



# Flash Memory Offers Speed and Extensibility in Banking Applications

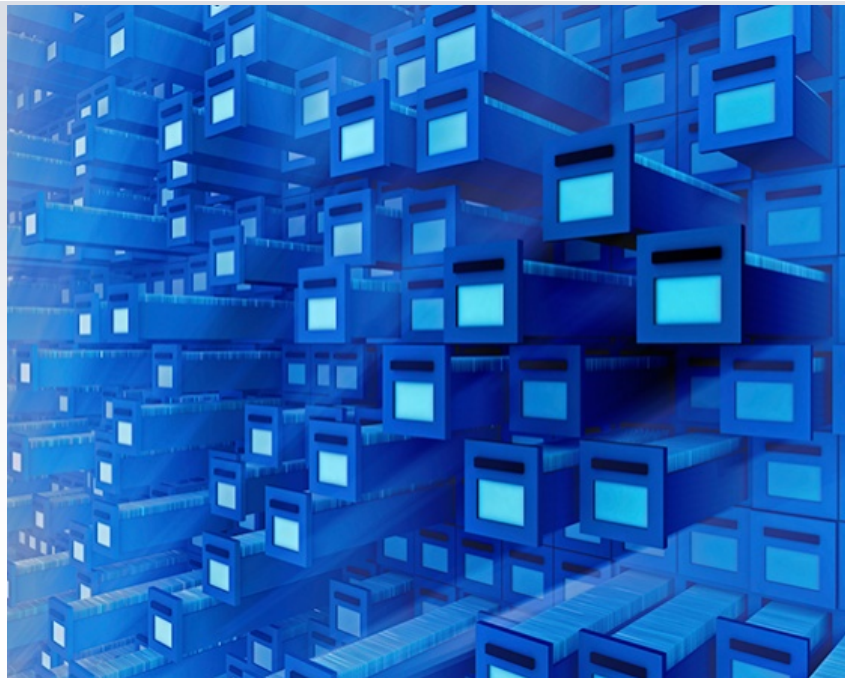
Woody Hutsell  
Manager, Portfolio Strategy, IBM



## *Improve Performance*

### **Databases**

- Logs
- Temporary Files
- Hot Tablespaces
- Entire Databases
- OLAP/OLTP/Key:Value
- Bare Metal/Virtual
- Real-time/Batch



# Industry Leading Databases Accelerated with Flash



## Improve Performance



DB2



SQL Server

- Standalone
- Clustered
- Always-On

ORACLE®

Oracle

- Standalone
- RAC

MySQL



Sybase

SAP HANA

*Flash is an equal opportunity database accelerator.*

*You name it, flash makes it faster.*



# Raiffeisenbank Austria d.d. Raiffeisen

*Core banking system performance improves significantly*

## 50 percent

reduction in ETL process time

## Zero impact

on existing environment during migration and testing

## POC

leveraged successfully to analyze and test the solution

### Solution Components

- IBM FlashSystem
- IBM Power Systems
- IBM SAN Volume Controller, Easy Tier
- IBM AIX
- Oracle
- Business Partner: S&T Hrvatska



**Business challenge:** Increased business and regulatory demands were putting pressure on the bank's data warehouse system driven by traditional storage, resulting in missed schedules and delayed reports.

**The solution:** A Proof of Concept (POC) using Oracle AWR and AIX performance tools impelled them to use preferred reads on the IBM FlashSystem virtualized on an IBM SVC.

**Results:** A significant reduction in the extract, transform and load process, schedules were back on track which freed processing time for new business needs, and performance gains were leveraged by SVC Easy Tier.



# SBI Sumishin Net Bank, Ltd.



*Internet-only bank enables rapid growth with rapid flash*

**25 percent**

better CPU performance

**30 percent**

reduction in SW licenses per core processor

**2.5x growth**

anticipated for internet accounts, from 2m to 5m



**Business challenge:** Leading internet-only bank headquartered in Tokyo with aggressive growth initiatives was concerned about scalability and high availability for its mission critical systems.

**The solution:** Partnered with IBM GTS for systems integration which included the IBM FlashSystem 840 as a high-performance tier along with IBM DS8870 and Storwize V3700.

**Results:** Improved performance for critical systems and a reliable, scalable core banking platform with 24X7 availability to meet growth demands.

## Solution Components

- IBM FlashSystem 840
- IBM DS8870
- IBM Storwize V3700
- IBM Power Systems
- IBM DB2
- IBM Tivoli & IBM WebSphere

# 10x faster

online transaction times

# 80 percent

reduction in power  
consumption

# 3 months

for return on investment

### Solution Components

- IBM FlashSystem
- IBM Power Systems
- VMware
- VDI



**Business challenge:** Competitive pressures demand best user experience, existing technology not meeting needs for speed and extensibility.

**The solution:** The IBM FlashSystem was implemented as Tier 0 storage for core banking services, replacing conventional disk storage and providing radically better performance and scalability for clients.

**“We were facing the prospect of a lengthy and costly software redesign, but we solved the problem rapidly and effectively by dropping in FlashSystem. It absolutely smoked, giving us a 90% improvement from day one.”**

- Steven Reis, Infrastructure Manager, COCC



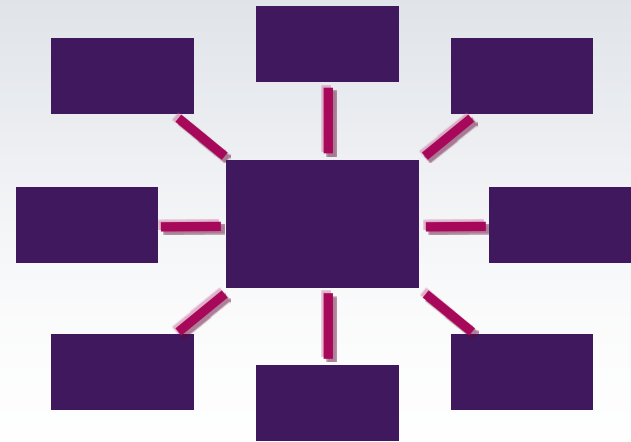
# Flash Accelerates VDI



## Improve Performance

### VDI

- Stateless
- Persistent
- Prevent boot storms
- Lower cost/desktop
- Better performance than real desktop
- Lower risk VDI installations





# Northeast US Commercial Bank

*Taking care of clients' needs with virtual desktop infrastructure*

## 178,000 IOPS

needed to meet challenging VDI workload requirements

## 12x better

user density than competing flash solution

## 12 seconds

boot time on a VDI, for a faster-than-local desktop experience

### Solution Components

- VMware VDI
- Atlantis ILIO
- IBM FlashSystem 820
- IBM San Volume Controller
- IBM Storwize V3700



**Business challenge:** Bank needed an end-to-end VDI solution that could support over two thousand desktops at 175+ branches and handle rapid growth.

**The solution:** Bank eliminated performance issues, improved VDI density and achieved high availability with IBM FlashSystem and Atlantis software.



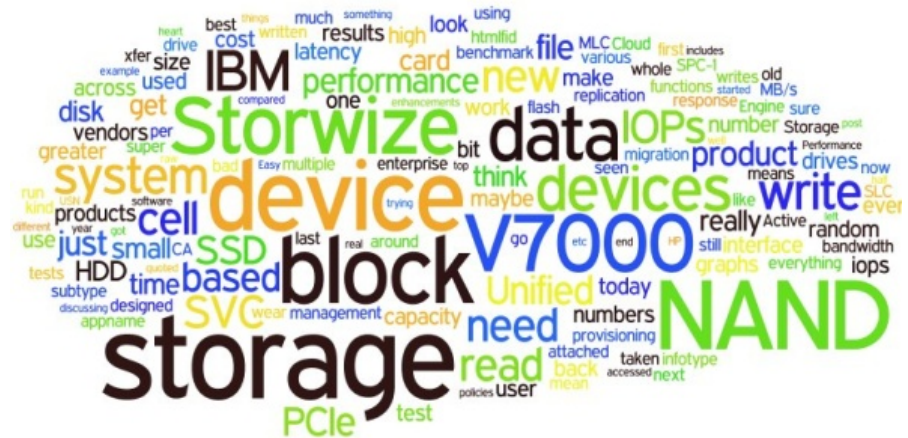
# All Flash Arrays accelerate your entire infrastructure



## Reduce Cost

### Infrastructure

- Centralized data centers
- Virtualized servers
- Storage services
- Uncertainty about which application to accelerate and when



# Flash accelerates mixed workload deployments



## Reduce Cost

### Improve Infrastructure Productivity

- **Consolidate applications** onto a platform with the capacity and performance scalability capable of supporting multiple applications
- **Avoid scale out hassle** with high density flash
- **Centralize and virtualize**, don't create new silos





## *Reduce Cost*

### Improve Worker Productivity

- **Users** wait less on slow applications
- **Developers** focus on new features and not tuning
- **System Administrators** spend less time installing
- **CIOs** spend more time creating value and less time fighting fires

# 71%

of CEOs rate their employees as their most important source of sustained economic value

The IBM 2012 CEO Study, surveying 1,700 CEOs



## *Enable New Opportunities*

### ReThink Your Business

- Create competitive advantage
- Launch new products
- React in real-time
- Improve customer satisfaction
- Grow with more concurrent users, orders, and personalization

