Microsoft

Microsoft Analytics Platform System

JumpStart

Agenda

- Overview
- Customer Training
- Discovery Workshop
- Architecture Review

JumpStart Overview

Overview – Goals and Benefits

Goals:

- Smooth and effective deployment to achieve customer needs
- Set up follow-on implementation work for success
- Drive Partner business opportunities
- Drive deployment of appliances
- Drive quality references

Achieved through:

- Quality knowledge transfer to customers
  - In depth hands on training to learn the products
- Customer specific discovery and design
  - Based on the customer's business requirements
- Delivers an implementable plan

Customer Training

Objectives

- Deliver 3-4 day training course focusing on APS development specifics and approaches to data model design for a Massively Parallel Processing (MPP) architecture. The training will also cover security, administration, and data loading techniques.

- Utilize customer appliance so customer can learn in their own environment

Training Agenda and Output

- Customer Owners / Stakeholders:
  Data Warehouse Architect, Data Warehouse Dev Manager, IT Manager
- Engagement Location:
  Onsite
- Duration
  3-4 days
- Deliverables:
  3-4 day instructor-led training course
  Training materials
  Hands-on labs
  Student time on appliance

Training Course Outline

Instructor-led APS product training for customer and partner resources, including overview of features, hands-on labs, and interactive learning sessions

- Analytics Platform System Overview
- Key Concepts of MPP
- PDW Region
- Database Design
- Table Design
- Cardinality Estimation & Statistics
- Resolving Queries in PDW
- Data Loading Patterns
- Migrating to PDW
- Managing the Appliance
- Hadoop Region
- Polybase

Discovery Workshop

Objectives

- Provide customer with overview of how to migrate existing DW solutions to APS
- Review the high-level vision of the customer, business, and project scope
- Understand data use cases
- Understand end-to-end solution architecture
- Understand availability requirements of data
- Understand load / query performance expectations
- Identify 3rd party solution integration tools in use
- Understand code artifacts requiring migration re-work in the existing solution

Discovery Workshop Agenda and Output

- Customer Owners / Stakeholders:
  - Data Warehouse Architect, Data Warehouse Dev Manager, IT Manager
- Engagement Location:
  - Onsite
- Duration
  - ~4 days
- Deliverables:
  - Series of interactive meetings
  - Project Discovery Document

Approach

- Highly interactive
  - Adapted to customers' needs & environment
- Lead discovery sessions that result in deeper understanding of first solution to move to APS
- Definition for migrating an existing solution to APS
  - High-level vision
  - Business, technical, & functional requirements
  - Risks identification & mitigation
  - Overall project scope
- Map operational needs to technical capabilities of APS

Business & Technical Discussion / White Board

- Business and Technical Requirements
  - Business Value Overview
  - Review of Current Environment
  - High Level Data Flow

- Operational Requirements & Physical Infrastructure
  - Identify business requirements around HA/DR, backup/restore, maintenance windows, etc.
  - Collect documentation on existing process execution time and physical network/server environment
  - Security model review

Technical Discussion / White Board

- Complete data flow in & out
- SLA definition for all components of data flow
- Data flow components overview
- Technical definition of each component of data flow on high level
    - Functionality
    - Technology

Technical Discussion / White Board

- ETL/ELT architecture overview
    - Pros and cons on ELT/ETL projected to APS technology
    - Overview of current and desired architecture
- Database design model discussion
- High level database design overview
    - Logical/physical model
    - Table design
    - Best practices

Technical Discussion / White Board

- Star schema
- Distribution criteria
    - Choosing the right distribution and clustered index key
- Partitioning approach
- APS statistics handling discussion
- Design and migration tools overview

Appliance Feature Discussion Session

- Star schema
- Distribution criteria
    - Choosing the right distribution and clustered index key
- Partitioning approach
- APS statistics handling discussion
- Design and migration tools overview

Architecture Review

Objectives

- Develop documentation that customer and deployment partner can use in their planning for next steps through to successful deployment of APS for customer

Architecture Review Agenda and Output

- Customer Owners / Stakeholders:
  - Data Warehouse Architect, Data Warehouse Dev Manager, IT Manager
- Engagement Location:
  - Remote
- Duration
  - ~5 days
- Deliverable:
  - Project Architecture Document

Architecture Review Primary Steps

- Develop detailed documentation and review of the technical architecture, oriented to customer's overall solution architecture
- Document is created as a result of Discovery workshop
- The technical architecture document is discussed, reviewed, and signed off by customer and COE Architect, with deployment partner included in discussions
- Plan and next steps provided for further implementation by customer and/or partner

Architecture Design Documentation - Primary Steps

- Architecture Design Preparation
  - Offsite creation of
    - Findings
    - Architecture
    - Leverage Prior Best Practices
  - Recommendations for how best to implement overall solution

- Architecture Design Presentation
  - Inputs, Q&A
  - Agreement
  - Alignment

- Architecture Design Documentation
  - Deliverable for planning and deployment
  - For follow-on use by all stakeholders and solution deployment roles (Customer Team, Partner, and Support)

Architecture Design Documentation – Example on Possible Content

- Introduction
- Executive Summary
- PDW Architectural Review Objectives
- Proposed System Overview
  - Current Systems Overview
- Proposed Architectural Processes
  - Proposed Use Cases
  - Proposed Availability
  - Proposed Performance
  - Proposed Load Process
  - Proposed Data Distribution Approach
- Proposed Architectural Processes (continued)
  - Proposed Partitioning / Indexing Approach
  - Proposed Security Approach
  - Proposed Data Model
  - Proposed Queries and Reports
  - System Administration Proposal
  - Proposed Data Retention
  - Appliance Monitoring Integration
  - Backup Integration and Disaster Recovery

Appendix

Installation Review - Objectives

- Actively verify that APS appliance hardware, software, and installation setup is fully ready for customer usage within customer environment (It is not part of JumpStart, but Prerequisites before “JumpStart”.)

Installation Review - Primary Steps

- Site preparation
- Confirm installation conditions and licensing are met from Microsoft and Hardware Vendor
- Verify Site Survey completed by Customer and Hardware Vendor
- Hardware Verification
  - Inter-Rack connectivity verification according to APS rack diagram
    - Ethernet connection
    - Infiniband connection
  - Check that all components are powered On

Installation Review - Primary Steps

- Software Verification
  - Verification of appliance using DWConfig tool
    - Check/configure external IPs
    - Check firewall configuration
    - Check all appliance services are up and running
    - iLO/iDRAC connection

Installation Review - Primary Steps

- PAV tool results verification
  - Disk speed
  - Memory speed
  - Verifier results
  - Connectivity
  - Sanity checks

Installation Review - Primary Steps

- Appliance basic functionality verification
  - Admin console Appliance state verification
  - Basic connectivity to appliance

Installation Review Agenda and Output

- Customer Owners / Stakeholders:
  - Data Warehouse Architect, IT Manager
- Engagement Location:
  - Onsite
- Duration:
  - ~1 day
- Deliverables:
  - Appliance successfully installed, validated and connected

Operations and Support Initialization - Objectives

- Prepare customer for post-production phase of support
- Prepare customer to successfully integrate their organization with Microsoft Premier Mission Critical (PMC) Support team Or Microsoft Support Team

Operations and Support Initialization - Primary Steps

- Discuss and coordinate next steps with customer
- Provide findings and documentation to Support PMC team members
- Provide hand-off of the overall solution over to APS Support and PMC teams for further ongoing operational support
- Provide introduction to customer's Dedicated Support Engineer

Operations and Support Initialization - Agenda and Output

- Customer Owners / Stakeholders:
  - Data Warehouse Architect, IT Manager
- Engagement Location:
  - Remote and onsite
- Duration
  - ~1 day
- Deliverable:
  - Support Documentation and Guidance on use