IBM

2020 金融資訊長交流會

領雲直行
佈局新時代

千里雲端，始於足下:
新世代金融雲端平臺架構與解決方案分享
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資深顧問

IBM LinuxONE 帶領金融上雲

- 安全
- 降低成本
- 開放創新
- 彈性擴充

- 雲原生開放開源
- 無所不在的加密
- 強化資安韌性
- 靈活的計算能力

Your private cloud

臺灣大型金融機構選擇IBM LinuxONE建置新一代數位金融雲平臺
– Highly Reliable and Trustful

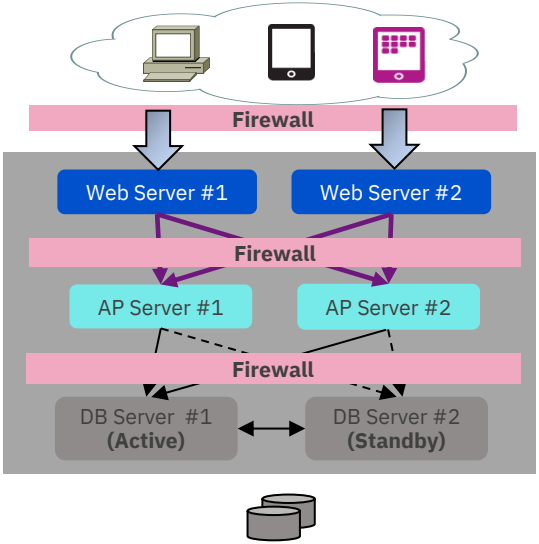
企業面臨的挑戰

- 資安成本過高
- 系統穩定性與可靠性
- 複雜的 IT 基礎架構很難備份和恢復 — 通常未測試備份
- 你能相信你的Linux基礎設施嗎？
- IT成本控制

IBM LinuxONE提供企業的價值

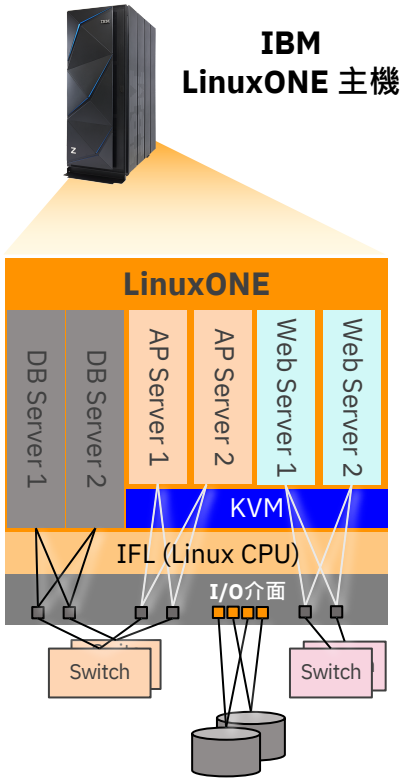
- 業界最高等級的穩定性與可靠性
- IBM 主機等級的資安-全時加密與安全容器SSC
- Linux 受益於 IBM 主機強大功能，大幅降低故障發生的機會，並且可以從故障中恢復，從而將業務中斷的影響降至最低
- 處理器、記憶體、抽屜和 I/O 的並行更換、修復和升級功能
- IBM GDPS® 和 IBM Storage Spectrum擴展的高可用性和災害復原解決方案™

階段1：引進 LinuxONE 雲平臺，建置於主中心/備援中心，提升資訊安全性能，降低總體投資成本 (TCO)



LinuxONE 雲平臺優勢

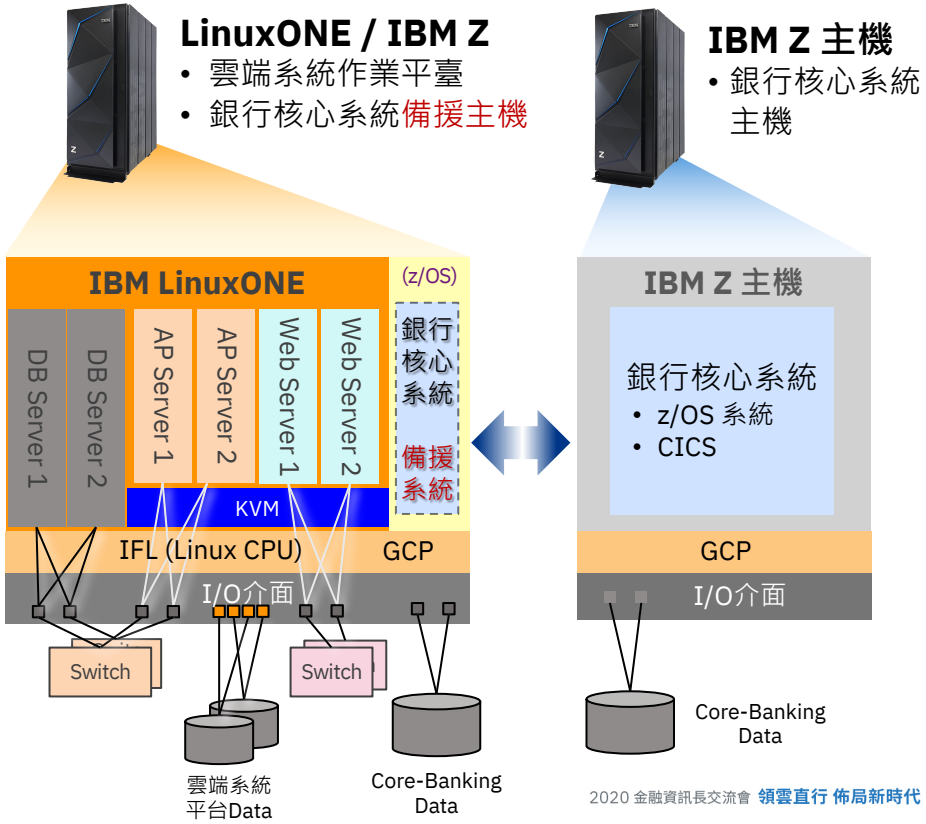
- 安全 (全時加密/EAL5+)
- 穩定（低故障率, MTBF>30年）
- 運維成本（低TCO）
- 效能（最快CPU, 80%以上高使用率）



- 逐步建置或遷移，將業務負載導入新建置LinuxONE雲平臺
- 提供優異穩定性與擴展性，大幅降低維運複雜度
- 善用CBU建置高效能低成本的同地、異地備援架構

階段2: 提升 LinuxONE 主機，增加 GCP 處理器以支援 z/OS 作業系統，據此建立為銀行核心系統（Core-Banking）的同地、異地備援主機架構

- 開啟LinuxONE上之MIPS服務，建置銀行核心系統的同地與異地MIPS備援架構
- LinuxONE 綜效 (IFL + GCP)
  - 投資保障（兼具銀行核心系統備援能力）
  - 具備優異的中、後台融合性能（SOI、SOR co-location）

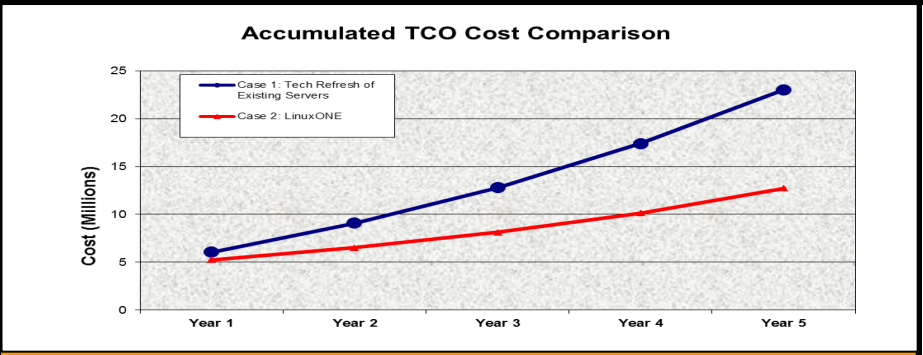


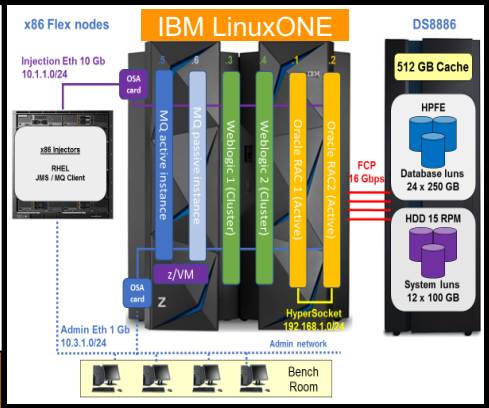
基於 LinuxONE 的核心應用雲平臺

TECHCOMBANK

業務挑戰

面對每年 30% 的業務成長, Techcom Bank 以既有 x86 / Windows / HP-Unix servers 來支援工作負載已不堪負荷, 基礎架構難以拓展, 管理複雜且效率低落. 既有的分散式Oracle環境在授權以核計價模式下導致大量支出, 同時增加系統管理成本





- 與既有x86 環境相比, 總體持有成本 (TCO) 降低 44% , 5年可省下$10M
- 全時加密與資安管理
- Java效能强化
- 風險降低
- 垂直規模提升

Scenarios Considered

- Tech refresh of existing distributed servers (x86, HP Superdome, POWER, etc.)
- IBM LinuxONE Emperor with 20 IFLs in Production and 6 for Dev/Test
- GDPS for disaster recovery management with Global Mirror between two sites

source: IT.Economics@us.ibm.com

- Server data based on customer specific actuals
- Pricing based on vendor published numbers
- Projections provided by IBM

英國氣象局利用 IBM LinuxONE 打造開放資料雲平臺
降低 75% Oracle 授權成本

業務挑戰

系統如何 24 x 7 不間斷地為全英數百萬客戶提供即時氣象資料？

效益

- 整合 Oracle 資料庫 – 15:1 consolidation ratio over x86
- 擁抱開放、靈活拓展
  - Docker/Kubernetes
  - 將 Oracle 資料庫轉換為 **50-60 個 PostgreSQL 資料庫**
  - **MongoDB**
  - 支援 Service Bus – 48:1 thread consolidation over x86

"我們可以將業務投注於LinuxONE – 有個可靠的資料交付系統, 我可以輕鬆入睡了

Graham Mallin, Executive Head of Technology, Met Office

選擇 IBM LinuxONE 支持金融服務上雲

- 1 IFL = 23 x86 cores[1]
- 27% TCO reduction[1]
- 40% less power[2]
- 1 trillion HTTPS per day[3]
- 2.4x Kubernetes containers per core vs x86[4]
- Scale out to 2.4 million containers in a single IBM LinuxONE III™[5]

無所不在的加密

IBM LinuxONE III has the industry's first commercial data privacy and security enforcement solution with off-platform access revocation, called Data Privacy Passports

開放開源雲原生應用

Decrease time to market when you build, deploy and manage new cloud native apps faster using containers and Kubernetes on LinuxONE.

服務不間斷

Erase worry with an enterprise platform designed for 99.999% availability. Scale workloads both vertically and horizontally.

x86整合省本增效

Consolidation to IBM LinuxONE will save the TCO from reduced SW licenses, energy & cooling, networking, labor cost, ...etc.

[1]When running mixed workloads consisting of both open source and IBM proprietary software, IBM LinuxONE requires 23 times fewer cores than the compared x86 servers and delivers a 27% lower overall TCO over 5 years.This is an IBM internal study designed to replicate a typical IBM customer workload usage in the marketplace. Results may vary.
[2]Compared LinuxONE III model consists of 3 CPC drawers containing 108 cores, and one I/O drawer to support both network and external storage.
[3]Performance result is extrapolated from IBM internal tests running in a LinuxONE III LPAR with 36 or 39 dedicated cores and 256 GB memory, a z/VM 7.1 instance in SMT mode with 4 guests [4]Performance results based on IBM internal tests running the Acme Air microservice benchmark on IBM Cloud Private (ICP) 3.2.1 on LinuxONE III native LPAR versus compared x86 platform.
[5]Performance result is extrapolated from IBM internal tests running in an IBM z15™ LPAR with 1 dedicated IFL and 16 GB memory 980 NGINX Docker containers. Individual results may vary.

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