Technical Architecture for SAP HANA
A Transition to SAP HANA Service Offering
SAP Active Global Support – IT-Planning
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Technical Architecture for SAP HANA

Transition to SAP HANA - SAP AGS General Offering
Technical Architecture for SAP HANA
Workshop Concept
Planning Workshop Overview
Delivery Model
The Opportunity

Run Better – Run your Best-Run Business on SAP HANA

- Unified and seamlessly integrated application and database stack
- Simplified maintenance
- Effective end-to-end operations support
- Reduced TCO
- Completely new possibilities with SAP HANA

The Challenge

Common Questions Related to the Adoption of SAP HANA...

- Will the new platform fulfill the performance requirements?
- How will SAP HANA fit into the existing infrastructure?
- What does it mean for the operations team?
- How to minimize business downtime for the transition?
- What is the project duration, related efforts and risks?

The Offering

SAP Solution Manager Based Methodology and SAP AGS Engineering Service

- Holistic approach, covering all phases and aspects of a migration project
- Address the related challenges proactively
- Apply best practices and experiences from supporting the top companies
- Make a transition to SAP HANA safe, effective and predictable
Transition to SAP HANA - From Strategy to Value Realization

Big Picture

### Platform Strategy
- Understand the **value and benefit of SAP HANA to Business and IT**
- Proof how to **manage the transition**
  - Establish a **consistent platform strategy leveraging SAP HANA**

### High-level Roadmap
- Evaluate **technical feasibility, migration risks & efforts, and Business & IT value** per system
- Define a **customer specific adoption roadmap** driven by business value – best migration sequence
  - Develop an **overall high-level value and transition roadmap**

### Detailed Plan
- Create a **detailed plan for the transition of one or multiple systems** to SAP HANA
- Focus: **Migration approaches/project plan** and **Technical Architecture** for SAP HANA
  - Develop a **detailed transition plan per system**

### Execution
- **Execute** the detailed migration plan, with the help of SAP Active Global Support
  - **SAP Landscape is successfully and safely transitioned to SAP HANA**
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**Objective**

- Develop a technical architecture and IT Infrastructure concept for SAP solutions based on SAP HANA, considering customer’s boundary conditions.

**Approach**

- Introduction of typical architecture and landscape options
- Discussion of design aspects and definition of technical architecture building blocks.
  - General SAP technical architecture
  - Availability SLAs, DC strategy & HA/DR architecture
  - IT infrastructure architecture
  - Scalability and load balancing
  - Software change management landscape
- Joint assessment of options according agreed set of evaluation criteria.
The technical architecture for SAP HANA offering is delivered as a flexible package consisting of:

- The methodology and content implemented in SAP Solution Manager
  - Focus on technical architecture of SAP HANA as well as the SAP application server layer
  - Best practices and guidelines for each of the tasks
  - Templates for essential process steps

- Onsite services: Technical Architecture for SAP HANA – Planning Workshop
  - Tailored to the concrete customer situation
  - Delivered as independent workshop or in the context of other Transition to HANA related engineering service offerings

Delivery model can be tailored in a flexible way to the concrete customer situation (partners, division of work, priorities in the project,....)
**SAP Solution Manager Roadmap**

**Focus Areas**

- Technical Architecture for SAP HANA
  - Scalability
  - HANA appliance, cloud and storage options
  - HA/DR with SAP HANA
  - PRD and non-PRD HANA solution landscape
- Technical Architecture for SAP Application
  - Server layer
    - Sizing and scalability of SAP Solution Landscape
    - Server Platform and private cloud options
    - HA/DR for SAP application servers
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Technical Architecture for SAP HANA - Workshop
Define required HANA capacity

Sizing, Scalability, Performance
• Green Field Sizing
• Sizing based on an existing SAP System
• Expert sizing for existing SAP System on HANA

Result
Required capacity for new or existing PRD and non-PRD HANA landscape
• Memory size
• Disk size
• CPU (related to memory)
Technical Architecture for SAP HANA - Workshop
Outline Productive HANA landscape

Technical platform options and architecture
- HANA topology options
- Appliance and Tailored Datacenter concept overview
- Deployment options

Result
Definition of the productive HANA system
- HANA layout
- Storage implementation
- Deployment model for planned HANA use cases and applications
High Availability / Disaster Recovery and Backup / Restore

- Error classification
- Availability features
- Backup / restore functionalities

Result

Definition of the additional HW setup to provide proper failover and restore functions
- Defined availability SLA’s
- Defined node and/or site failover
- Restore capabilities
Technical Architecture for SAP HANA - Workshop
Define Entire HANA Landscape

PRD and non-PRD SAP System landscape

- Software Change Management landscape requirements
- Usual non-PRD system sizing

Result
Outline of entire HANA system landscape

- Finalized size of non-PRD systems
- PRD and non-PRD HANA landscape including SAP application server layer
Technical Architecture for SAP HANA

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## Technical Architecture for SAP HANA
### Areas in planning workshop

<table>
<thead>
<tr>
<th>Areas</th>
<th>HANA Landscape</th>
<th>SAP Application Server Landscape</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>01: Current and planned SAP Landscape</strong></td>
<td>• System landscape, (HW, size, DB/OS, Virtualization, DC, …)</td>
<td>• Mid- and long term strategy (mergers and acquisitions, business growth, consolidation, new applications)</td>
<td>• Overview on current landscape</td>
</tr>
<tr>
<td></td>
<td>• On-Premise – On Demand</td>
<td>• On-Premise – On Demand</td>
<td>• Future plans, assessment of change and potential risks</td>
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<tr>
<td></td>
<td>• How does HANA complement the SAP landscape</td>
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<td></td>
<td>• What is the future HANA vision</td>
<td></td>
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<td>• HANA solutions (business driver’s)</td>
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<tr>
<td><strong>02: SAP HANA Platform in the Private Cloud</strong></td>
<td>• Major building blocks (Application layer, HANA Platform Layer, Storage Layer)</td>
<td></td>
<td>• Understanding of future vision of SAP HANA platform in private cloud</td>
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<tr>
<td></td>
<td>• Architecture of the building blocks</td>
<td></td>
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<td></td>
<td>• SAP HANA as future platform</td>
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<tr>
<td><strong>03: Architecture Overview</strong></td>
<td>• HANA Architecture</td>
<td></td>
<td>• Get an overview about SAP HANA Architecture in general</td>
</tr>
<tr>
<td></td>
<td>• Appliance Model</td>
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<tr>
<td></td>
<td>• HANA solutions</td>
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<td><strong>04: Sizing, Scalability, Performance</strong></td>
<td>• Source and target system based on workload analysis (performance baseline in source system, migration to HANA, resizing, …)</td>
<td>• Sizing methodology and approaches</td>
<td>• Required capacity (&amp; future outlook) and scalability assessment</td>
</tr>
<tr>
<td></td>
<td>• Performance and scalability</td>
<td>• Performance and scalability</td>
<td>• Assessment of qualitative state of the systems</td>
</tr>
<tr>
<td></td>
<td>• HANA sizing for various HANA scenarios</td>
<td>• Scale out, Scale up options</td>
<td>• (documentation of performance-critical business areas)</td>
</tr>
<tr>
<td></td>
<td>• Scale out, Scale up options</td>
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<td>• NLS solutions</td>
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<tr>
<td></td>
<td>• Capacity planning &amp; Performance</td>
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Technical Architecture for SAP HANA
Areas in planning workshop

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| 05: Technical platform options and architecture | • Single or scale out  
• Scalability options  
• SAP HANA Tailored Datacenter Integration concept for storage and networks  
• HANA in the cloud  
• Virtualization  
• Different HANA partner solutions | • Architectural outline of the options  
• Description of the options  
• Assessment along the decision criteria of the options  
• Basic technical configuration based on best practices + expected future size (deployment options) | | 06: High Availability / Disaster Recovery and Backup / Restore | • Availability classification and requirements (RPO / RTO)  
• Error categories  
• DC Strategy  
• High Availability and Disaster Recovery capabilities provided by the SAP HANA platform  
• DR in the cloud or on non-PRD  
• Backup and recovery solutions and integration into existing backup solutions provided by partners | • Decision on required HA / DR / backup / restore technology and architecture of entire solution stack including HANA | | 07: PRD and non-PRD SAP System landscape       | • High-level Software change management (non-PRD landscape, use cases, …)  
• Number and size, … of non-PRD  
• Data quality in non-PRD (QA, …)  
• HANA options for non-PRD systems  
• HANA stacking options (MCOD, multi-SID, Virtualization) | • Complete Picture of SAP system mapping to servers platforms  
• HA DR backup technology  
• RZ setup | | 08: Future Planning                            | • Project setup  
• Roles and responsibilities  
• Partner relationships (HW, hosting partner, implementation, …)  
• Risks collection | • Next Steps  
• Roles and responsibilities plan |
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This offering delivered via the SAP MaxAttention and SAP ActiveEmbedded support engagement model.

In the context of the Engineering Service Transition to HANA or as an independent planning service.

- … tailored to concrete customer situations
- … leveraging experiences from many years of working with companies in all industries and providing them in a consistently consumable way via SAP Solution Manager
- … providing different delivery options – ranging from provisioning of best practices to remote enabling to onsite services – creating flexibility to define a project in a customer-specific way
- … laying the foundation to ensure a consistent quality of migration projects independent of which company or partner executes the tasks.
Benefits
Holistic DB Migration Offering to SAP HANA or SAP Sybase ASE

1. **Risk mitigated**
   Keep risks under control

2. **Fast time-to-value**
   Benefit from existing knowledge to speed up migration

3. **Tailor fit**
   Flexible plan service to local customer situation

4. **Content**
   Leverage the SAP Solution Manager roadmap

5. **Comprehensive**
   Holistic end-to-end view to all aspects of entire project

6. **Expertise**
   Active Global Support expertise on supporting top companies

7. **Cost controlled**
   Careful planning and strong AGS partnership guarantees costs under control

8. **Quality optimized**
   AGS actively manages QA during entire project
Thank you

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