



Scaling Success: Engineering e-Commerce and CX Infrastructure at dōTERRA

Prince Jain, Sr. SAP Systems Manager, dōTERRA International

Mike Harding, SAP Practice CTO, Virtustream

Session ID #: 83300

About the Speakers

Prince Jain

- Sr. SAP Systems Manager, dōTERRA International
- Cloud technology and automation enthusiast! #Devops
- Over 5,234 sap notes applied over an IT career of 13 years
- Can patch an SAP NetWeaver kernel in 14 mins 55 secs flat!

Mike Harding

- SAP Practice CTO, Virtustream
- Long-time SAP customer and consultant
- Advocate and fan of the craft beer industry

Key Outcomes/Objectives

1. Obtain Details About an SAP Hybris on HANA Use Case.
2. Learn about dōTERRA's cloud selection process, and what led them to select their solution/provider
3. See the challenges dōTERRA faced, and how they were remedied with Virtustream's expertise

Agenda

- Introduction to Virtustream
- Introduction to dōTERRA
- dōTERRA and their unique IT challenges
- Why dōTERRA selected Virtustream
- How dōTERRA IT delivered an Omni channel CX
- dōTERRA's Past Challenges and How Virtustream Addressed Them

Virtustream and SAP

Deep SAP Expertise

- First** Production SAP customer in a multi-tenant cloud
- First** To run production SAP ECC on HANA in the cloud
- First** To run production SAP S/4HANA in the cloud
- 1 of 5** Global premium suppliers of SAP HANA Enterprise Cloud
- 250+** SAP customers running production SAP in the cloud
- 1800+** SAP migrations to date

SAP® Certified
in Hosting Services

SAP® Certified
in SAP HANA® Operations Services

SAP® Certified
in Cloud Services

SAP® Certified
in Database Migration Option

**Complete SAP
Portfolio Coverage,
Including SAP ERP,
S/4HANA, SAP HANA,
SAP Data Hub and SAP
Hybris in the Cloud.**

**Unparalleled SAP
Expertise and Assurance**



Reduces Risk



About dōTERRA

Revenue: \$1.9 B

Employees: ~ 3000

Operations in 29 Countries

- Sharing therapeutic-grade essential oils with the world since 2008
- New standard of therapeutic quality: Certified Pure Therapeutic Grade® CPTG
- Unique direct selling sales model
- **Source 105 essential oils worldwide**





dōTERRA Trivia

How many bottles of oil does
dōTERRA pack in a day?

394,000+

dōTERRA Trivia

**How many bottles of oil does
dōTERRA pack in a year?**

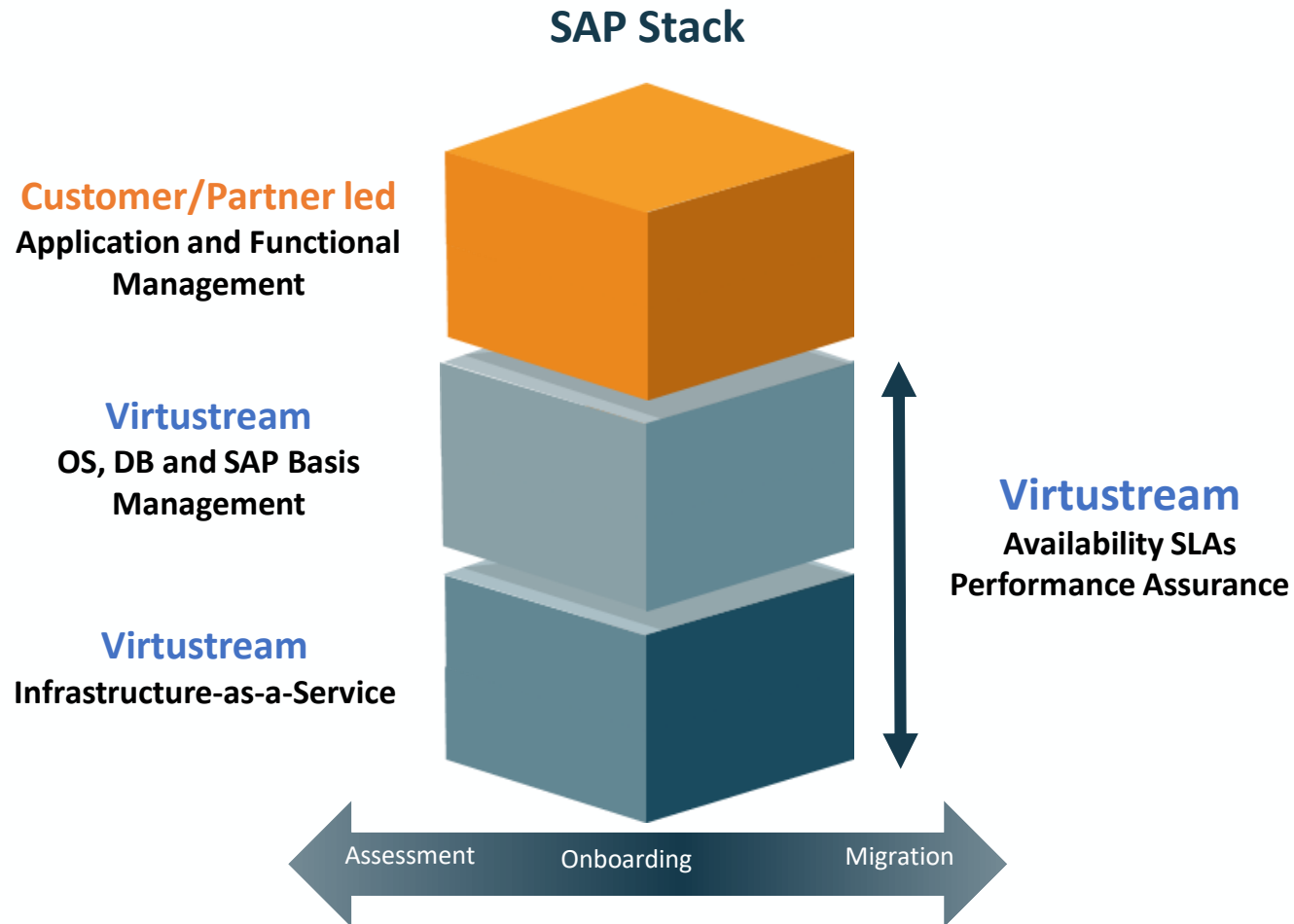
86.5 Million

doIT – dōTERRA's IT journey

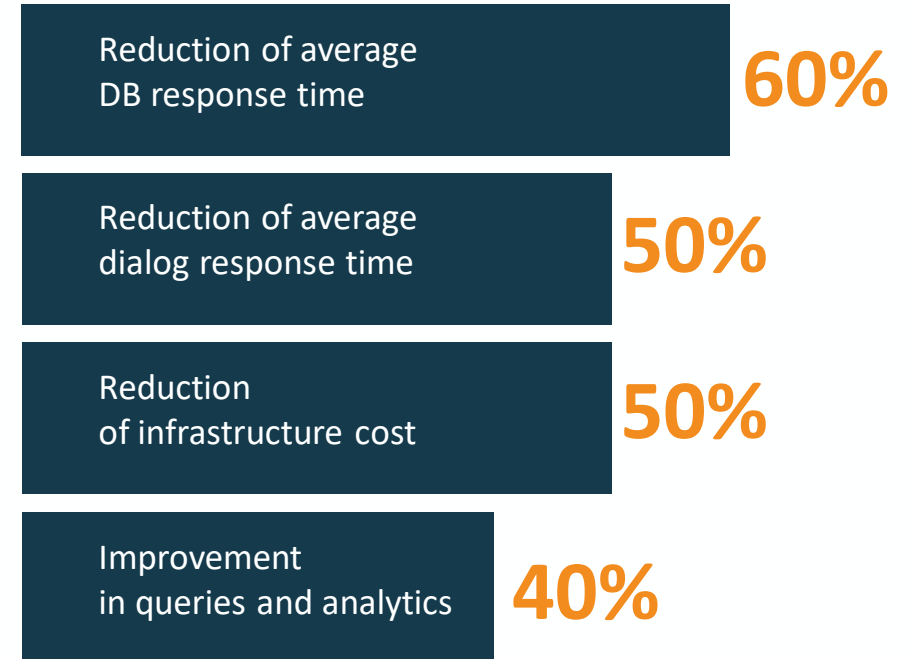
- Legacy E-commerce system unable to scale with the business growth
- From QuickBooks to SAP on the Backend systems
- Major IT transformation project kicked off in 2015
- Cloud hosting chosen for its flexibility, scalability, security, and quick time to market
- 5 month rigorous vendor selection process – finally selecting Virtustream Enterprise Cloud to run our SAP Hybris solution on HANA

Simplifying the SAP Cloud Journey

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



Sample Post-Migration Statistics of a Virtustream SAP Customer



Why We Selected Virtustream

dōTERRA's Selection Process and KPI requirements:





- Detailed technical RFP creation and response evaluation
- Vendor comparison matrix based on RFP responses with a detailed point grading system
- The H Factor – **Hybris and HANA expertise** with strict performance, availability and business continuity SLA's

Why Virtustream:

- Virtustream has **over 1,800** SAP Migrations to date
- They could deliver an offering that could scale-up and scale-down with our evolving consumer demands along with the technical expertise to run Hybris on HANA
- Virtustream was able to provide competitive SLA's for performance , availability and business continuity.

doIT – The customer first Approach

How dōTERRA IT delivered an Omni channel CX

Frontend	Backend
<ul style="list-style-type: none">• Orders, enrollments• Loyalty rewards• High transaction system	<ul style="list-style-type: none">• FI/logistics/Inventory/HR.• SAP PO + hybris Datahub ESB's• Robust backend processes
  B2C, Content, CRM	 Fiori, S/4 Core
 Infrastructure, platform and AMS	

~ 350 VMs hosted and supported by Virtustream



Year-Over-Year November Order Metrics

November 2017 (Pre-Cloud)

Total Monthly Orders: 939,438

Largest Daily Orders: 102,366 (Monday, Nov 20 – First Day of BOGO Week)

Lowest Daily Orders: 7,078 (Thursday, Nov 30)

Total BOGO Orders (Black Friday Event Week): 333,419

November 2018 (Post-Cloud)

Total Number of Orders: 1,396,258

Largest Daily Orders: 170,944 (Monday, Nov 19 – First Day of BOGO Week)

Lowest Daily Orders: 14,855 (Thursday, Nov 29)

Total BOGO Orders (Black Friday Event Week): 556,184

Total Monthly Orders	Largest Daily Orders	Total BOGO Week Orders
+48.63%	+66.99%	+66.81%

Scalability and Automation



Global cloud nodes for SAP in NA, EMEA, APJ, and ANZAC

- **Global capacity** that can be provisioned and dynamically scaled
- **Scale-up** capabilities to alleviate the need for high-memory physical hardware while improving in-memory performance
- **Scale-out** capabilities to build clusters for better performances and distributed processing of data
- **MicroVM™ (μVM) technology** for better cloud resource utilization and greater cost efficiency
- **Application automation** reduces errors and automates manual tasks for SAP landscapes



Virtustream has deployed a highly scalable, flexible and high-performance SAP Hybris on HANA cluster for dōTERRA.

dōTERRA's Black Friday event-(Performance Scaling)

Challenges:

- LTO event , high concurrent user traffic on site, long queues in the past
- System unable to scale during performance testing
- Expectation of ~ 70K orders/hour
- **CX Impact** – Performance of the online shopping experience

Virtustream expertise:

- Performance test environment delivered quickly
- vHANA – flexibility to move up to 90 vCPU's on HANA
- Participation in Infrastructure , platform and Application performance testing
- HANA DB expertise

The JGROUPS mystery – (Stability).

Challenges:

- Hybris clustering using Jgroups UDP - Long running issue – over 1 year
- Nodes dropping from cluster during impexes/content syncs/etc
- Frontend nodes restarted over 50 times in a day during high traffic
- **CX Impact** – slow page loads and errors for users during online shopping.

Virtustream expertise:

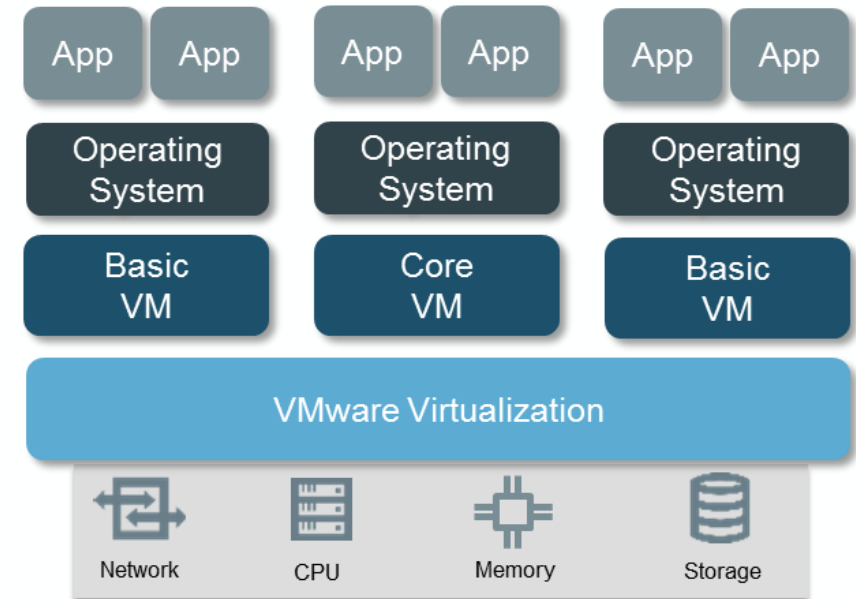
- Private network created for JGROUP communication
- JGROUP optimization parameters added
- Multiple load tests conducted to optimize the JGROUP parameter values

Performance Assurance



μVM technology ensures required capacity for CPU, memory, storage and network bandwidth

- **Reliability** – best-in-class Dell Technologies hardware and VMware hypervisor
- **Cloud architecture** – Compute zones based on workload requirements optimize app performance
- **Right sizing of resources** – proactive network, compute, memory and storage capacity optimization
- **Application response time** – assurance of timely access to data in production environment
- **24x7x365 proactive monitoring** – managed services option from IaaS up to DB/SAP Basis



¹According to Forrester, performance of mission-critical applications is a strong differentiator and deciding factor for selecting cloud platforms by enterprise customers.

Optimization project (Automation/right sizing)

Challenges:

- Growing costs due to expanding system landscape – over 300 VMs
- Increasing no of configuration parameters maintained manually
- Impacting deployments and missing parameters impacting performance
- Docket/Kubernetes/Redis – containerization of the platform

Virtustream expertise:

- Non-production systems – automated start/stops to save costs
- SALT stack – configuration management
- Exploring options for automating addition of new nodes on hybris
- Exploring options for containerization of the hybris platform

HANA HWCCT KPI's – Compliance

Challenges:

- dōTERRA's systems were on the latest versions on HANA
- The new version on HWCCT was unable to meet the disk I/O KPIs on the HWCCT report
- This was a pre-requisite for SAP's production support on HANA
- **CX Impact** – DB performance impacting e-commerce performance

Virtustream expertise:

- Ran multiple checks to analyze the root cause for not meeting the KPI
- Re-validate all VMware/Network/Storage configurations for a HANA TDI implementation
- Move storage for all HANA servers to the new VMAX clusters to meet the storage KPIs

dōTERRA Experience

dōTERRA Key Requirements:

- SAP Expertise
- A New e-Commerce System
- Scale-up/Scale-down Infrastructure
- Eliminate Customer Order Bottlenecking
- A Partnership That Would Enable Them to Expand their SAP Hybris Footprint



What Virtustream Offers

- Deep SAP Experience – Including SAP Hybris
- Designed for Mission-Critical Applications
- Consumption Based Pricing Model
- Ability to Scale-up and Scale-down to Meet Evolving Business Demands
- Managed Services



Since their initial purchase, dōTERRA has tripled their SAP Hybris footprint while becoming the largest SAP Hybris ecommerce running on SAP HANA implementation in the world

Take the Session Survey.

We want to hear from you! Be sure to complete the session evaluation on the SAPPHIRE NOW and ASUG Annual Conference mobile app.



Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>

Q&A

For questions after this session, contact us at pjain@doterra.com and jake.echanove@Virtustream.com

Let's Be Social.

Stay connected. Share your SAP experiences anytime, anywhere.

Join the ASUG conversation on social media: **@ASUG365 #ASUG**

