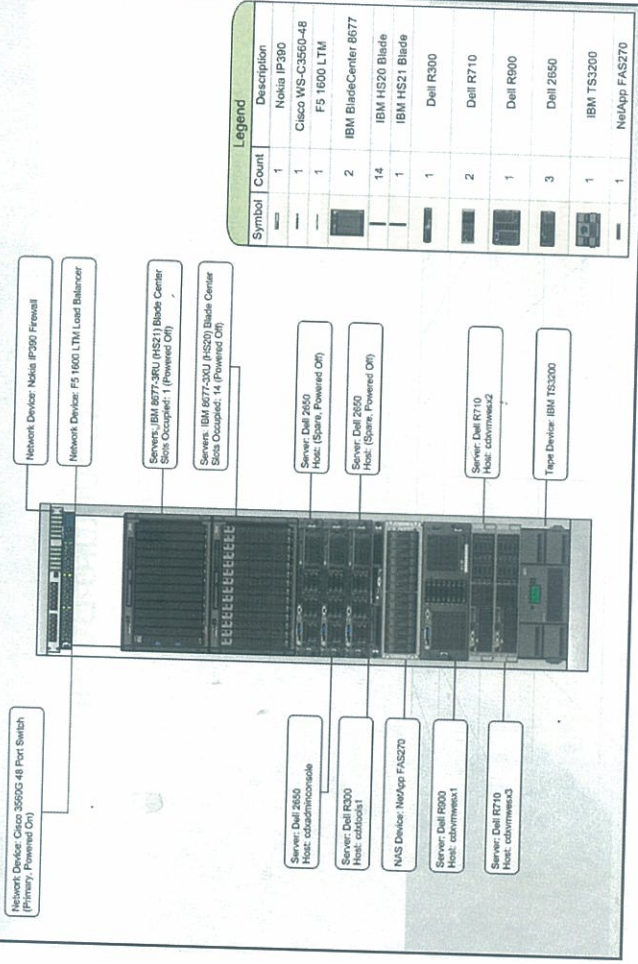
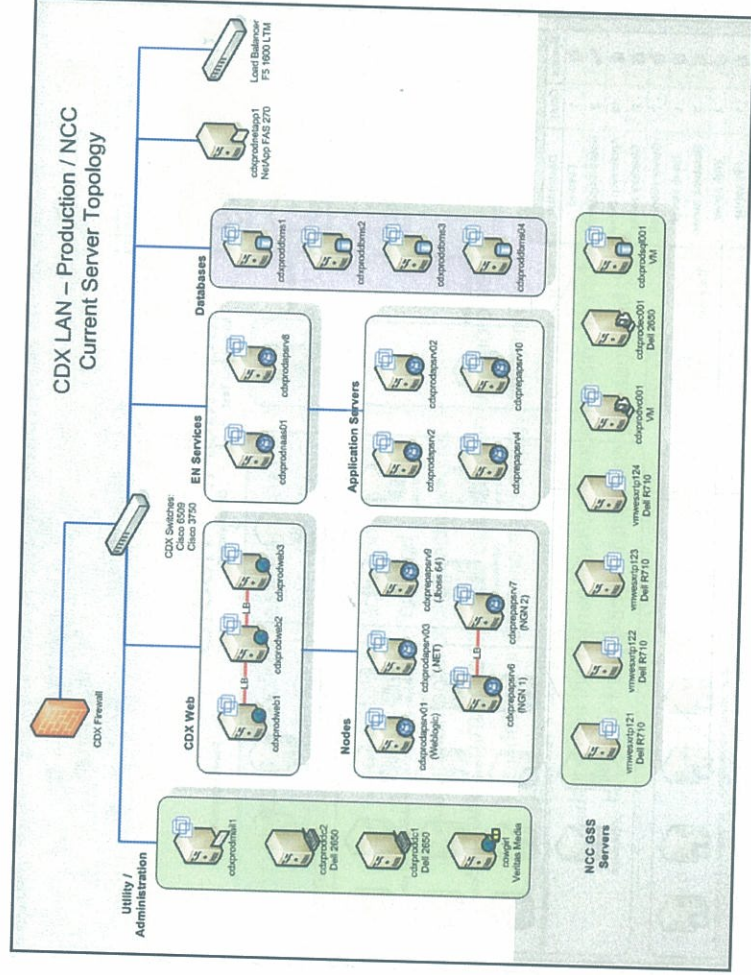


### CDX LAN – Fairfax Rack Diagram 12601 Fair Lakes Circle – Jefferson Room



Symbol	Count	Description
[Symbol]	1	Nokia IP390
[Symbol]	1	Cisco WS-C3650-48 FS 1600 LTM
[Symbol]	2	IBM BladeCenter B677
[Symbol]	14	IBM HS20 Blade
[Symbol]	1	IBM HS21 Blade
[Symbol]	1	Dell R300
[Symbol]	2	Dell R710
[Symbol]	1	Dell R600
[Symbol]	3	Dell 2650
[Symbol]	1	IBM TS3200
[Symbol]	1	NetApp FAS270



## CDX EPAT Study Tour

O&M Processes and Procedures

9/28/2011



### Operations and Maintenance Procedures

- O&M for a large and diverse program requires dedicated processes and procedures
  - Integrated within our software development approaches
- CDX O&M procedures based on ITIL V3 framework and foundations
  - Change Management
  - Change Control
  - Release Management
  - Incident & Problem Management
  - Capacity and Availability Management
- O&M procedures are institutionalized in an Operational Framework

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## Operations and Maintenance Procedures

- Major O&M Activities include
  - Infrastructure (Server and Platform) Administration
    - New server builds, network configuration, COTS software installation, patch management, etc
    - Tune application platforms (.NET) and COTS products (Jboss, Apache, IIS, etc)
  - Server changes requested and approved in Change Control and Management Procedures

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## Operations and Maintenance Procedures

- Major O&M Activities include
  - Database Administration
    - Instance and schema creation, capacity management, tuning
    - Database service requests created and approved in Change Control and Management Procedures
  - Application Support
    - Deployment of new releases, providing infrastructure troubleshooting to Tier 3 support requests

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## Operations and Maintenance Procedures

- O&M Team Roles
  - Server Engineer
  - Database Administrator (DBAs)
  - Network Engineer
  - Platform Manager
  - Configuration Manager
  - Dispatcher
  - Tier-3 Developers & Support Staff
- Depending on workload, multiple roles may be fulfilled by a single individual
- New project staff spend time with the O&M team to learn CDX and its components

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## Operations and Maintenance Procedures

- O&M Management Approach
  - All requests are logged and tracked in a work request system
  - Resources are assigned to each request
  - Changes are discussed, scheduled, and approved at a weekly change control board
    - Major infrastructure changes or architectures are reviewed by the CDX Engineering Board
  - O&M requests can be reported on for tracking, trending, and performance management.

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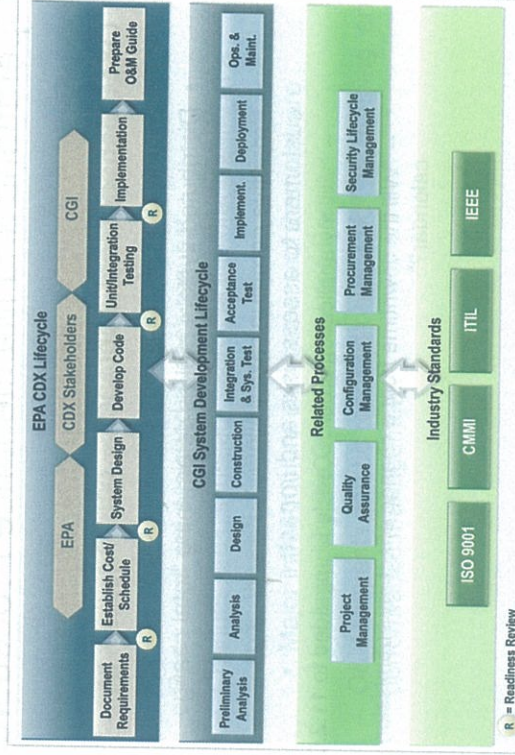
## Operations and Maintenance Procedures

- Software Development Lifecycle (SDLC) Integration
  - O&M checkpoints exist within each phase of the SDLC
  - CDX maintains “Readiness Review” checklists
    - Integrated project team assesses readiness of a project to move to its next SDLC Phase
      - Requirements into Design
      - Design into Development
      - Development into Testing
      - Testing into Implementation
    - Checklists evolve over time to streamline the efficiency of data exchange maintenance and operation
  - CDX maintains SDLC project plans that incorporate frequent O&M activities and checkpoints

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## Operations and Maintenance Procedures



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## Help Desk Topics

- CDX Help Desk
  - Tier 1 and 2
  - Tier 3
  - Process and Procedures
  - Putting It All Together

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## CDX Help Desk – Tier 1 and 2

- Tier 1
  - Provide end-user first contact
  - General inquiry and issue resolution
    - CDX "how-to"
    - CDX registration
    - CDX account maintenance (e.g., Password reset)
  - Communicate system status and outages
- Tier 2
  - Provide application-specific support
  - Pre-Tier 3 triage
  - Routing or hand-off to Tier 3 or to application-specific help desk

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## CDX Help Desk – Tier 3

- Receive, Categorize, Assign, and Track
  - Issues or Work Requests escalated from Tier 1/2
  - Work Requests directly from EPA or supported Programs
- Provides and supports
  - Advanced operations and maintenance
  - Deployment and transition services
  - Application development/integration
  - Node Services support
  - Coordination/routing with/to other application help desks

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## Process and Procedures

- Processes align with Operations and Maintenance (O&M) procedures
  - Based on ITIL V3 framework and foundations
  - O&M procedures are institutionalized in an Operational Framework (OF)
- Work request system (CAST)
  - ITIL-compliant process, workflow, and resource management tool
  - Customized tasks based on work request type
    - *Can be tailored to align with Change Management, SDLC, issue investigation, and other O&M processes*
    - *Facilitates communication and notification among tasked resources, across all Help Desk tiers, and to end-users*

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