Case Study:

Eliminating API Delays to Enhance Core Banking Performance with **VPC's Integration Solutions**

Client: A Leading Credit Union
Solution Suite: VPC Core Optimization Services | Technical Integrations
Core System: Fiserv DNA

Challenge

In September 2024, a leading credit union experienced significant performance issues with their core banking system. Several Core API requests, including critical authentication and transaction services, were delayed by as much as 18-20 seconds—well beyond the acceptable threshold of under 2 seconds. This latency risked internal inefficiencies and had the potential to disrupt member-facing services.

Key issues identified included:

- High response times on API transactions
- Inefficient SQL queries, particularly within the Core API authentication process.
- The use of numerous suboptimal API requests placed unnecessary strain on database and server memory, further exacerbating latency.

These challenges required a comprehensive review of both technical and process-based inefficiencies to prevent long-term performance degradation.

Solution

VPC was engaged to perform a detailed analysis of the credit union's core systems, leveraging its deep expertise in Fiserv DNA optimization. The following steps were taken to resolve the latency issues:

1. **Comprehensive Log and System Review:**
    - VPC conducted an in-depth analysis of API service logs to identify performance bottlenecks. By reviewing the logs, VPC pinpointed underperforming areas, examined specific use cases with significant performance issues, and evaluated the current system design to identify areas for optimization.
2. **SQL Optimization:**
    - By reviewing Oracle AWR reports to identify performance bottlenecks. A problematic SQL query related to user authentication was identified as consuming significant database time. VPC provided guidance regarding suboptimal query execution paths and the most optimized query plan, reducing response times and ensuring efficient query execution.
3. **API Transaction and Workflow Fixes:**
    - VPC recommended restructuring the API request flow, handling transactions sequentially to prevent memory overload and ensure faster response times.

4. **Custom Recommendations for Long-Term Stability:**
    - VPC provided a long-term recommendation, including replacing inefficient system status checks with optimized Database Handshake Requests. This ensured critical system health checks were completed without adding unnecessary API traffic.

Results

By implementing VPC's solutions, the credit union experienced immediate and measurable improvements in core system performance:

- **Reduced API Latency:**
  Transaction response times were reduced from 18-20 seconds to under 2 seconds—well within the acceptable threshold.
- **Optimized Resource Use:**
  Memory and CPU usage stabilized, resulting in faster processing and fewer instances of system slowdown during peak hours.
- **Enhanced Stability:**
  By optimizing SQL query plans and restructuring API request handling, the core system is now equipped to handle increasing transaction volumes without performance degradation.

Key Takeaways

- **Proactive Core Optimization:**
  VPC's technical expertise in Fiserv DNA enables it to identify and resolve performance bottlenecks before they escalate into critical failures.
- **Custom Technical Solutions:**
  VPC tailors its recommendations to the specific architecture of financial institutions, ensuring long-term performance gains.
- **Refined Guidance and Targeted Strategy:**
  This solution offers a framework for addressing similar operational challenges, tailored to each financial institution's unique environment. VPC provides expert insights and strategic guidance to help clients address specific issues as they arise, positioning us as a trusted partner in operational optimization.

Conclusion

By engaging VPC, the credit union successfully optimized its core system performance, ensuring that latency issues were swiftly addressed. The system is now equipped to handle future demands, highlighting the value of VPC's proactive, tailored solutions for financial institutions looking to enhance operational efficiency and member satisfaction.