

SQL-Ledger in the Cloud & KVM-Virtualization

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Overview

- About us
- Technical and „Legal“ Problems with running SQL-Ledger in the Cloud
- Chances
- Introducing Linux-KVM Virtualization
- How does KVM-Virtualization help with SQL-Ledger?



About us

- Founded 7 years ago
- Focus on Software as a Service:
 - Groupware (Open-Xchange) & CRM
 - SQL-Ledger
- With emphasis on integration:
 - CRM-Contacts in Groupware and vice-versa
- ... and Infrastructure as a Service:
 - Server- & Desktop-Virtualization
- Providing services for partners and SME



Technical problems with SQL-Ledger in the Cloud

- Runs with Perl, not Java, Python or .NET
- Requires a full-blown RDBMS instead of NoSQL-style DBs
- Additional dependencies: LaTeX, Printing
→ Cloud as in 'PaaS' currently not possible



„Legal“ problems with SQL-Ledger in the Cloud

- „Where is my financial data?“
- „Who has access to it?“
- „Is it safe?“



Chances of running SQL-Ledger in the Cloud

- General arguments for Cloud-computing apply:
 - Scalability
 - Pay for what is really needed
 - Lower investment costs
 - No hardware and associated maintenance costs
 - Possibility to outsource maintenance and support



Possibilities for running SQL-Ledger in the Cloud

- Private Cloud:
 - Virtual Machine
 - Shared-Hosting
- Public Cloud at a National Provider:
 - Virtual Machine
 - Shared-Hosting
 - Already available at stepping stone



Kernel-based Virtual Machine (KVM) Virtualization

- Live Migration between server nodes
- Kernel Samepage Merging (KSM)
 - Reduce the overhead of running multiple equivalent machines
- Supported Storage Backends:
 - File-, Volume- and Object-based (distributed) storage
- Unique remote access protocol: Spice
- Hot-Standby (Kemari)
- Open formats and protocols



How does KVM help with SQL-Ledger?

- Snapshotting captures state of the system, can help with upgrading SQL-Ledger
- KSM reduces overhead of running multiple similar systems while keeping them perfectly isolated
- Open formats allow to move the VM between different providers and technologies
- VM-Templating reduces initial setup time
- Live Migration and Hot-Standby provide the building blocks of high availability



Future plans

- Integration of SQL-Ledger and CRM/Groupware
- Seamless SQL-Ledger Virtual Machine deployment
- Connecting SQL-Ledger VM-instances to local office for printing using redundant Out-of-the-Box VPN-Appliance
- Separating Database Server into separate VM, possibly with SE-PostgreSQL



Links

- <http://www.stepping-stone.ch>
- Linux-KVM: <http://www.linux-kvm.org/>
- Qemu/KVM Ceph Distributed Storage:
<http://ceph.newdream.net/wiki/QEMU-RBD>
- Kemari KVM-HA: <http://www.osrg.net/kemari/>
- SE-PostgreSQL:
http://wiki.postgresql.org/wiki/SEPostgreSQL_Introduction



Questions & Comments

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Thank you

