

Managing SAP Document and Data Archiving in the Cloud

Jochen Hager, Solution Exchange LLC
 Kristin Gerling, Solution Exchange LLC
 Gerhard Saumweber, Texperts Inc.

- Review of Terminology
- Cloud Computing for SAP Imaging and Data Archiving
- Pricing Models and Business Cases
- Transitioning between on-premise to in-the-cloud
- Closing Remarks

Definition: on-premises, off-premises, in-the-cloud

- **On-premises:** software is installed and runs on computers in the building (on premise)
- **Off-premises:** often refers to hosted software scenarios
- **Cloud Services:** Software-aaS, Plattform-aaS, Technology-aaS
- **Public Cloud:** user usually does not know where software is physically run (off-premises)
- **Private Cloud:** software is installed locally (on-premises) and administered remotely
- **External Private Cloud:** software is installed remotely (off-premises) and connected through a VPN tunnel

What are Cloud-based Services?

Virtualization Benefits

- Fast Server Provisioning
- Fast System Copies
- High Availability
- Fault Tolerance
- Dynamic Resource Allocation

Cloud Computing Benefits

- Consumption-based
- Pay-as-you-Go
- Off-Premise
- Scale up and down

Cloud-based Service

SAP® Imaging and Archiving

- SAP offers integration to archiving solutions through its SAP ArchiveLink™ and SAP ILM interfaces
 - SAP ArchiveLink: HTTP/S based communication to control documents on compliant repositories
 - SAP ILM / BC-ILM 2.0 (WebDAV): web-based distributed authoring and versioning
- SAP ArchiveLink is currently the most commonly used protocol to store scanned or other electronic images connected to SAP
- SAP ILM / BC-ILM is relatively new and used in connection with SAP Information Lifecycle Management (SAP ILM)

SAP Archiving in the Cloud

- Connectivity encrypted through HTTPS protocols
- Secure Key Transmission to authenticate communication partner
- Write only storage further prevents accidental manipulation

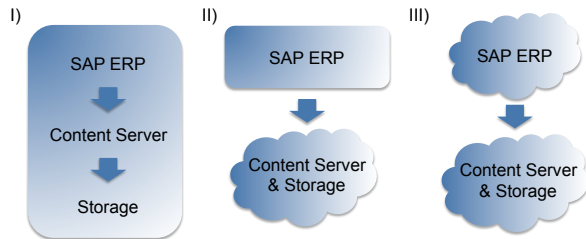
The screenshot shows the 'Display Content Repositories: Detail' configuration page. Key fields include:

- Content Rep: 119
- Description: Targets K05 ContentServer
- Document Area: ArchiveLink
- Storage Info: HTTP content server
- Protocol: HTTP
- Version no: 0046 Content Server version 4.6
- HTTP server: 67.90.132.109 (highlighted with a red box and labeled 'IP Address')
- Port Number: 8080
- HTTP Script: SAP4LNKContentServer
- Basic Path: /usr/sap/.../archiv1
- Phys. basePath: /usr/sap/.../archiv1
- Phys. archPath: /usr/sap/.../archiv1
- OutputDevice: S002
- Time created: 07/02/10 15:05:43
- Created by: ROOT
- Name: Joe Root
- Last Changed At: 09/01/10 21:16:15
- Last changed by: ROOT
- Name: Joe Root

 A 'Security Setting' box is also present at the bottom right of the configuration area.

What goes into the Cloud?

- SAP: on-premises or off-premises (hosting)
- Content Server: on-premises or off-premises
- Storage: on-premises or off-premises



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Document Display

- Image display over the internet, secured and authenticated
- Remote storage with local display functionality

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Virtualized Scanning?



- Scanning options
 - Local on-premise (HTTPS connection through SAP to archive)
 - As-a-Service by external service provider
 - As-a-Service through your Cloud Service

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Risks of Cloud Services

- Common concerns are:
 - Data integrity (no one is tampering with it)
 - Architecture defines secured storage
 - Data consistency (SAP data in sync with Archive)
 - Content Server and Link Tables define mapping of SAP transactional data to electronic documents in the archive
 - Rigorous compliance (retention, security and availability)
 - Compliance software layer ensures retention
 - Uptime and availability through SLAs
 - Unification of business process (seamless integration)
 - Business process not interrupted due to SAP's existing system design

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Benefits of Cloud Services

- Higher availability
 - Dedicated environments guarantee high availability rates
- Better scalability
 - As you grow, the service grows
- Lower costs
 - Better pricing on storage and server capacity
- Less complexity
 - Elimination of a whole set of infrastructure
- Improved elasticity
 - Retrieval power is provided when you need it

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Key Benefits of Cloud-based Computing

Cloud Computing for SAP Archiving allows:

- ... Consuming Archiving-as-a-Service
- ... Service provisioning On-demand
- ... Rapid deployment to accelerate business projects
- ... Managing Cost w/ flat pricing models like Pay-as-you-go
- ... Standardized "customized" deployments
- ... Scalability due to dynamic resources provisioning
- ... Flexibility (elasticity) to the customer's business needs
- ... Efficiency due to better utilization
- ... Innovation due to new service architectures (SOA)

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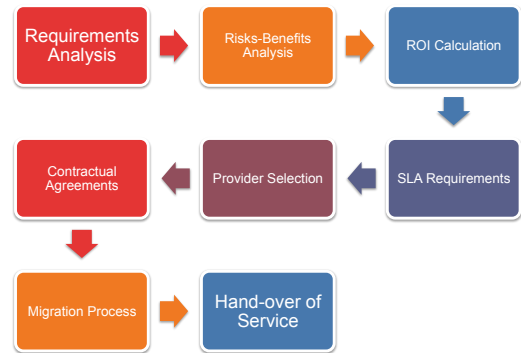
Value-Proposition



- No business process (BP) customizing changes
- No maintenance cost
- No administration cost
- No hardware and software license costs
- Turn-key solution leveraging SOA
- Compliant w/ legal standards for document management and encryption
- Tie-in to the standardized SAP ArchiveLink
- Dynamic scalability (elasticity) due to Cloud-based service + optimizing (rightsizing)

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What does it take to do the plunge?

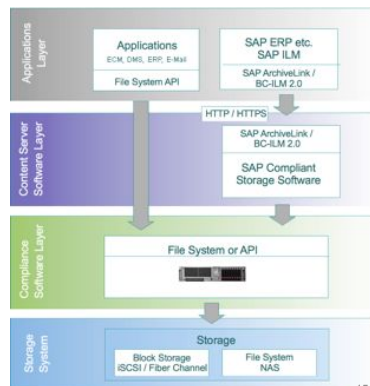


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Architectural Components

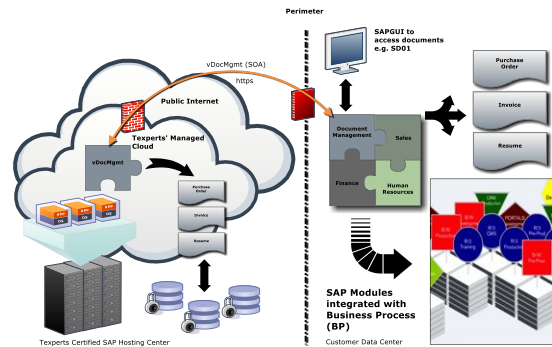


- Multiple communication layers
- HTTP / HTTPS communication allows move into the cloud
- SaaS in External Public Clouds most suited



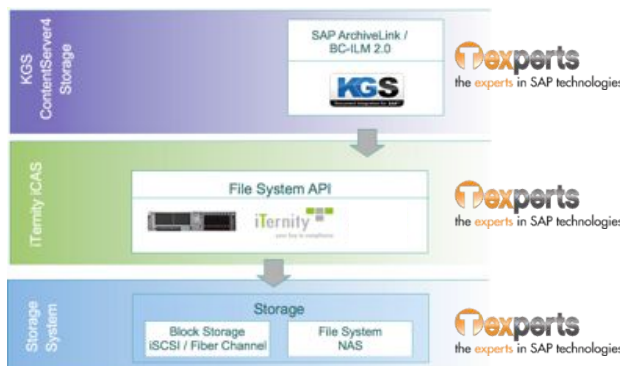
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How does it work?



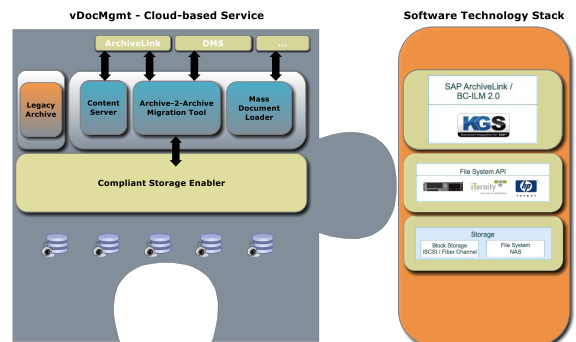
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Example Components



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Software Technology



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Software Pricing Models



- On-premises: Typically fully licensed software by consumer which is installed locally and
 - Under internal administration OR
 - Under outsourced administration
- Off-premises, PaaS:
 - Hardware administration is offered as a service
 - Software license is still owned by consumer
- Off-premises, SaaS:
 - Software and administration are offered as a service
 - No license fee is paid
 - Software is owned by service provider and offered for consumption based on a monthly service fee

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Cloud services are not for everyone!



- How could this work for me?
- Answer the following questions: How could we be harmed...
 - If the asset became widely public and widely distributed?
 - If an employee of our cloud provider accessed the asset?
 - If the process or function were manipulated by an outsider?
 - If the process or function failed to provide expected results?
 - If the information/data were unexpectedly changed?
 - If the asset were unavailable for a period of time?
- ... and then structure your cloud solution to safeguard against these concerns.

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Service Level Agreements and Other Considerations



- The following should be clearly regulated in your SLAs and other legal agreements:
 - The right to retain ownership, use and control of one's data
 - The right to an SLA that addresses liabilities, remedies, and business outcomes: the agreement should comprehensively address the business issues implied
 - The right to notification and choice about changes to the consumer's business process (upgrades, changes to the process)
 - The right to understand the technical limitations or requirements of the service up front
 - The right to understand which jurisdiction the provider operates in
 - The right to know which security processes the provider follows

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Business Case



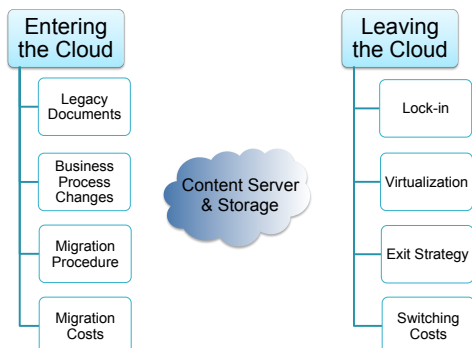
- Based on one SAP System and 1 Terra Byte of Data in secured storage

5 Year Comparison	Year 1	Year 2	Year 3	Year 4	Year 5	
Full Licensing Model:						
License	\$81,600	\$0	\$0	\$0	\$0	\$81,600
Administration	\$34,500	\$34,500	\$34,500	\$34,500	\$34,500	\$172,500
Storage Costs	\$17,500	\$17,500	\$17,500	\$17,500	\$17,500	\$87,500
Supp.&Maint.	\$8,200	\$8,200	\$8,200	\$8,200	\$8,200	\$41,000
	\$141,800	\$60,200	\$60,200	\$60,200	\$60,200	\$382,600
Cloud Service Model:						
Initial Setup	\$14,500					\$14,500
SaaS – SAP Archiving	\$33,300	\$33,300	\$33,300	\$33,300	\$33,300	\$166,500
SaaS – Storage	\$5,400	\$5,400	\$5,400	\$5,400	\$5,400	\$27,000
Encryption	\$4,200	\$4,200	\$4,200	\$4,200	\$4,200	\$21,000
7x24 SLA	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$39,000
	\$65,200	\$50,700	\$50,700	\$50,700	\$50,700	\$268,000

\$114,000 savings over 5yrs!

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What about Transitioning?



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What about Transitioning?



- Legacy documents and data
 - Effective migration procedures
 - External access to cloud environments
- Business processes should be fairly untouched
- Technology, that makes moving easier
 - Virtual images can be moved completely
 - Operating system images
 - File system images
 - APIs and interfaces
 - Extract your data at any time

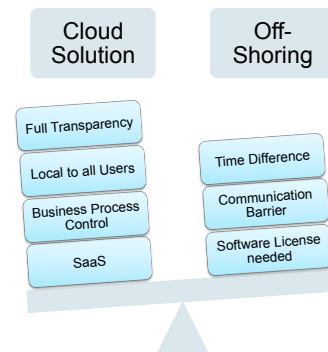
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What to consider...

- Pre-negotiate exit fees
- Contractually define an exit strategy
- Assess the efforts to exit up front
- Mitigate the risk of a lock-in
- The good and the bad (examples):
 - Open Source CRM
 - Salesforce.com

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Cloud vs. Off-Shoring



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Take-Aways

- Focus on your core business – leave the rest to others
- Choose the service that is right for you: SaaS, PaaS, TaaS
- Create strong SLAs with your cloud service provider
- Conduct a full risk / benefits analysis
- Make your decision

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Resources and Links

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