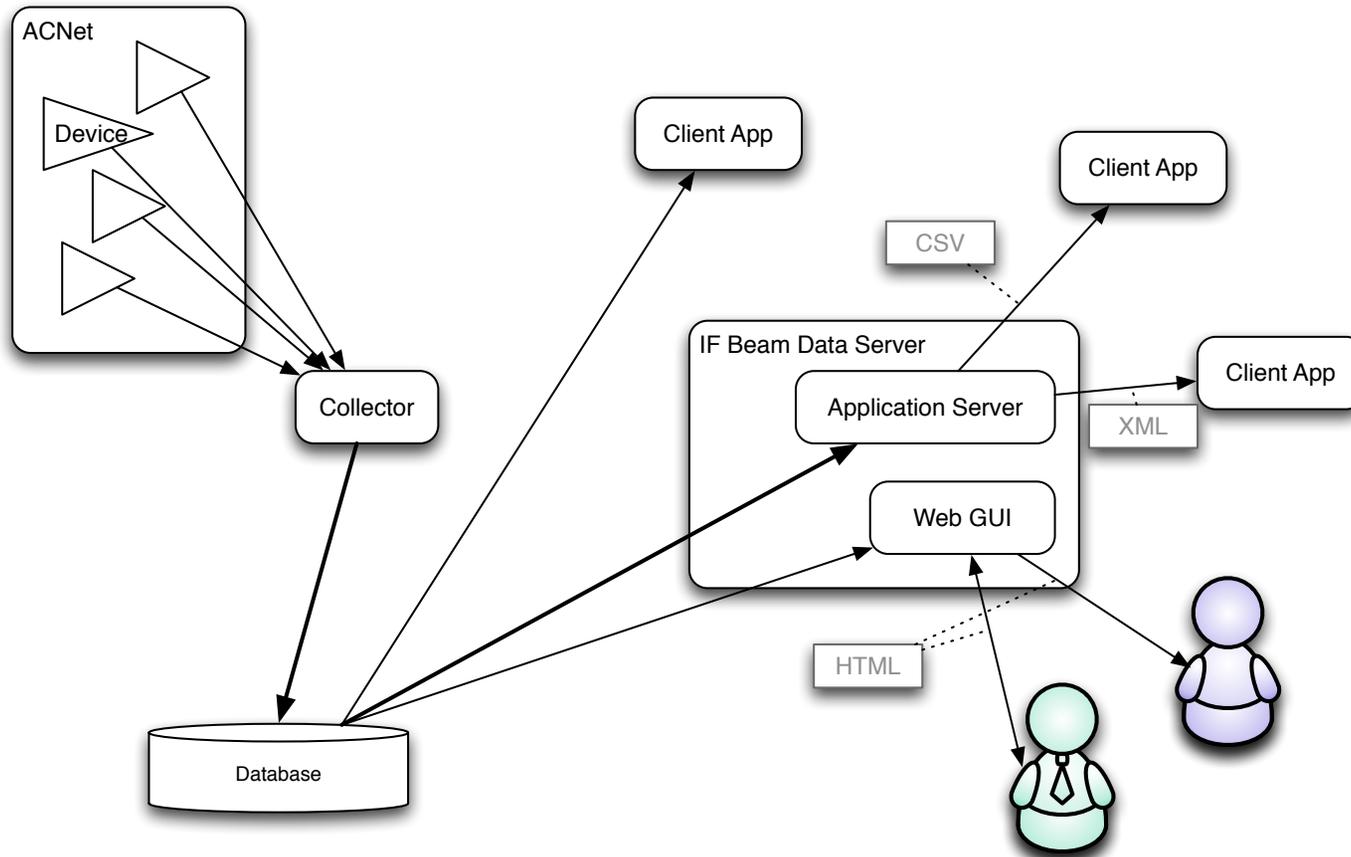


IF Beam Database

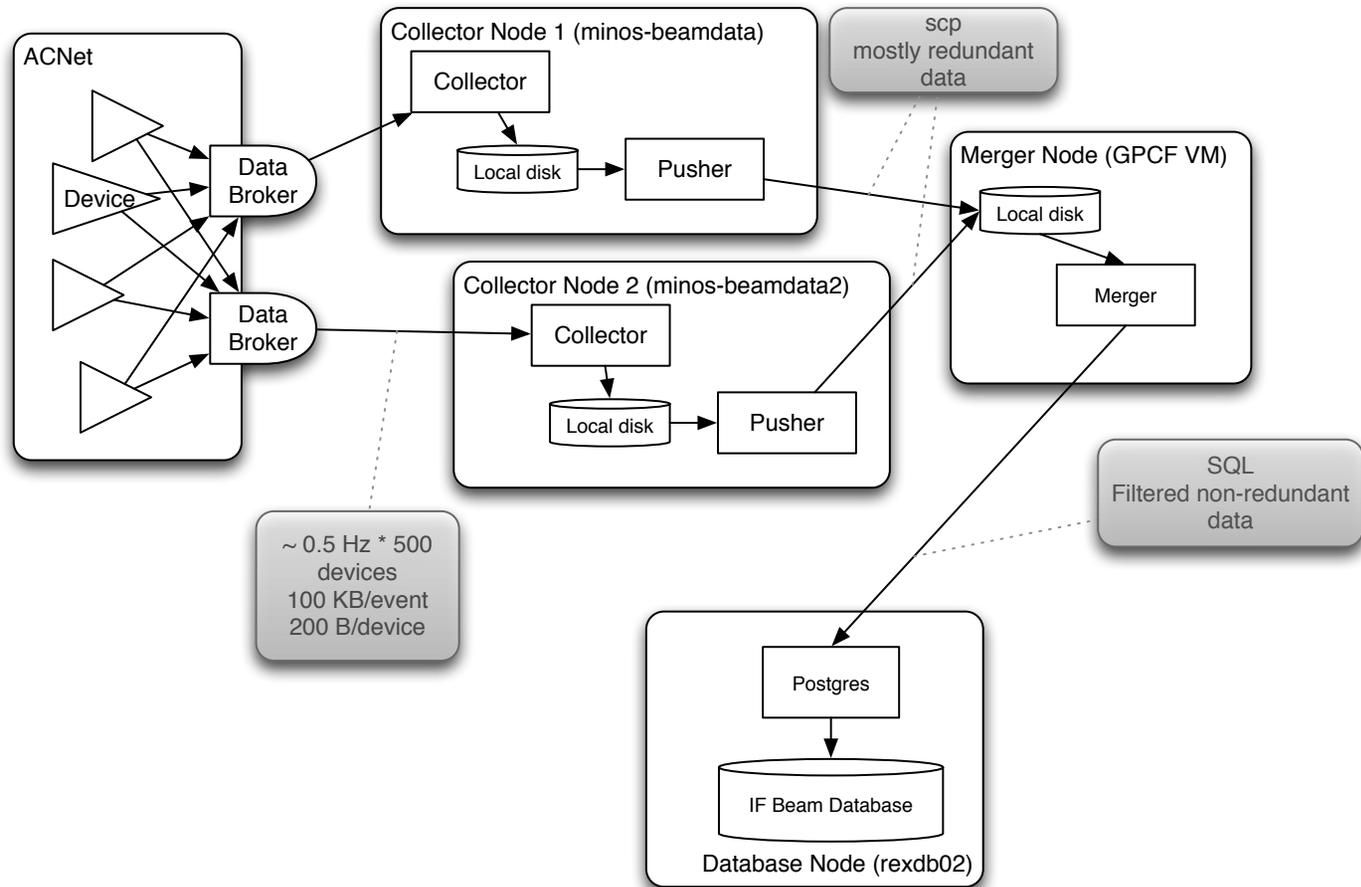
Igor Mandrichenko

7/20/2011

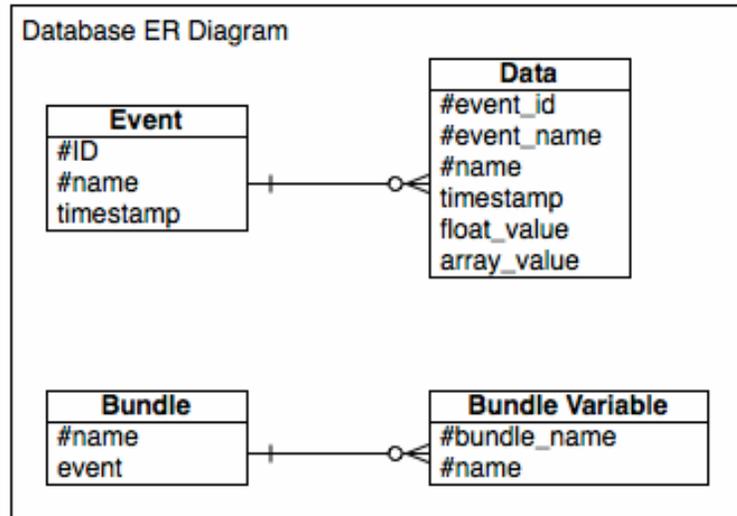
Data Server



Collector



Database Schema



- Bundle is combination of
- event name and
 - list of devices to read

Database size estimate

- 100 Bytes/device/event in average
- Event rate: 1Hz
- 500 devices for monitoring (short term storage, 1 week)
 - $500 * 100 * 7 * 24 * 3600 = 1.3 \text{ GB}$
- 50 devices for long term storage (1 year)
 - $50 * 100 * 3 * 10^7 = 150 \text{ GB}$
- Overhead:
 - Indexes – factor 2
 - Disk backup/standby instance – factor 2
 - Integration instance – factor 1.5
- Total: 1 TB

What we need to know

- Device list
 - Critical set
 - Optional set
- Trigger events
- Data access patterns
 - By event + time
 - By time
 - All devices or single device
 - Data subsets
 - CSV, XML, what else ?
 - XML schema ?

What needs to be done

- GUI exists as a prototype. We need input/feedback on:
 - Bundle control
 - Dashboard
 - Monitoring
 - Alerts

Deployment

- Database
 - IF DB host in purchasing. ATA – Fall 2011
 - Use minervadbprod for integration, feedback
 - Read load - ?
- Collector
 - Service Desk ticket for 2 VMs is in progress
 - Collector processes:
 - minos-beamdata
 - GPCF VM1
 - Merger process:
 - GPCF VM2
- Web server
 - Dbweb0 (HTTP redirector), dbweb3, dbweb4
 - HTTP redirector now can “gently” probe and know which server can actually connect to the database
 - Read load - ?