

Gilead Sciences Usage of Database In-Memory

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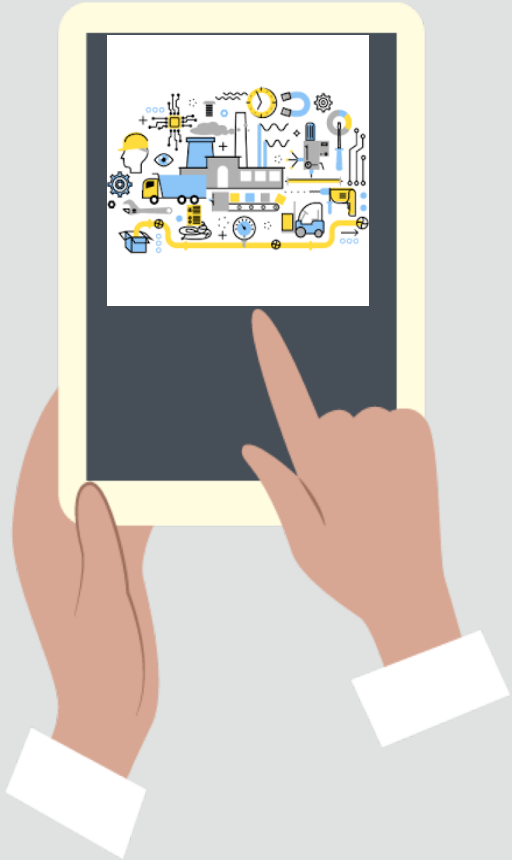


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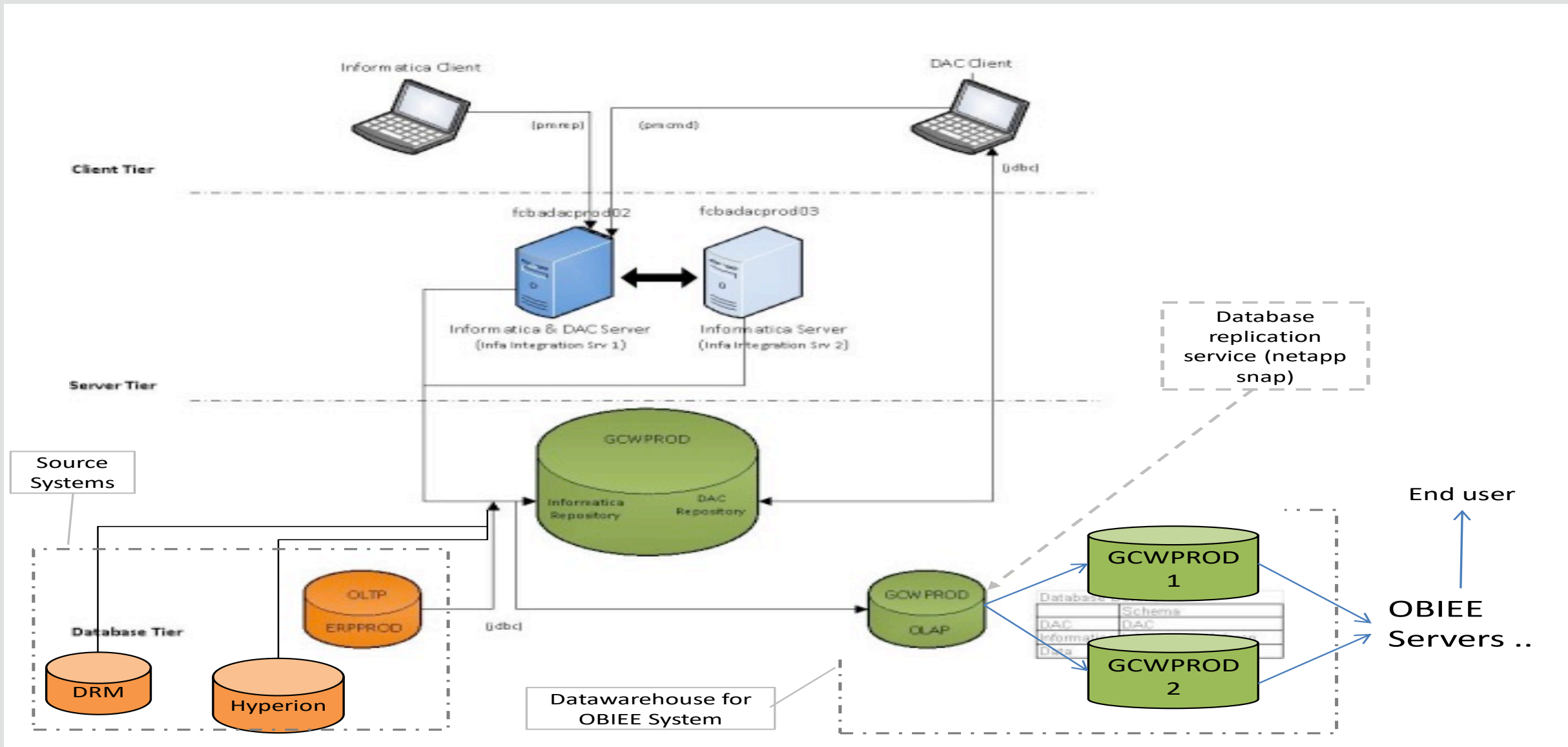


About Ajay Poondla



- *15+ years of experience working in Data & Analytics space.*
- *Worked in different roles which include building a roadmap for platforms, Enterprise Architecture, implementing solutions, streamlining processes for different clients.*
- *Currently manage DevOps team supporting Data & Analytics platforms at Gilead.*

OBIA Architecture at Gilead Sciences



Our Business Challenge

- Report/Analytics requirements change frequently: new filters, brand new reports, new data sources, ad-hoc queries, 3rd party data etc.
- Slow queries are huge productivity drain through the org
- Pain flows downhill: End user->Biz analyst->Developer->DBA->Storage/Networking
 - 20-30% DBA time spent in this loop
- Cycle repeats especially around M/Q/Y close

Slow queries are huge productivity drains

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Supporting Real Time Analytics in Finance Organization



Our Use Case

- Sustain M/Q/Y end key critical objectives & SLAs
- **1 Hour SLAs** - Hourly data refresh against multiple subject areas
- 100 % Uptime to avoid interruption during M/Q/Y End financial close periods
- Stake holders run **adHoc query/report demands & regular dashboards**
- **Consistent performance** for end users across all the Geo's

20+% time spent in service requests and incident resolution for analytics platform

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Solution: Database In-Memory

- 1TB of data, ~250-300GB of In-Memory usage
- Dell 48-core server w/ 500GB (no Exadata)
- **Data fully loaded to in-memory**
- **Dropped all indexes, constraints**
- 1000+ end users/analysts running 6000 reports on system
- **Resolved high pain-point for financials system**
- **50%-2000% gains (2x-6x typical)**
- **In-Memory reason for move to 12c**

Our Workflow

- Drop indexes, constraints
- Load all data into memory
- Confirm data is loaded into memory
- Integrate with DAC post ETL job
- After every ETL we run the job which does the snap of data and loads the data into memory on the reporting database
- The end to end process takes about 15minutes