



# USAF GeoBase Enterprise SOA

*The Evolution of ACC GeoBase*

***Dave Williams***  
***EarthTech, Inc***  
***757-855-4700***

**[Dave.Williams@earthtech.com](mailto:Dave.Williams@earthtech.com)**

# ACC GeoBase

- **What is ACC GeoBase?**

- **Data**

- 40 Core Basemap Layers (infrastructure, imagery, etc.)
- Support the development and management of other layers

- **Services**

- Web Map Services
- Data delivery and download capability
- Training and Advocacy

- **People and Coverage**

- Staff at each CONUS base and each Numbered Air Force
- Staff at HQ ACC
- 3 AORs

# ACC GeoBase Enterprise Akamai

- 1 Year Recap

- **Overview:** Integration into the USAF Enterprise, worldwide visualization of our assets via web services, better oversight
  - Portal Integration
- **Progress since June2006 - Akamai:**
  - Deployment of Akamai Data Library – June2006
  - Delivered over 8TBs (400GBs weekly) of GIS data since deployment
  - Portal accessible delivery of ALL ACC GeoBase data for NORTHAF, CENTAF, and AFSOUTH
  - In addition, Akamai has changed out internal workflows



# Akamai High Speed Large Content Delivery

- Akamai vs Local Server (transfer of data)
  - **99.2 MB File**
    - Langley AFB Server: 19 Min, 40 Sec
    - Akamai Server: 2 Min, 44 Sec
  - **380 MB File**
    - Langley AFB Server: 1 Hour, 18 Min
    - Akamai Server: 8 Min, 43 Sec
  - **1 GB File**
    - Langley AFB Server Time Out After 2 Hours
    - Akamai Server: 23 Min, 5 Sec

# ACC GeoBase Enterprise Web Services

- **Publish Once – Subscribe Many**
  - **We publish** our AOR Services and many users consume these services and embed in their tools.

**Integrating Imaginary Surfaces and Airfield Obstruction Data with GeoBase**  
Mon Oct 02 18:55:48 GMT 2006

**External Links**

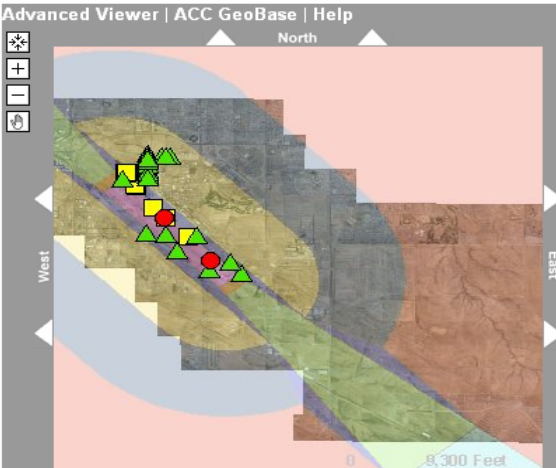
- ▶ ACC GeoBase Website
- ▶ Airfield Obstructions MDS guidance (xls)

**ACC Integrated Planning is currently working with ACC GeoBase to include imaginary surfaces and airfield obstructions data on the ACC GeoBase portal viewer. Getting all ACC surface and obstruction information into GeoBase involves:**

- Defining a mission data set (MDS)
- Having the community planners/airfield managers populate the airfield management MDS per GeoBase guidance (see the related links)
- Loading the data into the GeoBase system
- Maintaining the data in the GeoBase system

**Davis Monthan Portlet Viewer with Imaginary Surfaces**

Advanced Viewer | ACC GeoBase | Help



0 8,000 Feet

- **No need to build their own GIS**
- **Easily pull in web services in to their own app**

# ACC GeoBase Enterprise AOR Web Services

## Full AOR Visualization

### NORTHAF

- >6 sources of Imagery
- 40 core layers
- >50 additional layers
- Common Access Card Accessible

ACC GeoBase NORTHCOM AOR - Microsoft Internet Explorer

Address: <https://www.my.af.mil/accgeoprod/website/gcss/garrison/aor/viewer.htm>

### ACC GeoBase NORTHCOM AOR

Home | Help | View Other AORs: Choose an AOR...  
Quick Zoom to an airfield - Zoom to....

Unclassified // FOUO

0 3,779,370 Feet

Pan: Drag the map to move it in the direction you like  
ACC GeoBase: [Click Here to email](#)

Map: -71.362781, 26.758592 -- Image: 792, 370 -- ScaleFactor: 0.06516446312764654



# ACC GeoBase Enterprise AOR Web Services

## Full AOR Visualization

### CENTAF

>6 sources of  
Imagery

Core CIP  
Layers



# ***ACC GeoBase Enterprise 2007 Enterprise Architecture Plan***

- **Consolidation of Web Servers / Services**
- **Centralized Management of ALL HW**
  - Complete Remote System Deployment and Administration
  - Oracle now managed by a DBA
  - Servers now managed by a SysAdmin
- **Very High Availability System Design**
  - Oracle Data Guard
  - Ability to edit local or HQ databases
  - Multiple points of failover
  - Continuity of Operations (COOP)

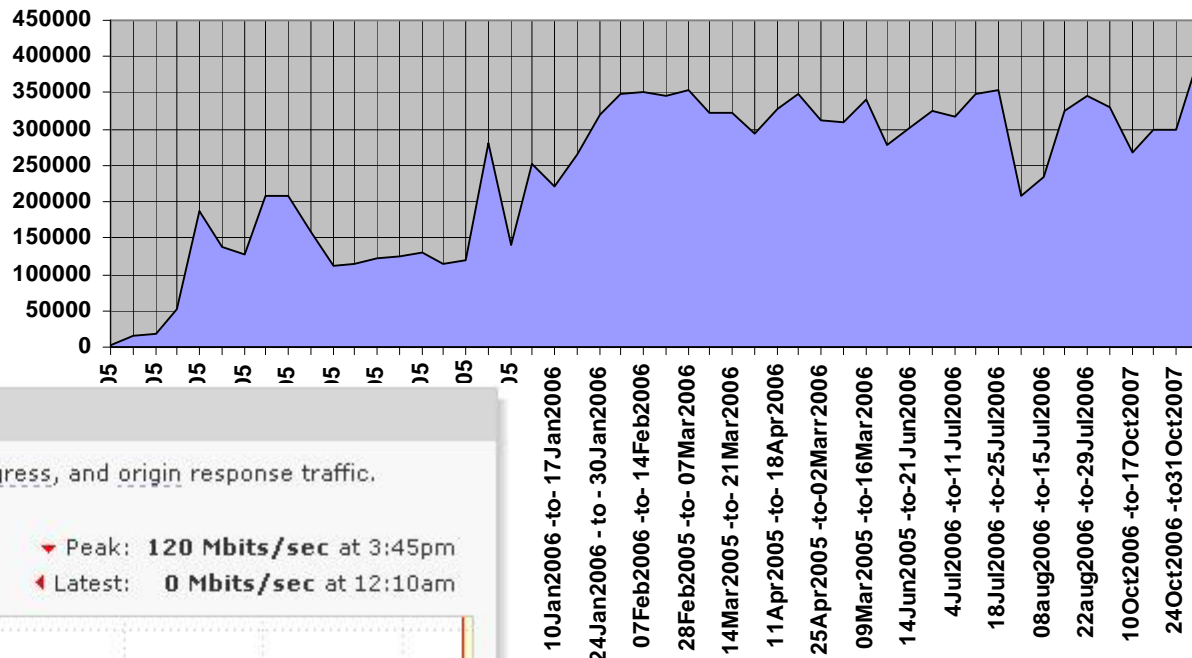




# Usage Examples

## GeoBase Web Usage Total Requests Per Week

Series1

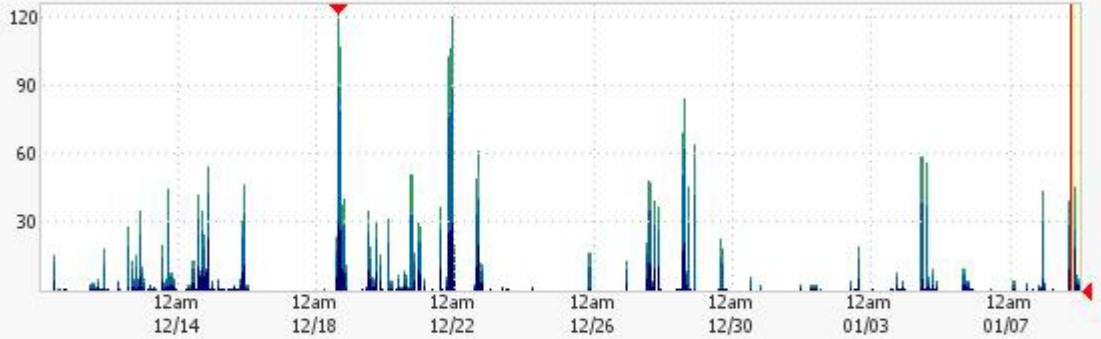


## Total Bandwidth, in Mbits per Second

Total bandwidth includes all request traffic plus edge, midgress, and origin response traffic.

Total Volume: **430 GB**

Peak: **120 Mbits/sec** at 3:45pm  
 Latest: **0 Mbits/sec** at 12:10am



GMT Estimated data begins at 6:00pm

	Total Volume	% Volume
Edge Responses	102 GB	23.7%
Midgress Responses	210 GB	49.0%
Requests	10.0 GB	2.3%
Origin Responses	107 GB	25.0%

- 10 Jan 2006 -to- 17 Jan 2006
- 24 Jan 2006 -to- 30 Jan 2006
- 07 Feb 2006 -to- 14 Feb 2006
- 28 Feb 2005 -to- 07 Mar 2006
- 14 Mar 2005 -to- 21 Mar 2006
- 11 Apr 2005 -to- 18 Apr 2006
- 25 Apr 2005 -to- 02 Marr 2006
- 09 Mar 2005 -to- 16 Mar 2006
- 14 Jun 2005 -to- 21 Jun 2006
- 4 Jul 2006 -to- 11 Jul 2006
- 18 Jul 2006 -to- 25 Jul 2006
- 08 Aug 2006 -to- 15 Jul 2006
- 22 Aug 2006 -to- 29 Jul 2006
- 10 Oct 2006 -to- 17 Oct 2007
- 24 Oct 2006 -to 31 Oct 2007

# ***ACC GeoBase Enterprise*** ***The Way Ahead***

- **Implement 2007 Enterprise Architecture Plan**
- **Layer Level Access Control**
  - Dynamic rendering of map service layers
- **Expansion of browser based editing**
  - Use for data stewards and orgs who require thin client editing
- **Implementing remote data production ability for the Air Expeditionary Forces**
  - CENTAF
  - AFSOUTH
- **Continue to work with the GCSS to see what further migration can/should take place.**

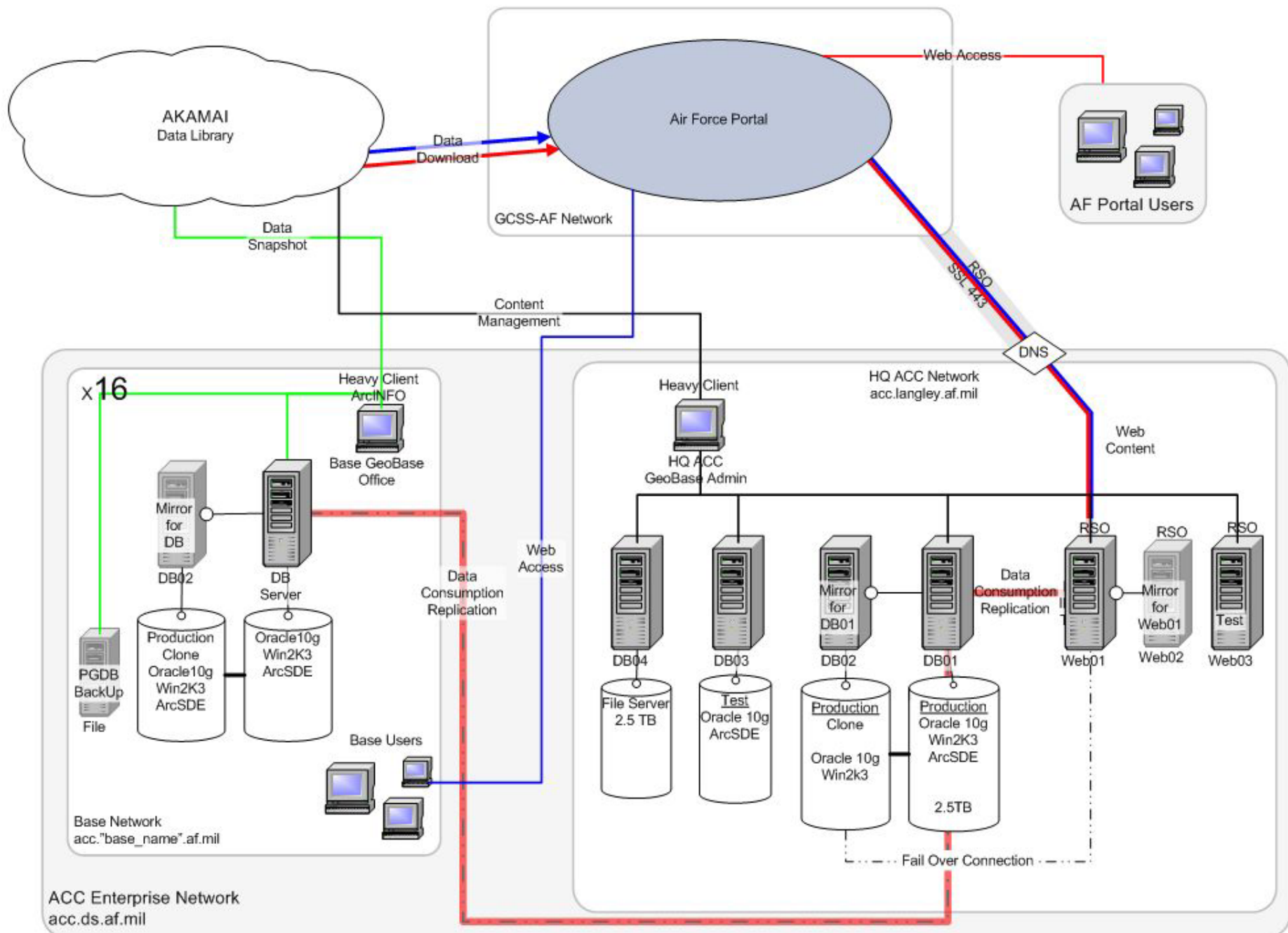
# **Questions?**

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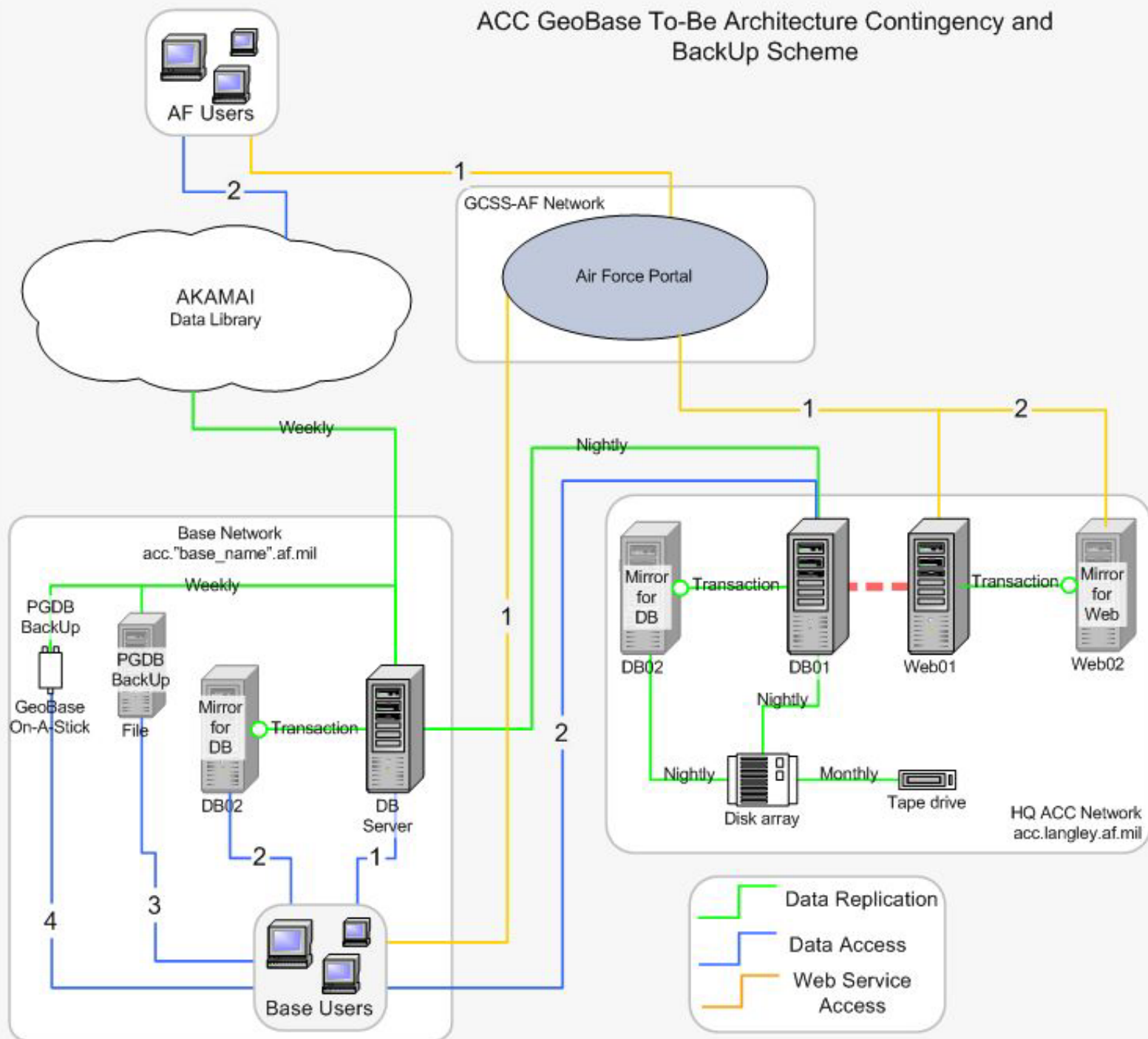
# ***Back Up / Additional Slides***

# ACC GeoBase NIPR Architecture





# ACC GeoBase To-Be Architecture Contingency and BackUp Scheme



# GCSS-AF Overview

