

# University of Washington

Databridge capabilities deliver dramatically improved data replication from mainframe to Enterprise Data Warehouse.

## Overview

The University of Washington (UW) is one of the world's preeminent public universities. Ranked number 13 in the world on the 2017 Academic Ranking of World Universities, UW educates more than 54,000 students annually.

## Challenge

UW relies on its Unisys mainframe and DMSII database for key applications, such as financial systems and student information systems. An in-house developed DMSII extraction component was introduced in the mid-1990s to enable more effective operational data access by easily replicating large volumes of mainframe-based data to relational databases, such as SQL Server, Sybase, and Informix. Eliminating customized mainframe reporting,

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## ELIZABETH RUNKLE

Technology Manager  
University of Washington

data extraction and file transfer routines saves times, improves the flexibility and quality of the data being made available, and reduces the burden on processing resources. The data is vital for budget setting and analysis, as well as course planning.

After many years of successful operation, when UW upgraded its DMSII system, it ran into unexpected problems. Elizabeth Runkle, Technology Manager for the university, explains the problems: “We were suddenly experiencing issues with replicating compact data sets on the relational database side. Records were dropped and we had a real integrity problem. We also noticed that replication was taking about seven hours after the upgrade. This was unacceptable for us and we suspected some rigorous data reorganization was needed.”

A test of the replication after adding the Micro Focus® Databridge relational database client demonstrated a solution to the data replication integrity issue, and Runkle and the team embarked on a project to introduce Databridge across the board.

## Solution

Supported by Micro Focus Professional Services, Databridge was implemented on most key systems. Student records are held on the



## At a Glance

### ■ Industry

Education

### ■ Location

Washington, USA

### ■ Challenge

Following a DMSII upgrade, UW discovered that long replication times were negatively affecting data quality and productivity, which required changes in data replication configuration and set-up.

### ■ Products and Services

Micro Focus Databridge

### ■ Results

- + Dramatically improved system performance during data replication
- + Improved data quality through new Databridge filter generation capabilities
- + Reduced operational risk through a multi-discipline implementation team

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**ELIZABETH RUNKLE**  
Technology Manager  
University of Washington

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mainframe, and replicated into both an Enterprise Data Warehouse, and a Web Services database where the data can be accessed and provided to campus-consuming applications. The data is strictly regulated and private data is not passed to downstream systems, or it is masked. Transferring the data to more modern systems allows departments to massage, report, and use the data more constructively with Tableau-driven or custom reporting.

Runkle comments: “This flexibility is especially important to us as we need to provide census information at the start of each quarter as part of a federal requirement. During our training with Micro Focus Professional Services we learned that the newest components of Databridge would not only solve our data integrity issues, but it also had the potential to really improve our system performance.”

The team discovered that the new multi-threading processes, in conjunction with optimizations of updates provided by customizable filter generation, contributed significantly to increased system throughput. Different stakeholders within the university have different data requirements and the Databridge filter generation capability enables the team to customize the results based on specific requirements to make data interpretation and analysis as easy as possible. Runkle: “We used the new Databridge filter generation code to interpret our data and were able to eliminate the replication of 13 million data rows as a result. This, combined with the Databridge multi-threading improvements, gave us a dramatic performance enhancement. By being more

intelligent about the data and how it is replicated, we moved from a seven-hour data replication to just 90 minutes for the University of Washington Student Database.”

Over 50 Databridge-managed replications are executed to a variety of SQL Server target databases and continuous audit log tracking is in place. Multiple staff were involved in the Databridge client implementation. Collaborative workshops were held weekly to migrate all applications in a phased manner allowing the team to meet the delivery schedule and budget. Spreading implementation expertise among more employees helps reduce operational risk and the team established great partnerships.

### Results

The increased processing performance was clear immediately, and one team was particularly pleased, as Runkle comments: “The Student Information Systems team reported receiving the data for the fall quarter initial student account setup in just nine minutes. The previous year the same activity had taken over 11 hours. This meant the data was available for all campus users in the Enterprise Data Warehouse much sooner than before and all the heavy load data activities were processed seamlessly through the end-user databases.”

She concludes: “The speed and reliability of data processing is just amazing. Our stakeholders need their data quickly, especially for federal and college reporting purposes. We are in a continuous audit cycle and need near real-time data which is exactly what Databridge delivers.

The team responsible for the Databridge client implementation received a well-deserved ACE award in recognition of their Achievement, Collaboration, and Excellence. We could not have done this project without the excellent support from Micro Focus as they helped improve our data quality and replication processes, as well as updated our technology.”