Data Center 3.0 Architecture Workshop

F-DC-AW

Services

The Data Center is being transformed today. The adoption of new architectures that enable consolidation, virtualization, and automation are driving a radical change in the way that Data Center managers evaluate technology solutions—from best-of-breed to integrated systems, from CapEx reduction to OpEx control, and from a focus on technology to a focus on business process.

The Firefly Data Center Architecture Workshop (DCAW) is designed to help DC customers develop a visionary DC architecture, identify key solutions that will enable the strategic DC vision, and develop a foundational blueprint for architecting next-generation DC services in a consolidated, virtualized, automated environment.

The workshop will be facilitated by a senior multi-disciplinary Firefly engineer who is intimately familiar with both business requirements and Data Center technologies and solutions.

What's Included

Day 1—Customer Requirements Analysis

The first day of the workshop will focus on gathering requirements from the four interrelated operational silos within the IT organization: servers, storage, network, and applications, and aligning the customer's business objectives with strategic IT solutions. Firefly will facilitate a discussion about the business drivers that are at the core of the Data Center vision and strategy.

The key objective for the end of Day 1 is to develop a deeper shared understanding of the customer's specific business objectives that are driving IT infrastructure evolution, and the customer's current architecture.

At the end of Day 1, Firefly will prepare a documentation package that consolidates and documents the requirements and architecture, and documents a preliminary high-level design and migration plan.

Day 2—Architecture Review & Planning

On Day 2, we will facilitate a discussion based on the key trends in DC architecture that are enabling next-generation DC services. We will then review the requirements, architecture, preliminary design, and migration plan documented by Firefly.

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Service Deliverables

Day 1: Requirements Analysis

During the first day, Firefly will conduct a joint requirements gathering session with the individual operational organizations:

- Servers
- Storage
- Network
- Applications (middleware and database)

Session Topics

1.1 New or Existing DC
- 1.1.1 Growth
- 1.1.2 Existing Infrastructure

1.2 Users
- 1.2.1 Intranet
- 1.2.2 Extranet
- 1.2.3 Internet

1.3 Business Drivers
- 1.3.1 What do you do?
- 1.3.2 What are your key challenges?
- 1.3.3 What are you doing well?
- 1.3.4 What is your DR strategy/goals?

1.4 Changes Coming
- 1.4.1 DC Consolidation
- 1.4.2 Server & Storage Consolidation
- 1.4.3 Server & Storage Virtualization

1.5 Environmental Challenges (HECS)
- 1.5.1 Heat & Cooling
- 1.5.2 Electrical
- 1.5.3 Cabling
- 1.5.4 Space

Documentation

Following the Day 1 session, Firefly will:

- Consolidate the requirements
- Document the current architecture
- Prepare a high-level design
- Prepare a high-level migration plan

Day 2: Architecture Review & Planning

On Day 2, Firefly will conduct a joint architecture review and planning session.

Session Topics

2.1 Data Center Evolution
- 2.1.1 Service-Oriented Architecture
- 2.1.2 Consolidation & Virtualization
- 2.1.3 Defining “Optimized”

2.2 Data Center Physical Architecture

2.3 Data Network Tiers

2.4 Physical Equipment Distribution
- 2.4.1 Pod Architecture
- 2.4.2 EOR/MOR
- 2.4.3 TOR
- 2.4.4 Blade

2.5 Power and Cooling
- 2.5.1 Server Farm Density
- 2.5.2 Cooling Methodology
- 2.5.3 Airflow and Efficiency

2.6 Service-Oriented Architecture
- 2.6.1 Network-Based Services
- 2.6.2 Service Virtualization
- 2.6.3 Provisioning and Orchestration

2.7 DC Architecture Trends
- 2.7.1 Compute Trends
  - Server Virtualization
- 2.7.2 Connectivity Trends
  - I/O Consolidation Benefits
  - Unified Fabric/DCE
  - FCoE
- 2.7.3 Business Continuity
  - BC/DR Metrics
  - Data Replication
  - Site-to-Site Connectivity
  - Backup

2.8 Architecture Recommendations
- 2.8.1 Review Architectural Plan
- 2.8.2 Current Analysis
- 2.8.3 Future Design
- 2.8.4 High-Level Migration Plan

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