



e-shelter innovation lab

use case catalog

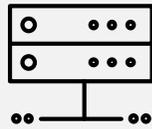
Frankfurt, August 2019

e-shelter innovation lab

use case categories



Hybrid Cloud



Storage &
Big Data



Network &
Cyber Security



DevOps &
App Management



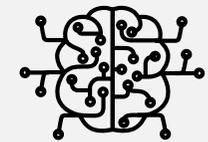
Facility &
Physical Security



Blockchain &
Distributed Ledger



Internet of Things &
Robotics



High Performance &
Cognitive Computing



Use Case >> Openstack Mirantis

Virtualization platform for PoC and development

Description:

Openstack is a virtualization platform with several core components: nova (virtualization), neutron (networking), glance (image storage), cinder (volume storage), keystone (authorization) and over a dozen of additional components which enable orchestration, monitoring and a lot more.

Similar to other Openstack distributions, Openstack from Mirantis allows to deploy a working Openstack environment which can be used for testing, development and proof-of-concept activities. Although no longer being developed, it still includes easy graphical installer and contains a lot of plugins for different network layouts.

Customer values/problems solved:

- Testing
- Proof-of-concept
- Easy to deploy
- Lot of plugins for different networking solutions from vendors

Category:

Hybrid Cloud

Partners:



Technologies:

- Dimension Data VCCAP / ETSI NFV



Use Case >> Keep control of your data while harnessing the capabilities of Google Container Engine

Managing hybrid cloud clusters with Kubernetes Federation

Description:

Keeping sensitive data on-premises is imperative to many companies—especially in Germany—effectively barring them from Google’s powerful cloud computing services. A hybrid cloud approach using e-shelter’s data centers, Google Container Engine (GKE), and inovex cloud for data persistence helps to address this requirement, allowing users to store their data on-premises while also harnessing Google Container Engine. A Kubernetes Federation Plane serves as a single point for cluster management, distributing loads equally between both e-shelter and GKE.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Simplify cluster management in hybrid clouds using federation
- Easily integrate hybrid cloud with existing persistence layer
- Keep data on-premises and react to peak loads with GKE

Technologies:

- Kubernetes
- Docker
- Google Container Engine



Use Case >> Scale Apps with One Click. On your Preferred Infrastructure

Kubermatic Container Engine – Create Multiple Kubernetes Clusters in Seconds

Description:

Kubermatic is a Google-like container engine for business-ready Kubernetes in the cloud or on-prem. It provides businesses with an out-of-the-box cluster manager and container platform that comes with advanced operations and troubleshooting features.

- Fast and consistent Kubernetes deployments and one-click node adding
- Directly integrated with many cloud providers e.g. AWS, Azure, Digital Ocean, VMWare, OpenStack and many more

Customer values/problems solved:

Modern applications are highly distributed, containerized systems providing scalability, efficiency and speed. Since its release, Kubernetes has become the number one platform for container orchestration. Building and running multiple Kubernetes clusters in a complex enterprise environment and across various infrastructures is challenging and requires a considerable investment in terms of time and resources. Kubermatic is a production-proven platform to set up, deploy and manage a multi-cluster setup in the cloud or in the datacenter. As Cluster-as-a-Service, Kubermatic accelerates innovation, reduces time-to-market and saves cost and labour intensive operations.

Category:

Hybrid Cloud

Partners:



Technologies:

- Kubernetes
- Etcd
- Prometheus
- Helm
- elasticsearch + kibana
- nginx
- CoreOS & Ubuntu



Use Case >> Speed up your development with Kubernetes and Docker

Managed Kubernetes – Enabling Cloud Native Apps

Description:

ScaleUp Technologies accelerates and simplifies the development and deployment of applications. Our Managed Kubernetes service enables customers to deploy multiple Kubernetes clusters in different regions with just a few clicks. The Managed Kubernetes platform is based on proven opensource cloud technologies (i.e., Kubernetes, Docker, OpenStack). With our expertise, we also help businesses to migrate applications to Docker and Kubernetes or integrate CI / CD pipelines and workflows.

The turnkey Managed Kubernetes platform is hosted by ScaleUp in ISO27001 standard data centers in Hamburg, Berlin, and Duesseldorf and can also be used for deployments on-premise or at hyperscale clouds (AWS, Azure, GCP).

Customer values/problems solved:

- Container as a Service (CaaS): ready to use, self-service Kubernetes Cluster deployments
- Multi-Region, Multi Cloud, Hybrid Clouds
- CI / CD: Cloud Native Application Development
- K8s Migration of Legacy Applications
- Open Source: No vendor lock-in
- Consulting, Trainings, Support during the entire project process

Category:

Hybrid Cloud

Partners:



Technologies:

- Kubernetes
- Docker
- OpenStack
- Helm
- NGINX Ingress Controller
- Cert Manager (End-to-end Encryption)



Use Case >> Cloud-based, scalable, modular, integrated contact center solution

Amazon Connect makes it easy to set up and manage a customer contact center and provide reliable customer engagement at any scale.

Description:

Amazon Connect integrates with existing systems and business applications such as Salesforce – and others - to provide visibility and insight into all customer interactions.

By looking up the caller number in Salesforce, customers are being identified right away. To measure and continuously increase customer satisfaction, call records are being automatically converted into text with Amazon Transcribe and can then be analyzed with Amazon Comprehend.

If it is likely that clients want to talk to a contact center agent in person, they are being asked pro-actively - on the back of Sentiment Analysis - whether they want to be passed thru to the next available agent. For continuous process improvements, the current mood of the caller - and thus customer satisfaction - can be measured on the back of Sentiment Analysis.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Amazon Connect provides rich metrics and real-time reporting that allows clients to optimize contact routing to decrease wait times.
- Clients can also resolve customer issues more efficiently by putting customers in touch with the right agents.
- Amazon Connect requires no long-term contracts; Pay per use payment model.

Technologies:

- Amazon Connect
- AWS S3, AWS Lambda, Amazon Lex, Amazon Transcribe, Amazon Comprehend, Sentiment Analysis
- Salesforce



Use Case >> Quickly and easily deploy and manage your Hybrid Cloud

A 'Single-Pane-of-Glass' to Orchestrate and Manage your Hybrid Cloud

Description:

Quickly and easily deploy and manage your Private, Public, Hybrid and Multi-Cloud. Deliver IaaS, PaaS, Containers and Virtual Networks in zero-touch mode with full automation. The System offers each tenant in a cloud a role-based true 'Single-Pane-of-Glass' secure interface controlled via a configurable dashboard with which all cloud management, monitoring and control functions are executed. Get Automated Business Processes, Automated Payments, Hybrid Cloud Management, REST APIs, etc.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Quickly and easily deploy in any Cloud Systems
- Automated Payments
- Automated Business Processes
- One Web Dashboard
- Automated provide from SAP HANA VMs
- Automated provide from IaaS, PaaS
- Multitenant System

Technologies:

- Orchestrate Hybrid Cloud
- SAP HANA DB
- OpenStack
- Huawei Systems
- Huawei FusionSphere
- IBM Power Systems
- etc.



Use Case >> Creating and scaling distributed and edge clouds

Customer-centric multi-site cloud orchestration

Description:

Enterprise and public cloud operators are presented with the significant challenge to deploy and operate cloud infrastructure, distributed across multiple remote locations and/or manage multiple cloud instances. This is demanded by a new set of Edge Cloud applications (IoT, AR, NFV) and the DevOps methodology. CPLANE Multi-Site Manager provides multi-tenant full lifecycle management of applications, services and resources across distributed and edge cloud deployments at scale.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Automated application, service and infrastructure management of multi-site distributed clouds
- Consolidated customer/tenant, security and policy management
- Reduced operational complexity and costs through automation, intelligence, service abstraction and open APIs.
- Enables new types of edge cloud applications and services

Technologies:

- CPLANE Multi-Site Manager
- OpenStack
- VMware
- CPLANE DVNd
- CPLANE DVNi
- CPLANE OGR
- AWS



Use Case >> Test drive Azure Stack Hybrid Cloud Solution in the Cloud

DellEMC Azure Stack Developer Edition PoC Platform

Description:

Microsoft Azure Stack is a hybrid cloud platform for delivering infrastructure and platform-as-a-service with a consistent Azure experience both on-premises and in the public cloud. It allows customers to embrace a cloud-native model with write once, run anywhere in Azure or Azure Stack for streamlining app development and deployment. Organizations can access, create, and share application services securely in Azure and Azure Stack for both traditional and cloud-native applications.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Microsoft Azure Stack empowers users and app developers to deliver applications faster with on-demand, self-service resources, all while ensuring compliance with corporate policies.
- Using a consistent set of APIs through the Azure Resource Manager, customers have a consistent Azure experience both on-premises and in Azure public cloud.
- Azure Resource Manager templates can be used to accelerate the modernization of traditional applications and the development of new cloud-native applications.
- Empower developers to innovate using Microsoft and other third party development tools and services they're already familiar with, such as Visual Studio, .NET, Java, Python, Ruby, PowerShell, and more.

Technologies:

- DELL | EMC PowerEdge™ Server
- Microsoft Azure Stack Dev. Edition



Use Case >> Openstack RedHat

Single and open solution to control virtual infrastructure

Description:

OpenStack is a combination of open source tools (known as projects) that use pooled virtual resources to build and manage private and public clouds. Six of these projects handle the core cloud-computing services of compute, networking, storage, identity, and image services, while more than a dozen optional projects can be bundled together to create unique, deployable clouds.

Think about it like this. In virtualization, resources such as storage, CPU, and RAM are abstracted from a variety of vendor-specific programs and split by a hypervisor before being distributed as needed. OpenStack uses a consistent set of application programming interfaces (APIs) to abstract those virtual resources 1 step further into discrete pools used to power standard cloud computing tools that administrators and users interact with directly.

Depending on what resources you're virtualizing and the types of cloud services you need, different projects can be deployed using OpenStack's modular architecture—letting you design a unique cloud platform. It's the foundation of Red Hat® Cloud Infrastructure, a solution which allows your enterprise to break free from the restrictions of traditional infrastructure.

Customer values/problems solved:

- Development cloud
- General compute and storage cloud
- Hosting/service provider cloud
- Network function virtualization

Category:

Hybrid Cloud

Partners:



Technologies:

- KVM
- Openstack
- Dimension Data VCCAP / ETSI NFV



Use Case >> Virtualization is key in a software defined world

Managing your virtualized datacenter from a single pane of glass

Description:

Datacenters continue to virtualize their server and storage environments to realize the benefits of higher efficiencies and lower costs. However, this shift to virtualization creates complexities, including the need for integration between server and storage environments. Without real-time visibility into - and management of - storage health, capacity usage, orchestration, and performance, server administrators must regularly coordinate with storage administrators to provision, configure, optimize, and protect VMware data stores and VMs.

Customer values/problems solved:

- Simplify storage and data management for VMware environments
- Increase availability with instant backups and restores of lost or corrupt data
- Enable a dynamic infrastructure by rapidly provisioning data stores and cloning thousands of virtual machines
- Significantly reduced storage costs with leading efficiency

Category:

Hybrid Cloud

Partners:



Technologies:

- VMware vSphere
- NetApp ONTAP
- Virtual Storage Console



Use Case >> Enable a Multi-Cloud World

Bringing Enterprises to the Cloud with a secure, intelligent platform for digital business

Description:

Unlike other IT vendors who only optimize for their cloud, Cisco provides you cloud intelligence (based upon management, security, analytics, and the network) across your hybrid IT world. From the infrastructure to the application, we take a cloud neutral approach to help you bridge your cloud gap: Any hypervisor, any workload, any location, any cloud.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Decoupling Line of Business environment choices from IT functions and infrastructures.
- Free choice of Cloud Technologies and Applications Platforms On Premises or Colocation Hosted or Public Clouds
- Provide Infrastructure for Apps, Ensure Security, Performance and Compliance
- Free choice. No lock-in. Make It Easy for Enterprise to Focus on Apps and Business Goals
- **Deliver hybrid IT as a service** and centralize governance and security

Technologies:

- Cisco CloudCenter Cloud Management Platform
- Cisco HyperFlex HX Data Platform
- Cisco ACI Application Centric Infrastructure
- Cisco Cloud Services Router CSR 1000V
- Cisco Umbrella Security
- Cisco Meraki Cloud Driven Management



Use Case >> Distributed clouds connectivity

Software-Defined Networking for distributed cloud connectivity – with QoS

Description:

Applications are becoming more complex, spanning multiple cloud locations from data centers to customer premises to the mobile edge. These distributed applications increase the demand for reliable and responsive network services that ensure end-to-end quality of service across data center and WAN networks. CPLANE DVNi carrier-grade multi-vendor WAN orchestration platform meets the demands of the new distributed cloud infrastructure.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Simplify the creation and management of MPLS network services
- Automate the provisioning and management of secure VPN
- Increase the visibility of network resources and topologies to improve operational responsiveness
- Eliminate vendor-specific dependencies and lock-ins
- Significantly reduce network configuration and management costs

Technologies:

CPLANE (DVNi)

- MPLS Traffic Engineering
- L2 (PW/VPLS) and L3 VPN
- Carrier Ethernet
- Path Computation Engine
- LSP Traffic Optimization
- Class of Service Management



Use Case >> Disaster Recovery and Migration of business applications

Software-Defined Networking for high-performance OpenStack clouds

Description:

Private and hybrid clouds are being rapidly deployed to improve the IT agility, optimize the infrastructure utilization and lower the total cost of ownership. Deploying OpenStack based clouds at scale requires a high performance network infrastructure which supports virtual workloads and tightly integrates with the external physical network. CPLANE DVNd SDN product is a standard OpenStack plugin which provides comprehensive management of datacenter networks, implements virtual network overlays and supports virtual and physical network functions and appliances.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Delivers high-performance OpenStack networking with full automation
- Enables OpenStack to scale to thousands of compute nodes
- Supports complex network topologies and services
- Extends and integrates the OpenStack network with the rest of the datacenter
- Provides network connectivity between multiple OpenStack instances across LAN and WAN networks

Technologies:

Dynamic Virtual Networks – Datacenter

- VXLAN Virtual Overlay
- Open vSwitch
- CPLANE OGR
- DHCP, Floating IP, NAT, DDoS Protection, ARP Proxy
- MPLS
- BGP



Use Case >> Disaster Recovery and Migration of business applications

Live Any-to-Any Cloud Migration and Disaster Recovery of business applications

Description:

Hystax Acura – a fully-automated Live Cloud Migration and Disaster Recovery solution for private, public and hybrid clouds and business applications. The solution provides enterprise-grade consistent replication from any source platform, automated instant P2V / V2V transformation and orchestrated launch of business applications on a target or failover cloud.

Hystax Acura supports Amazon Web Services, Microsoft Azure, Google Cloud Platform, Alibaba Cloud, VMware, Hyper-V, OpenStack, Oracle Cloud, KVM, Bare Metal.

Category:

Hybrid Cloud

Partners:





Customer values/problems solved:

- Any-to-Any cloud migrations and Disaster Recovery
- Live background replication of production workloads
- Fully automated migration and Disaster Recovery process
- Agentless migration without data loss in minutes
- Best-In-Class RPO and RTO values
- Ability to test migrations before deciding to switch production to a new cloud platform
- TCO reduction by moving to a cost-effective target site
- Isolated solution infrastructure for customer security
- Full coverage with REST API to support complex and multiphase migration strategies
- Easy to use solution: all components of migration and Disaster Recovery are controlled by a sophisticated customer portal
- Cost-effective cloud migration and Disaster Recovery

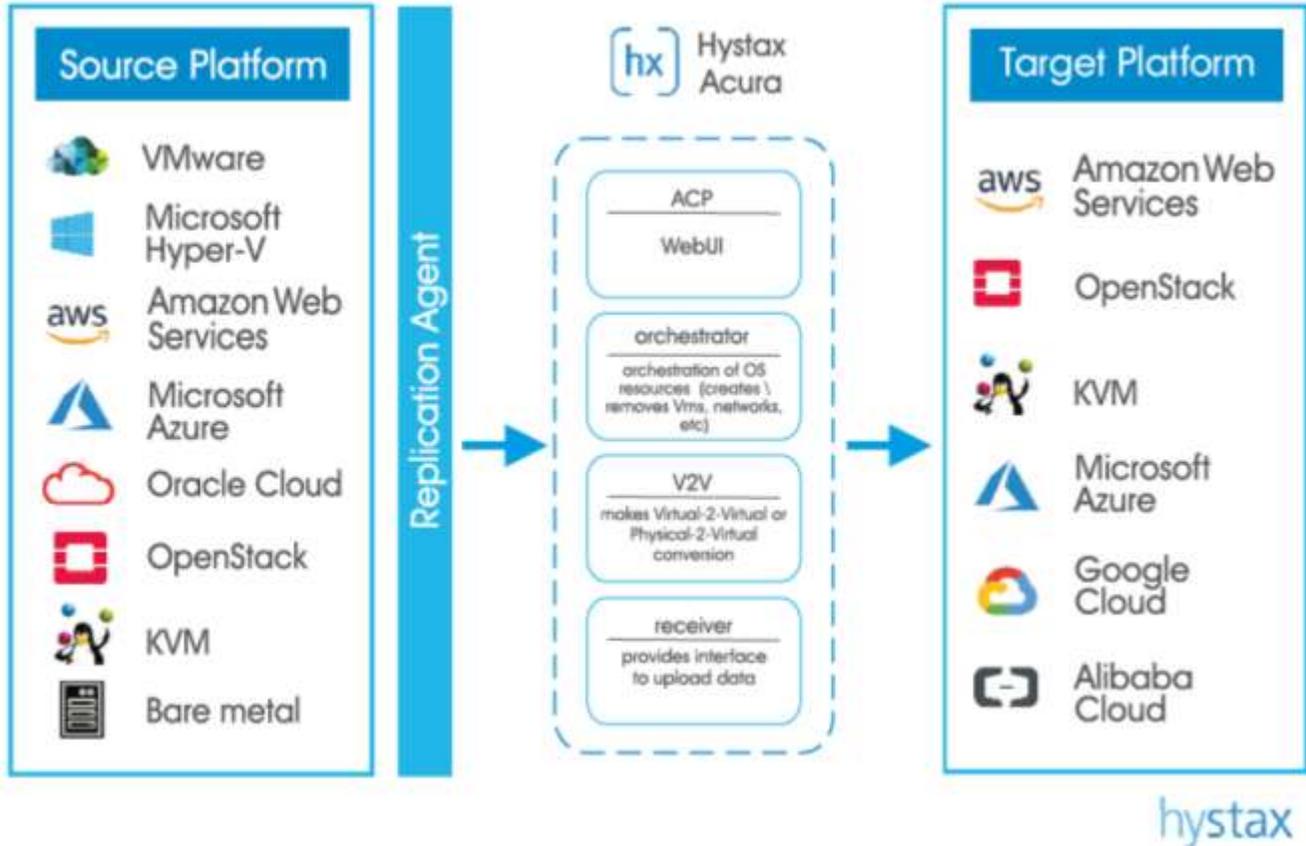
Technologies:

- Hystax Acura
- Ubuntu OpenStack
- Docker
- Kubernetes



Use Case >> Disaster Recovery and Migration of business applications

Live Any-to-Any Cloud Migration and Disaster Recovery of business applications



Use Case >> Test drive OpenStack with Dell EMC Red Hat OpenStack Reference Architecture

Dell EMC Red Hat OpenStack Reference Architecture

Description:

The OpenStack project was created to provide an open, massively scalable cloud operating system capable of supporting today's dynamic, cloud-native applications. OpenStack software is built by an international community of more than 2,500 developers, operators and users from 309 organizations around the globe and broad-based industry support from more than 160 sponsoring vendors. OpenStack is now the vanguard open source project on the planet.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

Deploying OpenStack can be challenging due to the interdependency of OpenStack's multiple projects and the rapid evolution in OpenStack components. Integrations with hardware, cloud management software, services and enterprise IT systems are needed to package the OpenStack platform into a solution that addresses real organizational needs — and therefore delivers real results to an enterprise. This work requires significant knowledge, dedicated investment and continuing commitment.

Trusted technology vendors — Dell EMC and Red Hat — have solved this dilemma by co-engineering the Dell EMC Ready Bundle for Red Hat OpenStack Platform. It combines a core validated architecture with select extensions to create an adaptive infrastructure that integrates the best innovations from the OpenStack community with proven Dell EMC and Red Hat technologies. This open, secure, reliable and supported solution is built on validated, integrated components and features rapid, automated provisioning to simplify and speed Deployment — so you can take advantage of cloud benefits sooner.

Technologies:

- Dell EMC PowerEdge™ Server
- Dell EMC PowerConnect Switches
- Red Hat Openstack
- Red Hat Ceph
- Optional: Red Hat Openshift and Red Hat Cloudforms



Use Case >> Protect your business when a disaster happens

Scale-up or recover from Disaster to e-shelter or the public cloud

Description:

In today's always-on global world, you need to protect and quickly recover your data in the event of damaging natural or human-made events. You also need to maximize investments and get the most out of your IT infrastructure. An effective disaster recovery strategy is vital to prevent your operations from being brought to a standstill, resulting in lost productivity, reputation, and revenue. But being able to reuse your DR facility for business intelligence or development and testing can turn your disaster recovery solution into a business accelerator. With connection to a hyperscaler, your data can also be processed with Compute Instance from them to scale up your business.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Business continuity w/o investment in a second datacenter
- Back to business in hours not days
- Turn DR infrastructure into business value
- Reduced network bandwidth requirements
- Your choice of CAPEX and OPEX for the DR site use your own equipment @e-shelter or resources in the public cloud

Technologies:

- NetApp FAS
- ONTAP Cloud
- SnapMirror
- SnapCenter



Use Case >> Virtualization is key in a software defined world

Managing your virtualized datacenter from a single pane of glass

Description:

Datacenters continue to virtualize their server and storage environments to realize the benefits of higher efficiencies and lower costs. However, this shift to virtualization creates complexities, including the need for integration between server and storage environments. Without real-time visibility into - and management of - storage health, capacity usage, orchestration, and performance, server administrators must regularly coordinate with storage administrators to provision, configure, optimize, and protect VMware datastores and VMs.

Customer values/problems solved:

- Simplify storage and data management for VMware environments
- Increase availability with instant backups and restores of lost or corrupt data
- Enable a dynamic infrastructure by rapidly provisioning datastores and cloning thousands of virtual machines
- Significantly reduced storage costs with leading efficiency

Category:

Hybrid Cloud

Partners:



Technologies:

- VMware vSphere
- NetApp ONTAP
- Virtual Storage Console



Use Case >> Fully Integrated Hybrid Cloud Solution

Lenovo ThinkAgile SXM for Microsoft Azure Stack

Description:

ThinkAgile SX for Microsoft Azure Stack is a hyperconverged hybrid cloud solution, engineered and integrated by Lenovo and Microsoft. It's provided direct from Lenovo - ready to go - with all features, support, and deployment services included. With this solution you're free to focus on cloud services - instead of your infrastructure. ThinkAgile SX for Microsoft Azure Stack provides the ease and speed of a public cloud with the security and control of on-premises IT. The solution also includes a comprehensive portfolio of software and services that supports the full lifecycle of your infrastructure. At every stage - from planning to deploying, supporting, optimizing, and end-of-life - Lenovo provides the expertise and services you need to get the most from your technology investment.

Customer values/problems solved:

- Provides IT agility at a lower TCO
- Deliver Azure cloud services from the security of the e-shelter data center
- Enable rapid development and iteration of applications with on-premises deployment tools to help transform your organization
- Unify application development across your entire hybrid cloud environment
- Easily move applications and data across private and public clouds

Category:

Hybrid Cloud

Partners:



Technologies:

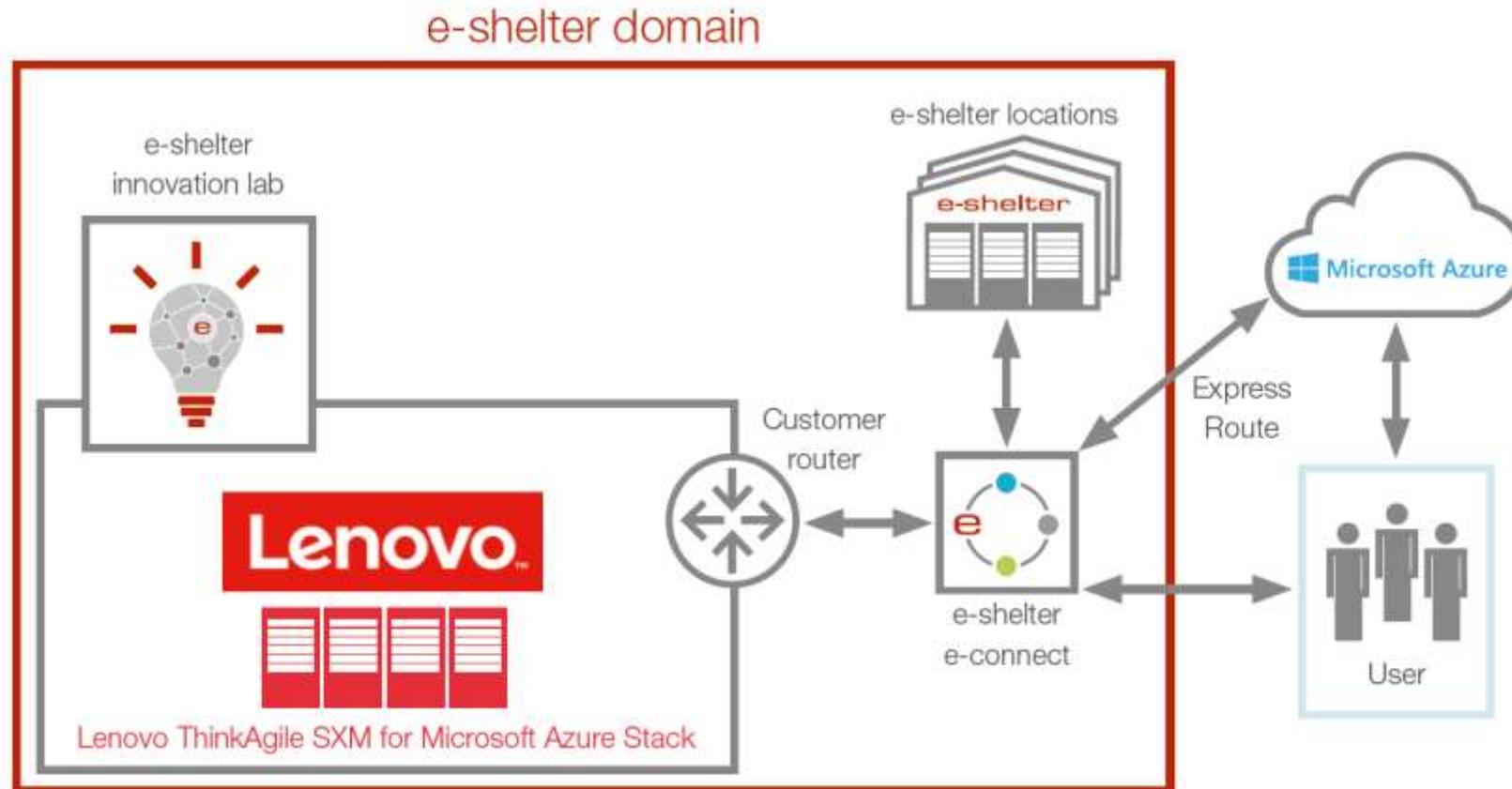
ThinkAgile SX for Microsoft Azure Stack consists of...

- Lenovo ThinkServer
- Lenovo Network Switches
- Lenovo xClarity
- Lenovo Services & Support
- Microsoft Azure Stack



Use Case >> Fully Integrated Hybrid Cloud Solution

Lenovo ThinkAgile SXM for Microsoft Azure Stack



Source: Lenovo



Use Case >> Migrate to Cloud with Red Hat OpenStack Platform and Lenovo

Lenovo Red Hat OpenStack Hybrid Cloud Solutions

Description:

Lenovo industry leading servers and Red Hat OpenStack Platform provide solutions that help companies build the right infrastructures for the right workloads. IT organizations can create agile and cost-effective cloud infrastructures for traditional workloads, massively scalable public-cloud-like infrastructures for cloud-enabled applications or both. Organizations want responsive and manageable IT infrastructures that can help them improve productivity, reduce complexity, and support the increasing demands that are placed on the business. Many enterprises are moving to cloud-enabled workloads. These applications are deployed across multiple virtual machines (VMs) and even across datacenters, accelerating development and updates and helping companies gain competitive advantage. OpenStack provides infrastructure and management capabilities for system-wide resources. OpenStack is intended for cloud-enabled workloads that require applications to be architected to use compute, storage, and network resources in concert.

Customer values/problems solved:

- Consolidated and fully integrated hardware resources with balanced workloads for compute, network, and storage.
- An aggregation of compute and storage hardware, which delivers a single, virtualized resource pool customizable to different compute and storage ratios to meet the requirements of various solutions.
- Ease of scaling (vertical and horizontal) based on business requirements. Compute and storage resources can be extended at runtime.
- Elimination of single points of failure in every layer by delivering continuous access to virtual machines (VMs).
- Rapid OpenStack cloud deployment, including updates, patches, security, and usability enhancements with enterprise-level support from Red Hat and Lenovo.

Category:

Hybrid Cloud

Partners:



Technologies:

- Lenovo ThinkSystem Servers
- Lenovo Networking Switches
- Lenovo XClarity Management
- Red Hat OpenStack Platform
- Red Hat Ceph
- Red Hat CloudForms



Use Case >> Hybrid IT with Open Infrastructure

Connecting the cloud with your hardware

Description:

ScaleUp Cloud is an OpenStack cloud offering that maximizes IT flexibility, uptime, and scalability. Due to its 100 % OpenStack API-access, ScaleUp Cloud has no vendor lock-in and can be combined into a hybrid cloud-environment by leveraging colocation services in multiple German cities (Hamburg, Berlin, Frankfurt, etc.)

ScaleUp uses the latest, high-redundancy cloud technology based on OpenStack and Dell Enterprise hardware that is operated and maintained to 100 % in German data centers.

ScaleUp can also offer connectivity to other public clouds, leveraging direct connect and interconnect services.

Customer values/problems solved:

- Combining OpenStack cloud with colocation for hybrid cloud setups
- Based on Open Standards (API access, Kubernetes, etc.)
- Transition of legacy applications as well as backup, load overflow
- 99,96% uptime
- GDPR-compliant
- VLAN interconnect between physical hardware and cloud

Category:

Hybrid Cloud

Partners:



Technologies:

- OpenStack
- Kubernetes
- Networking



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Category:

Hybrid Cloud

Partners:



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Technologies:

- pp FAS
- ONTAP Cloud
- SnapMirror
- SnapCenter



Use Case >> Scalable, Hybrid Cloud Solution for Service Providers

Acronis® Backup Cloud — Local and Cloud Backup and Recovery Service to Solve Your Customers' Data Protection Challenges

Description:

Acronis Backup Cloud is a powerful, hybrid cloud backup solution for service providers that protects all their customers' systems and mobile devices, anytime, anywhere, faster than anyone else. With zero upfront costs and a pay-as-you-go business model, you can easily attract new customers and realize incremental revenues with a service that puts you in control.

Category:

Hybrid Cloud

Partners:



Customer values/problems solved:

- Exploit a growing marketing opportunity and capture market share with market-leading backup technology.
- Realize incremental revenues by attracting new customers with a broader product portfolio.
- Add value to your business and “lock in” existing customers to reduce churn.
- Accelerate new backup service offerings with zero entry costs and a per-use business model.
- Offer the services levels you define with multi-tiered solutions.
- Scale your business and reduce costs with a multi-tenant service.
- Differentiate your service with valuable hybrid cloud and mobile device backup.

Technologies:

- Acronis Backup Cloud
- Acronis AnyData Engine
- Acronis Hybrid Cloud Architecture



Use Case >> Object Storage: Start Small, Scale to PBs

Clouidian Hyperstore- efficient hybrid cloud object based storage

Description:

Clouidian HyperStore® software makes it easy to build full-featured, Amazon S3-compliant cloud storage, on-premises. It is available as either stand-alone software, or fully integrated with Clouidian HyperStore appliances. Either way, HyperStore software ensures unlimited scale, multi-data center storage, fully automated data tiering, and support for all S3 applications—all behind your firewall

Category:

Storage & Big Data

Partners:



Customer values/problems solved:

- Cost Efficient & Easy out-of-the-box
Start small, Scalable to hundreds of petabytes across regions
Efficient data protection with compression, replication, and erasure coding
- Encryption for secure data storage
- On-premises S3 with full support for all S3 ecosystem apps
- Multi-Tenancy and User defined QoS
- Integrated Billing & Monitoring

Technologies:

- AWS S3
- Google Cloud



Use Case >> Develop locally, scale globally - Software-Defined Storage

Software-Defined Storage – all flavors of storage in one package

Description:

All-in-one approach: A single storage platform for ease of use, high performance and cost effectiveness.

All the flavors of storage: The combination of all-in-one file system, block and object store offers a variety of options based on need, as well as flexibility and agility.

Scale-out: Rapid, linear scaling using nodes/x86 building blocks – without the need for special-purpose hardware.

Reduced complexity: Because there is no single point of failure, there are no expensive bottlenecks to address. This allows businesses to lower total cost of ownership and focus on core business value and new innovation projects rather than IT maintenance.

Category:

Storage & Big Data

Partners:



Customer values/problems solved:

Single point of failure and hot spots are removed with vNAS web scale architecture. This allows for IT managers to focus on core business value and new innovation projects rather than IT maintenance.

Provisioning and policy processes that normally take hours, days or weeks now take just a few clicks and can even be performed automatically.

With removed storage- and infrastructural silos which makes legacy storage hard to manage and maintain, we have designed vNAS to reduce IT infrastructure cost in almost every way.

Technologies:

- NAS + SAN + Object store
- SMB, NFS, iSCSI, S3, SWIFT, Cinder
- Scale-out
- Virtual IP
- Erasure Coding
- Non-disruptive updates
- Self-healing
- vLAN
- Encryption
- Snapshot
- Quota
- Metro cluster



Use Case >> Scalable Cloud ZFS based Storage Solution

Toshiba Enterprise Hard Disks and SSD as base for Open-E's ZFS- and Linux-based Data Storage Software in Celestica's Server- and Storage Enclosure Solutions

Description:

ZFS based Storage Solution with Toshiba Enterprise Hard Disks and SSDs

Toshiba has provided its Show-and-Reference Server as a central Storage Controller, with the Company's high-end SAS Enterprise SSD (PX05S series) providing read-cache and write logging. Celestica's 4U-60 bay high-density Chassis has been connected via Microsemi's Series 1000 Host Bus Adapter or Series 8 Raid Adapters in HBA-mode, and equipped with 60 Toshiba 4TB SAS Enterprise Capacity Hard Disk Drives (MG04S Series)

Category:

Storage & Big Data

Partners:



Customer values/problems solved:

- High Performance, high Capacity Petabyte Scalable Storage Solution for Enterprise Software-defined-storage (SDS) Environments, for Enterprise and Cloud Service Providers
- With High-Availability (HA) Storage Options
- Provided as iSCSI Storage Targets available for all PoC Activities in the Innovation Lab with virtually unlimited Storage Capacity

Technologies:

- Toshiba Enterprise Performance HDD
- Toshiba Enterprise SAS SSD
- Open-E JovianDSS Data Storage Software
- Celestica NVMe Dual Skylake CPU Server
- Celestica 60 Bay JBOD
- Promise 12 Bay JBOD
- Microsemi Series 1000 HBA / Series 8 Controller



Use Case >> Develop locally, scale globally - Open-E JovianDSS

Open-E JovianDSS for Software Defined Storage

Description:

Open-E JovianDSS - Storage, Backup and Disaster Recovery all in one for Large, Medium & Small Enterprises and Businesses

- ZFS-based Linux-OS for Software Defined Storage Servers
- Off-site Data Protection and High Availability
- Support for iSCSI, NFS and SMB/CIFS
- Petabyte scalability with flexible licensing options
- Professional technical support

Customer values/problems solved:

- **High Availability Load-balanced Cluster with Ethernet, SAS or Fibre Channel connection** for highest data security with SMB / NFS / iSCSI failover functionality via Advanced Metro HA Cluster Feature Pack (SAS, FC, Ethernet) or Standard HA Cluster Feature Pack (SAS, FC).
- **Off-site Data Protection** that enables asynchronous replication to local sites or co-locations with consistent snapshots, secure archiving, encryption and buffering.
- **Unlimited snapshots and clones** may be created and can be remotely activated via CLI to enable easy cloning, versioning and backup.

Category:

Storage & Big Data

Partners:



Technologies:

- Open-E JovianDSS



Use Case >> Develop locally, scale globally - Open-E DSS V7

Open-E DSS V7 Data Storage Software

Description:

Open-E DSS V7 Data Storage Software - All-in-one universal and scalable storage OS for Small & Medium Businesses

- Fault-tolerant and transparent Metro High Availability Storage Cluster
- Active-Active Failover (Feature Packs) and Active-Passive Failover for NFS and iSCSI
- Continuous Data Protection with Synchronous Volume Replication
- Interval, scheduled and Snapshot-based Data (File) Replication (Asynchronous Replication)
- Storage Virtualization – VMware Ready and Citrix Ready certified

Customer values/problems solved:

- **Industry-leading High Availability Failover Cluster with Active-Active Failover** for NFS and iSCSI, boosting overall system performance and minimizing downtime. The cluster can be conveniently managed with the HA Cluster Maintenance Mode which enables users to easily reconfigure their setup without downtime.
- **Support for multiple infrastructures** such as 1GbE, 10GbE, 40GbE, FC, Infiniband, and offers NAS, iSCSI and Fibre Channel (both target and initiator) functionality in a single application.
- Ideal for a wide variety of deployments such as demanding virtualized environments, High Availability storage clusters, network environments with many clients, CCTV, backup and more.

Category:

Storage & Big Data

Partners:



Technologies:

- Open-E DSS V7



Use Case >> High-Performance Software Storage

Fast and Reliable Software-Defined Storage for Enterprise Workloads

Description:

Quobyte turns standard server hardware into a data center file system. Built around a high-performance parallel file system core, Quobyte supports all workloads from classical file system use cases like HPC, filers, and archival to high-performance block storage for VMs and databases. Data is kept safe and available with end-to-end checksums, replication, and erasure coding and is accessible via local mount point for Linux, Windows, and macOS, NFS, HDFS or SMB. A full-fledged S3 interface delivers service provider-grade object storage.

One of Quobyte's key features is its linear scalability: start with four nodes and scale out to entire data centers while letting Quobyte's built-in fault-tolerance transparently handle hardware problems. With over 10 years of development behind it, Quobyte storage is both mature and well tested at customers ranging from service providers to scientific research institutes.

Customer values/problems solved:

- Shared file, block, and object storage for all enterprise workloads
- Benefit from high IOPS and a consistent sub-millisecond latency
- Protect your data with end-to-end checksums, replication, and erasure coding and full fault tolerance
- Policy-driven data placement and tiering
- Minimize manpower requirements by delivering highly-automated operational efficiency
- Hardware monitoring enables lights-out maintenance on your schedule
- Hadoop, OpenStack, and Docker support
- Integrates with Kubernetes, Rancher, and Mesosphere

Category:

Storage & Big Data

Partners:



Technologies:

- Quobyte Software Storage
- BigFoot XXLarge



Use Case >> Simplifying Data Storage for Service Providers and End-User Customers

Acronis® Storage — High Performance, Fault Tolerant, Low-Cost Storage

Description:

Acronis Storage is a software-defined storage solution that allows you to quickly and easily transform low-cost commodity hardware and network equipment into protected, enterprise-grade storage. Universal, cost-efficient, and scalable, it combines block, file, and object workloads in a single solution and is built on a proven architecture that has been protecting over 100 petabytes of production data in Acronis Data Centers for more than six years.

Category:

Storage & Big Data

Partners:



Customer values/problems solved:

- Acronis Storage supports object storage, making it a far better solution than tape because of its speed, cloud integration capabilities, competitive price, and ability to recover non-sequential data.
- Acronis Storage is an ideal solution for consolidating and centralizing geographically dispersed data centers into one cloud data center.
- Acronis Storage, coupled with other Acronis products, provides a one-stop shop of modern, agile, integrated IT technology for IT departments looking to rationalize their IT operations and reduce the number of vendors' products they use in their data centers.

Technologies:

- Acronis Storage
- Acronis Notary™
- Acronis CloudRAID™



Use Case >> Software defined storage

Automated management of replicated block storage

Description:

Linbit SDS is a replication software to create, remove and manage storage volumes – independent of the underlying hardware. The open source tool ties together data availability, performance, scale and easy handling, making it perfect for your storage environment. It can be integrated into virtualisation and cloud environments like OpenShift, OpenNebula and Proxmox and can be also used to provide storage resources for container environments like Kubernetes.

TradeDX, a Foxconn Company, delivers white label servers, storage and switches for next generation workloads.

Category:

Storage & Big Data

Partners:



Customer values/problems solved:

- Automated configuration of storage resources, including replicated volumes
- Integrates with Kubernetes
- Integrates with OpenStack, OpenNebula and Proxmox
- Supports multi-tier storage
- Multi-node synchronous or asynchronous replication supported by LINBIT DRBD 9 (up to 32 nodes per resource)

Technologies:

- LINBIT® DRBD® 9
- LINBIT® LINSTOR®
- Linux
- LVM, ZFS



Use Case >> Accelerating Data Intensive Applications with High Density NVMe-oF™ Storage

High Performance, Low Latency Shared NVMe-oF Storage Solutions

Description:

As the pace of business speeds up, so do the demands on the applications that drive business revenue. The most demanding applications such as financial trading, genomics, and artificial intelligence directly fuel the revenue stream of the company, and any bottleneck to performance has a direct impact to the bottom line. Customers need solutions that not only maximize application performance, but also reduce the storage footprint in increasingly crowded data centers.

To achieve both high performance and high density, look to an industry leading integrated NVMe-oF storage solution which combines AIC servers, Mellanox Ethernet Storage Fabric (switches, NICs and cables), E8 Storage Software together with Samsung and AIC designed “Mission Peak” 1U platform with 36 NF1 SSDs.

Customer values/problems solved:

- Accelerates I/O and data intensive applications for faster time to results that drives business
 - Genomics – Increased capacity and performance to analyze larger populations for more accurate results
 - Real-time Analytics – Faster time to results, enabling better and faster decisions
 - AI / Machine Learning – Real-time data streaming for AI processes such as image recognition
- Fully integrated reference system, providing turn key compute, networking and storage ideal for large scale clustered databases and filesystems used for high performance computing environments
- High density NVMe storage platform with 6x more capacity per RU than 2.5” SSD platforms

Category:

Storage & Big Data

Partners:



Technologies:

- E8 Storage Software
- Samsung Mission Peak Server
- Samsung NF1 NVMe SSD
- Mellanox 100GbE Switch
- Mellanox ConnectX-5 NIC
- AIC Storage Servers



Use Case >> Virtual PBX á la ONEnet Enterprise

Virtual Enterprise Communications: The private cloud for Voice,- and Video Communications & Collaboration

Description:

While communications between people is changing, enterprises recognize a higher demand on new and more flexible solutions for Voice,- and Video Communications and a higher integration in their business processes and applications.

OUR solution is a dedicated private cloud platform designed for either small, medium or large enterprises to cover the future requirements on Voice and Video communications and mobility.

The consolidation of all services (Data, Voice & Video) over one IP network leads in the medium and long term to cost savings and offers customers the possibility to concentrate on business critical issues.

Based on market-leading Voice over IP (VoIP) technologies we are able to design, implement and maintain these custom-tailored solutions.

Category:

Network & Cyber Security

Partners:



Customer values/problems solved:

- adaption to new demands on communications
- deliver modern workplaces
- simplification & optimization of Enterprise Communications
- easy & quick expansion of features
- reduction of on-premise equipment for UC-Infrastructure hence reduction of operating costs
- reduction of own administrative expenditures through managed central services
- new business areas for Service Provider/Carrier

Technologies:

- Cisco Unified C&C portfolio
- Asterisk IP PBX
- 3CX IP PBX
- Dimension Data VCCAP / ETSI NFV



Use Case >> Telco Virtualized Applications Platform for Proof-of-Concept, Showcase, and Competence Building

VCCAP - An ETSI NFV Virtualized Applications Platform built by Dimension Data

Description:

Since the advent of Software Defined Networks (SDN) and Network Function Virtualization (NFV), Dimension Data recognizes demand for a reference platform built on the principle of openness and standards adherence. Now it is here, ready to be used for integration of products emerging in this field, testing of new solutions and demonstration of new product capabilities, encompassed in a platform built for stand-alone verification as well as for interoperability tests. There is no way to ensure this through slideware. VCCAP infrastructure is equipped with a fully-fledged hardware and software suite that enables data plane load testing, control plane load testing and end-to-end functionality testing using scenarios designed to replicate real world applications and environments.

Category:

Network & Cyber Security

Partners:



Customer values/problems solved:

- NFV infrastructure following carrier class design principles
- Vendor-independent, partnership with diverse technology leaders
- Proof-of-Concept or NFV showcase integration and verification for vendors and customers
- Way to gain competence in emerging Service Provider Technologies
- E2E Service and Performance assurance using Ixia equipment
- Evolving Reference Setup / Blueprint since 2013

Technologies:

- Juniper,
- Cisco
- Ixia
- Lenovo,
- OpenStack
- A10, Flowmon, Amarisoft, Commscope, Infoblox, Tessares, Benu, TeleSys
- VMware
- RedHat
- NetApp
- F5



Use Case >> DDI Automation

DNS, DHCP & IP Address Management for OpenStack

Description:

Virtual and private clouds provide undeniable benefits in scalability, agility, and cost control for distributed network needs. However, conventional network management tools undermine those advantages. For example, configuring DNS and IP addresses are largely performed manually using segmented point solutions. These tools are not designed to support elastic scalability. Nor can they provide the control, visibility, reliability, and consistency your organization demands.

As part of their Virtualized Carrier Core Application Platform (VCCAP), Dimension Data has implemented Infoblox DDI for Virtualization and Private Cloud. Actionable Network Intelligence allows us to control DNS, DHCP, and IPAM for complex distributed virtual and cloud-based environments centrally, flexibly, and efficiently. This allows VCCAP to support complex multi-platform workloads with confidence and maximize the full potential of our virtualization deployment strategy for Network Function Virtualization and Software-Defined Networks.

Customer values/problems solved:

- Automate manual processes for DNS and IP address provisioning
- Gain a consolidated view of network resources across cloud and virtualized environments
- Bolster security and reliability by ensuring that multi-platform networks are consistent and compliant
- Integrate out-of-the-box with a broad range of platforms including VMware, OpenStack, and Docker

Category:

Network & Cyber Security

Partners:



Technologies:

- Infoblox DDI
- Virtual Appliances on OpenStack
- Infoblox Cloud Adapter for OpenStack
- Dimension Data VCCAP / ETSI NFV



Use Case >> Virtual CPE by BENU Networks and Dimension Data VCCAP

Virtual CPE – CPE in the Cloud

Description:

The current architecture of CPE like eRouters and the Wi-Fi gateways on the customer premise presents a number of challenges for operators, because an eRouter is a NAT function, behind the operator can't see or influence the behavior of delivering services.

A new architecture is needed to move the IP network logic or service logic that is locked in the CPE's Wi-Fi access point/Router to the service aware edge cloud.

Benu Networks' Virtual Service Edge (VSE) platform achieves this by virtualizing the eRouter function in a multi-tenant virtualization platform that has been designed to aggregate large scale virtual CPE/routers.

The SDN/NFV approach separates the Data Plane Function from the Control Plane Function to virtualize CPE services. Open programmable interfaces are leveraged from the Control Plane toward the Cloud and OSS/BSS systems. The VSE is based on an SDN implementation to virtualize CPE, addressing scale and service agility for Network Operators delivering Cloud-based managed services for Residential and B2B customer segments.

Customer values/problems solved:

Service providers are able to offer per device value-added services to subscribers such as

- parental control
- advanced security
- Internet of Things (IoT) management (and many more)

that are competitive to Over The Top (OTT) solutions, while at the same time reducing costs and efforts for

- CPE CAPEX, engineering and testing
- Fast GoToMarket for new value-added service offerings

Category:

Network & Cyber Security

Partners:



Technologies:

- BENU VSE
- BENU vMEG
- Dimension Data VCCAP / ETSI NFV



Use Case >> DataMiner end-to-end multi-vendor management and OSS solution for broadcast, satellite, cable, telco and mobile industry

Broadcast and telco equipment monitoring, control and resource scheduling

Description:

In a multi-vendor environment for broadcast, satellite, cable, telco and mobile operations, monitoring, control and resource scheduling of several equipment is mission critical. Operators must be enabled to provision, monitor, control, troubleshoot and book/schedule device's resources efficiently and reliably.

For this purpose, the Skyline DataMiner network management and OSS solution provides the necessary set of functions. A flexible GUI approach, including dashboard features and combined with a powerful web GUI, visualizes every required information. A set of drivers provides interaction with thousands of different device types via several protocols such as SNMP, IIOIP, REST, etc..

Monitoring and alarming, including features such as alarm trending, correlation and prediction, service-oriented combination of alarms are of course central functions. Nevertheless, advanced features such as automation and scripting for various device's control tasks, scheduling and resource booking, as well as the possibility to link everything to an inventory and asset management database, completes the options with regard to integrated overall operations.

Category:

Network & Cyber Security

Partners:



Customer values/problems solved:

- Avoid the forest of different vendor's legacy GUIs and interfaces by vendor and technology independent overall integrated network management
- Introduce own GUI strategies and common look and feel by flexible GUI approach including the options of self-designed views, diagrams, dashboards etc.
- Integrate all automation tasks into a common environment
- Manage device's operational times by integrating them into booking and schedule planning (e.g. "video encoding profiles" to be adapted several times a day)

Technologies:

- DataMiner end-to-end multi-vendor management and OSS solution for broadcast, satellite, cable, telco and mobile industry
- Microsoft Windows Server, XML, C#
- Dimension Data VCCAP / ETSI NFV



Use Case >> IMS Call Session Control Function (CSCF)

Centralized virtual Call Routing with Oracle CSM

Description:

Core session management functions play a critical role as the central control point that directs signaling flows through the network and between elements. Network Function Virtualization (NFV) allows service providers to efficiently share hardware resources across different services and customers. It enables operators to more effectively manage multifaceted, multi-vendor networks, rapidly launch new services and easily reallocate resources without purchasing new equipment and coordinating expensive onsite installation teams.

The Oracle Communications Core Session Manager is designed to fully support core session management capabilities in virtualized environments. It provides a complete set of session core functions including IP Multi-media Subsystem (IMS) Call/Session Control Functions (CSCF) and Break-out Gateway Control Function (BGCF) and their associated 3GPP interfaces.

Customer values/problems solved:

- Fully virtualized solution available on commercial hypervisors
- Core session control functions S-CSCF, I-CSCF
- Session routing –BGCF
- Dynamic load balancing support
- Support for 3GPP IMS-AKA authentication mechanism
- Routing control with ENUM interface support and preferential routing based on User Equipment capabilities
- Advanced SIP Header Manipulation Rules and DIAMETER Manipulation Rules for increased interoperability

Category:

Network & Cyber Security

Partners:



Technologies:

- Core Session Manager (CSM)
- Dimension Data VCCAP / ETSI NFV



Use Case >> VoIP Protection with Session Border Controller

Protect your network with Topology Hiding and Encryption

Description:

The Oracle Session Border Controller works as a SIP firewall in the customer VoIP network to protect their core systems. The SBC can work as an Access-SBC in a residential deployment or as Interconnect-SBC in a peering deployment. SBC are important systems in the Service Provider and Enterprise area. Especially in the growing Enterprise IP-PBX market, the SBCs are important to demarcate the enterprise core from the service provider network.

Encryption for signaling (SIPoTLS) and media (SRTP) is as important as the header-manipulation for interop problems.

The Oracle Session Border Controller is available as physical appliances and also as virtual machine in a ETSI NFV deployment.

Customer values/problems solved:

- Topology Hiding through NAT and PAT
- Interoperability through header-manipulation
- IPv4-IPv6 Interworking
- Protocol SIP/H.323, SIP-SIPs conversion
- Encryption for SIP and RTP

Category:

Network & Cyber Security

Partners:



Technologies:

- Session Border Controller
- Dimension Data VCCAP / ETSI NFV



Use Case >> Signaling Routing for SS7 and Diameter

Centralized virtual Signaling with MACH7

Description:

The general signaling network of telecommunications is subject to immense changes. The traditional circuit-switched infrastructure of the Public Switched Telephone Network (PSTN) runs side by side with the new Internet Protocol (IP) based technologies and the evolution of SS7 signaling to Diameter signaling. The task has been to implement new technologies with lower costs and the ability to implement rapidly expanded IP-based services. Now we are facing the second stage of this development. Virtualization is the magic word to bring it to a point. New technologies, cost-effective and future-proof.

The change from the traditional, wired PSTN to the IP based network was the first step. The second step is a fundamental shift in the core network from the SS7-based signaling to the diameter signaling.

The teleSys MACH7 platform combines both functionalities iSTP and iDC in one product.

Customer values/problems solved:

- Call number evaluation and routing of the signaling messages in the direction of the selected subscriber (forwarding to the destination switching center / destination MSC or network transfer)
- Queries in subscriber databases, to which network operator a subscriber belongs.
- In mobile networks: Forward the subscriber data from the HLR to the VLR of the target MSC
- Global Title Translation in the SCCP layer so that the signaling messages transmitted in this layer end-to-end are routed to the correct point code
- Filter functions allow to prevent or reject certain types of signaling messages as required
- Diameter manipulation for Interoperability issues

Category:

Network & Cyber Security

Partners:



Technologies:

- Virtual Signaling Transfer Point
- Virtual Diameter Controller
- Dimension Data VCCAP / ETSI NFV



Use Case >> Public Key Infrastructure with PrimeKey PKI

Creating trust for the connected society

Description:

Public Key Infrastructure (or PKI) is largely about managing secure digital communication, to find a way to know who is who when sharing information. Otherwise, how can anyone be certain of the identities of obscure parties?

Customers need to decide and grant different individuals access and rights within, and occasionally, outside the organization. And he needs to keep track of every single level of trust amongst network elements, co-workers and business associates, or any other end entity.

PrimeKey's extendable PKI covers all demands for authentication efficiently and reliably.

Today and tomorrow.

Category:

Network & Cyber Security

Partners:



Customer values/problems solved:

- PrimeKey EJBCA Enterprise PKI is an open source IT-security software for Certificate Issuance and Certificate Management.
- PrimeKey EJBCA Enterprise protects your data, allowing you to provide safe digital communication when needed.
- Extremely flexible, EJBCA Enterprise is used for most imaginable PKI use cases.
- PKI software for any organization that needs to manage and operate its own serious, in-house PKI.
- Deployable in the customer's own organization, EJBCA Enterprise gives him full control of everything he does.

Technologies:

- PrimeKey EJBCA Enterprise Edition Software
- Dimension Data VCCAP
- RedHat jboss EAP
- Maria DB
- Gemalto Hardware Security Module (HSM)
- PrimeKey PKI Appliance
- Dimension Data VCCAP / ETSI NFV



Use Case >> Service Provider Security: Defending against volumetric DDoS attacks

Highly Scalable Out-of-Path DDoS Protection Solution with Flowmon and F5

Description:

Distributed Denial-of-Service (DDoS) attacks are an increasing threat, growing in volume, frequency, and sophistication. Out-of-Path DDoS detection based on flow data is a proven, effective, and scalable method to protect against volumetric DDoS attacks. In case of attack, Flowmon's DDoS Defender injects a BGP route to the protected destination causing the router to send it through F5 Big-IP for further analysis and protection. Scrubbing device has visibility up to the application level and is capable of protecting from contrived attacks targeting L4 up to L7.

Category:

Network & Cyber Security

Partners:



Customer values/problems solved:

- Ability to simulate various DDoS attacks in an isolated and safe environment
- Effectively mitigating against volumetric DDoS attacks
- Option to discard attack traffic (blackholing)
- Option to send traffic to scrubbing device for enhanced security
- Graphically illustrating network traffic flows before, during, and after a DDoS attack

Technologies:

- Flowmon NetFlow Collector
- Flowmon DDoS Defender
- F5 Big-IP AFM
- Ixia IxNetwork, Ixia Breaking Point
- Dimension Data VCCAP / ETSI NFV



Use Case >> Service Provider Security: Defending against volumetric DDoS attacks

Highly Scalable Out-of-Path DDoS Protection Solution with Flowmon and A10

Description:

Distributed Denial-of-Service (DDoS) attacks are an increasing threat, growing in volume, frequency, and sophistication. Out-of-Path DDoS detection based on flow data is a proven, effective, and scalable method to protect against volumetric DDoS attacks. In case of attack, Flowmon's DDoS Defender injects a BGP route to the protected destination causing the router to send it through A10 Thunder TPS for further analysis and protection. Scrubbing device has visibility up to the application level and is capable of protecting from contrived attacks targeting L4 up to L7.

Customer values/problems solved:

- Ability to simulate various DDoS attacks in an isolated and safe environment
- Effectively mitigating against volumetric DDoS attacks
- Option to discard attack traffic (blackholing)
- Option to send traffic to scrubbing device for enhanced security
- Graphically illustrating network traffic flows before, during, and after a DDoS attack

Category:

Network & Cyber Security

Partners:



Technologies:

- Flowmon NetFlow Collector
- Flowmon DDoS Defender
- A10 Thunder TPS
- Ixia IxNetwork, Ixia Breaking Point
- Dimension Data VCCAP / ETSI NFV



Use Case >> Enriching GRC platforms with vulnerability information

Integration of vulnerability information to Secure Operations

Description:

The integration of vulnerability information provided by Qualys to the Secure Operations Module of RSA Archer GRC platform enables us to:

- Map the vulnerabilities to the assets to get more information like criticality, applications or the person in charge to speed up and improve the patching process
- Combine vulnerabilities and security incidents or alarms in one report to improve the incident response and to get a more targeted response

Customer values/problems solved:

- Speed up and improve patching process
- More meaningful vulnerability and incident information
- Improve the incident response by getting a more targeted and faster response

Category:

Network & Cyber Security

Partners:



Technologies:

- RSA Archer SecOps
- RSA NetWitness Suite
- Qualys QualysGuard



Use Case >> SAP Alarm integration with SIEM

Integration of SAP alarms in your SIEM solution

Description:

In order to get the greatest visibility and know the details of the lateral movement of attackers, it is utmost important to integrate all relevant and critical systems in the SIEM solution. For getting the insight of SAP databases, an integration has been created to ingest the alarms from SAP ETD within RSA NetWitness and SecOps.

When correlating the SAP ETD alarm with packet and log information from the SIEM systems, a Security Analyst is able to understand the full scope of an attack and therefore able to coordinate the correct incident responses.

Customer values/problems solved:

- Integrating SAP ETD logs and correlation of them with SIEM alerts and events from logs and packets provides the full visibility of an attack
- Missing the integration of such, only parts of the attacks will be minimize the visibility and hence the defender will not be able to understand the full attack scope

Category:

Network & Cyber Security

Partners:



Technologies:

- RSA NetWitness Suite
- SAP ETD



Use Case >> Dynamic DNS & Data Exfiltration

Alarming of the usage of Dynamic DNS & Data Exfiltration

Description:

One of the most common goals of malicious actors is to steal data. Data exfiltration refers to the successful sending of information out of an environment to an environment controlled by an attacker. For malicious purposes, dynamic DNS allows an attacker to change the actual host and IP address used as a drop zone, for “malvertizing”, or as a command and control point without having to modify the behavior of the malware used on the victims endpoint. This provides a quick and convenient mechanism for attackers to evade detection using traditional IP/domain reputation services. While dynamic DNS can be used for many stages of an attack, this scenario focuses on its use as a drop zone for data exfiltration, uncovered by noticing an anomaly in a daily report.

Customer values/problems solved:

- RSA Security Analytics allows for the reporting of all network, log, and net flow and endpoint data from a single interface. By leveraging a feed of known dynamic DNS top level domains, Security Analytics can produce a rich report summarizing all activity that has been seen both on the wire (packets) or from various devices in the network such as proxies and firewalls (logs).
- In addition to just tagging traffic to and from dynamic DNS domains, Security Analytics can add valuable business and asset context to help an analyst sift through the noise.
- By further investigating Use Case Reports within RSA, an analyst can reconstruct the exfiltrated data. This helps to evaluate the business impact of the attack as well as provides information for suitable containment measures.

Category:

Network & Cyber Security

Partners:



Technologies:

- RSA NetWitness Suite



Use Case >> WebShell Attacks

Reconstructing Web-traffic to identify the exact way of an attacker

Description:

A common method of execution for this attack leverages vulnerabilities in a website (eg. SQL Injection, Remote File Inclusion) to remotely generate or install a file that will act as a WebShell. Once the WebShell is successfully installed, the remote attacker may then craft an HTTP POST request directly to the WebShell with embedded commands that will be executed as if the attacker had local (shell) access to the web server.

Attackers that successfully use WebShells take advantage of the fact that many organizations do not have complete visibility into HTTP sessions. Traditional tools rely on signatures and are easily left blind by intentional obfuscation of payloads and commands. In order to effectively respond to WebShell attacks, defenders must maximize visibility into each stage of the attack lifecycle.

Customer values/problems solved:

- Without being able to reconstruct the entire HTTP session (request and response), traditional toolsets do not allow an investigator to see into enough of the attack lifecycle to understand the initial attack vector (Delivery, Exploit/Installation), what an attacker is doing (C2), and what the impact to the business is (Action).
- A traditional logs-only SIEM has no way to alert on suspicious HTTP sessions of this nature unless a downstream signature-based tool such as an IDS/IPS or web proxy has seen the exact attack before.
- Furthermore, HTTP sessions cannot be reconstructed with log data alone, meaning a complete lack of visibility into C2 commands, data exfiltration, and initial entry vector.

Category:

Network & Cyber Security

Partners:



Technologies:

- RSA NetWitness Suite



Use Case >> SpearPhishing Attacks

Insights to SpearPhishing Attacks

Description:

Spear phishing is an attempt to entice a specifically targeted victim to open a malicious attachment or visit a malicious website with the intent of gaining insight into confidential data and/or acting on nefarious objectives against the victim's organization.

A common tactic used by an attacker is a spoofed email address designed to look like it's coming from a source that is trusted by the victim. Reconnaissance and social engineering tactics may also help produce content and wording that makes the delivery email more believable to the victim.

A motivated attacker can get a weaponized file through traditional signature-based email security solutions. Traditional tools must rely on signatures and are easily left blind by intentional obfuscation of attachments and embedding of unique malicious code. In order to effectively respond to spear phishing attacks, defenders must maximize visibility into each stage of the attack lifecycle in order to understand the delivery mechanism, the infection (i.e. did the user fall for it), and the impact to the business by having full visibility into network, endpoint, and user activity.

Customer values/problems solved:

- The ability to reconstruct the entire email session (analysts are great at confirming whether an email is truly phishing) as well as extract and perform analysis on all attachments is crucial to understanding the delivery mechanism.
- The capability to extract the initial payload is an invaluable way for investigators to perform deep analysis on potentially malicious files.
- Furthermore, the only way to truly determine whether or not an end user fell victim to the attack is to have deep visibility into the endpoint without relying on signature-based anti-virus solutions (a motivated attacker can easily evade AV).

Category:

Network & Cyber Security

Partners:



Technologies:

- RSA NetWitness Suite



Use Case >> Unified solution for managing critical infrastructures

Automatic Infrastructure Monitoring and Management

Description:

Infosim's *StableNet* solution provides an automated service fulfillment and service assurance solution for telcos, service providers and enterprises. Cause of two different versions, 'telco' and 'enterprise' it address nearly all current technical challenges and customer infrastructures as well. A service oriented architecture (SOA) satisfy all management domains like fault-, performance-, config- and inventory management as well as additional like reporting, vulnearability or backups. One of most advantage is getting one solution for all your needs and listed domains. It's supported and developed by just one team, so it assured great leverage and benefits like reduced network traffic, reduce investment into silo-style applications, smoother transition and ability to integrate while protecting existing investments.

Category:

DevOps & App Management

Partners:



Customer values/problems solved:

- Traditional OSS systems are often stucked together through several historical disjunct products despite of one label or one name. It's an attempt to satisfy all customer needs with moderate or low success. With *StableNet* you will get an all-in-one solution with unified concepts and technologies through all layers. Database storage, internal and external interfacing, GUI and frontends are highly integrated and aligned to each other. Not every domain feels like a separate product.
- Historical growing of infrastructure extends your needs and as side effects a lot of 'tools' have been born. During pass of time you're not able anymore to administrate you 'tools' and environment. *StableNet* replace such a tool zoo – you will get everything out of one hand.

Technologies:

- Infosim *StableNet*
- OSS / BSS
- Dimension Data VCCAP / ETSI NFV



Use Case >> Unified solution for managing critical infrastructures

Improve your customer satisfaction

Description:

Infosim's *StableNet* solution provides an automated service fulfillment and service assurance solution for telcos, service providers and enterprises. Cause of two different versions, 'telco' and 'enterprise' it address nearly all current technical challenges and customer infrastructures as well. A service oriented architecture (SOA) satisfy all management domains like fault-, performance-, config- and inventory management as well as additional like reporting, vulnerability or backups. Use unique advantage of getting one solution for all your needs – empower your enterprise to provide proactive monitoring. Keep away your customer from interrupts or low throughput. Manage, activate and guarantee current valuable services and ensure your business.

Customer values/problems solved:

- Monitor you network traffic in completely full automated way. Follow network peaks and don't worry about morphing networks like in SDN/NFV environments. *StableNet* supports new technologies like this as well as virtualization or containering.
- Using techniques like dynamic network loads (bonding) requires a management system who knows such connections and can represent this – in graphical manner as well as for billing or routing mechanism. *StableNet* dives into techniques behind and fulfill your needs.

Category:

DevOps & App Management

Partners:



Technologies:

- Infosim *StableNet*
- OSS / BSS
- Dimension Data VCCAP / ETSI NFV



Use Case >> Subscriber Management with virtualized appliances

Subscriber Management for Everyone

Description:

The industry-driven approach to virtualize network functions on standard x86 hardware does not stop at broadband network gateways (BNGs). As a network function with very high bandwidth utilization, BNG integration has been a challenge to-date. A solution must provide not only the function but also the performance you are familiar with from specialized BNG hardware.

Dimension Data has proven the functionality and maturity for the Cisco CSR1000v router as the virtual edition of the physical ASR1001-X router.

Category:

DevOps & App Management

Partners:



Customer values/problems solved:

- Ability to provide subscriber services without the specialized hardware
- Supporting a true Pay-as-you-Grow model with licensable throughput and subscriber scaling
- Supporting a whole variety of hardware vendors for compute resources
- Separation of customer types with virtual instances
- OPEX reduction
- Using well-known operating system IOS-XE

Technologies:

- Cisco CSR1000v
- Lenovo x86 blade
- IXIA IxNetwork
- FreeRadius
- Dimension Data VCCAP / ETSI NFV



Use Case >> Subscriber Management with virtualized appliances

Subscriber Management for Everyone

Description:

The industry-driven approach to virtualize network functions on standard x86 hardware does not stop at broadband network gateways (BNGs). As a network function with very high bandwidth utilization, BNG integration has been a challenge to-date. A solution must provide not only the function but also the performance you are familiar with from specialized BNG hardware.

Dimension Data has proven the functionality and maturity for the Juniper vMX as the virtual edition of the physical MX router.

Category:

DevOps & App Management

Partners:



Customer values/problems solved:

- Ability to provide subscriber services without the specialized hardware
- Supporting a true Pay-as-you-Grow model with licensable throughput and subscriber scaling
- Supporting a whole variety of hardware vendors for compute resources
- Separation of customer types with virtual instances
- OPEX reduction
- Using well-known operating system JUNOS

Technologies:

- Juniper vMX
- Lenovo x86 blade
- IXIA IxNetwork
- FreeRadius
- Dimension Data VCCAP / ETSI NFV



Use Case >> Business-IT Datacenter Management

Turns Data Center complexity into sophistication

Description:

Correlata is the first Business-IT Collaboration solution that puts IT operations in a spotlight as a business unit. A proprietary technology (patent protected) which inspects for the first time the relationship between the business layer and technology that delivers the agility and economics of the public cloud without sacrificing the control and security of on-premise infrastructure. Ensures production is not only up and running but highly available, resilient per the company's design Intentions - Governs all aspects under one Operating system.

The first independent vendor-agnostic system that also evaluates cloud transitions helping to make an efficient recommendations based on the unique patterns of system users.

Customer values/problems solved:

- Cost saving by Re-using connected and/or configured IT infrastructure resources not providing value.
- Ensure SLA compliance by measuring alignment between IT infrastructure resource tiers & service levels allocated to Apps.
- Identify data recovery issues by identifying coverage, RPO/RTO & retention time of allocated data by data protection systems and storage based copy services
- Identify redundancy, resiliency & SPOF scenarios, anticipating Lack of service/App delivery due to Infrastructure failure

Category:

DevOps & App Management

Partners:



Technologies:

- Correlata CorreAssess OTA
- Correlata CorreAssess Proactive Analytical engine.



Use Case >> Adding electronic lock to existing data center infrastructure (HW and SW)

TANlock – the highly integratable electronic lock

Description:

Data centers are nowadays highly secured areas. Access control on rack level is getting vital. Flexibility in access methods on top of a proven solution would be desirable.

Equipping server racks with TANlock3 is the solution.

Exchangeable HW brick moduls bring up the possibility to choose from a variety of authentication methods: Palm Vein Sensor, fingerprint sensor, RFID, touch display and others.

TANlock basis allows authentication and monitoring access – configured as needed in your environment. Authentication via LDAP / MS Active Directory, fixed keys or homebrew solutions via WebAPI. Monitoring via SNMP or syslog. Even controlling TANlock via SNMP or WebAPI in your own way is possible.

Category:

Facility & Physical Security

Partners:



Customer values / problems solved:

- Futureproof TANlock 3 with exchangeable HW brick moduls: Palm Vein Sensor, RFID, PIN, fingerprint sensor, touch display
- Highly integratable in existing IT infrastructures via SNMP, LDAP, MS Active Directory and syslog
- Highly customizable to your needs via WebAPI and RESTful API
- Authentication and monitoring of access of network racks
- Full flexibility in IT integration from simple fixed key authentication up to MS Active Directory integration

Technologies:

- Exchangeable HW brick moduls
- Compatible to many server racks
- Power supplied via POE
- Authentication via LDAP, MS Active Directory
- Monitoring via SNMP, syslog
- Controlled via SNMP, WebAPI, RESTful API



Use Case >> Automatic Infrastructure Management

The intelligent way to manage your network

Description:

CommScope's imVision Automated Infrastructure Management (AIM) solution provides actionable insights into the network's complex, interdependent physical layer as well as the myriad of active devices connected to it. It documents automatically all changes and generates electronic work orders to automate processes. imVision also increases the security of the network by generating alerts to unauthorized or unplanned changes. Thru customized reports it is easy to optimize the network by identifying unused IT assets available for reuse. APIs also enable the integration of AIM into Network Management Systems (NMS).

Category:

Facility & Physical Security

Partners:



COMMScope

Customer values/problems solved:

- Optimizing the utilization of the physical layer with real time data and automatic documentation of all changes: The AIM reveals all components to show you where you can get more from the infrastructure you already have – e.g. recognize and use your idle ports.
- Increasing availability by automatization: imVision is minimizing human error and network downtime with electronic work orders. All changes are automatically fully documented which enables fast root cause analysis in the event of a network failure.
- It makes the network more secure by generating alerts to unauthorized or unplanned changes and it is optimizing efficiency with real-time management of the physical layer.

Technologies:

- CommScope imVision
- Systemax structured cabling



Use Case >> NOIA Decentralised CDN

NOIA - Network Of Internet Acceleration - a distributed content delivery layer (CDN) that utilizes a widely dispersed edge node network in order to increase Internet performance.

Description:

NOIA utilises hundreds of public Nodes running NOIA Node software to participate in the network and form a distributed CDN. NOIA also ensures the minimum service level using their own infrastructure in the form of high-performance dedicated hardware and virtual private servers. NOIA needs several clusters of such private and public internet connected nodes for development, performance and reliability testing, as well as forming first private CDN networks. This is achieved through working with partners to use dedicated hardware clusters connected to best internet exchanges, deploying and orchestrating VPS clusters from various providers in different locations using Docker, Terraform, Kubernetes and other technologies.

Category:

Blockchain &
Distributed Ledger

Partners:



Customer values/problems solved:

- Ensuring high performance network clusters for testing, running private networks and ensuring SLA in public network
- Deploying, orchestrating and monitoring clusters of Virtual Private Servers in an automated and reliable way
- Ensuring on-demand scalability of VPS or network resources

Technologies:

- Docker
- Kubernetes
- Terraform



Use Case >> Digitalisation of a whole sports event

Tour de France, powered by NTT

Description:

As a primary technology partner for the Tour de France, a guiding principle of our technical solution was to deliver the business outcomes set out by the race owners, Amaury Sport Organisation (A.S.O.). Our goal was to deliver these outcomes in the unique environment of the race and at the same time deliver more data insights than we did in the previous year's race.

With a multitude of data – collected by each rider's sensor and processed in real-time – harnessing the power of the Internet of Things (IoT), and creating a platform for this, underpinned the overall strategy for the race. This includes a dual transmission network, defined data segregation, as well as a process for filtering and data analytics.

More: <https://hello.global.ntt/tourdefrance>

Customer values/problems solved:

- 2015 – Making data available: live tracking of all riders, real-time data analytics, real-time data for broadcast, live tracking website.
- 2016 – Telling great stories with data: commentators app, enriched data analytics, full race website, @letourdata insights and innovation in visualisation, enhanced live tracking
- 2017 – Using data to predict likely outcomes: machine learning and predictive analytics, animated data visualisations, enriched social media content, enhanced websites
- 2018 – Taking data analytics to the broadcast: live gradient, live elevation gained, virtual general classification, maximum speed on descent of group, 3D mapping and virtual fly through
- 2019 – The most data-rich Tour de France in history: using animation, enhanced analytics and machine-learning, and augmented reality to bring our data storytelling to life

Category:

Internet of Things

Partners:



Technologies:

- Transmission networks, shielding, redundancy
- IoT platform with data ingestion, outputs, and integration, data aggregation and filtering, analysis
- Machine learning, big data, cloud, cloud-based services, networking



Use Case >> Managing edge devices and taming your data streams

End-to-end solution to manage edge devices and to configure data streams

Description:

Record Evolution offers two software solutions that combined answer to all demands in a typical IoT industry scenario. RESWARM is an online service that enables the remote software management and data acquisition given your machines and devices (single edge devices as well as swarms of devices). REPODS is a hosted cloud data warehouse, analytics and report generation service that combines Datawarehouse functionality with IoT data streaming for powerful insights into production processes.

The powerful API allows for seamless integration into your existing data infrastructure.

Category:

Internet of Things &
Robotics

Partners:



Customer values/problems solved:

- Management of machines and sensors with a central browser application
- Simple Deployment of your own software with private IoT-App-Store to swarms of devices
- Machine learning studio with direct data access with python and spark for big data handling
- Direct streaming to your existing data model to enrich your forecasting capabilities and controlling

Technologies:

- RESWARM
- REPODS



Use Case >> SPIRIT/21 Industrial IoT Platform

SPIRIT/21 Industrial IoT Platform - Overview

Description:

The SPIRIT/21 IIoT & Automation Platform serves as middleware between your field devices and your existing systems or as a central location to store and process your data. With DELL industry grade Edge Gateways and the SPIRIT/21 edge software you get an universal data aggregation system for any sensor or plant – no matter which industry protocol or IT protocol is used. Your data is securely transferred and cached on the gateway until the database write is acknowledged. With a scalable system (including database) and an intuitive data visualization module you get the power to create your own BI. Flexible data processing and flow based programming enables power-users and DevOps-engineers to tune the business logic on the go. Using only open source software the solution belongs to the customer. It offers you flexible hosting in the cloud, on-premises, at e-shelter or as Managed Service by SPIRIT/21 or any combination of these. Container technology orchestrated by OpenShift offers HA, load-balancing and scalability out of the box while being super resource efficient.

e-shelter demo: The SPIRIT/21 IIoT & Automation Platform is used for reading a wireless electricity meter via wMBus protocol and to acquire data from distance measurement sensors via one DELL Edge Gateway. Live visualization and analytics of the consumed electricity and the distance data is performed in the backend.

Category:

Internet of Things & Robotics

Partners:



Customer values/problems solved:

- Consolidation of the “software zoo” in the field – acquire and process any sensor data using any protocol with one single backend. Only the gateway at the edge changes depending on the sensor protocol.
- Central processing point for everything producing data
- “Think big, start small” → Start with affordable prototype. 100% reuse from prototype to production
- Easy and affordable start into Industry 4.0
- Live monitoring both OT and IT & automated actions increased yield rates in production
- More data means more insight and more control
- Endless possibilities without disrupting existing systems/processes (if desired)

Technologies:

- OpenShift
- Microservices
- Flow-Based Programming
- Industry Protocols
- DELL Edge Gateways



Use Case >> Connected Freight Wagon

A1 Digital IoT Platform - Overview

Description:

Networking machines, equipment and other products is already a reality in many industries today. The ability to gather, monitor and control data remotely brings many new opportunities businesses want to leverage.

The innovation lab demo "Connected Freight Wagon" gives an insight into the possibilities of networking, in this case freight wagon companies. The collection of data by means of energy self-sufficient hardware allows maximum flexibility. These built-in sensors send data to the connected A1 Digital IoT Platform. Dashboards and visualizations then allow the customer to view the collected data. Based on predefined rules, alarms can be set or reports drawn. Furthermore, it is also possible to transfer this data directly into existing enterprise systems, such as an ERP.

Customer values/problems solved:

- Tracking: The solution makes it possible to determine the exact location of each freight car and to track the freight car in order to use it optimally
- Load weight: The solution allows to determine the load weight of a freight car and to set alarms in case of overcharge to avoid problems during transport
- Acceleration: The solution makes it possible to detect the acceleration measured train by train and standstill
- Services: The solution makes it possible to document the installation of the hardware in order to intervene quickly in case of errors / problems
- Outlook: Detection of track and turnout characteristics while driving to optimize the planning of service on track tracks

Category:

Internet of Things &
Robotics

Partners:



Technologies:

- Hardware (energy self-sufficient, sensors for measuring load weight, km, accretion, temperature, humidity, etc)
- Radio networking by mobile radio
- IoT Platform
- Application for visualization



Use Case >> Handling multiple Kubernetes clusters across cloud and edge

Kubernetes on the Edge with Kubermatic

Description:

Computing is increasingly moving away from traditional centralized data centers to edge locations and devices closer to end users. Edge computing environments create many new business opportunities, but also present new challenges for software deployment, updating, and life cycle management. Kubernetes and other cloud native technologies are the standard for managing these distributed use cases. Nevertheless, implementing and operating multiple Kubernetes clusters in complex enterprise environments across various infrastructures is no easy undertaking and can be challenging and expensive even for highly sophisticated technical organizations.

Kubermatic is a production-proven platform that supports the set-up, deployment and management of multiple Kubernetes clusters across cloud and edge environments. Kubermatic has both, a centralized control plane and the ability to add localized management clusters for reduced edge latency. Beyond basic Kubernetes clusters, Kubermatic also helps facilitate application management with integrated capabilities such as logging, health checks, automated backups, and disaster recovery.

Customer values/problems solved:

- Using Kubernetes on the Edge allows customers to automate software application delivery and creates self-healing infrastructure
- Kubermatic provides a single pane of glass for cluster management that handles provisioning, upgrades, Day 2 operations, and life cycle control of Kubernetes clusters on the Edge

Category:

Hybrid Cloud

Partners:



Technologies:

- Kubernetes
- Kubermatic - Kubernetes Engine
- Sponson - Application Directory
- Machine-controller – cluster provisioner



Use Case >> Use AI to turn unstructured documents into structured data

A tool to efficiently manage corporate documents and the data within seconds

Description:

LEVERTON develops and applies disruptive deep learning technologies to extract, structure and manage data from corporate documents in more than 20 languages. The platform empowers corporations and investors to be more efficient and effective with their data & document management. It facilitates quick and data-driven decision-making by creating actionable, valuable insights out of unstructured data using AI and deep learning technologies. The platform runs on LEVERTON servers in ISO 27001 and ISO 9001 certified data centers which guarantee highest security.

Category:

High Performance &
Cognitive Computing

Partners:



LEVERTON

Customer values/problems solved:

- Fast data aggregation
- Deep Learning algorithms to extract required data
- Extract data from contracts in 20+ languages
- Efficient quality control of extracted data
- Real-time insights to accurate portfolio data
- Migrate and sync data to existing target systems
- Improve target system data quality

Technologies:

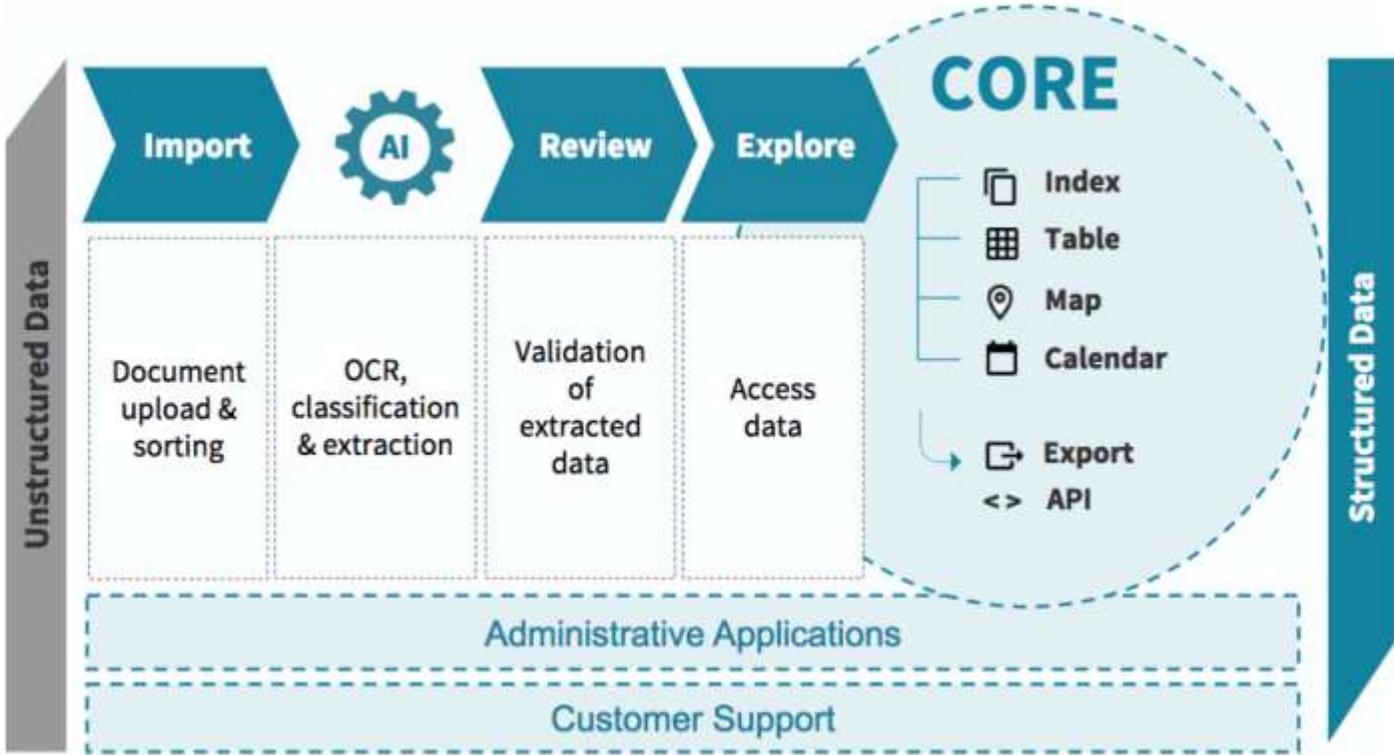
- Java
- Python
- Tensorflow
- React
- Kubernetes



Use Case >> Use AI to turn unstructured documents into structured data

A tool to efficiently manage corporate documents and the data within seconds

LEVERTON Platform – Workflow Overview



Source: LEVERTON

