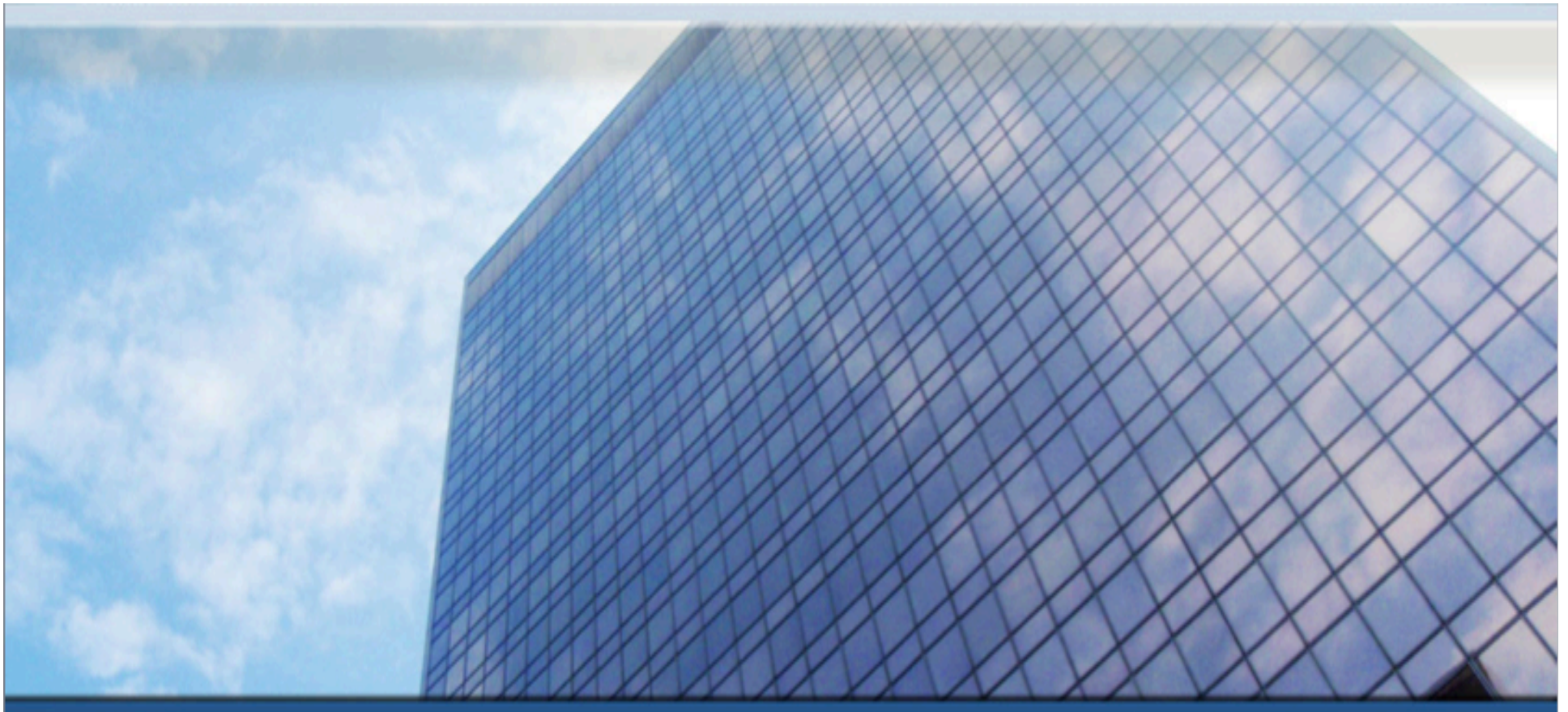


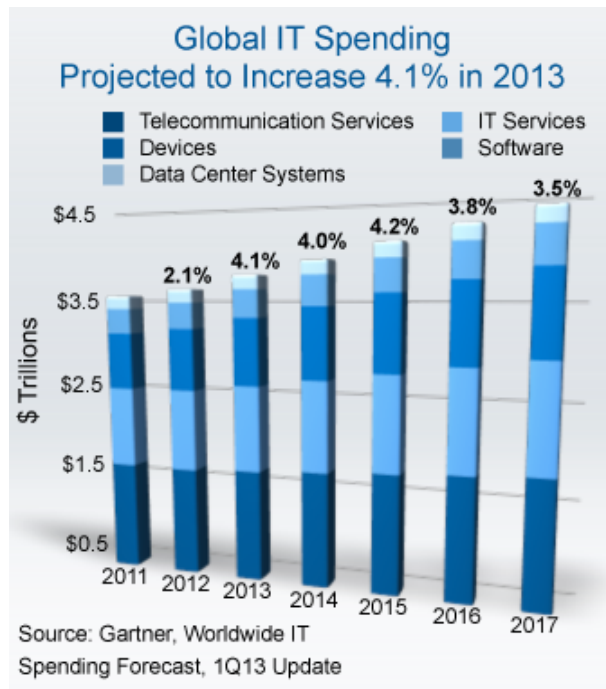
SAP Private Cloud Case Studies

Real World Customer Case Study



SAP Future – A Crisis for Complexity

As the world gets smarter, the demand for SAP infrastructure will grow rapidly....



Uncontrolled management and Energy costs

Steady CAPEX Spend

To make progress, delivery organizations must address the server, storage and network operating cost problems, not just CAPEX

Challenges of today's SAP Landscape

- Challenge 1: Large databases
 - Large databases are putting a strain on the traditional SAP infrastructure and frequently a cause for performance problems paired with high storage costs. This cause an impact with testing and training landscapes and also impede in delivering adequate disaster recovery.
- Challenge 2: Complex SAP landscapes
 - Today's landscape has evolved far beyond from what was once a monolithic integrated application with an integrated administration layer, to a complex multi=component architecture.
 - The landscape has become difficult to operate on an application, administration and infrastructure level.

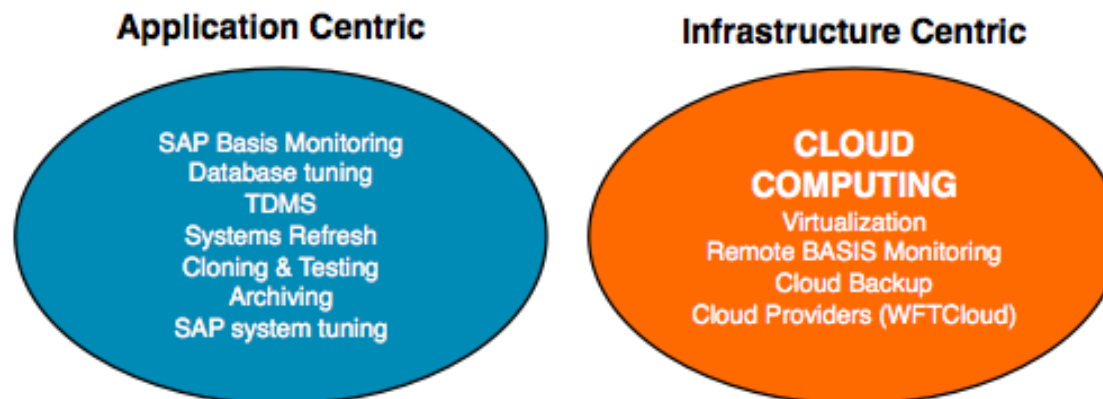


Challenges of today's SAP Landscape

- **Customers are facing the combined challenge of complex SAP landscapes and large databases. This leads to operational problems**
 - “It takes weeks to setup a training landscape”
 - “I cannot back up my ERP system anymore within the agreed SLA”
 - “I have over provisioned computing and storage but using only a fraction. I paid for the provisioned hardware and DB licenses based on hardware cores”
 - “It takes a long time to run my BDLS even though I spend a lot on my server hardware”
 - “ We have a disaster recovery scenario but never executed it as a whole”
 - “Upgrading/patching my landscape takes weeks of admin work”
 - “Simply provisioning a Unix Server takes me 5-6 weeks”
 - “Restoring the full SAP landscape would be a nightmare”
 - “I have a 7 TB ERP database, do I really need 7TB storage on my testing and training landscape”
 - “My SAP infrastructure and admin support budgets have sky rocketed!!!!!!”

How to meet the Challenge...

- The traditional response is failing. Customers application centric approach adding bigger boxes started to fail. On an infrastructure level the traditional architectures reach the limits of the scale up model.
- In WFTCloud view, the challenges today's SAP landscape are facing can neither be met by adopting a pure application nor a pure infrastructure centric approach.
- Customers will need to define a mixed approach while revising their current SAP infrastructures and the way they are managed and consumed.



SAP Infrastructure Complexities....

SAP Customers choose the Best of the Best Infrastructure

AUDI Exterior



Mercedes Interior



BMW Engine



IBM SERVERS



EMC STORAGE



CISCO SWITCHES



BROCADE SAN



BACKUP DATA DOMAIN



F5 LOAD BALANCER

Challenge - Best Infrastructure needs better Integration

How we meet the Challenge...

- The objectives of cost reduction and operational excellence drive our customers into the SAP Private Cloud on Premise (ON-Premise HMS Cloud Solution).
 - **ON-Premise HMS Model** include:
 - Converged Infrastructure on a Dedicated New Hardware
 - Architecture / Design and implementation
 - SAP (Homogeneous or Heterogeneous) Migration of SAP Production and Non-Production (Unicode Conversion if needed)
 - SAP High Availability for Production Landscape setup
 - SAP Disaster Recovery Implementation for SAP Production Landscape
 - SAP Performance Optimization for Production Landscape
 - SAP System Refresh Design and Implementation
 - SAP Data Protection Design and Implementation
 - SAP Operations Management for both SAP Production and Non-Prod Landscape

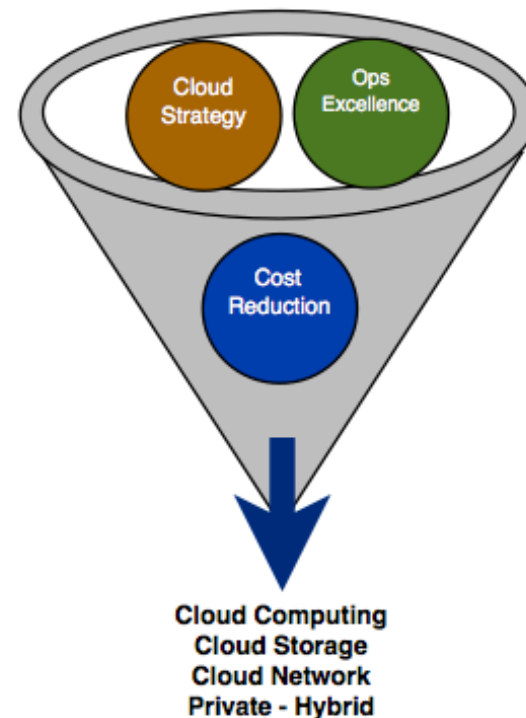


MONTHLY SUBSCRIPTION PRICING



Challenge - Best Infrastructure needs best Integration

Cloud Strategy <ul style="list-style-type: none">✓ Private - Hybrid (On Demand - On Premise)✓ Cooperations✓ Partner Alliances
Cost Reduction <ul style="list-style-type: none">✓ Reduce Infrastructure cost✓ Reduce labor cost (Basis / Database / OS)✓ Reduce storage cost✓ Reduce Disaster Recovery cost✓ Reduce Training / Sandbox build cost✓ Reduce BDLS time
Operational Excellence <ul style="list-style-type: none">✓ Flexibility✓ Faster to Market✓ Measured KPI✓ Service Level Agreement (SLA)



SAP Private Cloud – On Premise

What if a SAP customer wants to adopt cloud computing but does not want to rely on external hosting nor on the public cloud?

- **The only possibility would be to adopt a PRIVATE CLOUD**
- **Adopting private cloud is not easy though.**

A recent global market survey among more than 1,800 customers indicated that adopting private cloud on their own without going through a **transformation program** leads in **66%** of the cases to an increased infrastructure cost footprint rather than delivering the promised TCO reductions...



What sets us apart from the Market?

OPERATING SYSTEM: Windows 2008, Redhat & SUSE Linux

- Best supported SAP certified Operating Systems
- Enterprise class Operating Systems with Support
- Choice of 80% of world's SAP customer running OS

HYPERVERSOR: VMware, Hyper-V

- Best hypervisors on the market
- SAP certified Operating Systems
- Enterprise class Operating Systems with Support
- Choice of 80% of world's SAP customer running OS

COMPUTE: Dell, Cisco UCS, HP Blades, IBM Blades & Fujitsu

- Dynamic landscapes based on date/time or SLAs
- Highest memory density supported hardware in the market
- Service profile capabilities on some above stated HW
- Decoupling physical blades using SP on some above stated HW
- Single largest SAP instance of 5 mio SAPS with 500K SAPS DB

NETWORK: Cisco Nexus, Brocade Silkstorm

- High-speed connections
- Each virtual machine has its own virtual network card
- Full network transparency
- Switch hides up to 6 mio SAPS from the LAN

STORAGE: EMC, NetApp

- Up to 50% storage foot print reduction using de-dupe
- Hot data in flash cache removing I/O bottlenecks
- Online Snapshots for backup and system refresh
- SAP application aware and automation using tools
- Fast Virtual Provisioning. SAP best performing Storage in the industry



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Case Study - Global Supply Chain Management Provider

- Leading clients relied on the above customer to drive revenue growth and reducing cost for their Supply Chain Management. Customer runs SAP for managing their client SCM and optimized using process globalization and ready to reach wider markets without capital investment for their clients.
- Customer had hosted their SAP landscapes on leading vendor datacenter facility and vendor also managed SAP day to day operations.
- Customer procured hardware & hosted at vendor datacenter and currently paying **3.4 Million Dollars Per Year** to manage SAP Infrastructure & Applications.
- Customer was currently at hardware refresh cycle (2.5 years) and need to reduce both SAP Applications and Infrastructure Operating cost.
- Customer wanted a compliant and secure On-Premise SAP Private Cloud Solution including their own dedicated hardware.
- Customer also looking to reduce their RPO to 2 hrs (original 24hrs) and RTO to 8 hrs (original 72 hrs) for their Disaster Recovery.
- 24 x 7 x 365 Global Operations



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Customer SAP Production Landscape

Product	SID	Type	Server Role	OS	CPU	Memory (in GB)	Swap Size	Boot Lun	SAP/SQL Binaries
ECC	RP1	Virtual	DB/Failover	Windows 2008	16	144	432	20.00	50.00
	RP1	Virtual	CS/Failover	Windows 2008	16	144	432	20.00	50.00
	RP1	Virtual	App1	Windows 2008	8	48	144	20	50
	RP1	Virtual	App2	Windows 2008	8	48	144	20	50
	RP1	Virtual	App3	Windows 2008	8	48	144	20	50
	RP1	Virtual	App4	Windows 2008	8	48	144	20	50
BW	BP2	Virtual	DB/Failover	Windows 2008	6	72	216	20.00	50.00
	BP2	Virtual	CS/Failover	Windows 2008	6	72	216	20.00	50.00
	BP2	Virtual	App1	Windows 2008	6	72	216	20	50
	BP2	Virtual	App2	Windows 2008	6	72	216	20	50
	BP2	Virtual	BW Pre-Calc	Windows 2008	6	72	216	20	50
BPC	BPP	Virtual	BPP DB/CI	Windows 2008	12	144	432	20	50
	BPP	Virtual	BPP Application Server	Windows 2008	8	96	288	20	50
EP	EP2	Virtual	DB/Failover	Windows 2008	6	72	216	20.00	50.00
	EP2	Virtual	CS/Failover	Windows 2008	6	72	216	20.00	50.00
SM		Virtual	SMP CI & DB	Windows 2008	2	24	72	20	50
GTS	GP1	Virtual	DB/Failover	Windows 2008	2	72	216	20.00	50.00
	GP1	Virtual	CS/Failover	Windows 2008	6	72	216	20.00	50.00
	GP1	Virtual	App1	Windows 2008	6	72	216	20	50
	GP1	Virtual	App2	Windows 2008	6	72	216	20	50
SAP Console		Virtual	DB + CI + APP	Windows 2008	4	12	36	20	50
Web dispatcher 1		Virtual	App	Windows 2008	4	12	36	20	50

Customer Non-Production Landscape PRE-PROD / DEV / QA / SBX / TRN

Product	Type	OS	vCPU	Memory (in GB)	Swap Size	Boot Lun	SAP/SQL Binaries
ECC - TEST	Virtual	Windows			0	20	50
ECC - QA	Virtual	Windows			0	20	50
ECC - DEV	Virtual	Windows			0	20	50
ECC - SBX	Virtual	Windows			0	20	50
BW - TEST	Virtual	Windows			0	20	50
BW - QA	Virtual	Windows			0	20	50
BW - DEV	Virtual	Windows			0	20	50
BPC - DEV	Virtual	Windows			0	20	50
EP - QA	Virtual	Windows			0	20	50
EP - DEV	Virtual	Windows			0	20	50
SM - DEV	Virtual	Windows			0	20	50
GTS - QA	Virtual	Windows			0	20	50
GTS - DEV	Virtual	Windows			0	20	50
SAP Console - DEV	Virtual	Windows			0	20	50
Web dispatcher 1 - DEV	Virtual	Windows			0	20	50
Web dispatcher 2 - DEV	Virtual	Windows			0	20	50



MONTHLY SUBSCRIPTION PRICING

CONVERGED INFRASTRUCTURE

	1st Year		2nd Year		3rd Year		4th Year		5th Year	
Month	HW	Services	HW	Services	HW	Services	HW Maintenance	Services	HW Maintenance	Services
1	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
2	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
3	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
4	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
5	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
6	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
7	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
8	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
9	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
10	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
11	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
12	41419.5	135247.52	39075	127592	36730.5	119936.48	21100	119936.48	21100	119936.48
Total	497034	1622970.24	468900	1531104	440766	1439237.76	253200	1439237.76	253200	1439237.76
Total		\$2,120,004.24		\$2,000,004.00		\$1,880,003.76		\$1,692,437.76		\$1,692,437.76
Realized Savings		\$1,279,995.80		\$1,399,996.00		\$1,519,996.30		\$1,707,562.30		\$1,707,562.30
% Savings		37%		41%		44%		50%		50%

OVERALL 45% SAVINGS



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- **SAP ON-Premise HMS solution differentiates from competing vendors through our SAP management operational services**
 - Faster provisioning – Stage new SAP systems using SCIF Methodology (SAP Cloud Image Factory) – Less than 15 minutes
 - Faster System Refreshes – 2 hours (BDLS will be optimized)
 - Faster Restore using Bookmarks < 15 minutes
 - Online non-disruptive backup – using Snapshots
 - Training and Sandbox landscapes in hours
 - Architecture / Design and implementation
 - SAP (Homogeneous or Heterogeneous) Migration of SAP Production and Non-Production (Unicode Conversion if needed)
 - SAP High Availability for Production Landscape
 - Enhancement Pack Upgrades or SAP Upgrade included with our pricing
 - Disaster Recovery setup and Maintenance included with the pricing
 - SAP Operational Management support on day to day basis included with the pricing
 - Faster Patching using non-disruptive technologies
 - Multi-tenancy – Virtual Data centers per landscape, department or company...

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MONTHLY SUBSCRIPTION PRICING



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READY TO TAKE THE CHALLENGE – CONTACT US