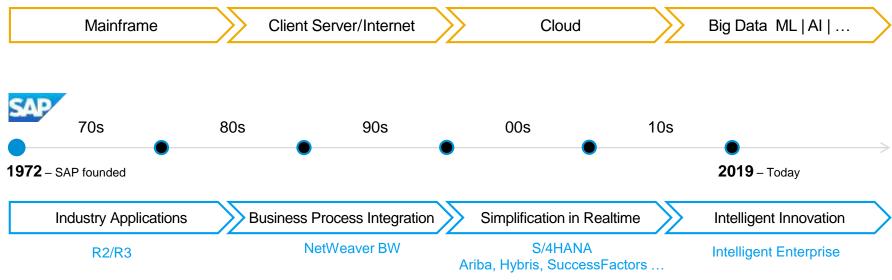






Evolution of enterprise innovation

Technology



Homogeneous data model

Heterogeneous data model

SAP ERP

SAP ERP

SAP HANA



Real-time analytics on live transactions without data duplication



Built-in advanced analytics and multi-model processing



In-memory-first dynamic data management platform

SAP ERP

SAP HANA

Virtually or physical connect to all data from any source



Modern application development

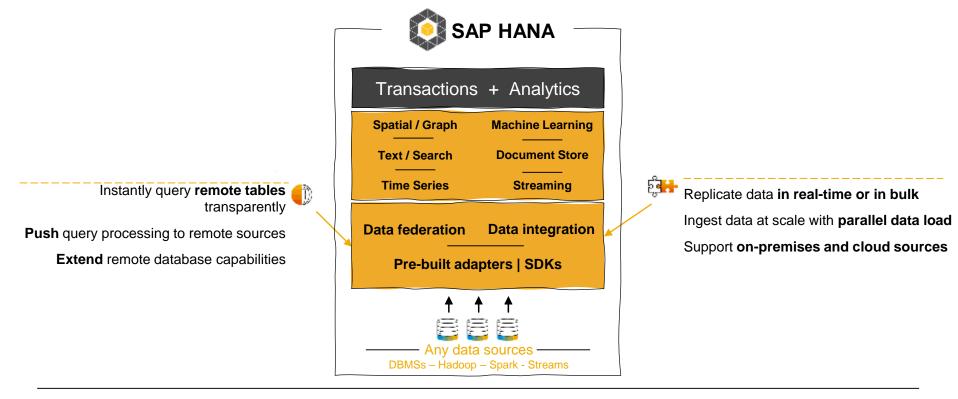


Enterprise-ready security and reliability 24/7



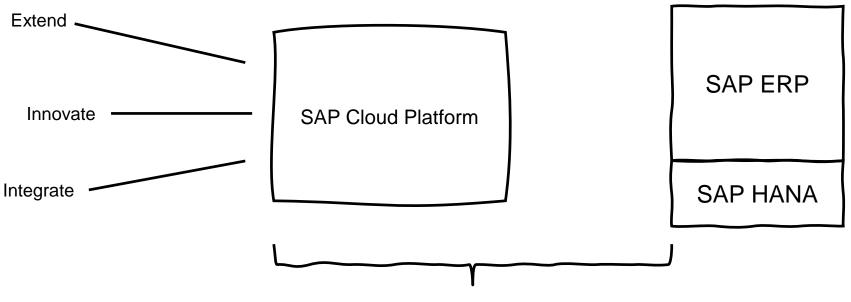
Act with live intelligence

Real-time performance on local and virtually connected data



Access remote data in real-time with or without data movement for a full view of the business

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Simplify to reduce cost and prepare for S/4HANA move





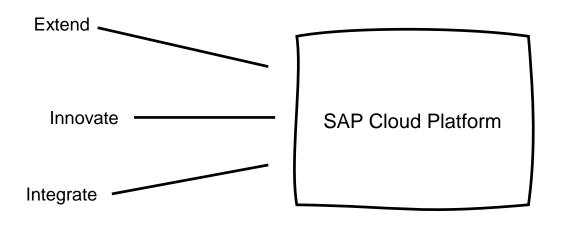
Intelligent Automation Embedded



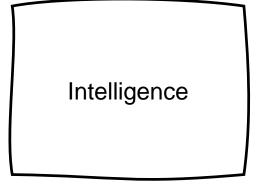




SAP S/4HANA



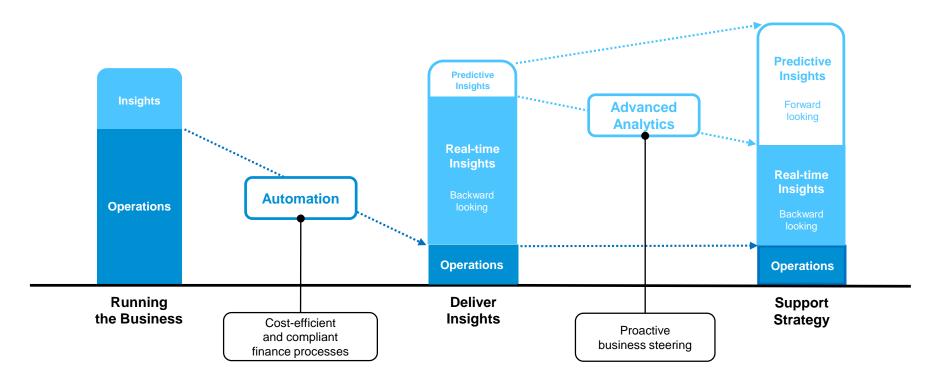
SAP S/4HANA



SAP S/4HANA

SAP's Vision of Digital Transformation

From daily routine to supporting growth and forward looking insight



SAP Intelligent Enterprise





Experience
Data
—
qualtrics.**

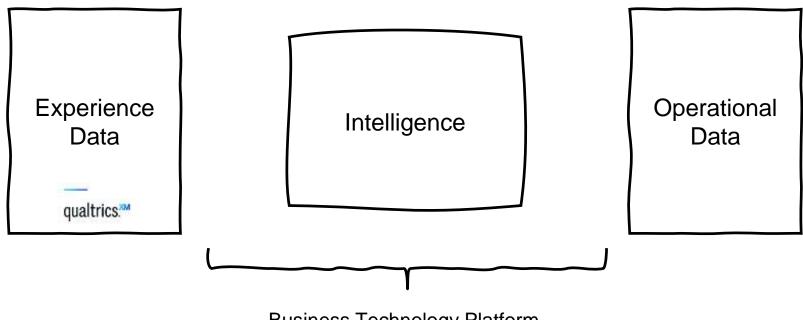






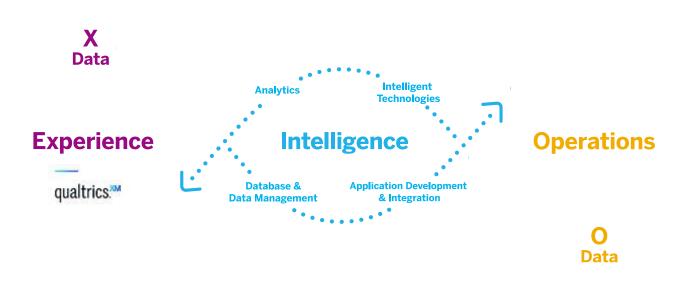


SAP Intelligent Enterprise



Business Technology Platform

Business Technology Platform to Enable the Intelligent Enterprise



Why things are happening

The human factor: beliefs, emotions, and sentiments.

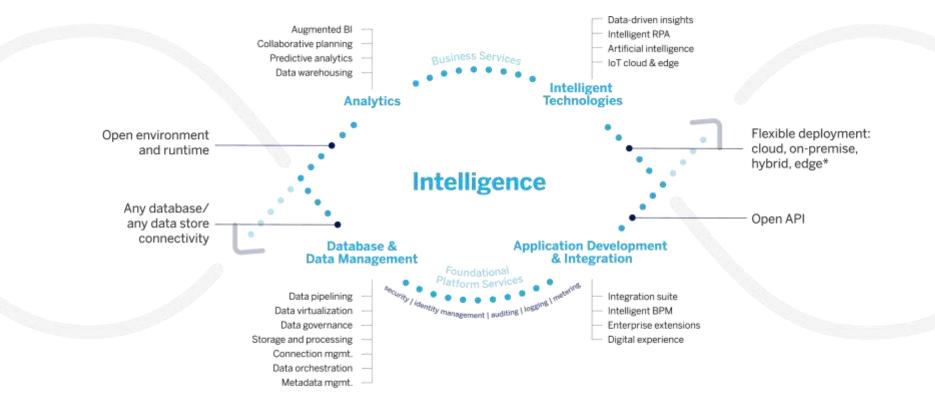
X-data helps to uncover what matters most to customers, employees, products and brands.

What's happening

Insights from day-to-day operations, like sales, finance, win rates, time to close.

O-data helps you run your business and take action.

Business Technology Platform



^{*}Services availability may change per deployment model and laaS vendors

Embed Integration and Innovation in the Entire Intelligent Suite

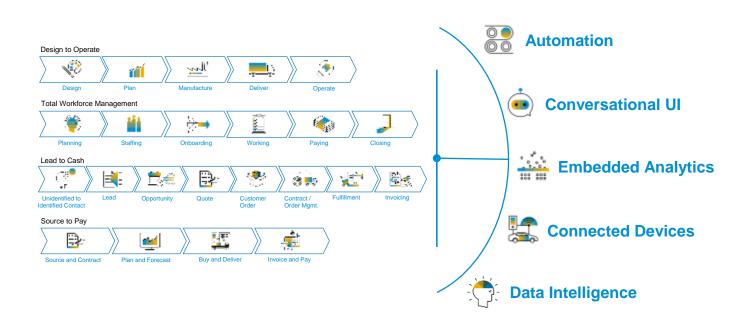
Key Focus Areas







Implemented along prioritized use cases



SAP Data Intelligence Platform



SAP Data Hub

Data sharing, pipelining, and orchestration. Including data preparation and cleaning.



SAP Predictive Analytics

Operationalization and automation



SAP Leonardo ML Foundation

Deep Learning (text, image, video, audio)



SAP HANA ML

In-database Machine Learning



Open Source Languages and Libraries

R, Python, Sci-kit, Tensorflow

ONE integrated data science solution

AND

Full lifecycle management integrated with SAP ecosystem

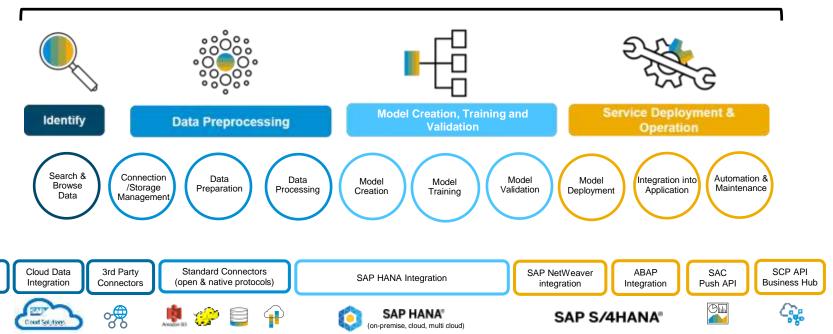
OnPremise / Cloud

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Simplify and Scale Data Science: SAP Data Intelligence



SAP Data Intelligence (OP, Cloud)



ECC & BW

Integration

Unprecedented Opportunities for Business Innovation

SAP HANA



100x reduction in Sales query execution time

SAP Cloud Platform



66% reduction in administrative work

SAP Analytics Cloud



200% increase in annual production capacity

SAP Leonardo Machine Learning



46% improvement in Accounts Receivable productivity

SAP Intelligent Robotic Process Automation



80% reduction in new customer on-boarding time

SAP Leonardo IoT Edge services

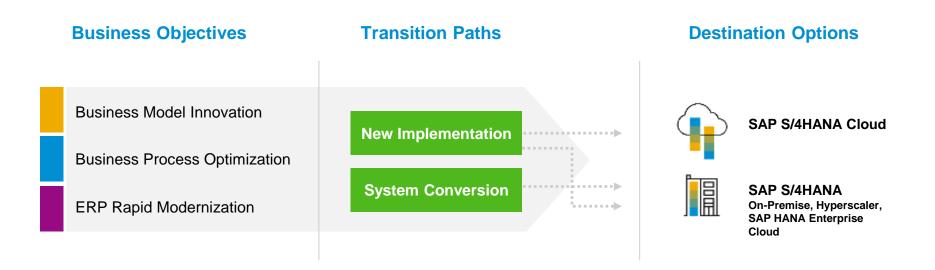


+\$2M cost reduction in maintenance processes



Consider Your Strategic Choices

Match your business objectives to possible transition paths and destinations



Make the Case

Three free tools, personalized guidance for IT and the line-of-business

S/4HANA Business Scenario Recommendations



Identify the business processes you can improve and discover new business capabilities.

Customers new to SAP can use Business Value Advisor: http://impact.s4value.com

SAP Transformation Navigator



See the **S/4HANA** roadmap for each component in your current landscape.

Based on current SAP product usage or capabilities your organization wants.

SAP Readiness Check



Learn the technical requirements and actions for a system conversion to S/4HANA.

Based on configuration and usage data for customers already on SAP ECC 6.x.

SAP S/4HANA Momentum

11,500+

3,300+

SAP S/4HANA Customers

Live Customers

30%

Shorter delivery lead time

48%

Reduction in days sales outstanding

60%

Increase in operational efficiency

80%

Faster report generation

95%

Faster material requirements planning

100%

Visibility of inventory across all locations











































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SAP HANA Enterprise Cloud





A full subscription, cloud based software model

Flexibility, with your choice of infrastructure provider

SAP Cloud Platform. Integrate your SAP cloud and HEC solutions, and optimize your SAP solution landscape





Digital core functionality of S/4HANA

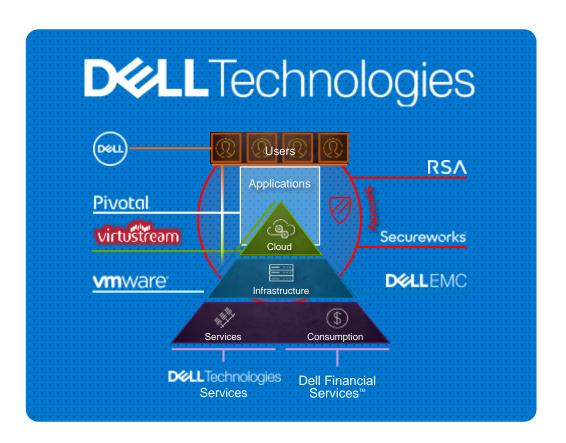
Latest innovative technologies from SAP



Built-in safeguards, regardless of who makes the "move"



The Dell Technologies Advantage



"...it is clearly becoming a multi-cloud world and Dell leads with data integration with Boomi and a mission critical cloud with Virtustream."

- Michael Dell

A Proven Approach for Enterprise Applications

Virtustream takes a proven, comprehensive approach to delivering an end-to-end industrialized process to modernize enterprise applications while delivering highly personalized services.



One hand to shake. Virtustream expertise and services across the infrastructure, operating system, database and application stacks

SAP, Oracle, Healthcare, Disaster Recovery, Backup and Replication

Defining Mission-critical Applications

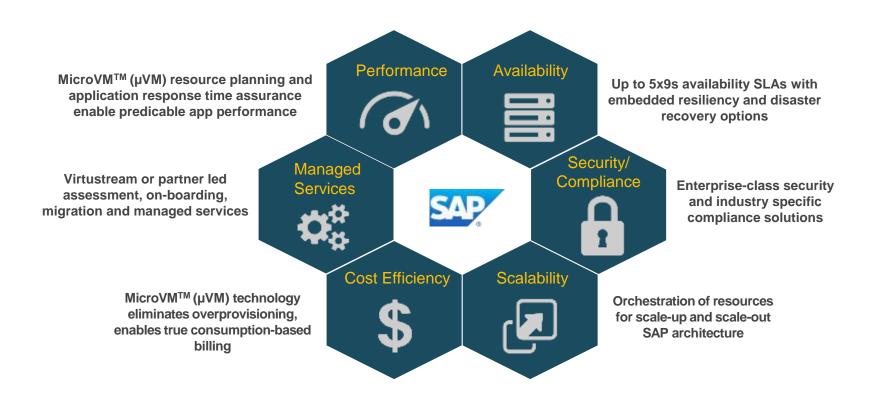
Mission-critical applications have specific business requirements:

- Consistent high performance
- Very high availability, with guaranteed service levels
- Secure customer data
- Regulatory compliance certifications
- Geographic scalability
- Affordable economics



"Force-fitting a 'lift and shift' approach to migrating some apps, particularly mission critical ones, often results in firms choosing between cost and performance." - Lauren Nelson, Forrester Principal Research Analyst

Virtustream Enterprise Cloud for SAP



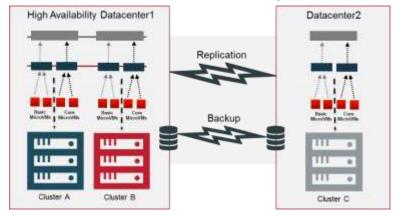
Availability and Resiliency



Availability and resiliency backed by industry-leading uptime SLAs

- Up to 5 9s availability for laaS
- Up to 3 9s availability for production OS/DB/SAP Basis
- Embedded disaster recovery protection option through replication of data
- Embedded backup and recovery option for resiliency
- Geographically dispersed data centers
- Industry-leading RPO/RTO capabilities to reduce risk and cost

Embedded DR on Virtustream Enterprise Cloud

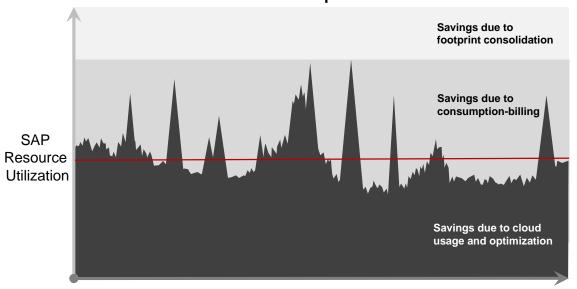


Fortune 20 corporation have successfully completed DR failover/failback testing on Virtustream Enterprise Cloud for 5 SAP apps; met typical RPO/RTOs.

Consumption-based Billing

Enabled by Patented MicroVM (µVM) Technology

Benefit Stream of µVM Architecture



1 μVM	
200MHz CPU	40 IOPs
768MB RAM	2Mbps Bandwidth

- Resource utilization of SAP systems can significantly vary over time
- µVM eliminates overprovisioning for handling peak SAP workloads
- Optimized and better utilization of cloud resources lead to significant cost savings

Beverage bottling company running a large and complex SAP landscape on Virtustream Enterprise Cloud reduced infrastructure cost by 30% with over \$50M estimated cost savings over 3 years.

Virtustream and SAP

Deep SAP Expertise

Winner

2019 SAP FKOM North America technology partner

of the year

First

To run production SAP ECC on SAP HANA in the cloud

First

To run production SAP S/4HANA in the cloud

10f 5

Global premium suppliers of SAP HANA Enterprise Cloud

250+

SAP customers running production SAP in the cloud

2500+ SAP migrations to date

Complete SAP Portfolio Coverage:

- SAP ERP
- SAP S/4HANA
- SAP HANA
- SAP Data Hub
- SAP Customer Experience



Reduces Risk

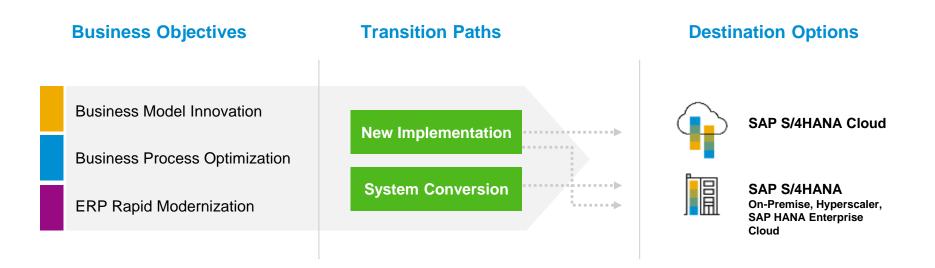
SAP® Certified

SAP Certified

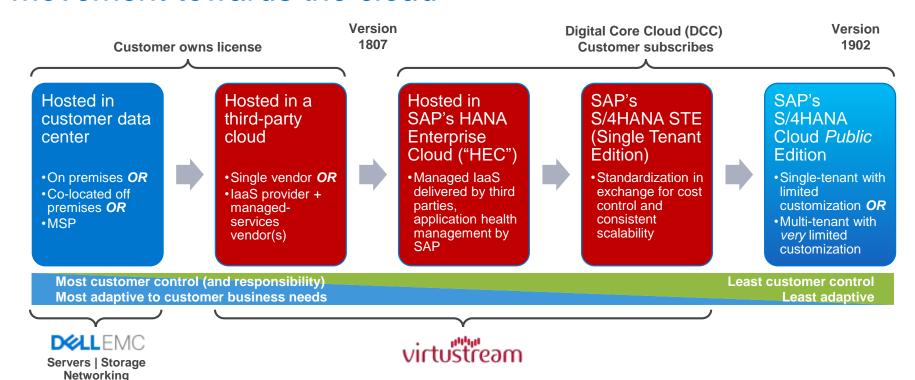
SAP* Certified in Database Migration Option

Consider Your Strategic Choices

Match your business objectives to possible transition paths and destinations

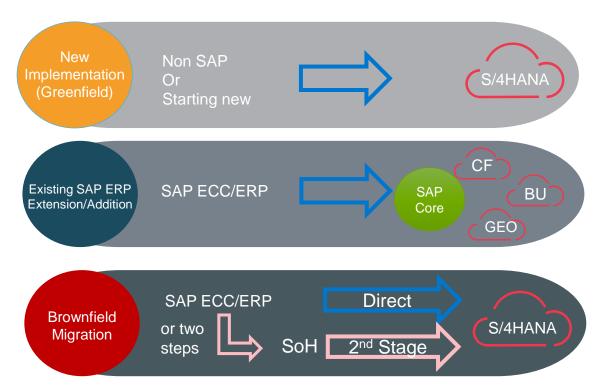


Plus, any change in a customer's SAP also means movement towards the cloud



Solutions | Services

Primary Paths to S/4HANA



New or existing customer implementing a new SAP S/4HANA system with an initial data load. doTerra, GE VEC = Perfect Fit

Customer keeps the SAP ERP Core, but starts S/4 with Central Finance (CF), a Business Unit or GEO – Volvo, Protective Life Ins, Cargill VEC = Spin up SBX or Dev S/4

Customer migrates from SAP ECC/ERP to S/4HANA VEC = Longer sales Cycles SoH and then go to S/4 – Media Co

Simplifying Your Journey: One Hand to Shake

Hyperscale:

Assemble, Configure, Manage and Secure



50%*

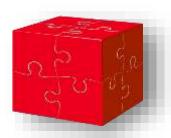
Migration cost savings

20%*

Operational Costs Savings

Virtustream:

End-to-end Solution



- Multiple providers needed to run typical mission critical workloads
- Complex SLAs, roles, and responsibilities
- Standardized, rigid solution components
- Fragmented, multi-vendor approach to DR, Backup, Data Protection, and Storage Replication
- Limited SLAs at infrastructure level only

- Fully managed, end-to-end solution
- Personalized 'white glove' service delivery
- Service tailored to customers' specific requirements
- Best-in-class migration and customer integration speed and simplicity
- Only cloud provider to deliver both infrastructure and application SLA's (99.999% / 99.9%)

Virtustream's "single hand to shake" approach delivers the least complexity and highest value, reducing the business risk inherent in operating mission critical applications such as SAP.

Virtustream xStreamCare Services

Professional and Managed Services







Migration



Integration



Optimization



Managed

Advisory Services

Cloud Reediness Services

Business Continuity Planning

Security & Compliance

Solution Architecture & Design

Project & Program Management

Migration run-book Development

Multi-platform Migration Services

Post Migration Test, QA/QC

Monitoring & Alerting

Ticketing Integration

Operational Run-book Development

Technical Account Management Steady-state Health-check

Compliance Audits

Modernization Assessment

Platform Performance Optimization Services

Platform Cost Optimization Services

Application Management

Database Management

OS Management

Security Management

Managed laaS

Virtustream SAP Services

Industry-leading migration and management

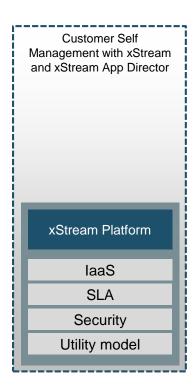
Infrastructure only options

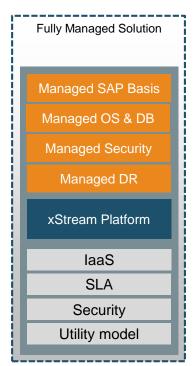
 Virtustream Enterprise Cloud delivers comprehensive infrastructure and platform services

Customizable integrated management

- Customers can select white-glove add-on services
- Include managed security services, managed disaster recovery services, operating system, database and SAP Basis services

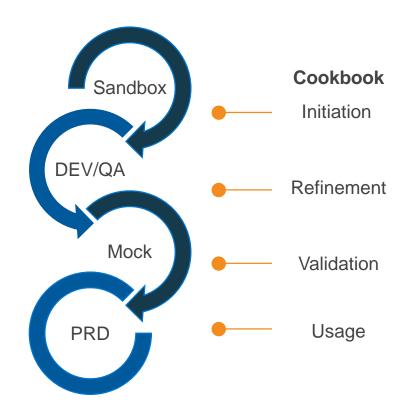
Fully managed Database and SAP Basis Services





Flow of Typical Migration Process

- While every customer is unique and this fact can influence the project – certain practices always apply.
- Flow follows typical General Computer Controls "leading practices" and starts with least impactful systems first
- The creation of a detailed "cookbook" is the key to a successful recipe
- Practice makes perfect: a "mock" run is essential to streamlining the production run and minimizing risk



Virtustream Services

First Cloud Provider to move and host production SAP workload in multi-tenant cloud!

First Cloud Provider to run production **SAP ECC on HANA** in the cloud!

run **S4/HANA**production workload in the cloud!

2500 SAP migrations to the cloud – most of anyone in the industry!

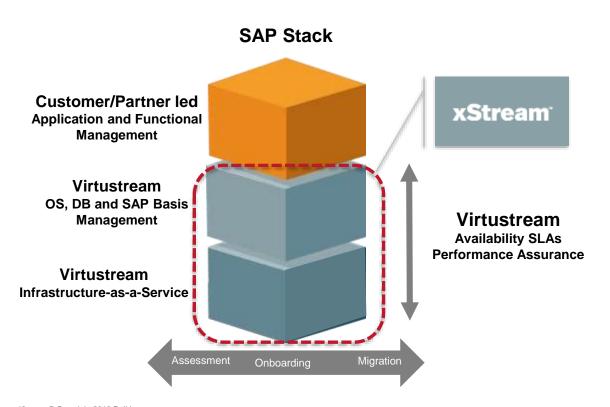
100% success - Zero SAP migrations ever rolled back!

16TB
S/4HANA / Fiori
migration to cloud in 12
hours

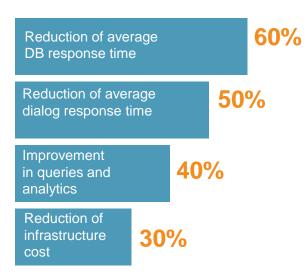


Simplifying the SAP Cloud Journey

Cloud Operating Model for laaS, OS, DB and SAP Basis

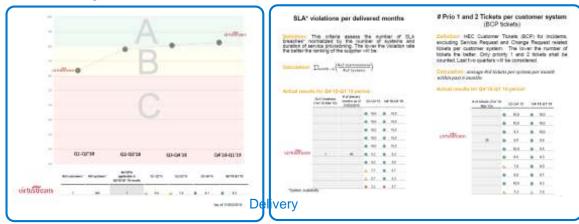


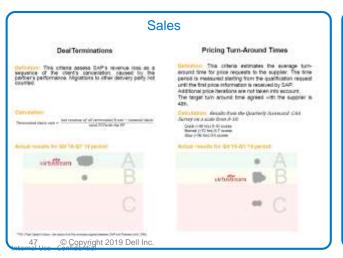
Sample Post Migration Statistics of a Virtustream SAP Customer

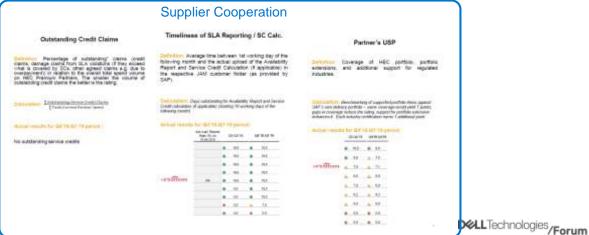


HEC Scorecard provided by SAP

- Ranked "A" in recent HEC Scorecards
- Good Extended Solution Portfolio
- No credit claims
- No missing Availability Reports
- Low number of customer incidents







Virtustream Value Delivered



∧lmaviv∧

- Reduced costs and time to market for analytics projects
- Flexible billing and resource scaling simplify operations
- Consumption billing improves cost flexibility





- Migrated systems in less than 9 months
- 700+ VMs
- Enabled self-service provisioning and management





- Reduced provisioning time from 6 weeks to 48 hours
- 50% reduction in cost
- 30% increase in application responsiveness
- Encryption at rest and in motion

Summary

Virtustream Enterprise Cloud for SAP

Built for the run complex, I/O intensive, mission-critical Deep SAP Scalability and Cost Efficiency enterprise applications such as SAP ERP, S/4HANA and Platform for Portfolio Automation of System of SAP HANA with true consumption-based billing **Expertise** MicroVM Record Fully- Fully-managed cloud from infrastructure up to the Migration Assessment On-boarding managed application to off-load operational complexities so IT Services Services Services IaaS to SAP teams can focus on business initiatives. **Basis** laaS to SAP DR/Backup Performance Geo-High availability/resiliency with performance assurance for Basis Recovery Assurance for Dispersed application latency and proactive CPU, memory, storage Uptime SLAs **Options** App Latency **Data Centers** and network optimization to guarantee required resources **GDPR** Defense in-Gov't/Industry **IRAP** Depth Compliance **HIPAA** Trusted cloud environment for SAP applications to run the most Security Solutions **PCIDSS** sensitive enterprise data, ready to comply with industry and etc. government regulations

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