EMC XTREMIO

ACCELERATING YOUR BUSINESS

TAMIR SEGAL
SR. MANAGER, PRODUCT MARKETING

AUGUST, 2015

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XTREMIO IS #1 WITH 31% MARKET SHARE

RUN RATE

>$1Billion

IN OUR FIRST YEAR

CUSTOMERS

>1,700

AND GROWING

Fortune 100

>65%

OWN XTREMIO

RELIABILITY

99.999%

XTREMIO DELIVERS

"Leaders Quadrant in Solid State Analysis" – **Gartner 2014**

"#1 Market Share 2014" – **IDC**

"Leader in Strategic AFA Technology" – **451 Research**

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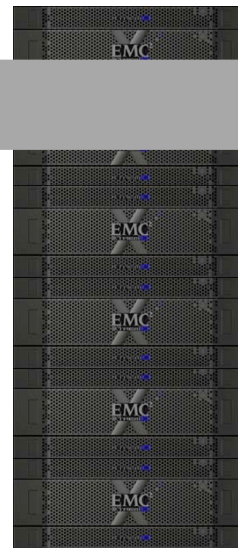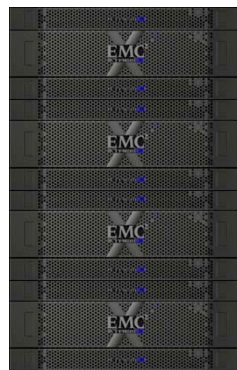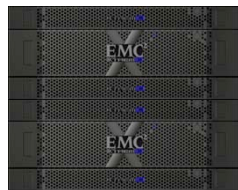# XTREMIO X-BRICK

Cluster Building Block

PRODUCT FAMILY,
ON-DEMAND LINEAR SCALE-OUT

150K mixed IOPS
250K read IOPS
<1ms Latency

From 2 – 16 N-way Active Controllers

1.2M mixed IOPS
2M read IOPS
<1ms Latenc
PBs Capacity

Starter
5TB

❰5—320TB physical, PBs effective capacity based on 10, 20, & 40 TB X-Bricks❱

SCALE-OUT   <1ms LATENCY   RICH DATA SERVICES   NO TUNING

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XTREMIO DATA SERVICES

ALWAYS-ON, INLINE, ZERO PENALTY, FREE

ALWAYS-ON THIN PROVISIONING

INLINE DEDUPLICATION

INLINE COMPRESSION

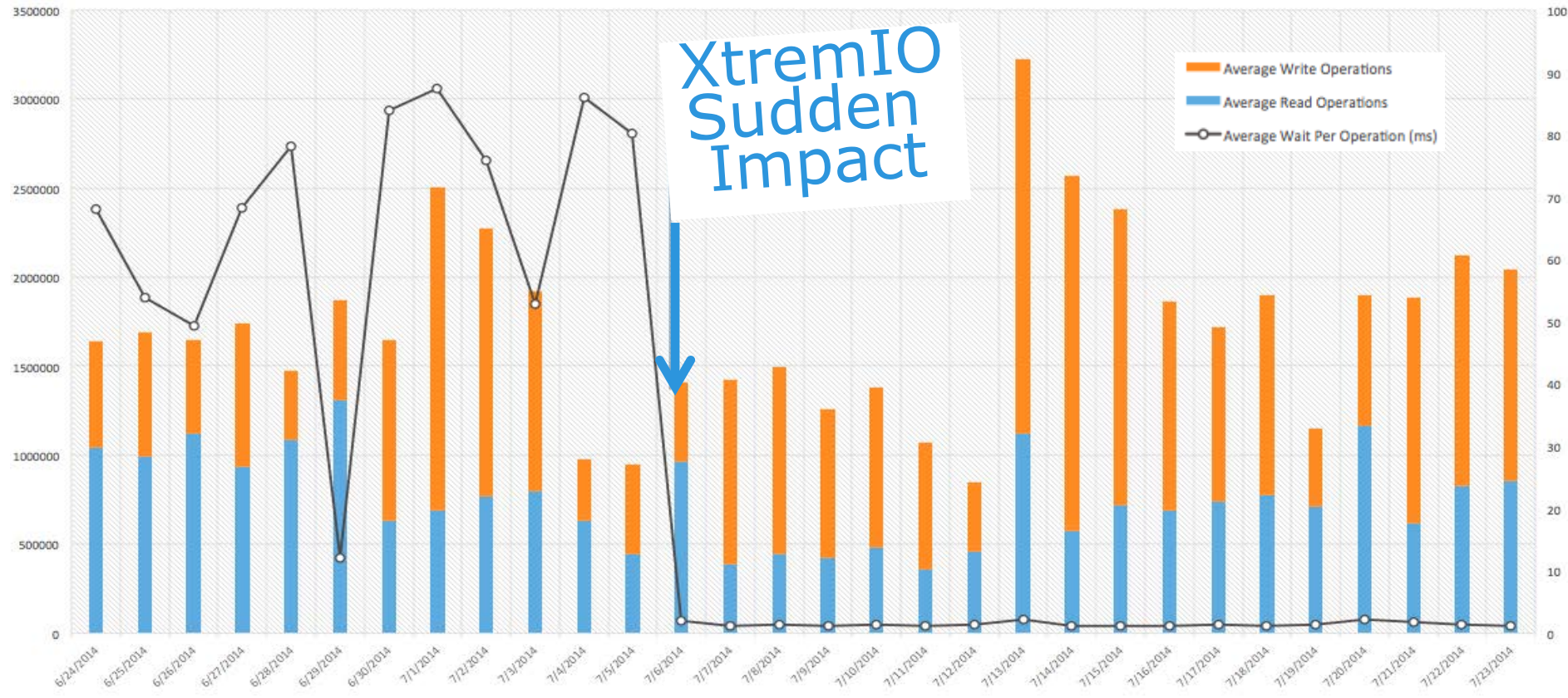XTREMIO DATA PROTECTION

INLINE DATA-AT-REST ENCRYPTION

Space Efficient Copies

5

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CONNECTIONS EDUCATION- SQL SERVER

Disk Operations vs. Latency

XtremIO Sudden Impact

- Average Write Operations
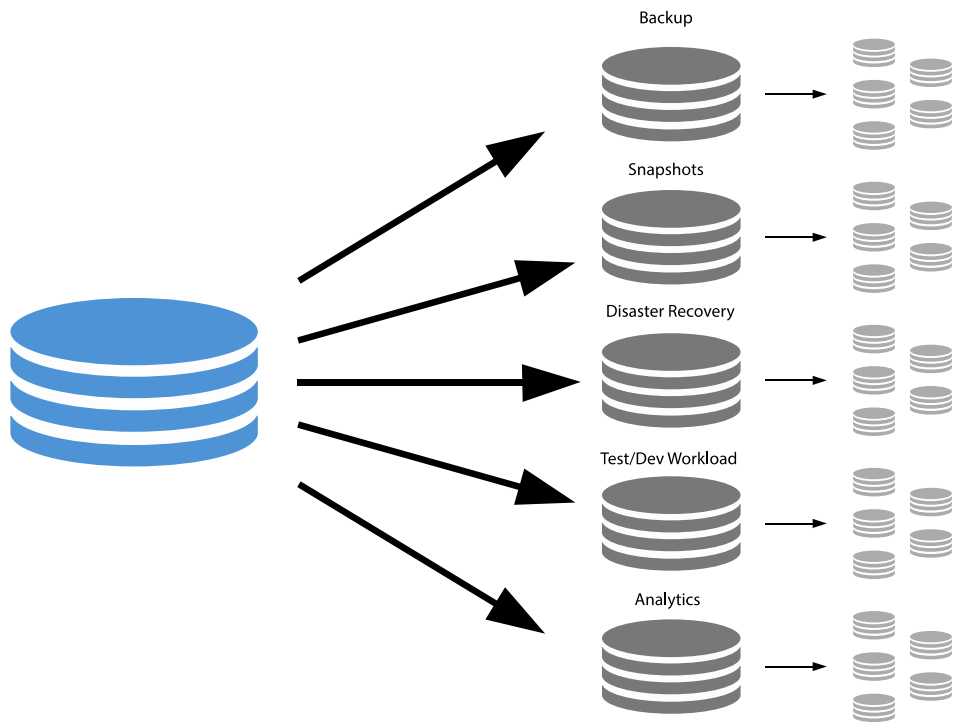- Average Read Operations
- Average Wait Per Operation (ms)

COPY DATA IS OUT OF CONTROL

Every copy of primary data makes multiple copies

IDC: >60% data from copies

A $44B global expense!

Backup

Snapshots

Disaster Recovery

Test/Dev Workload

Analytics

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COPY DATA MANAGEMENT APPROACHES

WHY DON'T THEY WORK?

- Method 1 – "Space-Efficient" Snapshots
  - Impact production performance, non-production scale, metadata bloat impacts snapshot performance

- Method 2 – Full "Brute-force" copies
  - Too Costly, slow development cycles, slow copy/refresh, stale data

- Method 3 – Dedicated CDM platform
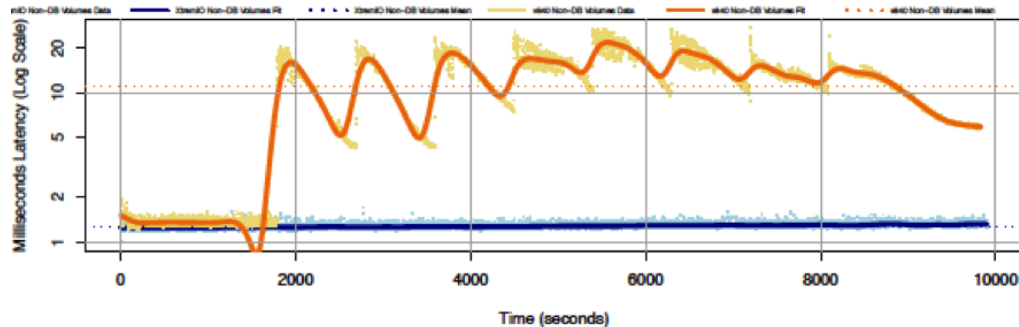 - Limited Scalability , non-production scale/performance, Incremental costs

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XTREMIO VS. TRADITIONAL SNAPSHOTS

XtremIO Vs. Vendor "A" steady state IOPS over Time

XtremIO Vs. Vendor "A" steady state Latency over Time
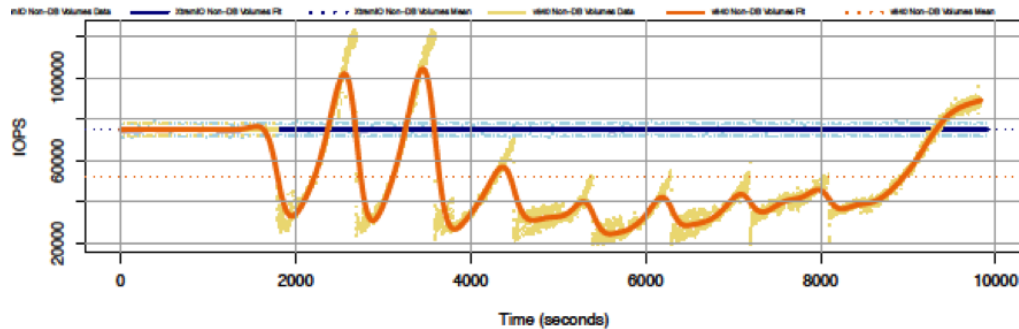
With XtremIO you can't even tell when the snapshots took place. It delivers the same consistent IOPs and low latency

Vendor A's array takes a noticeable performance hit every time the snapshot is created. This would never be a viable option for CDM use cases.
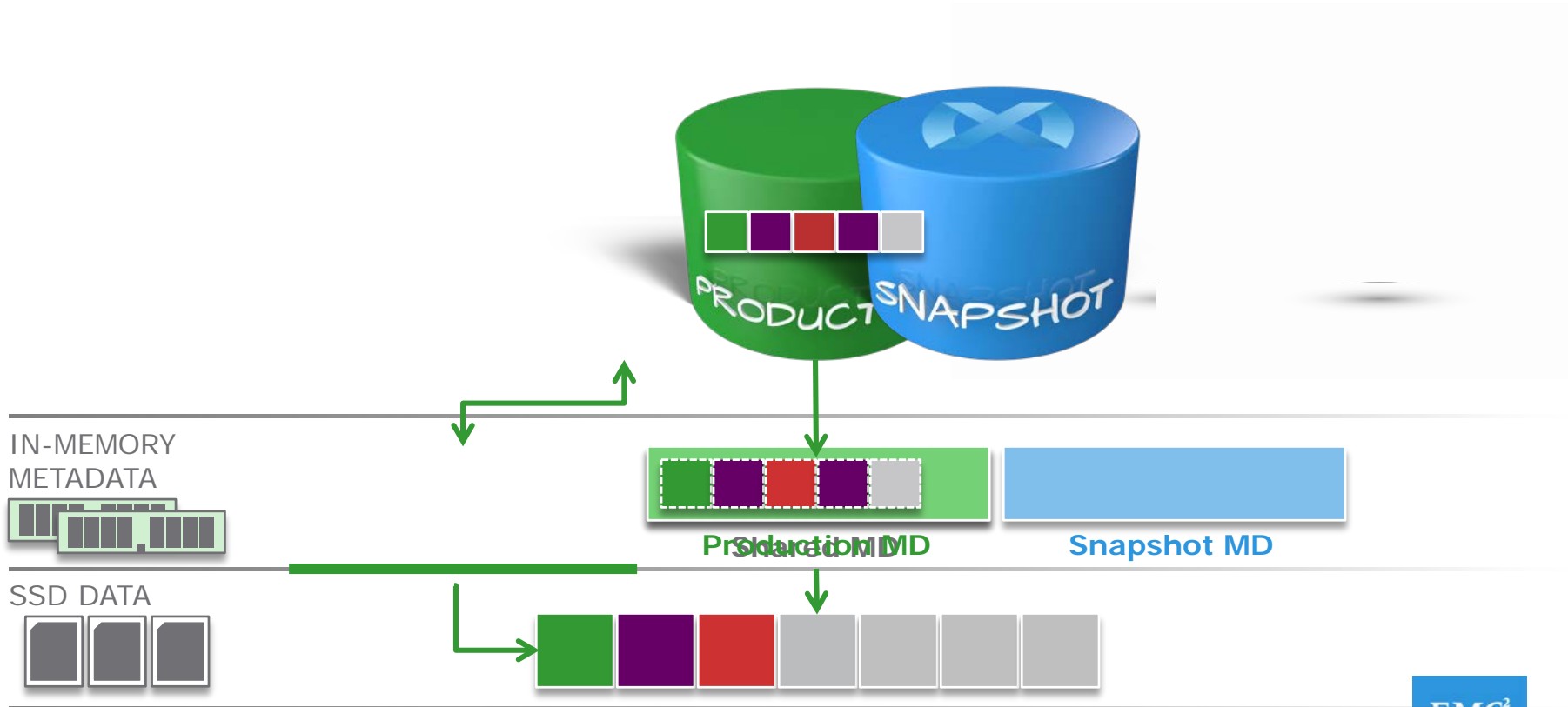
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COPY DATA MANAGEMENT

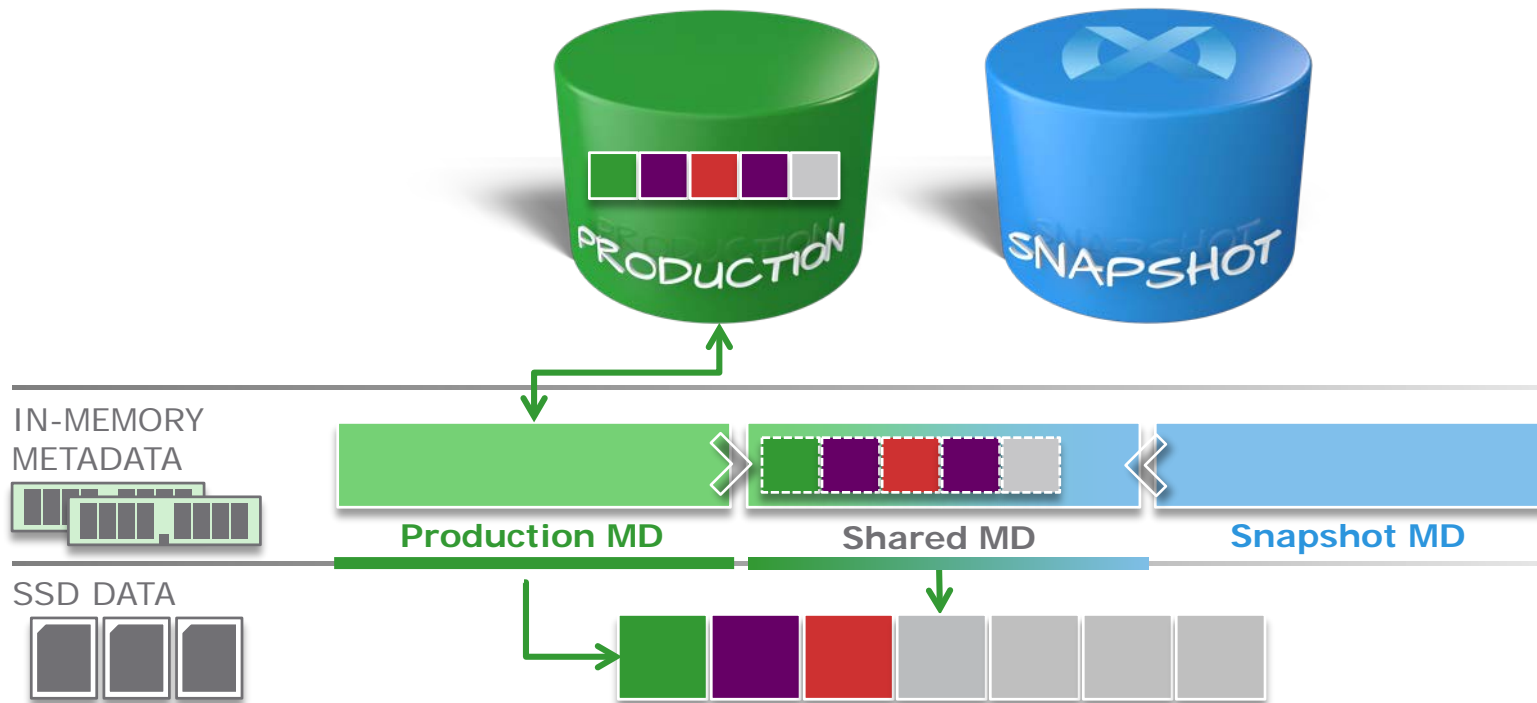## NEW OPTION W/ XTREMIO

In-Memory

Integrated Copy Data Management

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LET'S SEE HOW CREATED INSTANTLY

IT ONLY INVOLVES ALLOCATION TO A SMALL CONTAINER

IN-MEMORY
METADATA

Production MD   **Shared MD**   **Snapshot MD**

SSD DATA

METADATA MANAGEMENT IS EFFICIENT

ENABLING THOUSANDS OF SPACE EFFICIENT COPIES

IN-MEMORY
METADATA

Production MD   **Shared MD**   **Snapshot MD**

SSD DATA

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METADATA MANAGEMENT IS EFFICIENT

THE METADATA IS SHARED AND IN-MEMORY SPACE EFFICIENT

Modify Data **B** @ Block 1

IN-MEMORY
METADATA

Production MD · Shared MD · Snapshot MD

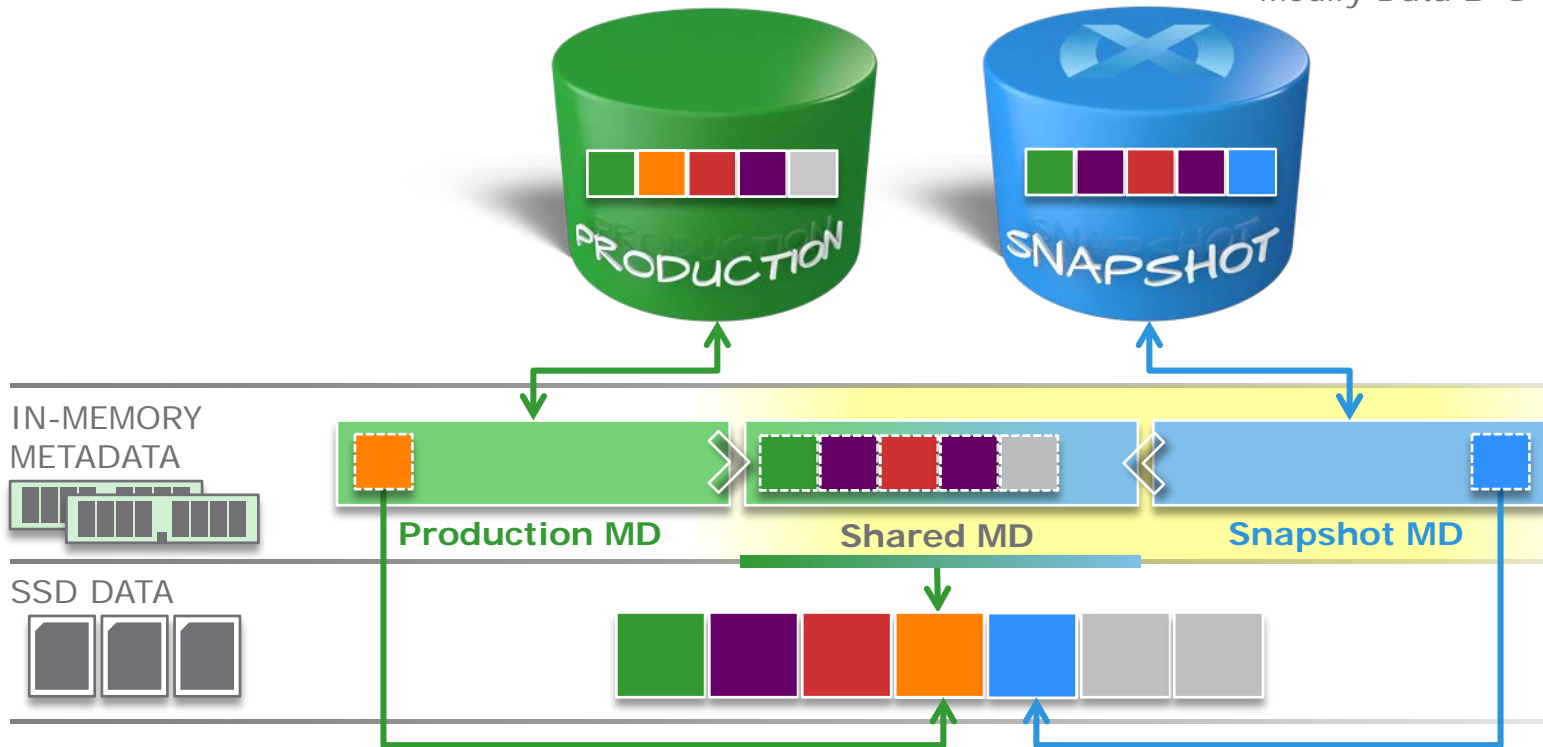SSD DATA

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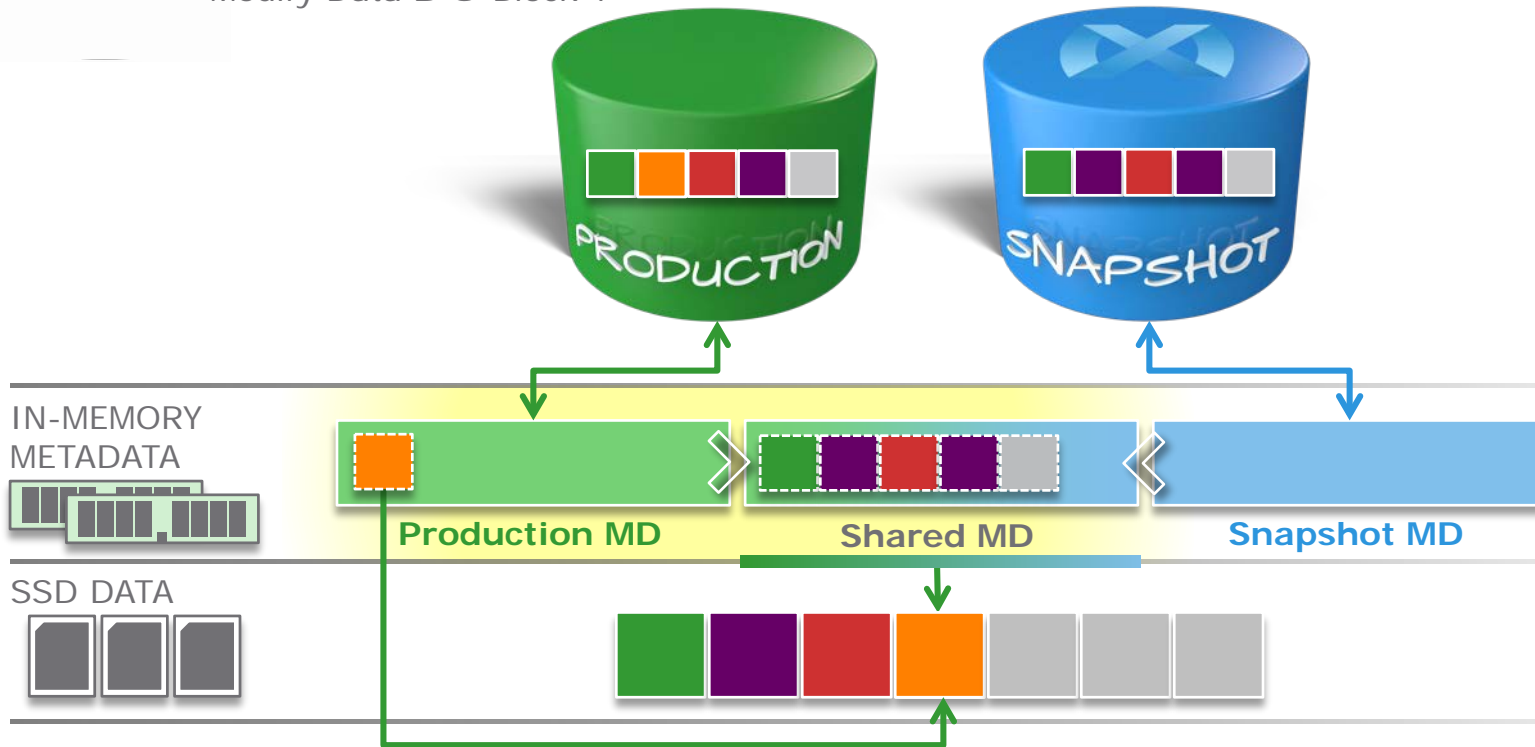
SNAPSHOT PERFORMANCE IS EQUAL

IT'S EXACTLY LIKE WRITING DATA TO THE PRODUCTION VOLUME

Modify Data **D** @ Block 4

IN-MEMORY METADATA

Production MD

Shared MD

Snapshot MD

SSD DATA

XTREMIO COPY SERVICES

100%
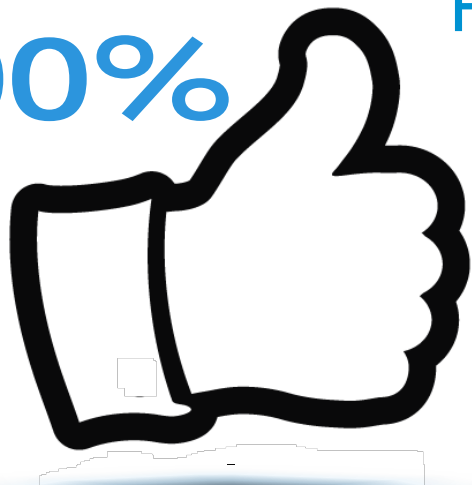
PERFORMANCE
(read, write and latency as volume)

SPACE EFFICIENT
(no metadata bloat, no space reservation, no moving blocks)

IN-MEMORY
(instant creation, immediate deletion, flexible topography)

AUTOMATED WORKFLOWS
app-integration with refresh, scheduling, and self-service

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BAILLIE GIFFORD: ANALYTICS

ACCELERATE ANALYTIC PROCESS

GOAL

Accelerate business processing time.
System must be ready for a new trading day!

Investment Firm

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BAILLIE GIFFORD'S ANALYTIC

SUDDEN IMPACT

Analytics

SYSTEMS INFRASTRUCTURE

4:1
Data Reduction

30% CUT
Licensing cost

50%
Improvement in

DAILY BUSINESS PROCESSING TIME

ORACLE EMC²

BAILLIE GIFFORD'S CONSOLIDATION

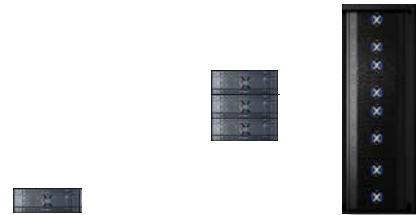# But, WAIT...

There was still plenty headroom for:

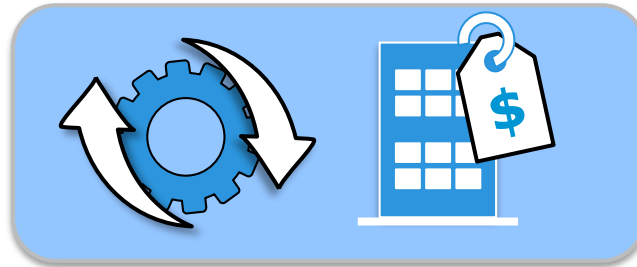| CAPCIY	PERFORMANCE	GROWTH

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BAILLIE GIFFORD : DEV/TEST

CREATE COPIES ON DEMAND WITHOUT LIMITATIONS

GOAL

Accelerate the development cycle
and time to business value

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BAILLIE GIFFORD: DEV/TEST

CREATE COPIES ON DEMAND WITHOUT LIMITATIONS

BEFORE SNAPSHOT

Due to performance concerns each copy was a **full clone of production data**

Investment Firm

30
DAYS OLD

32x
DATA SIZE

02
DAYS

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BAILLIE GIFFORD: DEV/TEST

CREATE SAVINGS AND AGILITY FOR THE CUSTOMER

XtremIO saves tremendous amount of time, capacity and cost to the customer

SNAPSHOT

Investment Firm

30	32x	02
DAYS OLD	DATA SIZE	DAYS
0	**1+Δ**	**30'**
IMMEDIATE COPIES FROM PRODUCTION	ONLY UNIQUE WRITES CONSUME CAPACITY	ENTIRE TEST AND DEVELOPMENT IN MINUTES

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BAILLIE GIFFORD: DEV/TEST

CREATE SAVINGS AND AGILITY FOR THE CUSTOMER

Investment Firm

ACCELERATE	CONSOLIDATE	AGILITY
0	**1+Δ**	**30'**
IMMEDIATE COPIES FROM PRODUCTION	ONLY UNIQUE WRITES CONSUME CAPACITY	ENTIRE TEST AND DEVELOPMENT IN MINUTES

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BAILLIE GIFFORD'S DEV/TEST TCO SAVINGS= ~$3.7M

100
Developers

SYSTEMS INFRASTRUCTURE

40% MORE
Effective Developers

70% LESS FLOOR SPACE
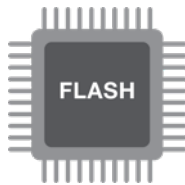
125TB
Effective Capacity for 50 copies

ONLY 4TB OF

FLASH

=

31:1 OVERALL REDUCTION

ORACLE EMC²

EMC²®