Asseco Driving Competitive Advantage with VPLEX for VMware Availability in Volksbank
Agenda

- About VOLSKBANK
- About Asseco SEE
- Challenging infrastructure needs
- EMC VPLEX – Part of the solution for Volksbank
- Architecture Benefits
- Conclusions
About Volksbank

Founded in 2000, Volksbank is a financial institution with Austrian roots, which serves over 160,000 clients, is one of the top 10 banks in the local market, with assets of 3.2 billion euros (as of October, 2013). The bank has 130 branches, covering the most important areas of the country.

As a universal bank, Volksbank today offers a full range of products and services for all categories of clients: individuals, small and medium enterprises and large corporations. Volksbank aims to provide competitive financial products and advisory clients, acting as their trusted partner.
About Asseco

Asseco SEE Romania has been one of the most important IT systems, solutions and services integrators, as well as banking applications developer in Romania. It is the result of a M & A process started by Polish Asseco Group in 2007, after which Asseco SEE took over the local IT companies Net Consulting, FIBA Software and Probass. They became a single business entity known as ASSECO SEE ROMANIA in 2011. The company has been constantly ranked among the top IT corporations in Romania.

Asseco SEE Romania Financial Results 2013

- Revenues: 24,7mil.Euro
- Net Profit: 1,08mil.Euro

Employment

- Number of employees: 183 (2013)
- People working for ASEE are experienced and skilled specialists
Asseco in Europe
Areas of Activity

**Finance**
- Banks
- Insurance companies
- Brokerage houses
- Investment funds
- Leasing companies
- Factoring companies
- Mortgage banks

**Public Sector**
- Central administration
- Local administration
- Healthcare
- International organizations
- Social services
- Uniformed services
- Education

**Enterprises**
- Telecommunication
- Energy sector
- Utilities
- Gas sector
- Manufacturing, Trade and Services
- FMCG
- Multimedia
Why Asseco?

- Comprehensive solution offering
- Deep domain expertise and knowledge of local markets
- Diversified customer base
- Strong financial performance
- Attractive business model
- Highly skilled employees
- Track record of successful acquisitions
- Software development leader in fast growing markets

solutions for demanding business
# Challenging infrastructure needs

## Solution overview

<table>
<thead>
<tr>
<th>Typical Deployment</th>
<th>Desired design</th>
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<tbody>
<tr>
<td>▪ Asset utilization</td>
<td>▪ Best asset utilization</td>
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<tr>
<td>Active – Passive DataCenter doesn’t fully use all resources =&gt; Equipments in</td>
<td>Active – Active Data Center is the winning design, choosing the best solution</td>
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<td>Disaster Recovery Data Center do not add value until switched on.</td>
<td>is the challenge.</td>
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<tr>
<td>▪ Migrations are generally disruptive and need downtime</td>
<td>▪ Seamless migrations, no impact on critical services</td>
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<tr>
<td>▪ Manual intervention is needed</td>
<td>▪ Automation</td>
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<tr>
<td>▪ No real 5 nines availability can be achieved</td>
<td>▪ Highest level of availability</td>
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Challenging infrastructure needs

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<td><strong>Plan for Downtime</strong></td>
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<tr>
<td><img src="image1" alt="Diagram" /></td>
<td><img src="image2" alt="Diagram" /></td>
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**Solution overview**

- **Typical Deployment**
  - Instance A: Active Failure Domain
  - Instance B: Passive Failure Domain
  - Replication

- **Desired design**
  - Encapsulated LUN
  - Instance A: Active Failover Domain
  - Instance B: Active Failover Domain
EMC VPLEX – Part of the solution for Volksbank

- Cross connect High Availability Metro Cluster
- Synchronous replication, transparent for the Storage
- Infrastructure load distribution through Datacenters
- Administration consolidation for both Datacenters
- Storage Virtualization – ensuring maximum level of performance and scalability
- Transparent VM migration, no impact on critical services
- Access to data without downtime, between and over the datacenters
Continous Operations Scenarios

Virtual machines protected when Fiber Channel or IP communication is interrupted

Virtual machines are protected when computing power is lost in one DataCenter
Implementation Scenarios

**VPLEX Local**
- Application and Data Mobility
- High Availability
- Workforce Collaboration

Use VPLEX Local for storage virtualization, consolidate heterogeneous storage, centralize administration, reduce costs.

**VPLEX Metro**
- Synchronous replication
- Maintain bullet-proof application availability and non-stop data access
- simultaneous access to one version of information across two data centers

Create and manage Metro Clusters using synchronous replication.

**VPLEX Geo**
- Asynchronous replication
- within, across, and between data centers over synchronous or asynchronous distance

Create and manage Geo Clusters using asynchronous replication, keep all other benefits of VPLEX.
Use Cases

**AVAILABILITY**
Maintain availability and non-stop access by mirroring across locations

- Zero RPO/RTO
- Eliminate storage operations from failover

**MOBILITY**
Move and relocate VMs, applications, and data over distance

- Active-active data centers
- Disaster avoidance
- Data center migration
- Workload rebalancing

**COLLABORATION**
Enable concurrent read/write access to data across locations

- Instant and simultaneous data access over distance
- Streamline workflows
Virtualization Scenario 1

- High Availability functionality limited to a single site
- vMotion non-disruptively moves virtual machines across sites but with storage vMotion (can take a very long time, downtime is needed to restart VM in the new location)
- Data is accessible from one site at a time
- Host-based mirroring consumes CPU and network
Virtualization Scenario 2

- High Availability can now function across data center sites
- No storage vMotion required for vMotion – VPLEX ensures data availability across arrays
- Loss of an array or site results in rapid automatic application failover between sites
- VPLEX supports HA and vMotion up to 10ms RTT between sites
- Optional vCenter storage provisioning via a VSI plugin
- Transparent Data Migration though different performance arrays
- Storage tiering
Increased Availability

- IOs can be **WRITTEN** to two separate arrays
- IOs can be **READ** from two separate arrays
- Failure on one array/host/side does not **IMPACT** availability

Dual controller to MULTI-CONTROLLER
Active-Passive to ACTIVE-ACTIVE
Architecture Benefits

Getting the Most out of VMware

- **SIMPLIFIED** vMotion across arrays or across distance
- **AUTOMATIC** failover and restart across arrays or across distance
- **FULL** utilization of compute and storage resources across domains
- Extend VMware Functionality Far Beyond the Array Boundary
Architecture Benefits

Enhanced VMware Availability

- Combines short- and long-distance (1000s of km)
- Leverages VMware SRM for DR site
- Any distance DR

Three Site (Synchronous and Asynchronous) Availability
Architecture design - computing

- Cisco UCS server blades
- Using Cisco Nexus products for Interconnect on FiberChannel and Ethernet arrays
- Ensuring both horizontal and vertical scaling
- Easy to maintain and administer
- Extended availability for chasis and blades
Architecture design
Architecture design – benefits

**Consolidation**
Storage can be virtualized and heterogeneous storage systems can be presented as one, transparent to the hypervisor.

**Scalability**
Start small and grow larger with predictable service levels.

**Performance**
Caching can improve performance for OLTP applications.

**Flexibility**
Roles can be switched between data centers.

**Availability**
Maintenance can be done without downtime on any component of the system.

**Efficiency**
Load can be spread across the entire cluster.
Conclusions

Asseco understood customer requirements and implemented the optimal solution. Volksbank benefits after implementation:

- Best asset utilization
- Seamless migration from Production Site to DR Site less than 5 minutes
- Reutilization of existing assets
- Implemented architecture guarantees future developments
- Reduced downtime and operational risk

Implemented architecture may provide cost reduction between 10-30% compared with traditional implementation.
Thank you

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