

Defect free migration of TPF to zTPF for a leading GDS

Business Need

- Migration from legacy TPF to open systems z/TPF platform.
- Key applications to be migrated:
 - Passenger Services System(PSS)
 - Passenger Name Record Complex systems (PNR)

Client

The client is a leading Global Distribution System (GDS) providing distribution, technology, payment and other solutions to the travel industry

Challenges

Complex architecture of the existing system, driving significant challenges to the implementation:

- Multiple dependent projects to be integrated into the overall z/TPF Migration program for successful completion
- Unavailability of resources was an additional challenge

Solution Offered

Single source - maintaining one set of source code that will run on both TPF 4.1 and z/TPF

- Defining/updating rules in TPF Toolkit: IGT team worked on creating their own rules in TPF Toolkit that required some replacements and auto fixes
- Removed compilation errors and warnings for TPF4.1 and z/TPF LINUX
- TPF4.1 production loads: Groups of remediated application segments were tested and moved to the TPF 4.1 production environment in smaller packages.
- Debugging (4.1 and z/TPF Regression Test)
- Prepare for implementation of code on z/TPF Environment: This includes Pro-active involvement by the IGT z/TPF Migration team in any diagnostic needs during implementations on z/TPF Test and copy systems

Best Practices

Leveraging existing knowledge of TPF systems

Utilizing a proven approach to handle large-scale z/TPF Migration

Developing a well defined migration plan (utilizing phased approach)

Testing

Repeatable test processes were developed that were used to test and Regression test the single source application code throughout the z/TPF upgrade. This process was executed at various intervals during the Program.

- Baseline functional 4.1 test executed against the as-is TPF 4.1 environment
- TPF 4.1 regression test executed after the z/TPF single source modifications were completed
- z/TPF regression test executed in the z/TPF environment once the operating system updates were applied

Benefits

- Migration to zTPF with **99.99%** success rate with up to **10%** cost savings
- **96,000** prebuilt functional testing scenarios resulting in less time to market
- **40,000** TPF modules single sourced in 9 months
- Reduction in license cost and maintenance and upgrade cost
- Innovators of customized accelerators
 - Industry's first "TPF Cross Functional Impact Matrix" enabling quick identification of dependency of each program on multiple functions
- Utility and EXECs to ensure data integrity
- Migration of **26** programs per month per developer