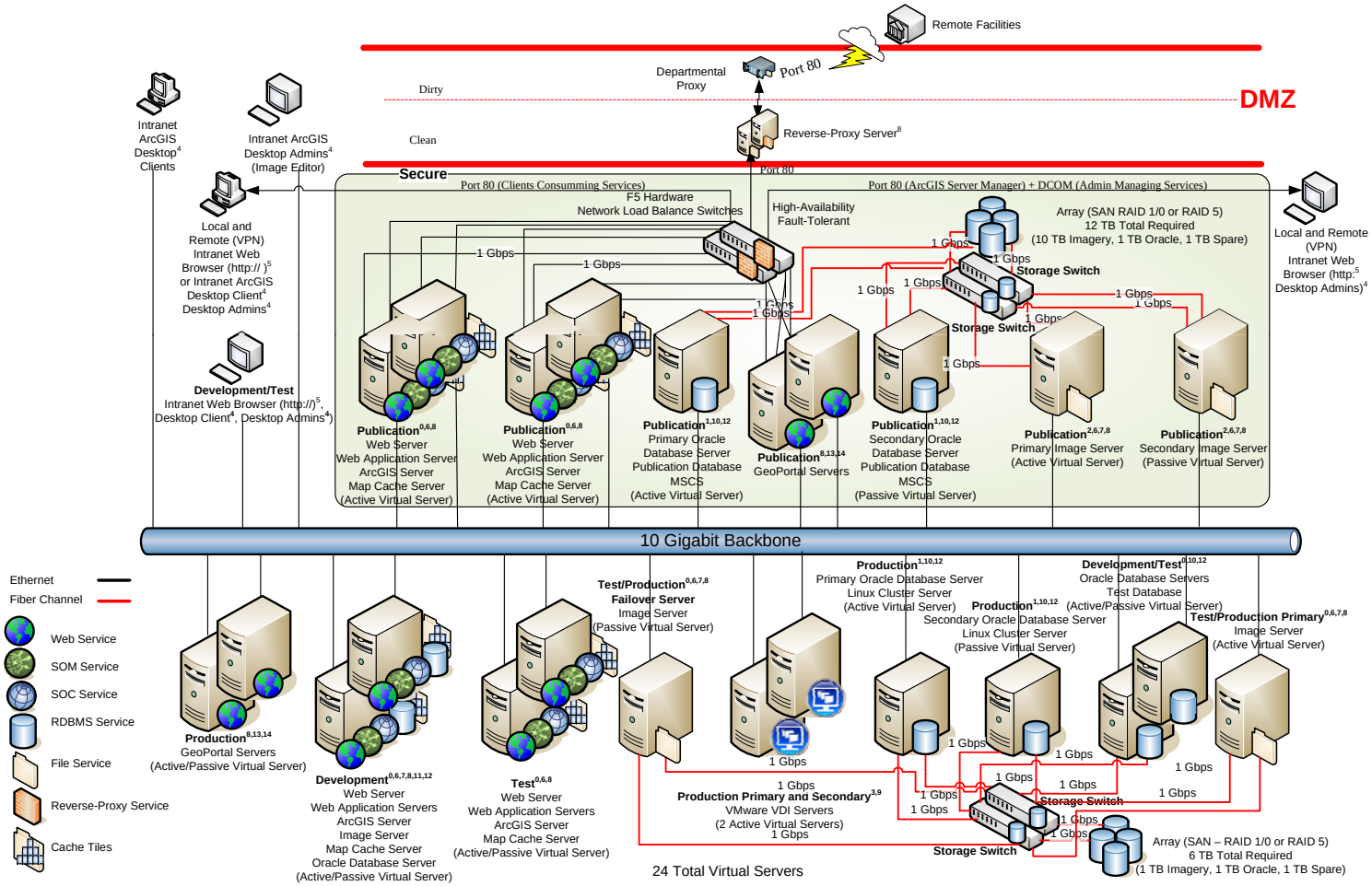
Enterprise GIS Architecture

DHCCP Physical Architecture
By: Danny Luong
Revised: Tom Pattison
Status: Final
Date: May 5, 2010



Legend:

[0]Dell 2950
1 X quad-core Intel Xeon E5440
2.83 GHz, 6 MB L2 Cache
4 Cores (CPUs)
8 GB RAM
Broadcom BCM5708C netXtreme II

[1]Dell 2950
1 X quad-core Intel Xeon E5440
2.83 GHz, 6 MB L2 Cache
4 Cores (CPUs)
24 GB RAM
Broadcom BCM5708C netXtreme II

[2]Dell 2950
2 X quad-core Intel Xeon E5440
2.83 GHz, 6 MB L2 Cache
8 Cores (CPUs)
16 GB RAM
Broadcom BCM5708C netXtreme II

[3]Dell 2950
2 X quad-core Intel Xeon E5440
2.83 GHz, 6 MB L2 Cache
8 Cores (CPUs)
32 GB RAM
Broadcom BCM5708C netXtreme II

[4]ArcGIS Desktop 9.3.1 SP1 (SDE Direct Connect)
Professional Licensing, Network Analyst Extension
Spatial Analyst Extension, Schematics Extension
3D Extension, Network Extension
Spatial Extension, Maplex, Publisher
GIS Portal Toolkit 9.3.1 SP1
.NET 3.5
Oracle 11G 32-bit Client
EMC VMware View 3 Client (or http Client)
Internet Explorer 7.0
Windows XP SP3 64-bit Professional Edition

[5]Windows XP SP3 64-bit Professional Edition
Internet Explorer 7.0

[6]ArcGIS Server 9.3.1 SP1 (SOM/SOC/REST/SDE)
Advanced/Enterprise Licensing
Microsoft SilverLight Map Viewer (REST) or
Flex Map Viewer (REST)
Oracle 11G 32-bit Client

[7]ArcGIS Server 9.3.1 SP1 Image Server Extension

[8]IIS 7.0 Web Server/Web Application Server
.NET 3.5
Windows 2008 Server 64-bit Standard

[9]EMC VMware View 3 (formerly VDI)
Windows 2008 Server 64-bit Standard

[10]Oracle 11G 64-bit Standard Edition
Red Hat Standard Linux AS/ES 5 (64-bit) and
Linux Cluster Server

[11]Oracle 11G 64-bit Standard Edition
Windows 2008 Server 64-bit Standard

[12]ArcSDE Service(Maintenance)
ArcSDE Administrator

[13]1 X dual-core Intel Xeon E5440
2.83 GHz, 6 MB L2 Cache
2 Cores (CPUs)
2 GB RAM
Broadcom BCM5708C netXtreme II

[14]Apache HTTP Server 2.2.11
Apache Tomcat Servlet Container 6.0.18
Java JDK 6
GeoPortal Web Application

Physical Design Model

Enterprise GIS Architecture

DHCCP Logical Architecture
By: Danny Luong
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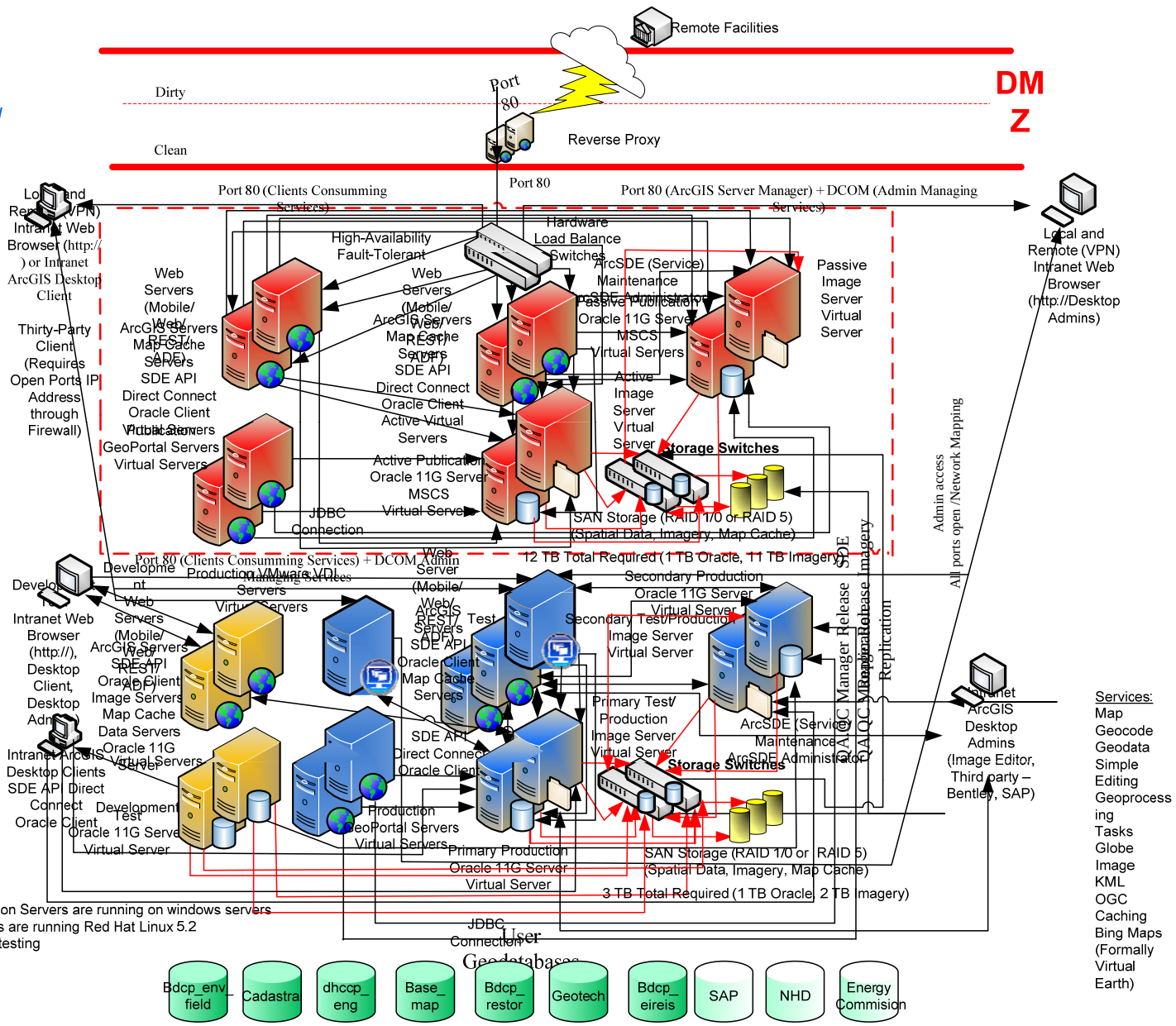
V30 Status: Final
Date: 8/28/10



Notes:
* ESRI Application Servers are running on windows servers
* Oracle Servers are running Red Hat Linux 5.2
* EDN uses for testing

Logical Design Model

Enterprise GIS Architecture

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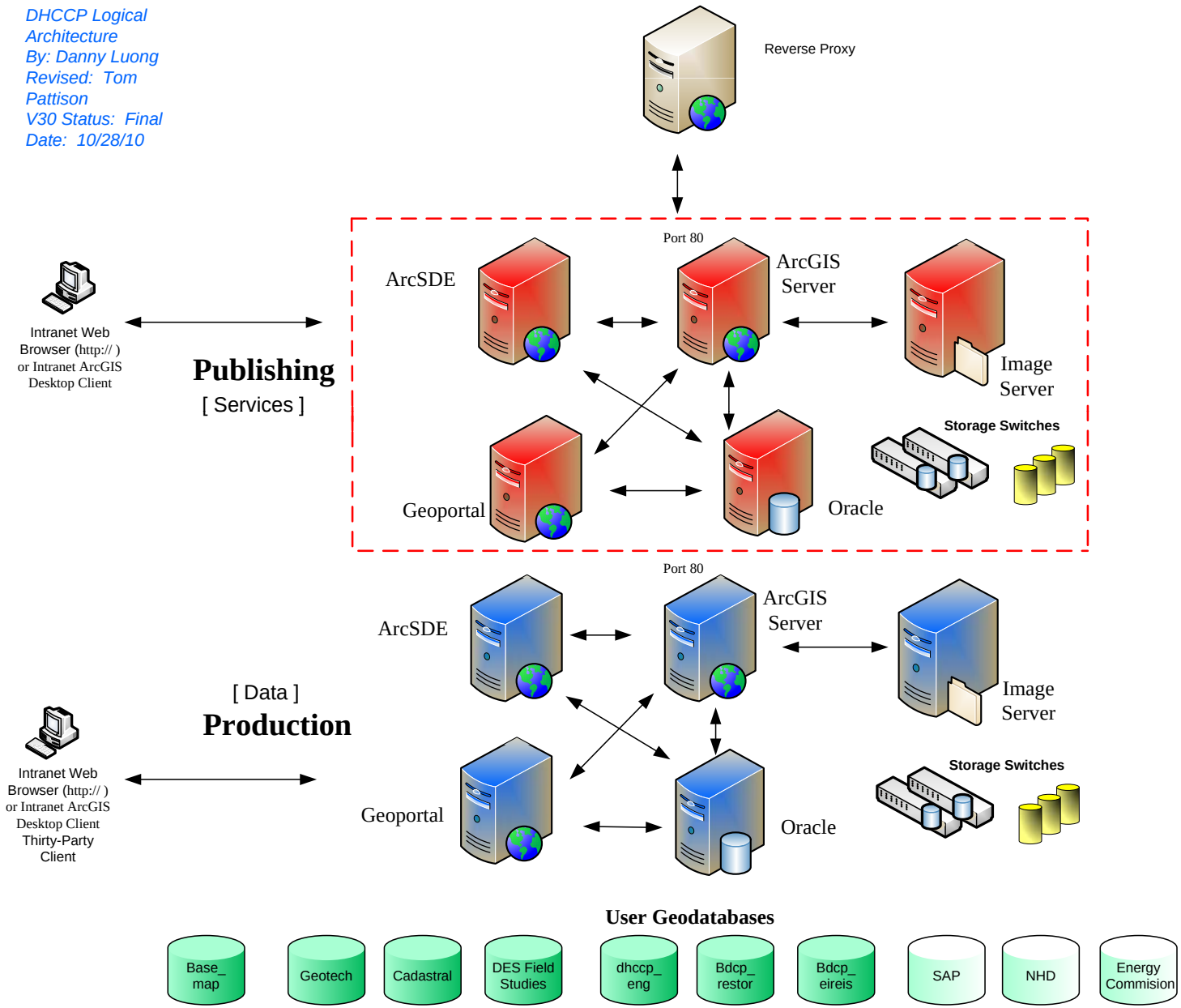

Logical Design Model – simplified version

Enterprise GIS Architecture

Administering a multiuser geodatabase

- Translate common tasks into job roles
- Workgroup
  - GIS manager as administrator
- Enterprise
  - May involve multiple job roles
    - End user
    - GIS manager
    - SDE admin
    - DBA

GIS analysis Map production Maintain edits	End user
Data QA/QC Versioning workflow Geodatabase design Data ownership	Manager
Configure DBTUNE for storage Manage ArcSDE configuration Compress Manage data statistics Monitor and rebuild indexes Backup and recovery	SDE Admin
Configure storage Create users/roles Grant database privileges	DBA

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- Instructor-led Training
  - *ArcGIS Desktop III: GIS Workflows & Analysis* (2)
  - *Building Geodatabases* (3)
  - Data Production & Editing Techniques (3)
  - **Introduction to the Multiuser Geodatabase** (2)
  - **Managing Editing Workflows in a Multiuser Geodatabase** (3)
  - Data Management in the Multiuser Geodatabase (3)
  - **Introduction to ArcGIS Server** (2)
  - ArcGIS Server Enterprise Configuration & Tuning for Oracle* (2)

- GIS Managers and ArcSDE Administrators*
  - Data Stewards