

银行主机应用架构热点问题探讨

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2011年10月30日,中国银行IT蓝图项目完美收官,标志着始于上世纪90年代末的银行数据中心大集中'运动'降下帷幕











What happened?

✓ 中国加入WTO,金融行业改革,银行IPO



✓ 互联网企业的兴起- Google, Facebook, Amazon, 淘宝, 百度, 腾讯, 新浪

✓ 2008年金融风暴



Google Analytics
You Tube

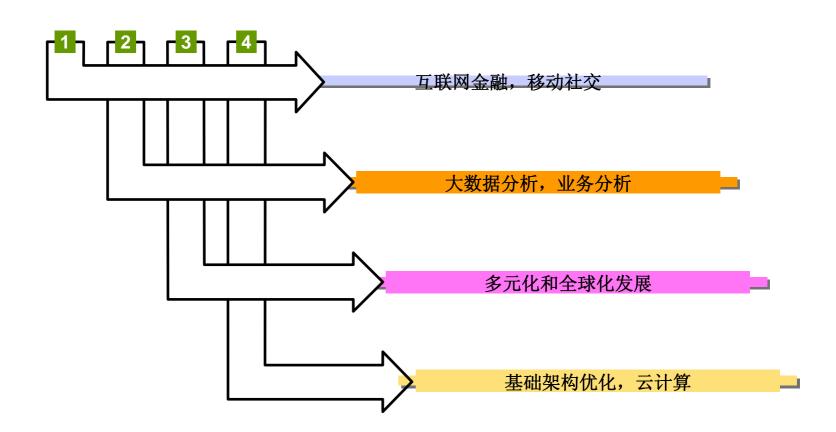
✓ Apple复兴,'创新'成为生存的必须



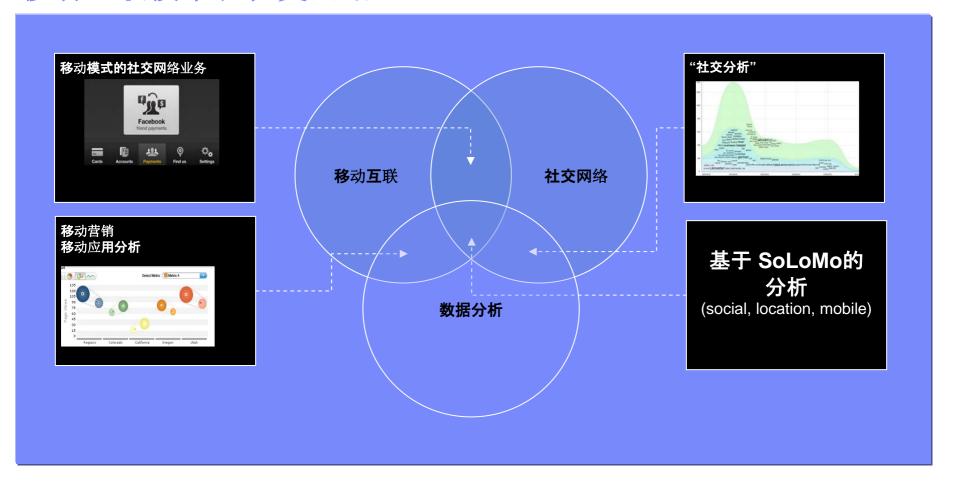
国内银行热点展望



核心银行系统转型,新一代...下一个轮回?

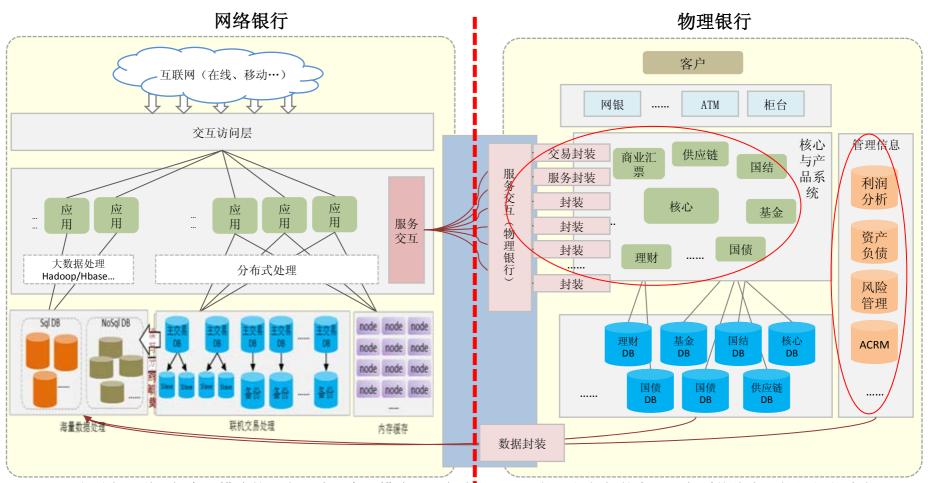


移动互联技术和社交网络



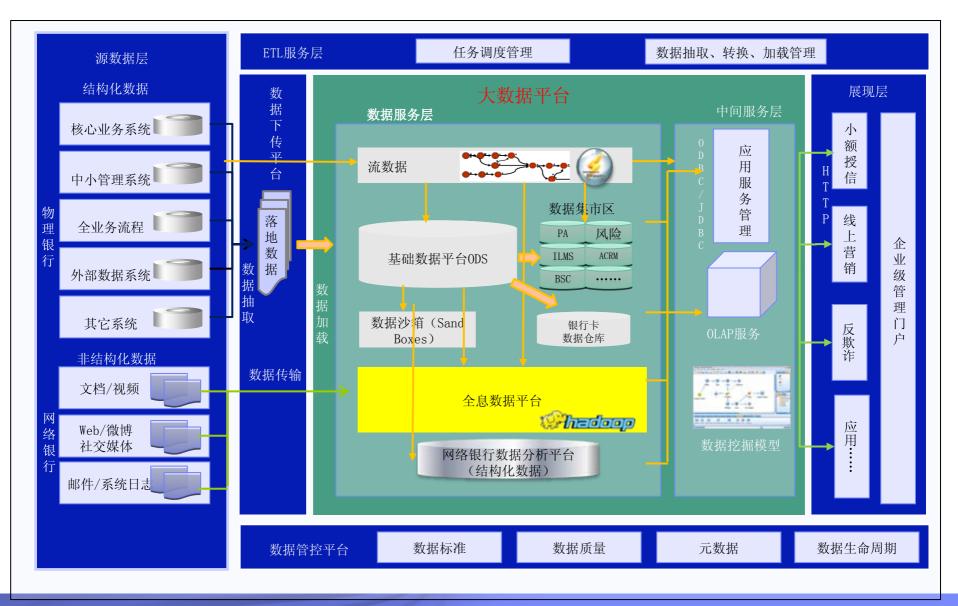
银行业未来的创新领导者--移动互联、社交网络及数据分析三个领域技术的有机结合

网络银行的建设思路

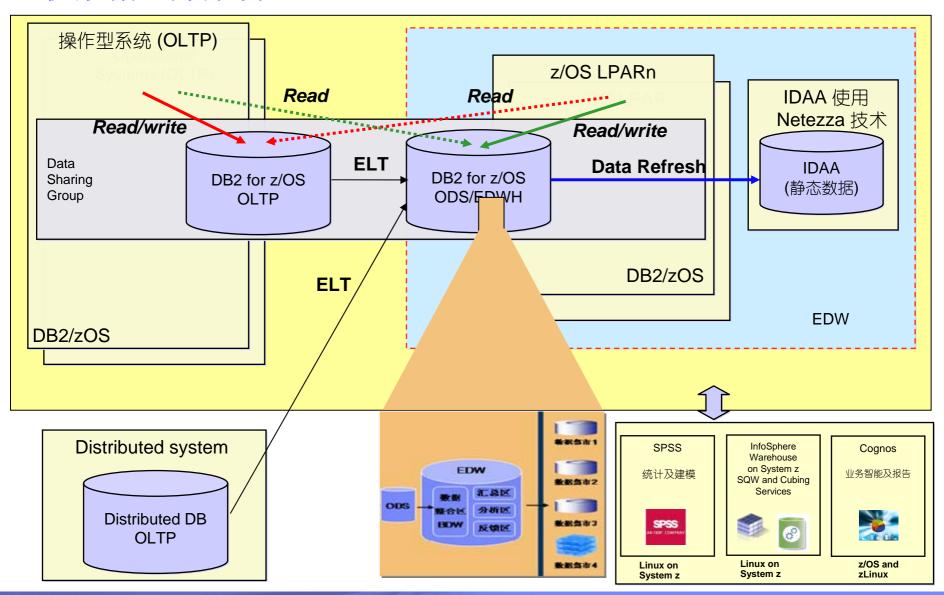


- 为适应互联网新商业模式的要求,涉及商业模式、业务流程以及网络银行创新的产品服务系统将在网络银行范畴内 进行独立建设。
- 通过将核心与传统产品系统的交易活动进行服务封装处理,供网络银行应用交互调用。为保证网络银行大数据营销的精准性,还需要统一实现对物理银行数据的融合分析挖掘。

大数据平台整体逻辑框架



主机数据仓库架构



GDPS Active-Active双活解决方案

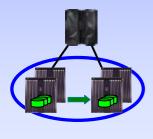
There are multiple GDPS service products under the GDPS solution umbrella to meet various customer requirements for Availability and Disaster Recovery

GDPS/PPRC HM

Continuous Availability of Data within a Data Center

Single Data Center Applications remain active

Continuous access to data in the event of a storage subsystem outage



RPO=0 & RTO=0

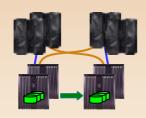
GDPS/PPRC

Continuous Availability / Disaster Recovery within a Metropolitan Region

Two Data Centers

Systems remain active

Multi-site workloads can withstand site and/or storage failures

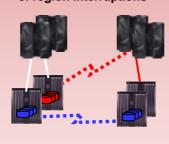


A/S RPO=0 & RTO<1 hr or A/A RPO=0 & RTO mins

GDPS/GM & GDPS/XRC

Disaster Recovery at Extended Distance

Two Data Centers
Rapid Systems Disaster
Recovery with "seconds"
of Data Loss
Disaster recovery for out
of region interruptions

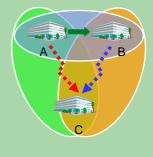


RPO secs & RTO <1 hr

GDPS/MGM & GDPS/MzGM

Continuous Availability Regionally and Disaster Recovery Extended Distance

Three Data Centers
High availability for site
disasters
Disaster recovery for
regional disasters



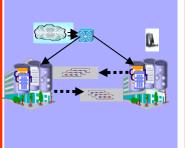
A/S RPO=0 & RTO<1 hr or A/A RPO=0 & RTO mins and RPO secs & RTO <1 hr

GDPS/Active-Active

Continuous Availability, Disaster Recovery, and Cross-site Workload Balancing at Extended Distance

Two or More Data Centers

All sites active



RPO secs & RTO secs

Components

Tivoli® – NetView®, SAz STG – System z, DS8000®, PPRC

GTS – GDPS control code, Services Tivoli – NV, SAz, SA-MP, AppMan STG – System z, DS8000, VTS, PPRC

GTS - GDPS control code, Services

Tivoli – NV, SAz STG – System z. DS8000.

Global Mirror, XRC

GTS – GDPS control code, Services

Tivoli – NV, SAz STG – System z, DS8000, MGM, MzGM

MGM, MzGM GTS – GDPS control code, Services Tivoli – SA, NetView

AIM - Multi-site Workload Lifelife

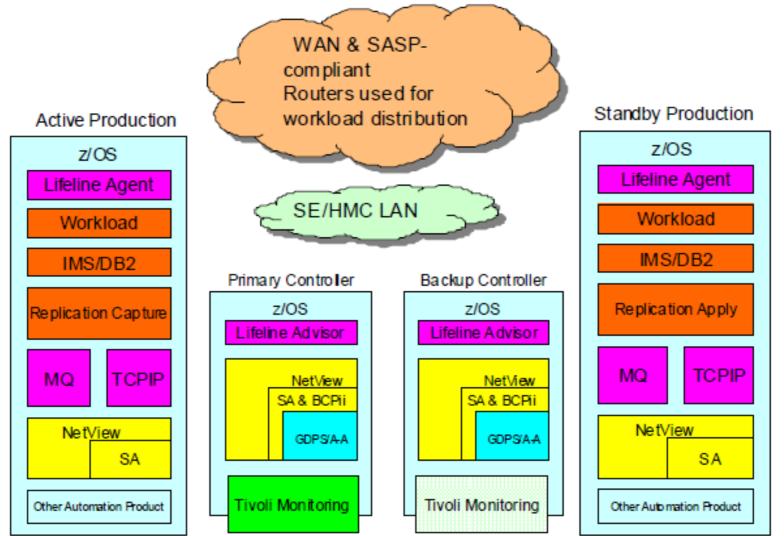
IM - DB2 &IMS replication

STG – System z, DS8K,
Global Copy

GTS – GDPS control code, Services

GDPS Active-Active 解决方案主要组件

GDPS Active-Active Key Components



未来银行

Think like a Retailer

Build extended ecosystem to support customer's everyday buying and paying needs



Act like a Manufacturer

Bring products and services at lowest possible cost to customers leveraging scale and efficiency



Operate as One Bank

Provide single, consistent and delightful customer experience in every interaction



Build Trust thru Risk Management

Protect customer by improving financial and fiduciary risk to gain complete trust



核心银行系统转型以支持业务转型



参考架构

Separation of UI multi-channel enablement for delivering consistent customer service across channels





Authentication or Authorization









such as, product managers

such as, risk managers

Business

Operations

Bank staff

Bank staff can dynamically execute banking scenarios by orchestrating available services from the architecture

Role specific access services (technology enablers)

View aggregation

Role based desktop mamt

Screen interaction man

Device enablement

Personalization services

Channel interfaces

Business applications retrofitted to use new or extracted business services in

shared environment

Business specific applications and services

Business applications and services

Legacy wrappers

- Customer sales and service Account opening
- Product management
- Campaign management
- **Pavments**

Service

gateways

Service

registry

- Billing and collections
- Credit and risk management Case management
- Product bundling
- Dynamic pricing Loan origination
- - **Back office** · Single customer view

Office productivity Front office tool services Middle office

> 3rd Partv applications

> > Data services

Integration adaptors

Internal operations

- Strategy definition
- Product design
- Banking operations

Integration layer provides the glue and brokers messages to avoid development of point-to-point interfaces

Service partners Card networks Corporate B₂B

Clearing and settlement

Separation of master, transactional, and operational data



Enterprise business services Such as, inquiries (customer, product, accounts), fees, and charges

Service mediation Process orchestration **Utility services** Complex event processing (Logging, Security, Audit etc.)

Event based routing

Information Gateways

Business rules Supporting (ETL, real time updates, and so on infrastructure

partners Credit bureau Market data Regulatory bodies

Data

Operational data

Structured Unstructured

> Master data Data services

Product Contract Customer master master master

Core transactional systems

Core transactional services

Demand deposit Term deposit Mutual funds Insurance Loans Fixed income Others Cards **Brokerage**

General Ledger

Enterprise services

Billing, finance, HR, statements, reporting

Analytical systems

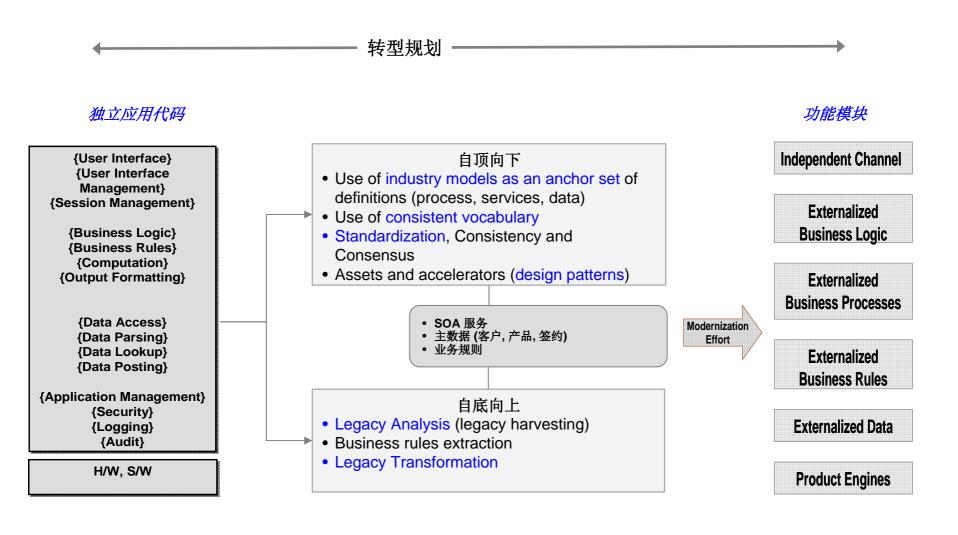
Reporting services

Data

OLAP

Data marts warehouse Core product engines provide transaction posting to accounting systems, scalability, and throughput

核心银行系统转型规划



国内银行热点展望



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