

Case Study



ITC MAINFRAME-COMPATIBLE TECHNOLOGY HOSTS MERGED MEGABANK'S TEST & DEVELOPMENT, FREEING RESOURCES FOR PRODUCTION



In just two weeks, Information Technology Company, LLC (ITC) migrated mission critical test and development work from a fully utilized IBM mainframe to a fully compatible standalone system, facilitating a complex Bulgarian bank acquisition.

Large modern banks are complicated organisms providing many interrelated applications spanning back-end databases; middleware linking them to front-end servers; and intricate broad networks supporting teller stations, ATMs, and mobile apps. And no matter that banks may look mostly the same, internally they reflect their origins, history, and evolution, usually spanning many decades.

Since banks began migrating from paper to technology, IBM has been at the forefront of the industry. Given the need for ultra reliable services and processing, it's not surprising that for decades so many banks have used IBM mainframes, introduced in 1964 as System/360 and now branded IBM Z. Although more than six thousand spoken languages divide the world, these workhorse processors have been the single global platform for diverse industries since their introduction in 1964, reflecting from its early days that IBM has been truly an international business.

And so it came to pass that when OTP Bank's Bulgarian subsidiary DSK Bank purchased SG Expressbank in 2019, an IBM mainframe was at the heart of customer services offered. Established in 1951, with exclusive rights to receive deposits from individuals, DSK Bank makes loans to the state and provides both consumer and housing loans.

Consider combining two such structures: it's well understood that in general, company mergers are challenging. Of course, the larger the organizations involved; the more correspondingly complex issues arise. And of necessity, joining banks involves synchronizing everything done into a unified whole.

Before the merger, DSK Bank's Z mainframe complex, with 42,000 MIPS on the floor, was comfortably running at 97% utilization; not unusual for such systems supporting batch jobs, online transactions, ATM/home users, and test/development/architecture work. There was clearly no flexibility or capacity for new developers, system administrators, and testers to have a separate mainframe under their control.

ZD&T is a mighty mainframe with 256GB memory and 16TB storage, emulating up to eight IBM Z processors, each of which can be a CP, IFL, zIIP, or zAAP

After considering the usual high-priced alternatives such as upgrading the mainframe or adding one, the bank was introduced to ITC by financial industry leader FIS Global Banking, with whom ITC has had a long relationship.

ITC, with a long history of international work and experience with diverse languages, cultures, and geography, proposed a dedicated and fully compatible ZD&T system for offloading the bank's development/test images that were to be used for the new entity, thus freeing main system resources, increasing user flexibility, and avoiding downtime for backup.



MIGRATION STATS & FACTS

- 4** migrated systems
- 7** configured IP addresses: zOS, zVM, Linux, iDRAC, zKey, etc.
- 10** days to complete migration and integration
- 48** defined tape drives
- 672** 3390 logical volumes

Alan Croll, CEO of Virginia based M&A Tool maker, EKNOW, commented that, "Bank mergers are high-risk, high reward propositions that can take 36 months or longer to plan and execute; many track results well after the execution phase." To the contrary, spanning only two weeks, this project involved an ITC team on-site in Sofia delivering, assembling, provisioning a standard ITC ZD&T configuration to meet the bank's needs; installing system and application software;

migrating data and users; training systems/ operations and user staff; and verifying that for all stake holders, things were essentially unchanged from the original system.

The project was facilitated by a full-time translator and the fact that mainframe terminology is gratifyingly universal. After years of working with IBM mainframes, the bank IT staff easily understood the information presented.

ITC founder and long-time IBM mainframe advocate Stan King noted that DSK bringing in basically a new mainframe dedicated to the application development, without complexities associated with carving out and supporting an LPAR, was central to overall success. He added that it was essential for this "mini mainframe" with all required features and capabilities to stand-up quickly, providing immediate availability.

Rational ZD&T licensing, handled by an ITC-proprietary zKey™ Appliance, authorizes system use. This manages ZD&T license keys without geographical limitations, providing more flexibility for controlling license deployments.

ZD&T is in fact a mighty mainframe in its own right, built on a rock solid Dell server with 256GB memory and 16TB storage. A Linux app runs IBM Z instructions using interpretive execution with a cached JIT compiler; it can be defined with up to eight IBM Z processors, each of which can be a CP, IFL, zIIP, or zAAP. The bank's configuration uses three CPs, z/VM as Z image hypervisor, and three z/OS guest systems (two migrated from existing development images and one brand new zOS version). Going live after two weeks provided seamless migration of all data and functions with master control consoles, operators, and system programmers in unchanged environments, including 3270 terminal access requiring no retraining or adapting. It provides perfect mainframe fidelity.

Server hardware support is provided on-site by Dell 24x7 in Sofia, Bulgaria; ITC provides technical support and ZD&T assistance, also 24x7. A key aspect of support is Dell's iDRAC, a hardware feature providing remote control including power-on/power-off, diagnostic testing, filesystem repair, upgrades to the firmware, and other ZD&T features.

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