Infortrend®

SAN STORAGE

UNIFIED STORAGE

SCALE-OUT NAS
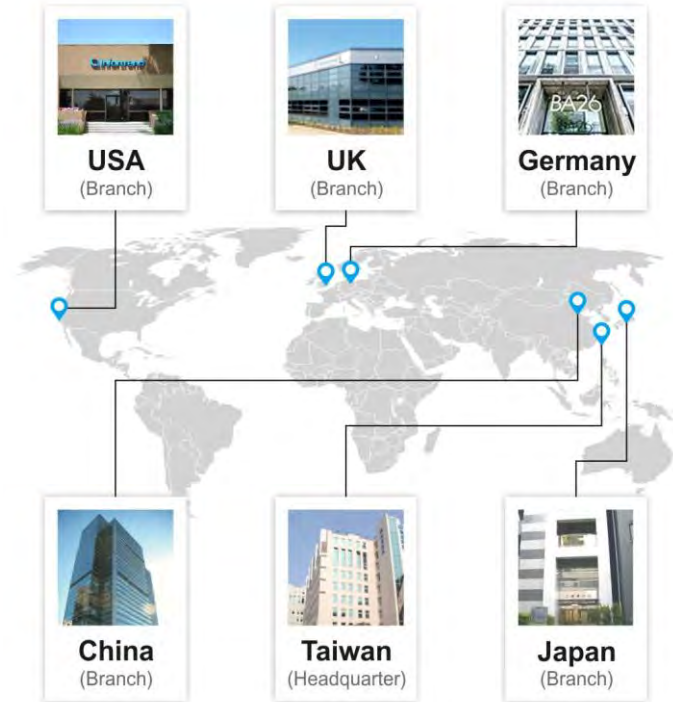
STORAGE SERVER

25+ Years of Continuous Innovation

Industry Proven Storage Solution & Technologies

Infortrend Fact Sheet

- Established: **1993**

- Publicly Listed: **2002**

- Headquarter: **Taipei, Taiwan**

- Worldwide Employees: **500**

Infortrend

Why Infortrend

- **25+ years of experience** in developing high-performance RAID storage solutions
- Deployed more than **1,000,000** world-wide rack-mounted systems
- Dedicated focus on R&D – **Time to Market**
- **300+ engineers dedicated** to R&D to deliver superior products
- **Price-Performance leader** in the market
- All products **designed and manufactured in-house**

High Quality from Design to Manufacturing

Total Quality Management (TQM)

- Implement TQM in design, supply chain, manufacturing, and quality management

- Weekly quality review is driven by the top management team

Process Control Methodology

- Foolproof software automation for production testing

- Six sigma process control methodology

Shop Floor Control and Traceability

- Forward / backward traceability and up to PCBA component level

- Foolproof routing control for operation and service

Close Loop Corrective Action

- Web-based integrated CAR (corrective action request) system

- Benchmark — 8D problem-solving methodology


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Worldwide Achievements & Recognitions

- Infortrend recognized as a vendor in **Gartner's Magic Quadrant for Primary Storage** from 2010~2019

- Infortrend awarded **Editor's Choice – Company** by **Storage Magazine** in 2020

- EonStor GS Gen2 awarded **Cloud Product of the Year** by **Storage Magazine** in 2020

- EonStor GSa all-flash SAN-in-a-box won **Best of Show Award** at **2019 NAB Show**

- EonStor GSa 2024 received a **5-star review** along with **Editor's Choice Award** from **IT Pro** in 2019

- Infortrend listed in **10 Most Promising Storage Solution Providers** by **CIOReview** in 2018

- Infortrend listed in **20 Most Promising Storage Solution Providers** by **CIOReview** in 2017

- EonStor DS 4024B **ranked #2 worldwide** in **Top 10 SPC-2 by Price-Performance**

2020

2017

Market Position
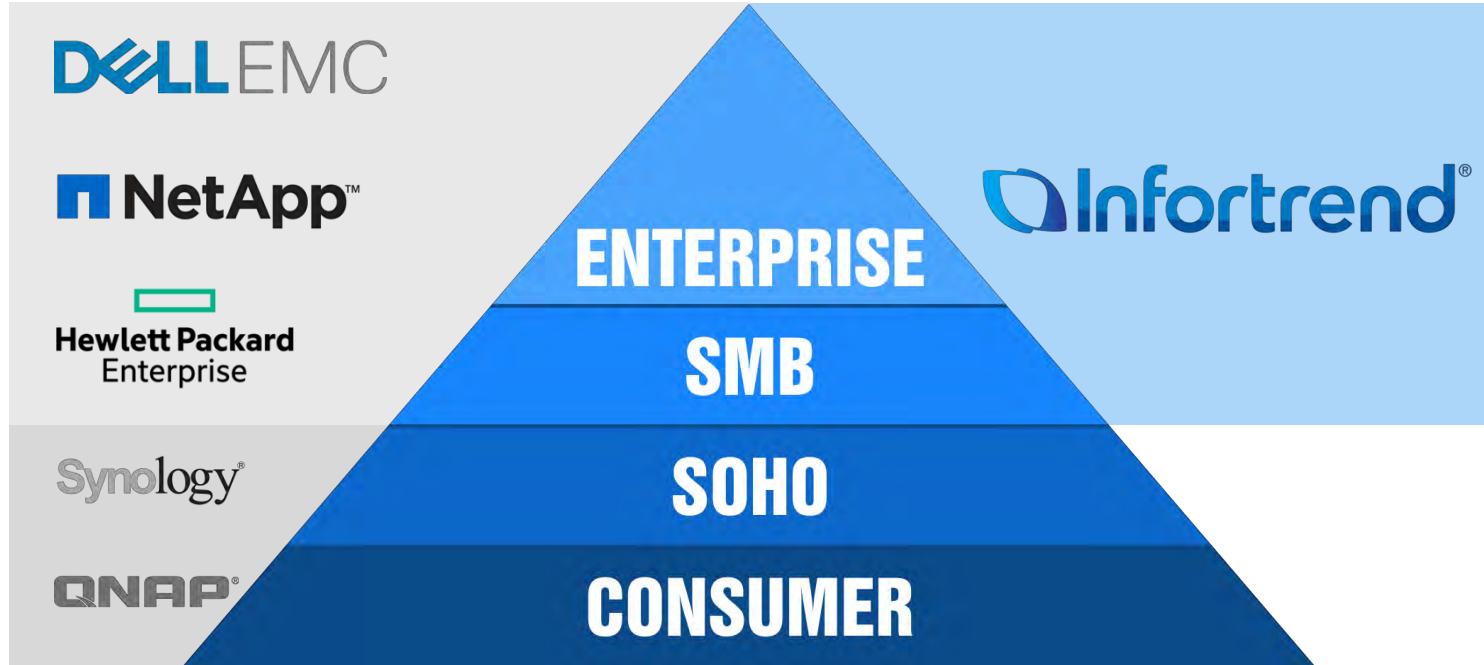
Vertical Markets

Media & Entertainment

- 4K/8K Editing / Post-Production
- Shared storage solution
- Multi-streaming workstation

HPC / Data Center

- AI & Machine Learning
- Government / Academic research center
- Data Center

Surveillance / Backup

- All-in-one built-in infrastructure
- Massive & seamless scale-out capability
- Milestone certified solution

Portfolio

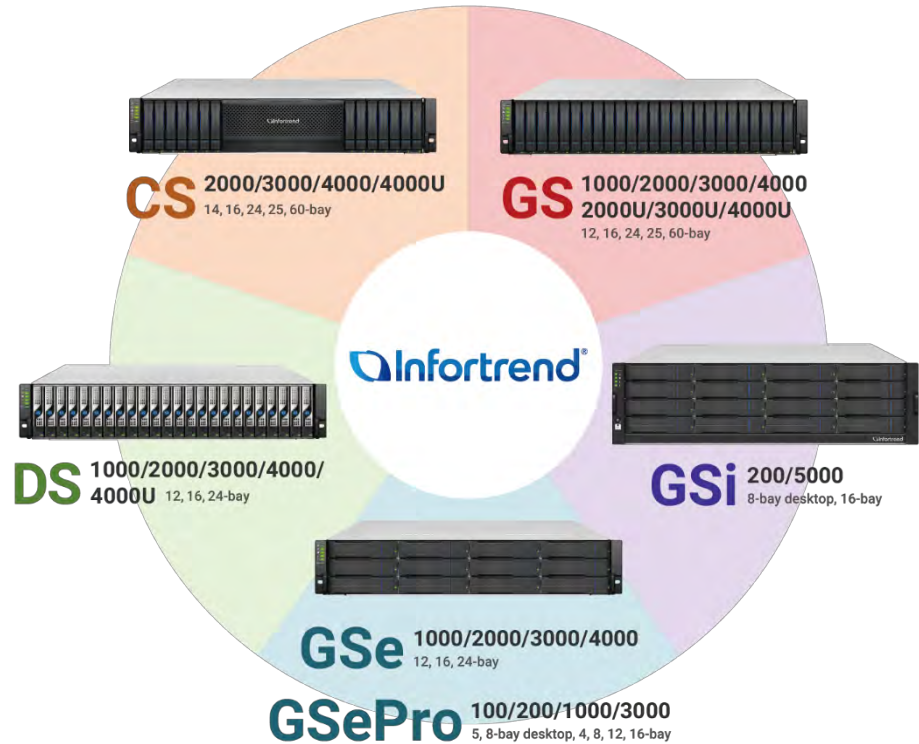**Scale-Out NAS**
EonStor CS storage family

Unified Storage (SAN+NAS)
EonStor GS storage family

SAN Storage
EonStor DS storage family

AI Storage Appliance
EonStor GSi storage family

Entry Commercial NAS
EonStor GSe/GSe Pro storage families

CS 2000/3000/4000/4000U
14, 16, 24, 25, 60-bay

GS 1000/2000/3000/4000
2000U/3000U/4000U
12, 16, 24, 25, 60-bay

DS 1000/2000/3000/4000/
4000U 12, 16, 24-bay

GSi 200/5000
8-bay desktop, 16-bay

GSe 1000/2000/3000/4000
12, 16, 24-bay

GSePro 100/200/1000/3000
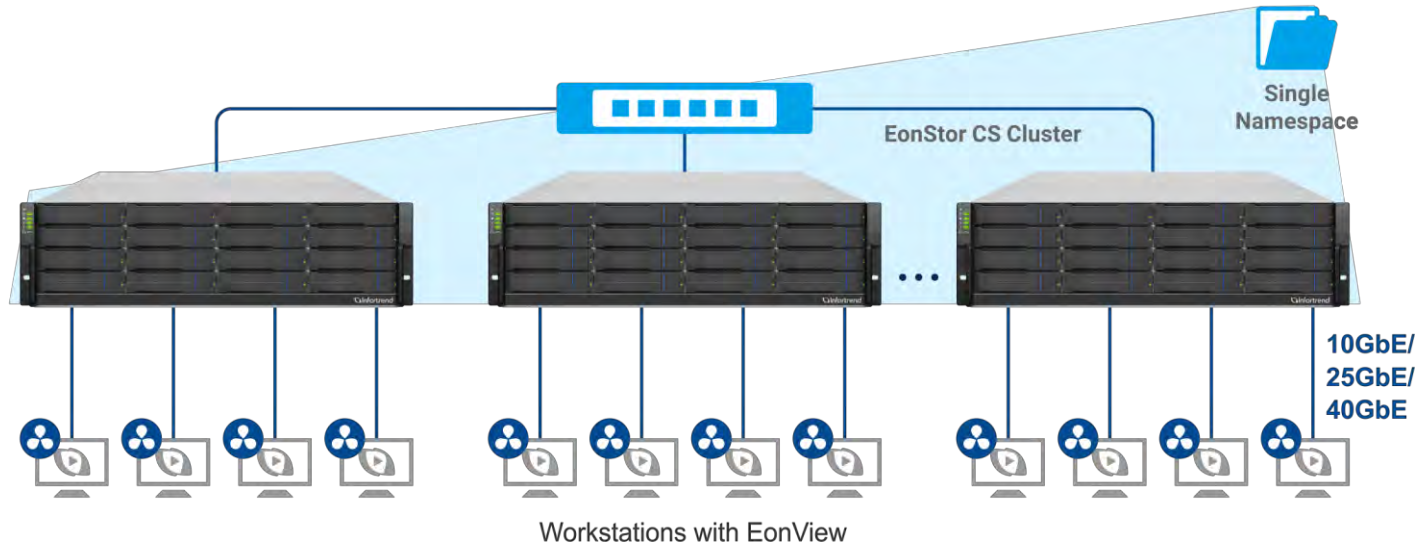5, 8-bay desktop, 4, 8, 12, 16-bay

CS Introduction

EonStor CS Family

The most valued and reliable
scale-out network attached storage

High Performance and Capacity

EonStor CS is a Scale-out NAS system, which supports horizontal scalability (Scale-out) by adding more devices, linearly expanding both capacity and performance as the system grows. The entire cluster can reach up to 100+ GB/s read/write speed and 100+ PB capacity.
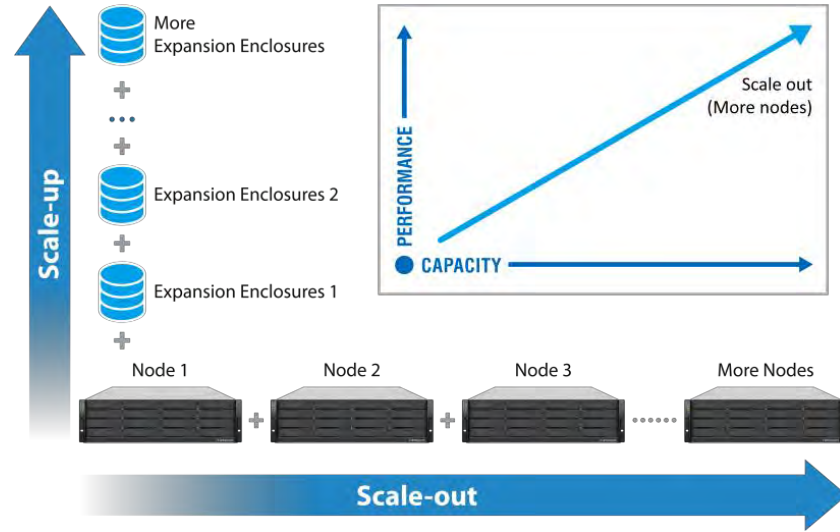
100+ GBps
Read/Write speed

144
Nodes

100+
PB

High Scalability

- Horizontal scalability (Scale-out)
  - Connecting more devices (nodes) to increase both capacity and performance
  - Up to 144 nodes

- Vertical scalability (Scale-up)
  - Adding disk drives to an existing system via JBOD to increase capacity
  - Up to 120 HDDs per node

High Scalability

3 Scale-out modes

- CS offers 3 kinds of scale-out modes for different applications

1. Replica (x3)	for critical data	File A	File A	File A
2. Erasure code (2+1)	for archiving data	File A-1	File A-2	File A (Parity)
3. Distributed mode (Infortrend exclusive)	for general data	File A	File B	File C

EonStor CS Family Overview

Maximum Performance (vertical axis)

Product Series (horizontal axis)

CS 2000
4U 60-bay

For Essential
Backup/Archive

CS 3000
3U 16/4U 24-bay

Cost/performance
Scale-out NAS

CS 4000
2U 25/3U 16/4U 24/4U 60-bay

High performance solution
Supports SSD node with
2U 25-bay

CS 4000U
2U 14-bay

Highest performance
Supports U.2 NVMe SSD
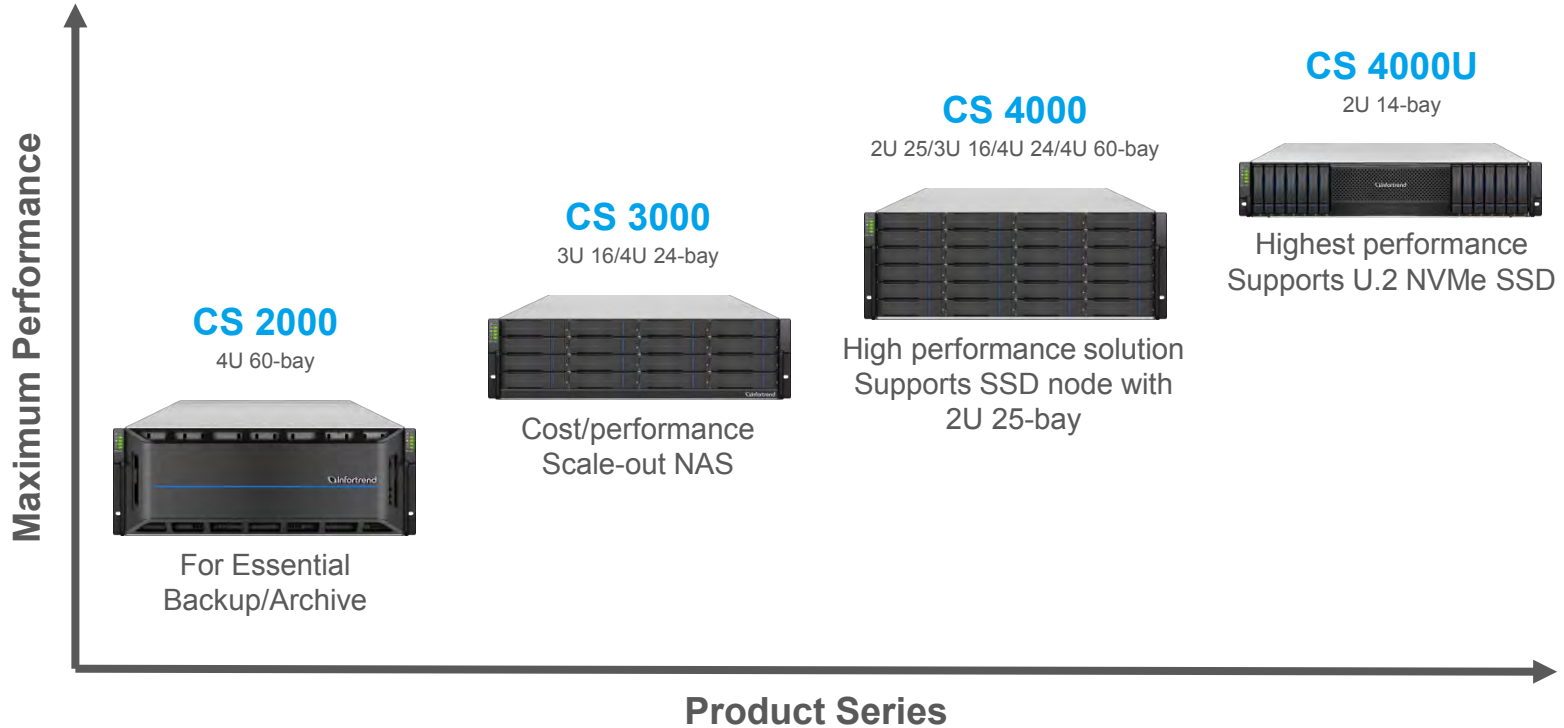
Case Study: Post-Production House

- Challenges

  Insufficient performance and capacity of the existing storage system

- Applications

  4K/HD video editing for a studio with more than 30 users

- System Requirements
  - Performance: Read & Write $\geqq$ 5GB/s
  - Capacity: 650TB usable
  - Protocol: SMB/CIFS

- Why Infortrend?
  - High Performance: Read/Write = 5.9/5 GB/s
  - Data Protection: EC 2+1, RAID 5
  - Model: CS 3060D x 2 (4 nodes) with 120 HDDs

CS 3060 4-node Cluster

10GbE Network

10GbE Network — Windows Client

10GbE Network — Mac Client
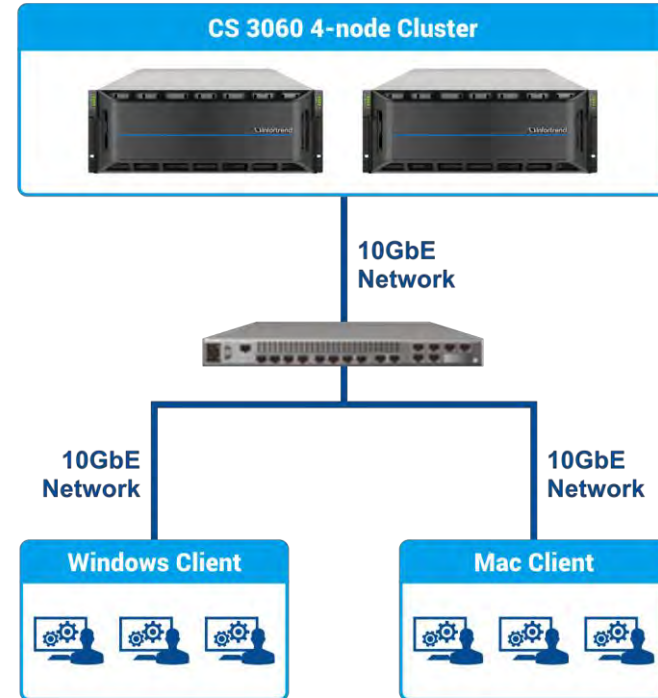
Case Study: Post-Production House

- **Challenges**

  Cost-effective scale-out NAS solution for massive unstructured data

- **Applications**

  4K video editing for a small group

- **Requirements**
  - Scalable NAS performance and capacity
  - Protocol: SMB/CIFS

- **Why Infortrend?**
  - Cost-effective: CS 4060D 2-node cluster with 60 x 10TB HDDs
  - High Performance: R/W = 5,000/4,200 MB/s
  - Data protection: Distributed mode, RAID 6

CS 4060D + 60 HDDs

25GbE Network

NAS Client

GS Introduction
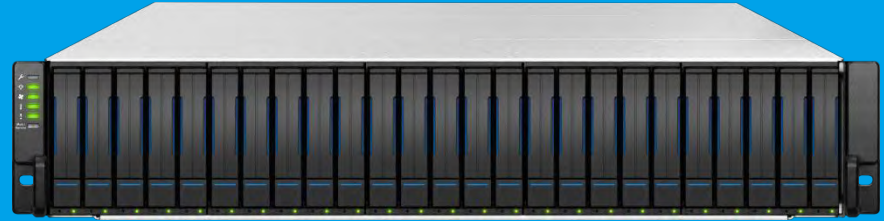
Infortrend GS Overview

GS Family

Scale-out High Availability Unified Storage

- High availability solution designed for enterprises
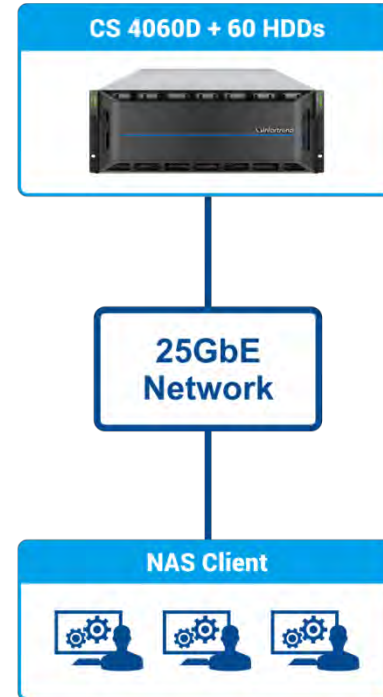- Support block and file scale-out with up to 4 GS
- Support U.2 SSD, SAS/SATA SSD or HDD drive interface
- Up to 40PB with 3584 drives
- Built-in EonCloud gateway standard license

GSe Family

Scale-out Unified Storage

- Unified storage designed for SMB
- Support block and file level scale-out with up to 4 GS
- Single controller with SATA or SAS drive interface
- Built-in EonCloud gateway standard license

GSe Pro Family

Entry-level Unified Storage

- Unified systems deliver stable performance and NAS services within affordable budgets
- Single controller with SATA or SAS drive interface
- Built-in EonCloud gateway Standard license

EonStor GS Family Overview

Performance / Scalability

GS 4000
- ● 896 Drives
- ● 900K IOPS
  R/W=11.8/6.3 GB/s (block)
  R/W= 9.9/5.5 GB/s (file)

GS 3000
- ● 896 Drives
- ● 900K IOPS
  R/W=11.8/6.3 GB/s (block)
  R/W= 8.3/3.8 GB/s (file)

GS 2000
- ● 896 Drives
- ● 630K IOPS
  R/W=11/4.3 GB/s (block)
  R/W=5.9/2.6 GB/s (file)

GS 1000
- ● 448 Drives
- ● 111K IOPS
  R/W=5.7/2.4 GB/s (block)
  R/W=2.5/0.75 GB/s (file)

Product Series from Entry to Midrange

Infortrend

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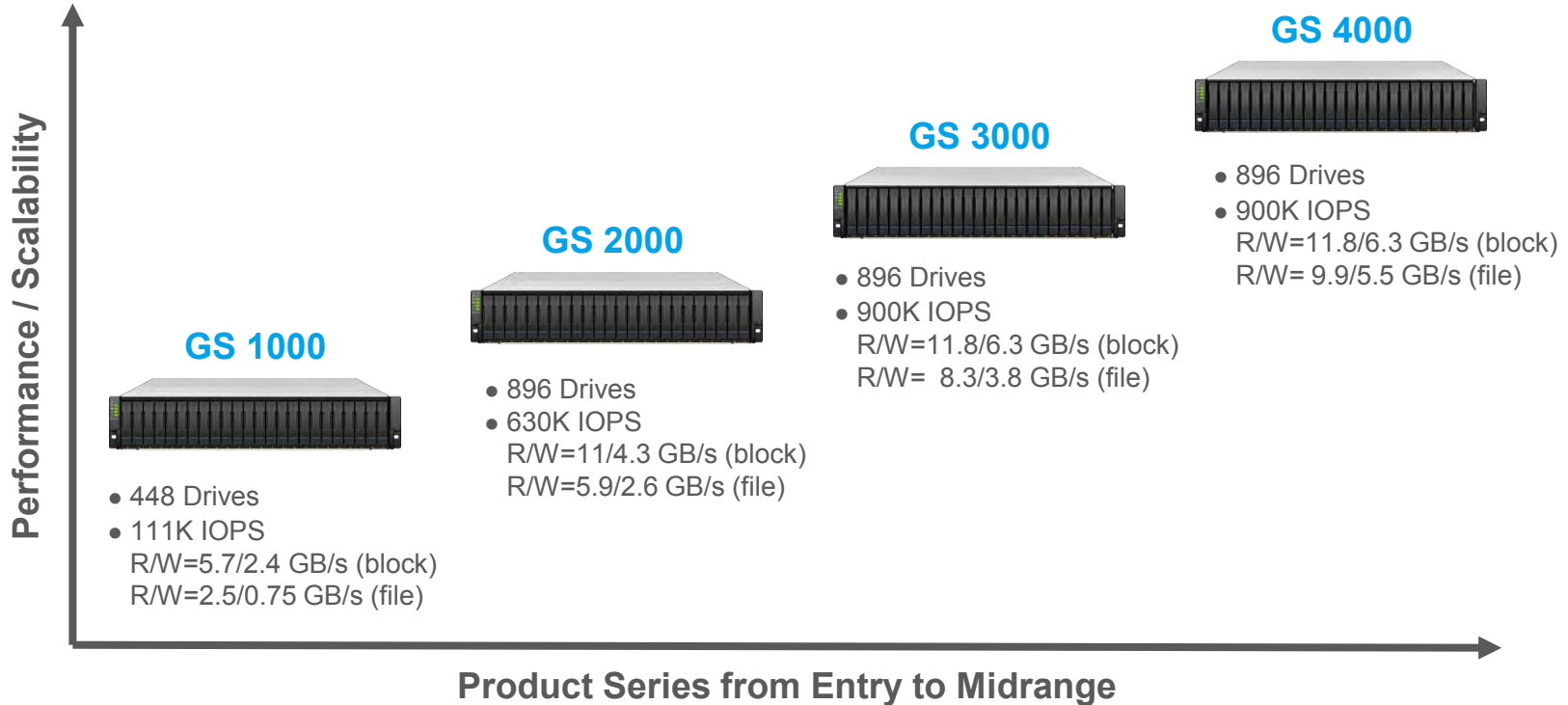
EonStor GS U.2 Family Overview

Performance / Scalability

GS 2024U
- 896 Drives
- 600K IOPS
  R/W=11/7 GB/s (block)
  R/W=4.2/1.3 GB/s (file)

GS 3024U
- 896 Drives
- 1000K IOPS
  R/W=11.8/7.5 GB/s (block)
  R/W=9/3.5GB/s (file)

GS 3025U
- 896 Drives
- 900K IOPS
  R/W=20/7.9 GB/s (block)
  R/W=11/4 GB/s (file)

GS 4025UT
- 896 Drives
- 900K IOPS
  R/W=20/7.9 GB/s (block)
  R/W=16/5.5 GB/s (file)

Product Series from Entry to Midrange

EonStor GS Advantage

Power Outage Backup

BBU + Flash
SuperCap + Flash

Redundant Modular Design

Cableless
Modular
Hot-swappable

Scale-out

Block level, File level

High Reliability

Flexibility

Data Protection

RAID
Snapshot
Volume copy

Open Drive Policy

SEAGATE
TOSHIBA
WD Micron

Tier – 1
Drive Qualification

Multiple Expansion Enclosures

2U: 12, 24, 25-bay
3U: 16-bay
4U: 60-bay

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DS Introduction

EonStor DS at a glance

Excellent price/performance SAN
storage for various environments
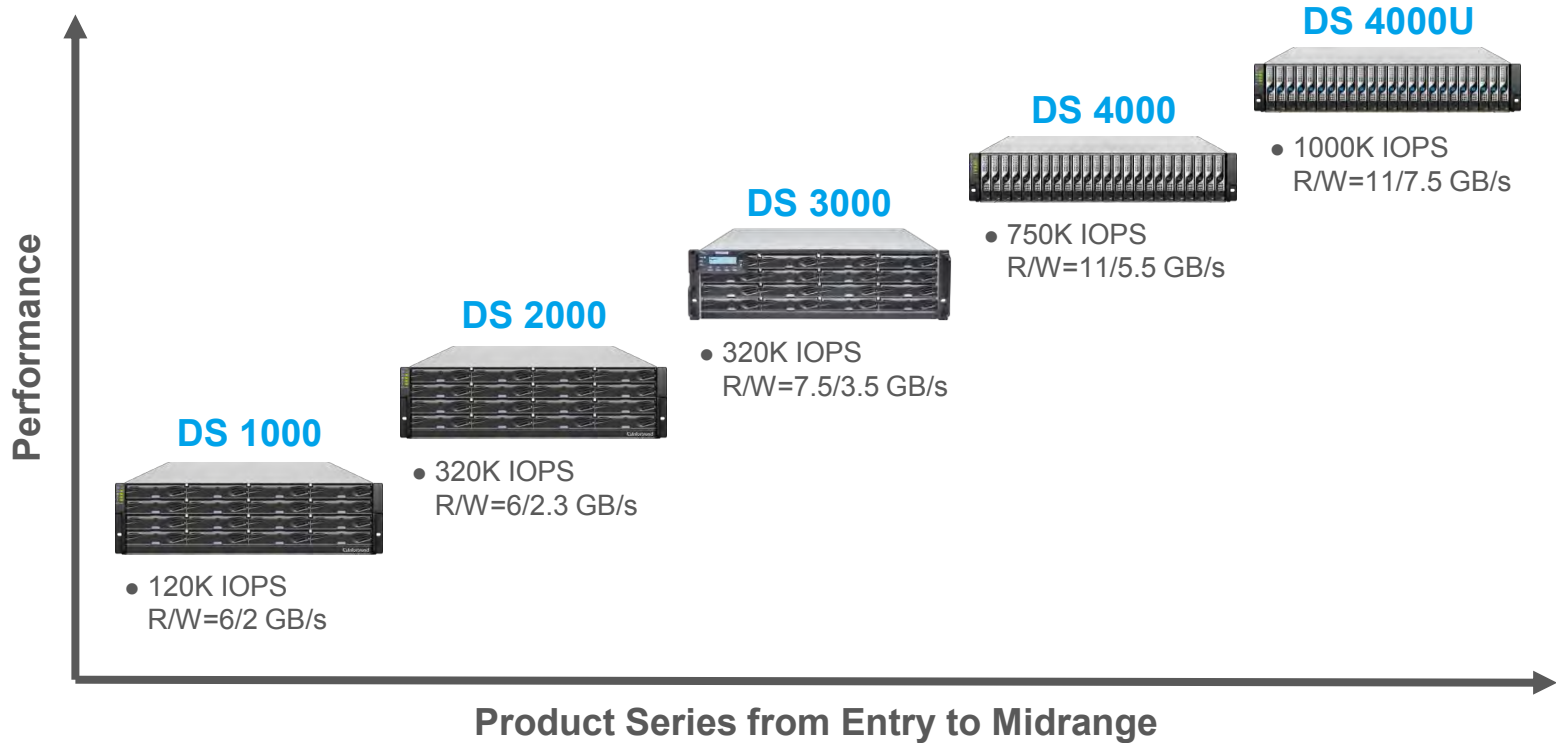
IOPS-intensive Applications

Server Virtualization, Virtual Desktop Infrastructure
(VDI), Database, Online Transaction Processing, etc.

Cost-sensitive Solution

Surveillance, Mail server, Backup

EonStor DS Family Overview

Performance (vertical axis)

DS 4000U
- 1000K IOPS
  R/W=11/7.5 GB/s

DS 4000
- 750K IOPS
  R/W=11/5.5 GB/s

DS 3000
- 320K IOPS
  R/W=7.5/3.5 GB/s

DS 2000
- 320K IOPS
  R/W=6/2.3 GB/s

DS 1000
- 120K IOPS
  R/W=6/2 GB/s

Product Series from Entry to Midrange

EonStor DS Advantages

- ## Multiple form factor choices
  High-density 4U 60-bay form factor for limited rack space

- ## High cost/performance value
  Up to 5.3PB capacity from entry-level DS 1000 Gen2 series

- ## High availability solution
  - Automatically recovers bad sectors, extends drive life, and prevents rebuild by intelligent media scan mechanism
  - Redundant components
  - Cache Backup Technology

Warranty Options

Warranty upgrade options	Features
Warranty extension (WTE)	• Optional Warranty Extensions up to 5 years (3-Year default Manufacturer Warranty) • In-Warranty repairs with return-to-base service
Advanced FRU Replacement (AFR)	• Upgrade the in-warranty repairs from return-to-base, to advanced replacement service • Covering customer replaceable Field Replaceable Units (FRUs): including power supply unit (PSU), cooling module (FAN), controller, memory module, cache protection unit, etc., as well as Infortrend supplied drives
Advanced on-site service (ADV)	• 8x5 next business day on-site service • Engineer to exchange parts on-site, in the event of hardware failure • Dedicated spare parts pool, not limited to FRUs
Premium on-site service (PRE)*	• On-site service level of 24x7, 4-hour response time • Covering public holidays and out-of-office hours • Engineer to exchange part on-site, in the event of hardware failure • Dedicated spare parts pool, not limited to FRUs

Remark: *Available in certain Regions / Countries only.

Champion Partner Program

Opportunity

- Reward for registration of DRP's
- Reward for the completion of orders
- Exposure on Infortrend website
- Online training & certifications

Requirement

- VAR must agree on revenue target with Infortrend (Select or Elite)
- All DRP's must be approved to qualify
- Quarterly reviews to assess incentives success

Outcome

- Increase in number of DRP's registered
- Incentivized salesforce
- Increase in Revenue
- Increased focus between Infortrend and VAR

Learn More

THANK YOU

Infortrend®