Providing Data to Distributed Tests

AIQ is a distributed test system. Multiple virtual users run in a TestNode and tests run across one or more TestNodes. Tests often need unique data for each virtual user. For example, a test of a banking system needs a separate and unique customer number for each virtual user running in the test. AIQ offers 3 solutions to meet your testing needs.

Common Test Data, No Coordination

AIQ's CSV DPL sends a copy of a single CSV file to each TestNode running a test. Each virtual user uses data in the CSV file. Within a TestNode each user shares the CSV file and shares a single pointer to the row of data in the CSV file.

CSV files are distributed to each TestNode

To use this configuration, use the Appvance Scenario Editor to configure a Test Use Case that uses a CSV DPL /Hash DPL. Set the DPL Action setting to Get Next Row of Data. When you run the test AIQ will send a copy of the defined CSV file to each TestNode. AIQ creates a single DPL for all virtual users in the TestNode. The DPL has a raw pointer. The pointer is initially set to the first row of data. The DPL reads the first row of data and injects the data fields into the test script. The DPL moves the pointer to the next row of data. At the last row of data, the DPL moves the pointer to the first row of data.

Unique Provided Data

Many times the test architecture requires each virtual user to use unique data. For example, when testing a banking system each virtual user needs to log in to the banking application using its own user-id and password. AIQ provides the Unique DPL to provide each virtual user's DPL with its own data. The data comes from a single CSV file. Each virtual user uses its local DPL to communicate over a TCP/IP request to a single Unique DPL service. The Unique DPL reads from a single CSV file.

Unique data is distributed to each virtual user

The communication overhead for Unique DPL is minimal. Appvance staged tests up to 100,000 virtual users and observed less than 1% network bandwidth overhead and less than 20-millisecond wait times when using UniqueDPL.

Running a Unique DPL scenario using a CSV file which has duplicate rows

Consider the following scenario to understand the unique DPL functionality.

Suppose the user is creating an Appvance Designer script with DPL enabled. The created DPL contains duplicate values for the field that was data enabled and considers the scenario for 2 executions and 2 users and it should have multiple test Nodes. The Unique DPL works in such a way that it will not validate whether the CSV file has repeated rows or not, that is, it does not check for the content of the rows. In AIQ, the Unique DPL functionality is that it will make sure that among all running users in all running TestNodes in a single execution, each row of the CSV data file will be used only once until all rows available in the DPL are used.

Note: Please make sure the CSV file has unique data rather than duplicated rows.

Transactional Data Provided To Each Virtual User

AIQ's RDBMS DPL enables tests to receive operational test data from a relational database. For example, configure a MySQL instance to serve transactional data to the virtual users. One Appvance customer stored invoice data for a test of an Enterprise Resource Planning (ERP) system. A stored procedure (StoredProc) in MySQL provides invoice data to the virtual users, including part numbers, part costs, quantities, and shipping details. The StoredProc enables each virtual user to receive its own unique data from the common data store.

Transactional data is distributed to each virtual user

The above example showed how to use data from a CSV file. DPLs work in the same way with data from a Relational Database (RDBMS) and other data-generating objects. See the DPL Recipes section for details.

If you have any feedback on this topic, please contact us at documentation@appvance.ai

Last updated: October 15, 2026

Revision #5
Created 2026-07-31 15:09:33 UTC by Admin
Updated 2026-10-15 15:45:09 UTC by mmora