LC STORAGE ENVIRONMENT (FY'16 – UPDATE)

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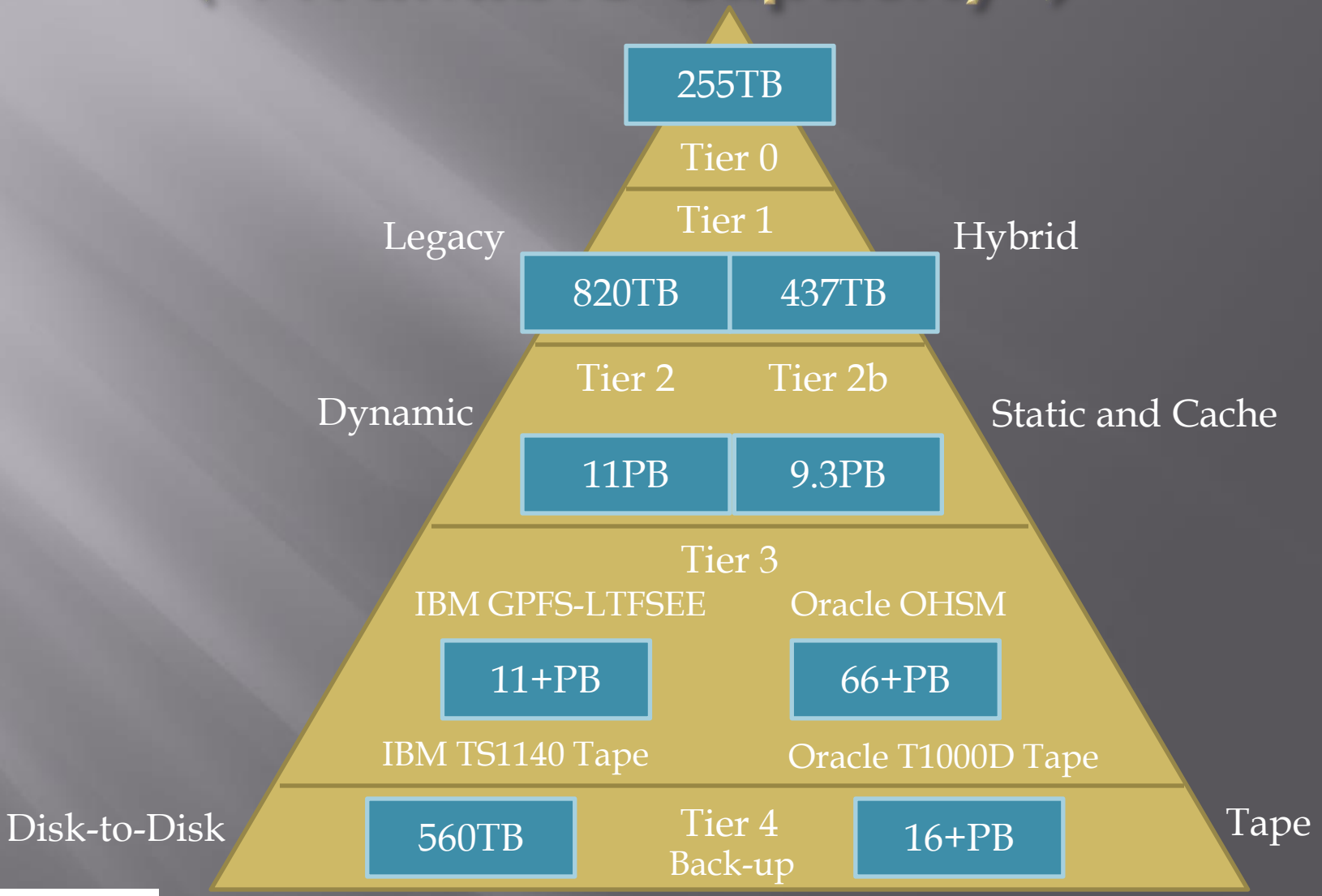
OCIO/ESE/SysDev
Carl Watts

Digital Growth

- Digital content continues to grow
  - 525TB (61+M unique files) added to online access
    - Over the past 12 months Online growth was 48%
    - FY'15 growth was 34%
  - 2.9PB (31M+ unique files) added to long-term storage
    - FY'16 was 26%
    - FY'15 growth was 50% primarily due to data migrations from older systems

Storage Tier
(*Available Capacity*)



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Life is Migration

- Still working on migrations…
- OHSM tape migration from T10KB to T10KD
  - Copy 1 took 10 months longer then the original estimate
  - Copy 2 turned into a migration of a migration, still ongoing
- Migrating from our HPSS to LTFS EE is ongoing
  - Current planned completion 6/2017
- Data consolidation continues
  - Four (4) presentation server migrations in FY'17

Object Storage Review

- We tested 5+ object storage system in 2016
- Use cases tested
  - Presentation storage
  - Archive storage
  - Object to POSIX via NAS gateway and s3fs
  - POSIX to Object via GPFS

Object Storage Review

- Observations
  - Not all Object Storage systems are equal
    - Five systems tested, five different results
  - There are no standards (S3, OpenStack, CDMI)
    - Compatibility is not a standard
  - Weigh the environment choices
    - Consistency vs. Eventual Consistency
  - How do you plan to use the system?
    - DevOps vs. Curatorial
  - Sizing the environment
    - Memory is your friend
  - Some middleware is needed
    - Maintaining abstraction layer for POSIX and Objects

Question

email:
cwat at loc dot gov