

# V L A D I M I R   B E Y D E R

PRINCETON NJ, 08540

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## DATABASE DEVELOPER, SYSTEMS AND DATA ARCHITECT, DEV LEAD

Highly accomplished application developer and tech lead with extensive technical and business expertise. Reliably spur evolution of products and services delivered to IT Clients, while meeting the challenges of distributed multicultural teams, timelines, and resource availability. Hands-on. Passionate about system design and development, with emphasis on building solid and robust implementations through a strong foundation in backend and data technologies. Have a proven record of delivering applications in a variety of fields. Enjoy working effectively as a lead, team member or individual contributor. Multilingual in English and Russian.

### CORE COMPETENCIES & TECHNICAL PROFICIENCIES:



- Application and data architect
- Application database administrator (DBA)
- Agile Scrum, Kanban, Waterfall and full SDLC
- Multiple programming languages
- Data Modeling: entity relational, anchor, current, temporal, bi-temporal, graph
- Application and Backend DB developer
- Multiple SQL and NoSQL database vendors
- Data warehousing (DW)
- Data governance
- Systems integration, ETL/ELT
- Business analysis and requirements
- Alternative investments, Real Estate (RE) and Private Equity (PE) fund accounting and calculations

### SYSTEMS, APPLICATIONS & TOOLS

<b>Databases:</b>	Oracle, Sybase, Microsoft SQL Server, Ingres, MS Access; Exposure to MongoDB, PostgreSQL, AWS Redshift, AWS DynamoDb, Snowflake
<b>Cloud technologies:</b>	AWS: S3 storage, EC2, DynamoDb, Lambdas & Step Functions
<b>Data Modeling:</b>	Erwin, ER-Studio, Unified Modeling Language (UML)
<b>DW, BI and ETL/ELT:</b>	ALTERYX, SNOWFLAKE, Golden Gate, SSIS, DATA STAGE, INFORMATICA
<b>Languages and Tools:</b>	SQL, PL/SQL, T-SQL, UNIX Shell, Python, Java Script, C/C++, Java, Visual Basic; HTML, XML, Git/GitHub, ClearCase, and Perforce

### PROFESSIONAL EXPERIENCE

**STATE STREET, Princeton, NJ**

**May 2022 – present**

**Vice President, Lead Developer, SME.**

Lead developer on strategic re-tooling project for the Real Estate Fund Accounting Calculation System for a Major Client:

- Achieved better modularization of the code by defining standards for module and data flow structures of the Calculation Workflows using Alteryx macros with the goal of compatibility and re-usability of modules.
- Implemented Unfunded Commitment module and feed to Investor Correspondence module (PL/SQL, Investran, T-SQL, Alteryx) for Draw Down calculation.
- Documented analysis of Distributions, Contributions, NAV and FEE calculations resulted in the proper decomposition into reusable modules for Alteryx implementation.
- Designed a database to support business process around the Alteryx Calculation Workflows and future feeds to SSCD.
- Participated in a continuous support and enhancement of the DHUB – State Street back-office trade settlement, reconciliation, valuation and accounting system.

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**BROADRIDGE, Jersey City, NJ**  
**Dev Lead – Consultant****May 2021 – May 2022**

Led a team of data engineers in implementation of a data flows to deliver data from the company's Fee Calculation Revenue and Billing System (Revport) to a major Client. The ELT flows were configured within in-house server-less pipeline framework implemented in AWS. Delivered to the Client in time within budget.

- Monitored changes and technically reviewed the requirements for 7 flows that produce data for the Client.
- Provided day-to-day and technical guidance to 5 developers in the team working on the 7 flows.
- Documented constraints of the capacity and technical capabilities of the framework, performed POCs of the enhancements.
- Enhanced performance of the Extractions step of ELT by structuring processing in parallel in Shell Script cutting execution time from ~20 to under 3 hours.
- Delivered custom pipeline components and enhancements:
  - AWS Redshift SQL scripts and stored procedures executed within the framework (Glue, Step Functions),
  - Shell Scripts wrappers (EC2, Bash, CLI) to accommodate the pipeline's server-dependent touch points,
  - Redshift custom user-defined function (Python, Lambda) to augment Redshift, and to communicate via events with other systems/flows/steps/ touch points,
  - Monitoring, notifications and metadata reporting shell scripts pipeline (Bash, EC2, DYNAMO DB CLI).
- Effectively served as liaison with upstream and downstream teams, with BA, QA and DEVOPS teams, and participated in status reporting to senior management.
- Organized development process by embracing Agile Kanban principles (though not a formal Scrum) and JIRA Kanban board of the team tasks/stories, and conducting daily stand-ups. Responsible for GIT repository for the project components and technical documentation.
- Organized and participated in testing of the data transformations executed in the framework, using AWS Console to access Step Functions, Lambdas, Dynamo Db, EC2, S3, etc.

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**STATE STREET, Princeton, NJ****2/2012 – 4/2021****Vice President****System and Data Architect, Lead Developer****11/2018 - 4/2021**

As SME and lead developer/architect implemented data strategy solution for private equity (PE) and real assets (RA) data integration and data warehousing, using enterprise-wide data service platform (ESP). Ensured data was fed from fund accounting, portfolio management, general ledger, and other internal systems, then integrated, transformed, enhanced, and delivered or presented in a holistic unified view to the business and diverse groups of clients.

- Designed and implemented ESP structures, objects, and transformations from data inception to presentation, addressing evolving business data and reporting requirements. Maintained feeds from a variety of sources (Oracle, Sybase, MS SQL), systems (Investran, Invest AI), and feed methods (Golden Gate, SQL Server Integration Services (SSIS) with file transfer, direct DB connection, Linked Server, etc.) supported by ESP. Monitored and maintained physical layer (indexes, partitions) to enhance performance.
- Increased efficiency of data consumption by using ESP 's asynchronous and parallel processing features:
  - Enhanced SSIS packages and corresponding MS SQL extract stored procedures ensuring that multi-million records INVESTRAN feed files were partitioned and split into manageable chunks of ~ 1m each.
  - Revamped PE INVESTRAN incoming files consumption processing UNIX shell script, ensuring chronological order of chunk files processing, effective error condition handling, and efficient notifications.
- Improved performance and reduced downtime of data warehouse PE ESP DB table data cleanup process. Suggested, tested the approach, and implemented PL/SQL script for trimming AS-AT bi-temporal dimension using Oracle partition swap functionality.

- Implemented an ESP data flow and feeds for real assets (RA) trial balance report that included replication from RA core DW to the staging Sybase environment, Golden Gate feed to ESP, ESP subject area categories and marts, and ESP IRD reporting.

## 2/2012 – 11/2018

As SME and lead developer/architect Enhanced and maintained the RA and PE fund Accounting Calculations Platform handling multiple funds performing complex limited partnership agreement (LPA) investor-level calculations, including European (by fund) and American (by Investment) style Waterfall calculations with large volumes of detail transactional data. Led a team of onsite, offsite and offshore developers.

- Ensured successful implementation of the system and interoperability and integration of the component subsystems by providing consistent and coordinated design solutions for the database layer across all subsystems (GUI, calculation engine, operational data store, reference data, and reporting data warehouse). Led and was a hands-on participant in all development.
- Ensured accuracy and near-real time delivery of calculation results and dimension changes to the data warehouse for review and reporting, and delivery to fund-level ledger and investor services subsystems. Responsible for all aspects of the DW subsystem including escalated production support, maintenance, data administration and integration with BI subsystem.
- Designed and implemented (Oracle, PL/SQL, Oracle Loader, shell scripting Oracle Scheduler) reporting data warehouse, including Dimension ETL, Dimension maintenance, DW data feeds, and DB maintenance jobs. Responsible for all aspects of the DW subsystem including escalated production support, maintenance, data administration, etc. Specifically:
  - Ensured accurate historical data migration from prior system.
  - DW data model accommodated all varieties of historical data (NAV and CVNI, drawdown, distributions, fees, expenses, etc.) and newly generated investor-level fund accounting data. At the DW foundation was a standard Star schema which combined fact tables (by data level) with common slowly changing dimensions (SCD).
  - The Star schema model was extended to accommodate dimension-only reporting and Snowflake or profile type details.
  - Dimension bi-temporal design allowed for “as of now” and/or “as of point of time” reporting.
  - Designed and implemented automated fact table transformations to accommodate fund investor splits and merges. System handled this via reporting solution and historical transformations via data solution with audit trail.
  - Designed and implemented the DW loads infrastructure (custom ETL) to deliver facts-generated data to DW for reporting. The infrastructure allowed for near-real time data delivery.
  - Led design and implementation of DB maintenance jobs including mat view refresh, DB tables, partitions, indexes, and space maintenance for operational data store (ODS) and DW.
  - Designed and coded inter-system communication interfaces between subsystems. Designed structures for incremental DW dimensions update by ETL. Designed and implemented ETL jobs in IBM DataStage.
  - Provided input, guidance, and support to BO reporting team in defining universe for DW and structuring queries and reports. Ensured different flavors of reporting were available for ad hoc power users: “As of Point of Time”, “Dim as of now”, “Dim as of History”, etc.
- Participated in functional requirements analysis and design sessions for upgrading fund accounting platform to meet the evolving business needs of existing funds and to on-board new clients.
- Designed enhancements for the data models (Erwin) to align with the new fund and client requirements.
- Initiated, coordinated, and led development and deployment of the database objects, backend code enhancements, and new functionality, reflecting on-going changes for existing and new clients.
- Led team in design, implementation, and rolling out a new Calculation Engine Subsystem (Oracle, PL/SQL, XML, JBOSS, Micro Services, JAVA, and Python) which provided the system with significant flexibility while reducing the amount of new coding required. This greatly enhanced reusability of components and simplified implementations of client-specific waterfall calculations. The platform reduced the time required to on-board new clients or modify the calculations significantly.
- Participated in functional requirements analysis and design sessions for upgrading fund accounting platform to meet the evolving business needs of existing funds and to on-board new clients.

- Led the SDLC including quality assurance (QA) and user acceptance testing (UAT) results analysis and production release planning.
- Participated in formal Scrum team as developer and/or subject matter expert (SME). Wrote clear stories, tasks, and acceptance criteria for re-factoring efforts.
- Provided client business support 24x7. Collaborated with users and production support team on problem analysis and resolution.
- Analyzed web GUI and Calc Engine performance to identify bottlenecks. Optimized system performance by tuning DB queries and database backend PL/SQL code, proposing and implementing DW enhancements.
- Partnered and cooperated with GUI and reporting teams. Provided input, guidance, and support in integration with DW and Calc Engine.
- Mentored new team members and assisted in understanding the business and technology of the system.

### **MORGAN STANLEY, New York, NY**

**1999 – 2/2012**

#### **Senior Technical Lead and Architect**

Principal architect of the real estate funds investor level sub ledger, calculations, and reporting system. Provided Morgan Stanley (MS) real estate controllers with an analytical and calculation tool for the MSREF (currently – Northern Star) family of funds. Led a team of onshore and offshore developers in all tech aspects of the system development and maintenance, re-engineering, enhancements, and prod support.

#### **2008 – 2012**

- Co-authored and patented the technology which was a key intellectual property asset acquired by State Street as part of the function transfer from Morgan Stanley, including the fund Accounting Calculations System.
- Collaborated with fund controllers to define, discuss, and formalize evolving user and system requirements. Presented models and processed feedback. Acted as liaison between IT teams and the business in defining deliverables based on IT resource availability and client deadlines.
- Ensured stability, continuity, and consistency of the implementation through initial development (SYBASE, T-SQL, C++, Excel, VB), subsequent re-engineering to accommodate increasing business complexity and data volume of the global funds (Oracle, PL/SQL, Oracle Loader, shell scripting Oracle Scheduler), and lift-and-shift to State Street.

#### **2000 – 2008**

- Designed and implemented databases and backend functionality for the real estate fund sub ledger and calculations engine. Reviewed, discussed, and clarified user and system requirements, and formalized tech specs.
- With minimal resources (three to six people) initially developed and then scaled up the system, processing and support to a total of nine domestic and international funds, with ever increasing functionality, complexity of algorithms, and volumes of data.
- Provided Sybase DBA support for development and production environments of the MS financial controllers division's global multi-tier proprietary distributed data warehouse hosting equity data, general ledger, FX, REPOS, PNL, balance sheet, and multiple sub-ledgers, including ABACUS data.
- Developed and maintained Erwin data models for the MS proprietary distributed data warehouse data marts, along with T-SQL and Unix shell scripts for cross platform ETL transfers. Maintained Autosys jobs. Monitored and troubleshot data feeds. Maintained metadata for the data warehouse's reporting client.

#### **1999 – 2000**

- Executed application and database design and coding of the IT inventory tracking system for Y2K analysis and remediation.

#### Other:

EXEL Reinsurance, Bermuda; MetLife, NJ; Republic National Bank, NY; Sandata Technologies, NY;

### **EDUCATION**

**Master of Science**, Computer Science, minor in Applied Mathematics, with honors, GUBKIN RUSSIAN STATE UNIVERSITY OF OIL AND GAS, USSR

#### **Patent, Recent Trainings and Certifications**