Agenda

- Flash is the King
  - IBM FlashCore – the secret sauce
  - Flexible Flash offerings
- Container storage enhancement
- Container backup
- 3D XPoint vs. CXL

Flash is the King

- **More than 2PB delivered usable capacity**

- **Almost no spinning disks – except for backup**

- **10 times less footprint, double the capacity – 40U:4U**

IBM FlashCore – the secret sauce

- **FlashCore Technology continuously monitors the health of each block**

- **Health binning - 57% endurance gain**

- **Heat segregation - 45% reduction in write amplification**

- **Variable Voltage is the Fountain of Youth, delivering reliable long life**

Flexible Flash Offering

- **IBM Block Storage as a Service for FlashSystems**
  - **OPEX model**
  - **Fixed + variable capacity**

- **IBS CAPEX model**
  - **Initial capacity + fixed upgrades**
  - **Similar TCO**

CAPEX model example

- **The case**
  - **5 years capacity – 250TB**
    - *Initial – 110TB*
    - *Year 2 – 90TB*
    - *Year 4 – 50TB*

CAPEX model example

- **Scenario 1 – 250TB initial purchase**
  - **290 674 USD with additional 10% discount**

- **Scenario 2 – 110TB + 90TB + 50TB**
  - **293 324 USD**

Container storage enhancement

- **Storage types – Block, File and Object**
- **Access modes – RWO, ROX, RWX**

What's new:

- **Replication**
- **Stretched cluster**
- **Extended Control Plane with IBM Flashsystem**

K10 PLATFORM

SELECTED FEATURES

Data Operations

- Volume Snapshots
- Durable Backups
- Change Block Tracking*
- Dedup & Compression
- App-Consistent Backup
- Logical DB Capture
- Managed Data Services
- Log and Replica Capture

Metadata Operations

- Auto App Discovery
- Full Spec Capture
- Spec Transforms
- Global Resource Capture
- Include/Exclude Filters
- Infrastructure Portability
- Global Catalog
- Query API

Backup, DR, Mobility

- Policy-based Operations
- Manual Actions
- GFS Retention
- Independent Schedules
- Application Cloning
- End-to-End Encryption
- Application Hooks
- Blueprint Extensibility

Ops Support

- Enterprise Dashboard
- API-first Design
- Logging Integration
- Monitoring
- Alerting
- Authentication
- RBAC/Self Service
- Air Gap Support
- DR and HA

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3D XPoint vs. CXL

- **3D Xpoint (Intel Optane)**
  - **Intel and Micron partnership**

- **Micron ends development – March 2021**
  - **Market is sluggish**

CXL - Compute Express Link

- **Different ways to connect memory and storage with compute**

- **Open industry specification**

Board of Directors

Advanced Micron ...	Alibaba	Arm Limited	Cisco	Dell
Google	HPE	Huawei L	IBM	Intel Corporation

At the end