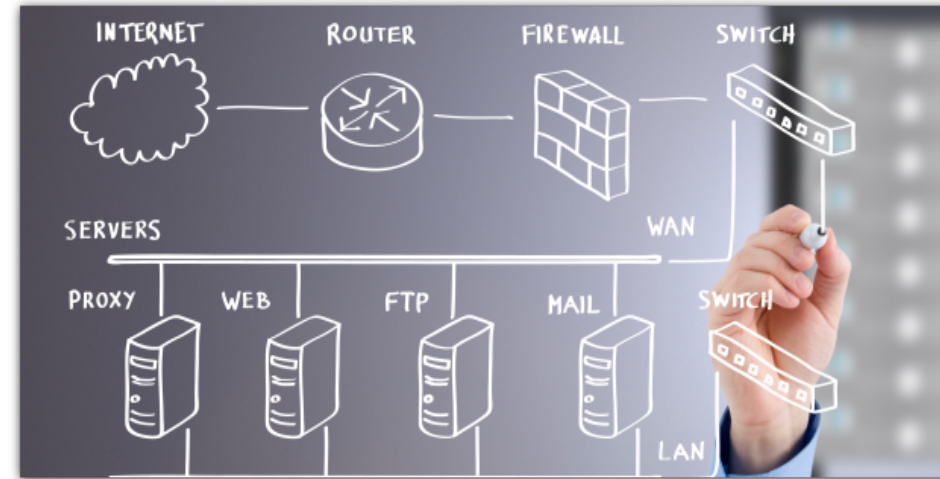
- IOT security
- Blockchains
- Anomaly detection

IT Infra Portfolio



Enterprise Networking

- Network Planning, Architecture and Design
- WAN deployment including SD-WAN
- Wireless deployment (Controller/Cloud)
- RF/Wireless surveys (Active/Passive)
- Network Automation services (Workflow/task based)
- Ansible, Smartport macros, DNA center
- Managed Network Services-NOC (L1 / L2 / L3)
- Managed Security Services-SOC (L1 / L2 / L3)
- Network/Server Monitoring tools Deployment
- Mobile Device management solutions
- Workspace One (Airwatch)



Security Services

- VPN and network security solutions
- Next-generation Firewalls and Network Access Control (NAC)
- Managed Intrusion/detection and DLP
- Vulnerability and Log management
- Managed endpoint security (on-prem/cloud, EDR)
- DDOS protection and Data encryption
- Application and Mobile Security



Data Centre and Virtualization

- SDN for DC and Campus
- Platform and Compute services
- Hyperconverged solutions
- Virtualization for server infra, storage, back up, compute
- DHCP and DNS deployments
- DDI Planning and deployment
- AWS and Azure deployments



Network Consulting

- Network Consulting for Enterprise networks
- Network Planning, Architecture and Design Recommendations
- Data Center migration and DR planning
- Network Monitoring services consultation
- SDN design recommendations and Vendor selection
- Vulnerability and Penetration testing
- MDM Solutions (Airwatch)



ANSIBLE



Workspace ONE

Tools. Hardware and Software Experience

Network Device	Vendor	Device Model List	Tools
Routers	Cisco, Juniper, Aruba, Nokia	Cisco ISR G1, G2, ASR, Juniper MX, PTX Series, Aruba gateways	Ansible, Cisco Prime, Cisco DNA, EEM scripting
Switches	Cisco, Juniper, Dell, Aruba	Nexus, Catalyst, Embedded Service, Juniper EX Series, QFX Series, Dell EMC N series, PowerSwitch Series, Aruba F, M & R series	SDN, SD-Access, Contrail, OpenManage, Aruba SDN
Wireless	Cisco Systems, Aerohive Networks, Meraki, Aruba	Cisco WLC 8500, WLC 7500, WLC 5508, Cisco UCS, Prime	Ekahau, NetSpot, Air magnet
SDN/SD-WAN	Cisco, BigSwitch, Vmware, HPE, Silverpeak , Viptela	Cisco ACI, Nexus series ,BCF ,HPE manager, Viptela	DCNM Cisco , DNAC,
Security	Cisco ASA, Firepower, Palo Alto, Fortinet, Checkpoint	Cisco 5500-X series & 5500-X with Firepower services, Palo Alto Physical and VM NGFW, Fortinet Chassis and VM based NGFW Checkpoint NGFW	Cisco ASDM, Panorama, FortiManager, Check Point Smart-1
Monitoring	Cisco, Solarwind, LiveAction, HP, ManageEngine	N/A	Cisco DNA, Prime, Stealthwatch, Solarwind Bundle, LiveNX, Live Wire, Live Capture, HP NNM, Nagios, Dynatrace
Platform Services	HP, Dell, Vmware, Redhet	HP Gen 8,9,10 servers ,HP C class chasis, Dell R740 Vsan node, Vmaware and openstack Hyperv	Vsphere, Vcenter, Vmotion, Vsan,VDS, Python , Shell ,C and C++

Network Transformation Services - Cruise Lines

Pre-build activities

- Requirement Analysis
- BOM Creation
- Port mapping/ HLD /LLD/Project Tracker/Timelines
- Tracking and logistics
- Inventory and tracking

Dry Dock Activities

- Racking of equipment
- Testing and Cutover
- Validation for Vendors and Shipboard applications
- CCIE/CCNP/CCNA Support for all design/implementation activities
- Wireless Site Survey/Heat Map generation/WL Deployment

Staging Activities

- Racking and Stacking of equipment/ installation/ Cabling
- Configuration push
- Testing and validation
- Unmounting of equipment
- Packing and inventory

Hypercare Support

- Support both remote and physical for 1 month
- Assistance/Troubleshooting for issues
- Rack Elevation, Runbook, Network AS build docs handover

Monitoring Services

- ITO resources onboard ship
- Setting up of NOC
- L2/L3 Support for ongoing issues on support model basis
- Incident/Problem/Change management

Case Study: Network and Compute Stack re-design – Dry Docking (1/2)

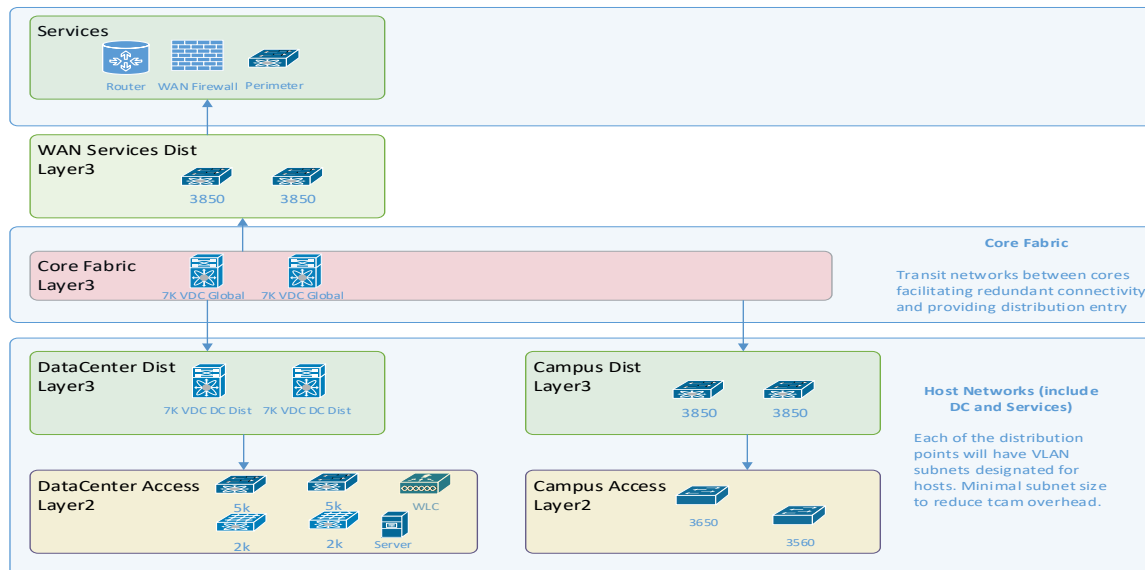
Business Requirement

- Enhance the Guest Experience for customers and offer personalized travel experience onboard cruise ships
- Decommissioning and Installation of latest state of the art network equipment in the existing network infrastructure onboard ships
- Re-design the existing compute stack on onboard ships to cater extremely voluminous data (generated from Ocean devices)

Zander Technologies Solution

- Devised a full three tier Architecture with Dual DC running in Active-Standby mode
- Pre-Staging activities comprising of pre NW and platform audit to assess gaps, Port mapping created for each device
- Wireless Surveys done for Passenger and crew areas to assess the as-is performance
- NW and Compute staging done beforehand including unboxing, racking, configuring, testing and preparing for installation
- During drydock, phased approach was created to ensure minimum disruptions during the cutover
- Hypercare post Deployment onboard support provided to remediate any issues
- Runbook/Handover checklist was created and delivered to Operations

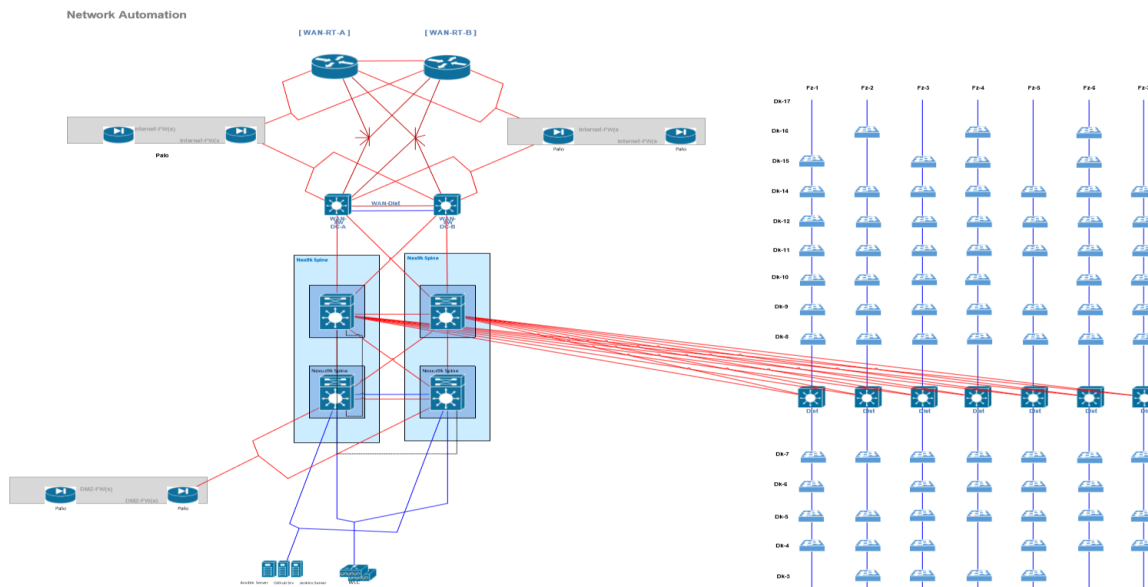
Layer3 Concept



Case Study: Network and Compute Stack re-design – Dry Docking (2/2)

Additional Details

- Delivered multiple ship builds at different geographies
- New Builds from scratch
- Network devices involved: CISCO, Dell, IBM, UCS, Nokia Air frame, Ekahau, Aerohive, Juniper, Palo Alto, SolarWinds
- Network technologies involved: Core Infrastructure, Data Centre, Campus Deployment, Security, Critical Systems
- Cloud compute technologies involved: Openstack Vmware, UCS, KVM, Azure, AWS



Customer Benefits

- Zander Technologies network implementation has helped cruise line to deploy Guest Experience Platform which is offering first in class services such as:
 - Wi-Fi at sea with land-like internet performance,
 - Mobile gaming platforms onboard the ship,
 - Digital streaming travel channels for land and sea,
 - Touch-free access to cabin and staterooms
 - Interactive entertainment at casinos
 - Transaction-free payments at restaurants and shops

Case Study: Optimised Network Design

Business Requirement

- To scale and upgrade the existing network system design to accommodate new deployments
- To deploy new applications and tools to enhance the guest experience

Zander Technologies Solution

- Devised a full three tier (IOT optimized) redundant architecture design to segment all traffic for application deployment
- Performed POCs on latest series of network devices to evaluate compatibility and optimum utilization based on the network design
- Build labs to test the network and also assess other vendor equipment for cost and performance advantages

Customer Benefits

- Zander Technologies network design and implementation has assisted the Cruise Operator to deploy various new applications and systems to enhance guest experience
- Fewer network outages due to robust design,
- Usage of latest cutting edge network technologies for improved performance
- Cost benefit due to optimized usage of network devices and lesser breakdown / fixes efforts,

Additional Details

- Worked on hybrid large scale network designs and deployments with latest network technologies (IOT optimized, SD-WAN)
- Used advanced features such as Multicasting to enable VOD, Smartport macros, EEM scripting, NGFW

Case Study: IT Officers – Onboard Cruise Ships

Business Requirement

- A leading Cruise Line required skilled engineers to provide 24*7 Level-1/2 technical support for shipboard users in cooperation with IT operations and engineering staff shore side

Zander Technologies Solution

- Install, test and maintain all associated production systems/network equipment onboard ship including VSAT equipment
- Oversee server administration, desktop support, user support for the client
- Conduct security inspections at regular intervals of time to ensure the data centers and different fire zone hardware racks

Customer Benefits

- With all the first level of troubleshooting and coordination with shore-side technical/shipboard, the cruise line was able to run hassle free cruises keeping customer and ship staff delighted

Additional Details

- Cisco router, switches and wireless APs, Riverbed and Cisco WAAS
- Windows Operating System advance troubleshooting
- Security and Antivirus standards

Case Study: Network Operations Centre/Offshore Support

Business Requirement

- Complex network infrastructure needed continuous monitoring and troubleshooting to avoid major network outages
- Customer wanted to execute a model for proactive incidents rather than reactive reporting .

Avipra Solution

- Devised a L2 / L3 support plan to ensure 24 * 7 support for the network with multiple alert mechanisms
- Deployed network monitoring tools ensure preventive measures and integrated them with ticket management sys.
- PagerDuty integration with SolarWinds and SNOW
- Assigned highly skilled Engineers to travel to sites to troubleshoot issues, application deployments, system transition etc which were planned and needed physical presence

Customer Benefits

- Total resolution time for an incident decreased by 50 percent due to process integration .
- Downtime significantly reduced resulting in customer delight and 40 percent cost reduction
- Immediate handling of incident 24*7

Additional Details

- Monitoring tools -(Solarwinds , Liveaction , Service-now)
- Platforms- (Cisco, Dell, Palo Alto ,WLC,ASA, Vmware)



Case Study: Offshore Satellite operation Centre

Business Requirement

- Complex Satellite infrastructure needed continuous monitoring and troubleshooting for satellite related outages on Cruise Ships.
- Customer wanted to execute an offshore L1/L2 model for running Ship Satellite operations.

Zander Technologies Solution

- Offshore team ramped up and SNOW dashboard created for Tickets assignments and Pager Duty integration.
- Engineers were trained to work on Dataminer tool for signal levels, MODCOD, throughput ,CIR on Modems and look for any external blockage.
- Follow up with ISP for quick resolution and tweaking QOS to comply with secondary CIR .
- Follow the P0/P1/P2 format shared by customer to regularly update management regarding the progress

Customer Benefits

- Total resolution time for an incident decreased due to process integration .
- Cost was reduced significantly .
- Immediate handling of incident 24*7

Additional Details

- Monitoring tools -(Dataminer ,PRTG, Imonitor,Satzen)
- Satellite Antenna- Intellion , Seatel
- Modem Models- CEFD760, CEFD Heights, Idirect

