



SAP  
Innovation  
Awards 2019



# SAP Innovation Awards 2019 Entry Pitch Deck

Amazon EC2 High Memory Instances

Amazon Web Services

THE BEST RUN





[https://aws.screenlight.tv/shares/hXI0o4CWAstPZs4OuB87GlaZWbFs  
znDd?\\_=1547851328777](https://aws.screenlight.tv/shares/hXI0o4CWAstPZs4OuB87GlaZWbFsznDd?_=1547851328777)

# Amazon EC2 High Memory Instances

## Whirlpool Corporation



### “Quote”

“5 hours instead of 5 days. We’re able to reduce a huge portion of downtime for our projects and get fresher data into the testing cycle so that we’re not having issues with our testing. That means faster time to market, that means more reliability getting to market, and that means happier customers.”

Matthew Hubbard, Sr. Manager, Infrastructure Delivery, Whirlpool Corporation

### Challenge

Bridge options between virtual and physical servers were cumbersome  
Physical HANA appliances had huge trade offs  
Multiple management tools / consoles needed to manage

### Solution

Amazon EC2 High Memory instances

### Outcome

Amazon EC2 High Memory instances delivered simplified networking with 1 IP address for the HANA server and made it easy to switch out of systems and configurations. Procurement time was reduced to hours, not days or months, and there is a single CLI/Console for the entire landscape.

Simplified networking

Procurement time was reduced to hours, not days or months

A single management interface



## Partner Information

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### Amazon Web Services

#### IaaS provider



“With 12 TB instances available in AWS, Amazon EC2 High Memory instances give our customers the ability to scale their in-memory database with predictable performance in the same Virtual Private Cloud (VPC) as their other AWS services. Customers can grow their in-memory database and easily connect it to their storage, networking, analytics, IoT, and machine learning services – helping them make faster and better business decisions.” - Matt Garman, Vice President of Compute Services at AWS





## Business Challenge & Objectives

Bridge options between virtual and physical servers were cumbersome

- Overlay Networks or Destination Network Address Translation
- Multiple network interfaces for each server
- Shared management networks (security concerns)

Physical HANA appliances had huge trade offs

- Physical storage, difficult to re-configure system on the fly
- Very Long Procurement Times (months vs days)
- HW failures could take days/weeks to remediate

Multiple management tools / consoles needed to manage

Increase the speed, agility, flexibility, and reliability of SAP HANA deployments with business applications.



## Project / Use Case Details

By bringing high memory metal into the VPC, the HANA servers look like a VM...feel like a VM...with no trade offs

Backed by Elastic Virtual Storage (AWS EBS)

- AMIs and Snapshots all still work as expected
- Easy switch out of systems and configs

Procurement time in hours, not days or months.

Single CLI/Console for entire landscape



# Benefits and Outcomes

## Business / Social

Procurement time was reduced to hours, not days or months

## IT

### Simplified Networking

- HANA server has **1 IP address** (customer defined VPC)
- No introduction of shared/mgmt networks

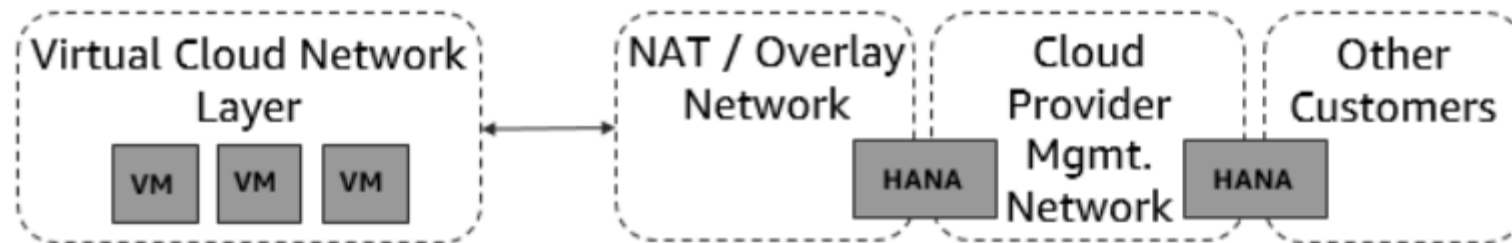
## Human Empowerment

A single management interface

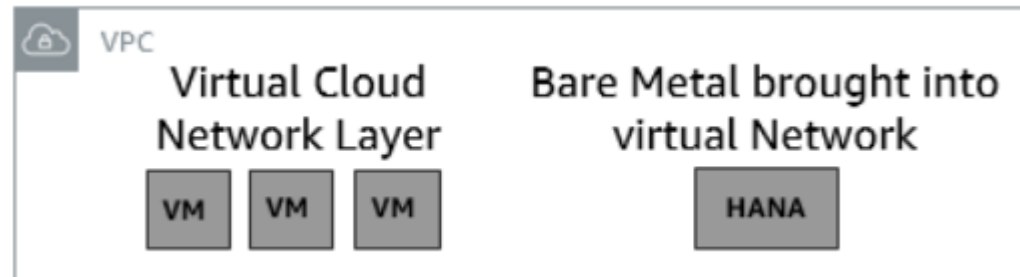


# Architecture

Before



After







## Deployment

Date of Deployment or POC: September, 2018

Number of live users: 10 users directly using the solution but tens of thousands using the systems it supports.

### **SAP Technologies Used:**

SAP HANA	Production
ECC	Production
CRM	Production
BW	Production
EWM	Production

Server Processor: Intel® Xeon® Scalable (Skylake) processors

Linux Distribution: Unknown



## Emerging Technologies and Use Cases

The following Emerging Technologies and use-cases are part of the project and describe the contribution

	Technology or Use Case	Yes/No	Contribution to Project
1.	Machine Learning / Artificial Intelligence		
2.	IoT		
3.	3D printing		
4.	Blockchain		
5.	API Economy / Integrate the Intelligent Enterprise		
6.	Cloud Native / Event Based Architectures	Yes	Integration of cloud native applications with SAP HANA in the cloud
7.	Extending the digital core with SAP CP / ABAP in SAP CP		
8.	SAP Leonardo Application ( extending SAP application, using Industry Innovation Kits or result of Design Thinking workshop)		