



SUSE® Enterprise Storage

Die Mittelstandsalternative zum klassischen SAN



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Agenda

- Warum überhaupt Software Defined Storage?
- SUSE Enterprise Storage
- Neupartner
- Prianto

PRIANTO

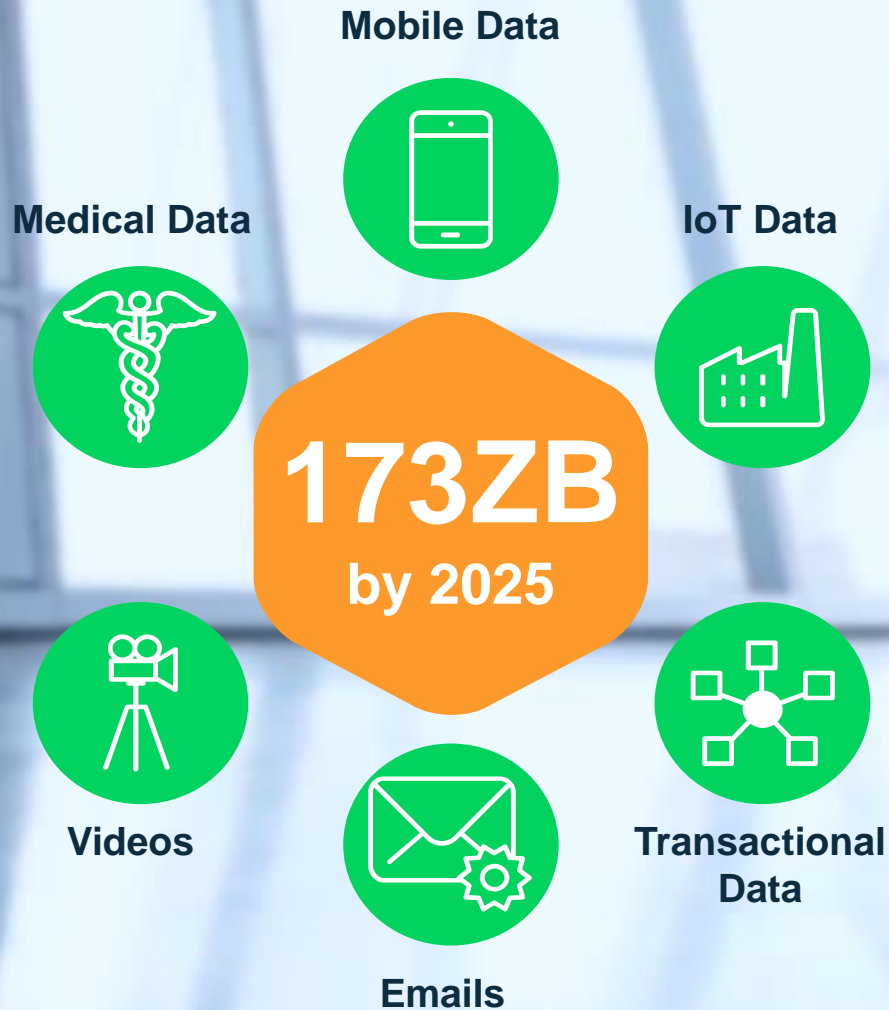


Warum Software Defined Storage?

Thomas Grätz

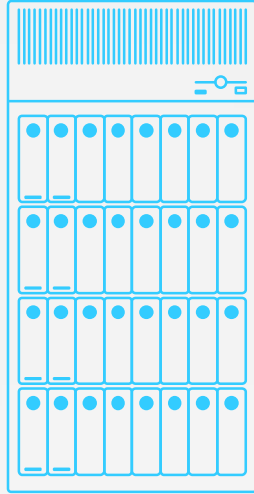
A Data Explosion

Demand For Data Storage Will Outstrip Production

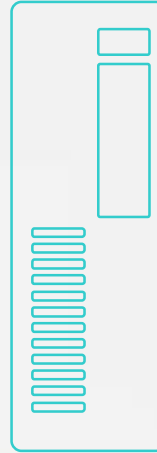


10x more data than today!!!

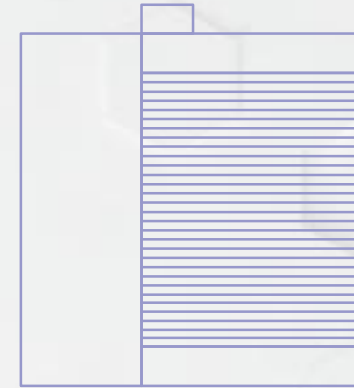
Können traditionelle Systeme die Antwort sein?



**Keine nahtlose
Skalierung
–
daher nicht
zukunftsicher**



Zu teuer



**Nicht Cloud
fähig**

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SUSE Enterprise Storage

SUSE Enterprise Storage

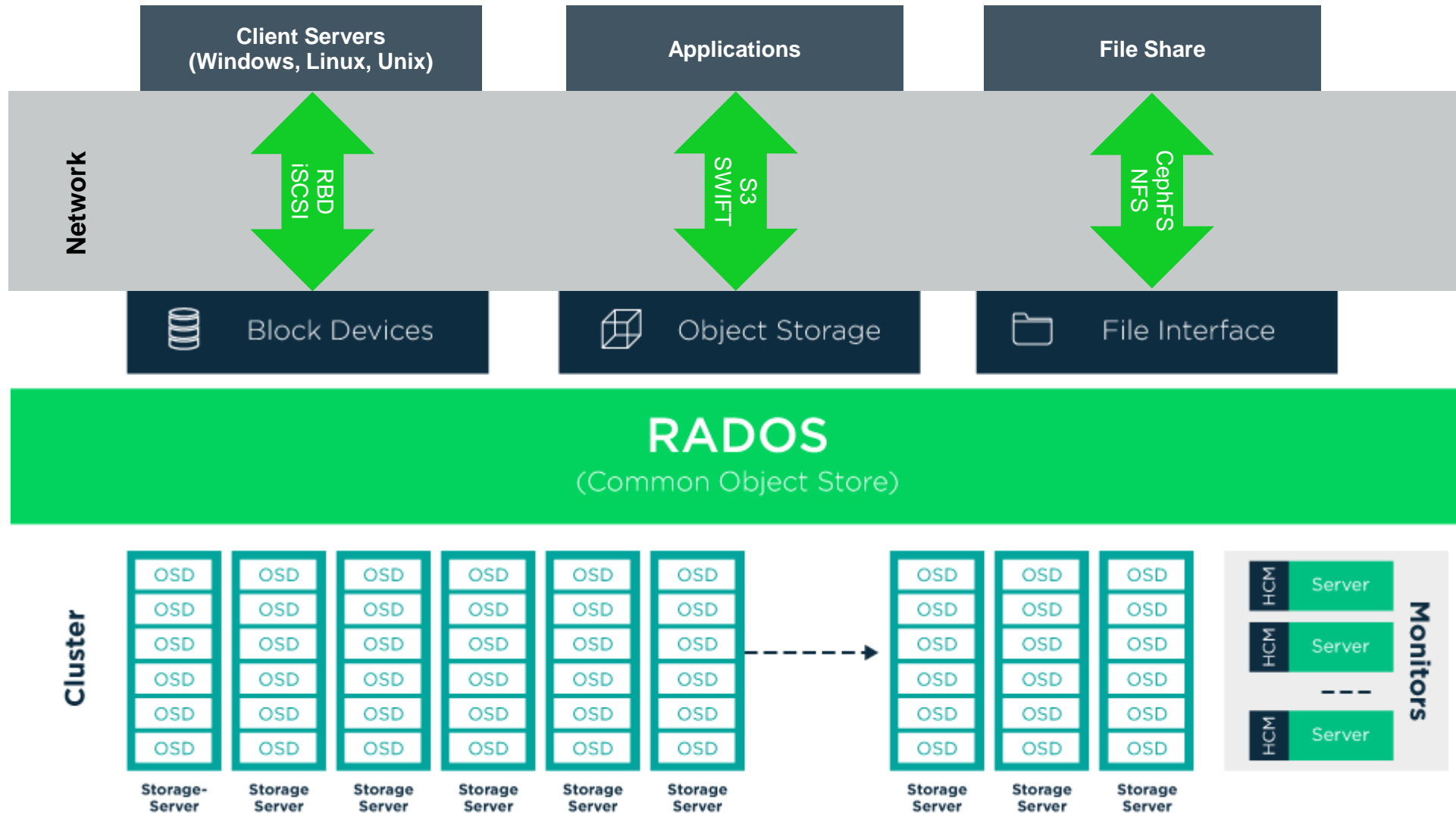


Eine **hochskalierbare, softwarebasierende** Storagelösung, die Unternehmen den Aufbau einer **kosteneffektiven** Speicherplattform, basierend auf **Standard Serverhardware** ermöglicht und zugleich **alle Enterprise Funktionen** unterstützt, die Kunden von einer derartigen Lösung erwarten.



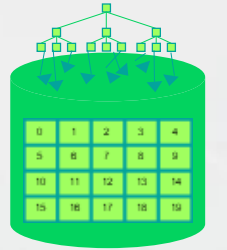
Powered by Ceph Technology

SUSE Enterprise Storage Architektur



SUSE Enterprise Storage – Major Features and Functions

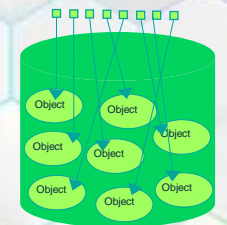
- Unified Block, Objekt und Dateien mit CephFS
- Erweiterte Hardware-Plattform mit Unterstützung für 64-Bit-ARM
- Asynchrone Replikation und multisite object replication
- Verbesserte Administration durch SUSE openATTIC
- Zugriff per NFS auf S3-Buckets
- Zugriff auf CIFS/SMB Shares über Samba
- AppArmor Security
- Data Compression



File Storage



Block Storage



Object Storage

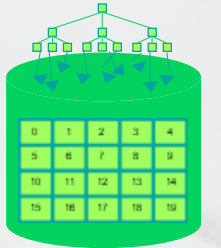
SUSE Enterprise Storage

SCHNELLER und EFFEKTIVER mit BlueStore Object Store

- Deutlich verbesserte Schreibperformance
- Data Compression
- Natives Block und File Erasure Coding

Einfaches MANAGEMENT mit openATTIC Gen2 und DeepSea

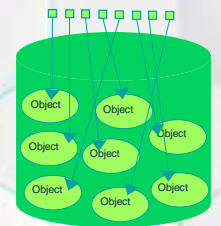
- openATTIC als graphisches Interface für einfaches Storage Management
- Signifikante Verbesserung des Device Monitorings
- Verbesserte Cluster Administration durch erweiterte DeepSea Funktionen



File Storage



Block Storage



Object Storage

SUSE Enterprise Storage

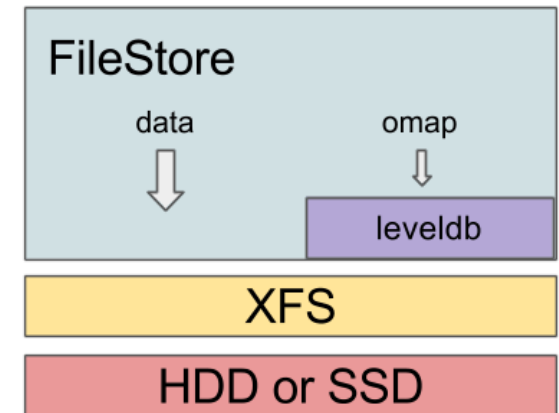
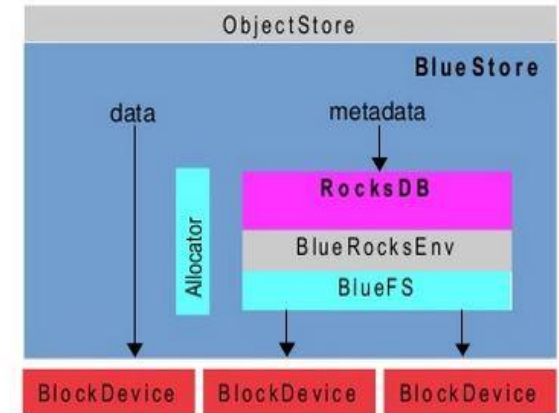
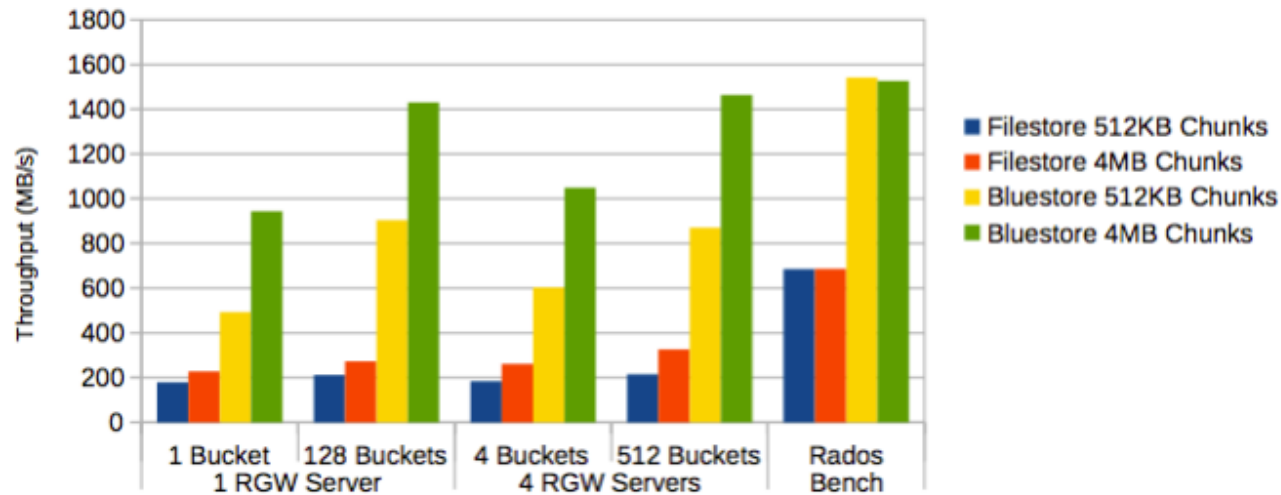
Focus klar auf Performance



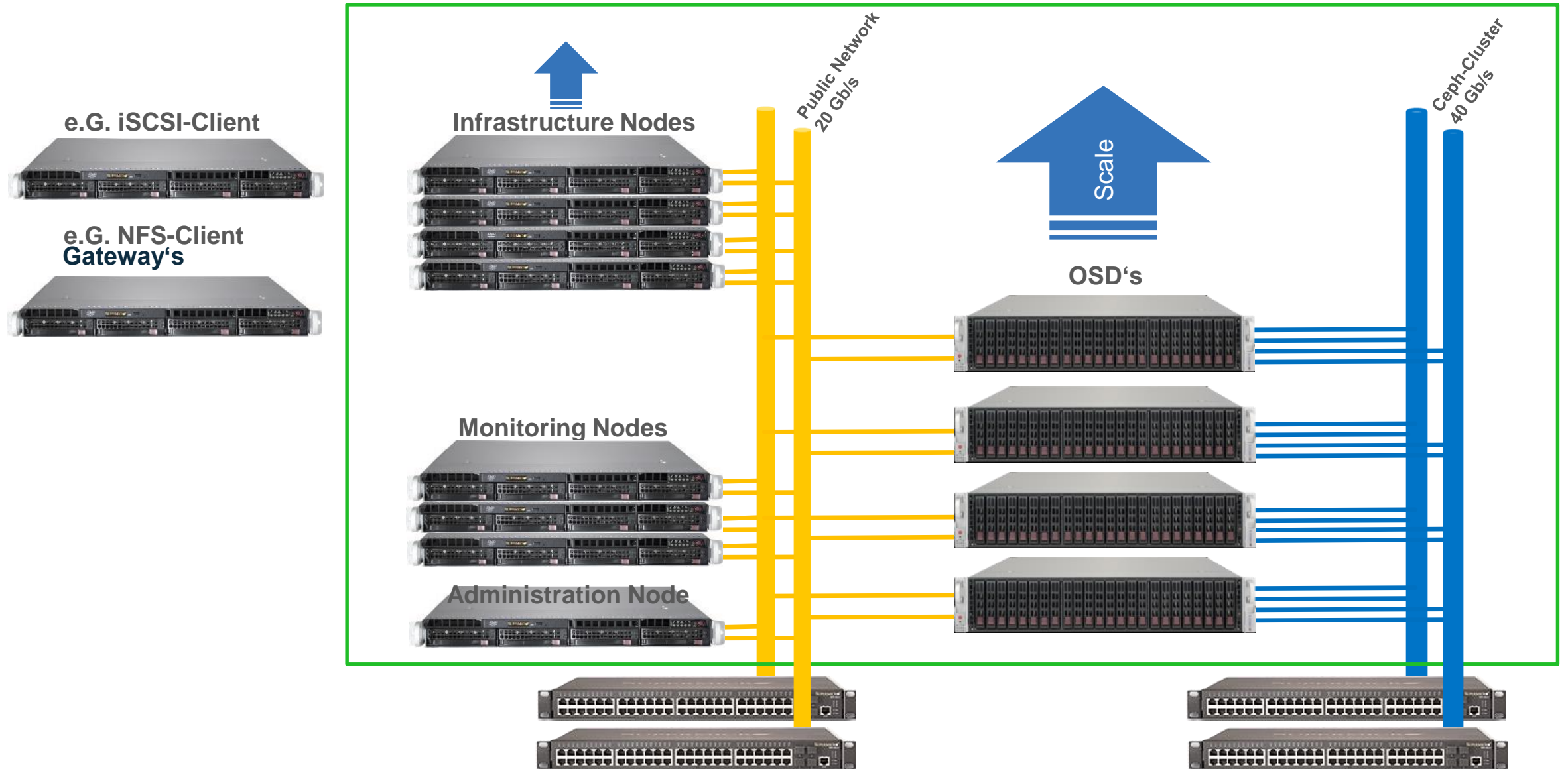
- SUSE Enterprise Storage 5 – Ceph BlueStore
 - Bis zu 200% bessere Schreibperformance im Vergleich zum Vorgänger

4+2 Erasure Coding RadosGW Write Tests

32MB Objects, 24 HDD/NVMe OSDs on 4 Servers, 4 Clients



Clusterarchitektur



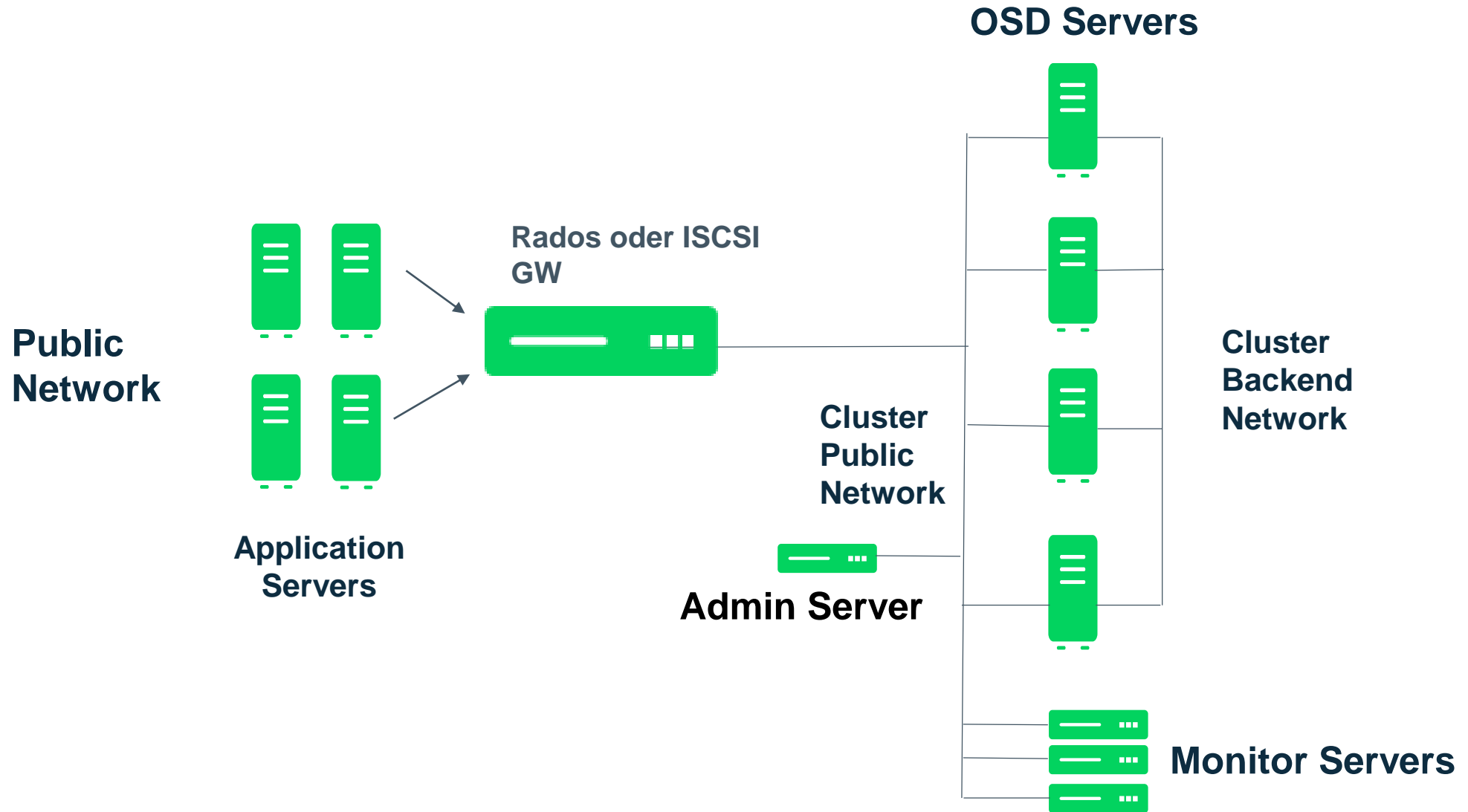
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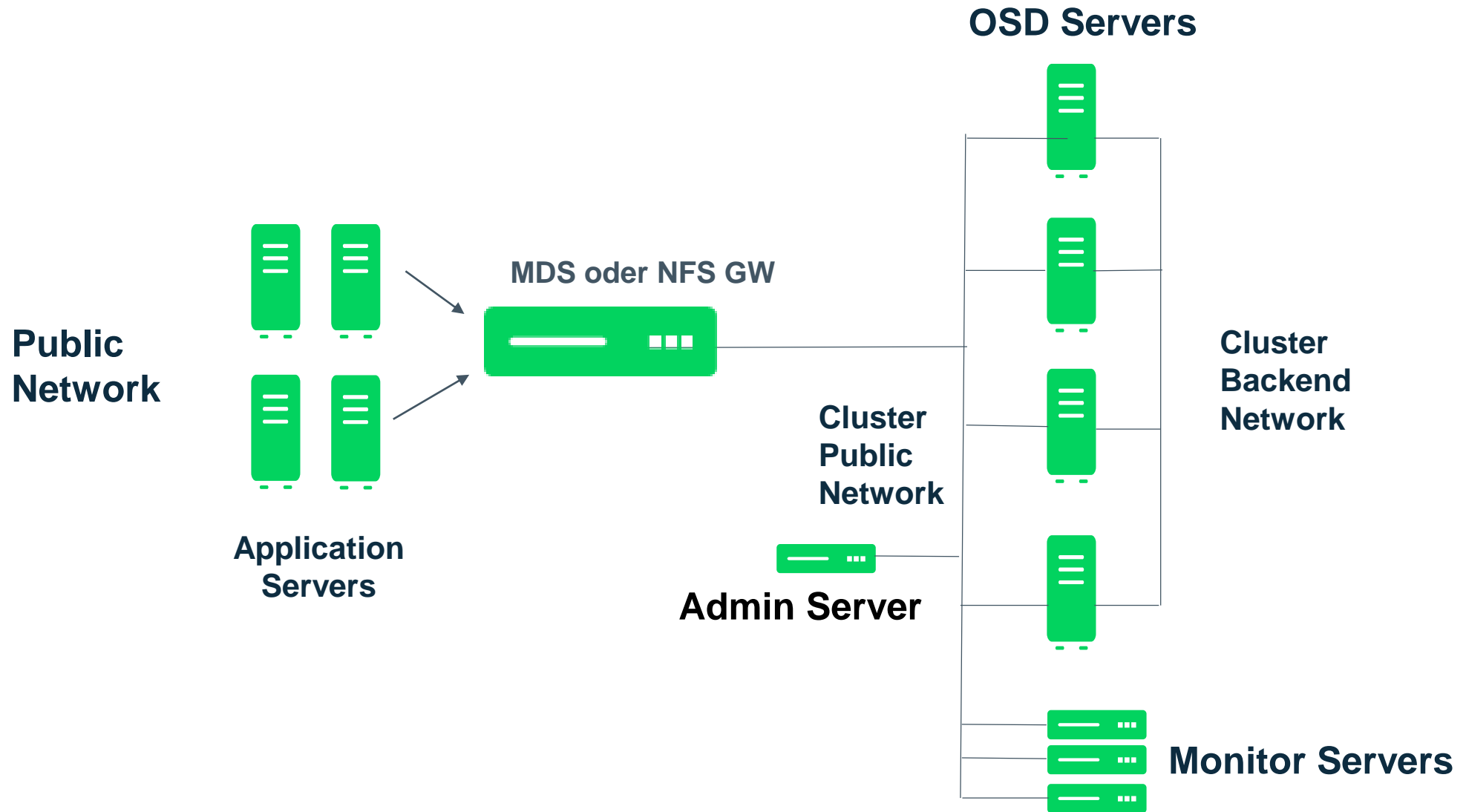
Welche Schnittstellen bietet SES?

Thomas Grätz

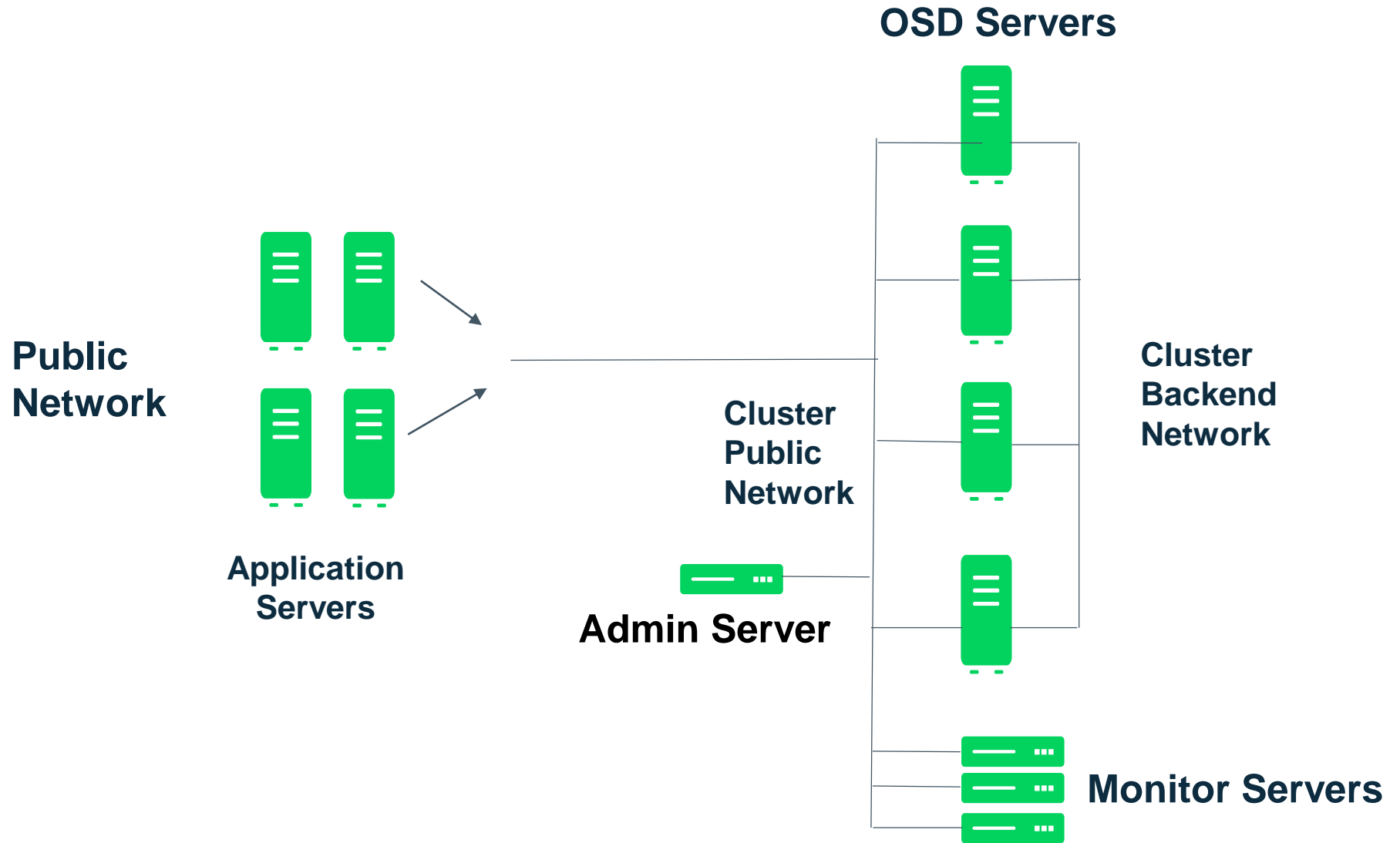
S3 oder iSCSI



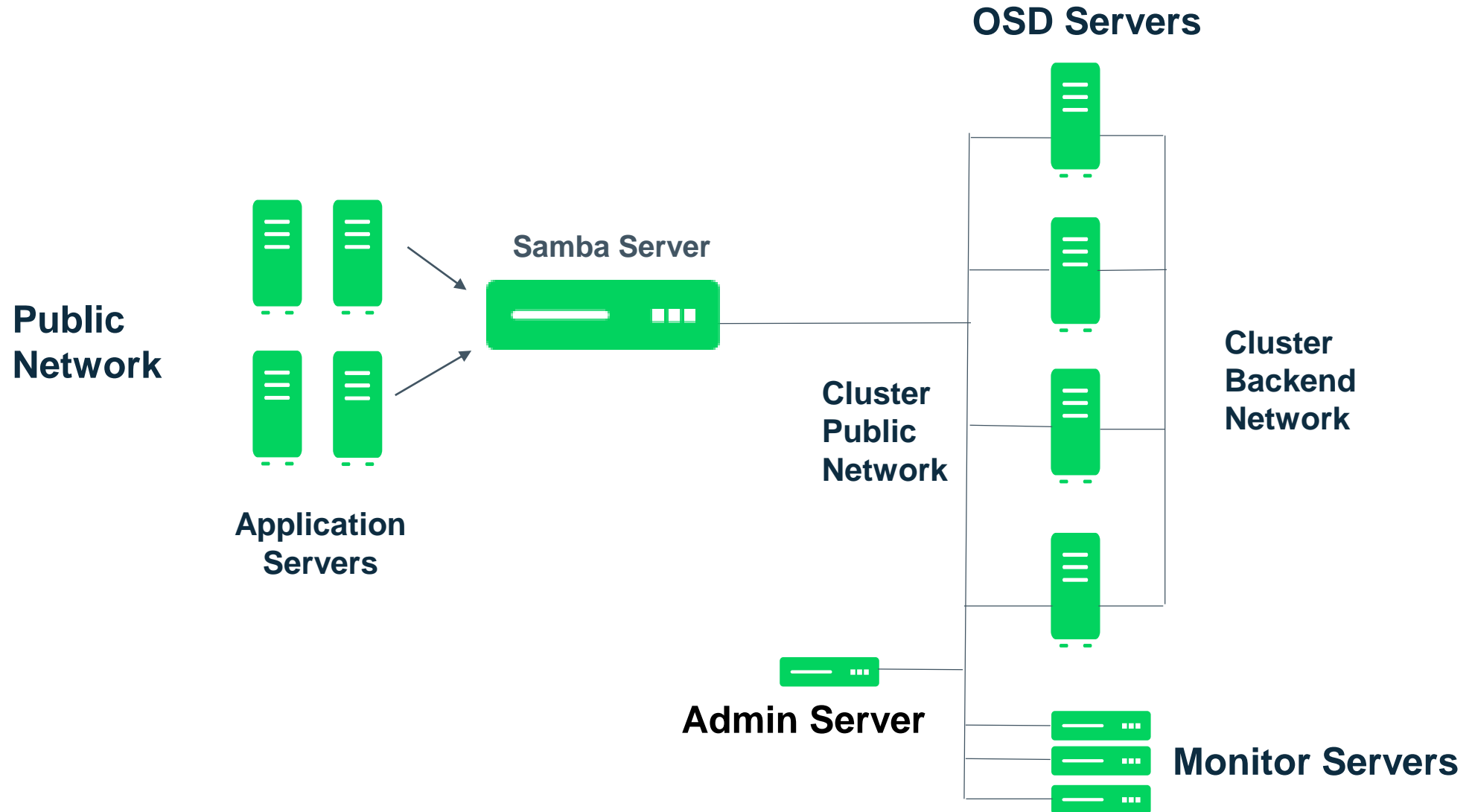
File Transfer via CephFS oder NFS Ganesha



RBD



SMB / CIFS



„For the Samba gateway (which will be tech preview in SES5) we'll offer AD domain membership via Winbind.

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SUSE Enterprise Storage 6

Thomas Grätz

SUSE Enterprise Storage

Development Focus



Verwaltung

- Leichte Installation
- GUI basiertes Monitoring & Management



Interoperabilität

- Unified Block, File & Object
- Fabric Interconnects



Effizienz

- Cache Tiering
- Containerization
- Hierarchisches Storage Management



Verfügbarkeit

- Backup/Archive
- Continuous Data Protection
- Remote Replication



SUSE Enterprise Storage 6

Verwaltung



- Ceph Dashboard (oA replacement)
- Phone home (metrics and error analysis)
- Enhanced PG balancing
- Autonomous PG scaling**
- CephFS directory quotas
- Graceful system shutdown from the UI

Continued SUSE Leadership in Making Ceph More **Enterprise Consumable**

Optimize data placement automatically and efficiently move data between all tiers of storage based on policy ensuring access to critical data when you need it

** Items are tech preview

SUSE Enterprise Storage 6

Interoperabilität



- IPv6
- RGW Elasticsearch sync module
- Node to node encryption**
- Multiple CephFS instances in one cluster**
- NFS-Ganesha active/active architecture**



SUSE Continues Making Ceph More **Flexible** to be Deployed in Traditional and Next Generation Use Cases

Accelerate Innovation by further removing storage silos

- easier access to your different types of data
- quickly extract information from your data using cutting edge search and analytics tools

** Items are tech preview

SUSE Enterprise Storage 6

Effizienz



- QoS for RBD
- QoS for background operations
- S3 object policy driven tiering**



SUSE is Making Ceph More **Self Managing** and Policy Driven

Improve IT efficiency
a single, scalable storage solution that meets all storage requirements for containerized and cloud enabled workloads no matter where they live

SUSE Enterprise Storage 6

Verfügbarkeit



- Unidirectional sync external cloud via S3
- CephFS snapshots
- Asynchronous file replication**

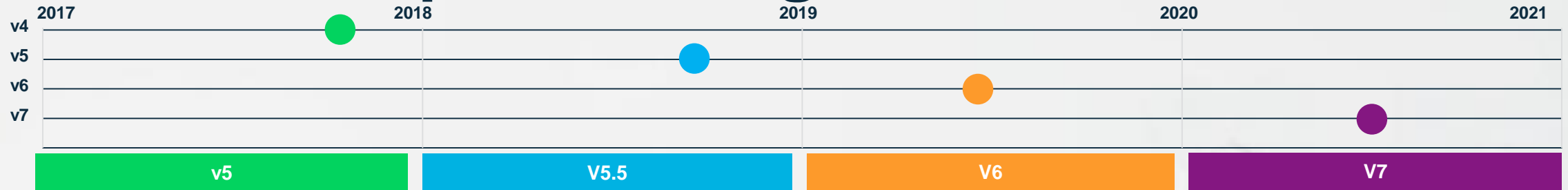
SUSE Enhances Ceph to be **Hybrid Cloud** Enabled

Maximize application availability

faster and more granular backups that can now leverage low cost public cloud resources for improved data protection

Respond to changing business demands faster quickly and easily leverage cloud resources as part of your storage infrastructure

SUSE Enterprise Storage



Built On

- Ceph Luminous release
- SUSE Linux Enterprise Server 12 SP3

Manageability

- openATTIC phase 2
 - ✓ Grafana monitoring dashboard
 - ✓ Prometheus event alert - email
- DeepSea (Salt) phase 2
 - ✓ Online Filestore to BlueStore

Interoperability

- NFS Ganesha
- NFS access to S3 buckets
- CIFS Samba**
- CephFS Multi MDS support

Availability

- Erasure coded block and file

Efficiency

- BlueStore back-end
- Data compression

Built On

- Ceph Luminous release
- SUSE Linux Enterprise Server 12 SP3

Manageability

- Internationalization
- Usability enhancements
- Predefined profiles
- Autonomous data balancer**
- DeepSea (Salt) phase 3

Interoperability

- Non SUSE RBD and CephFS clients
- CIFS/Samba
- AppArmor security module

Availability

- Multisite RADOSGW N+1 with N/N-1

Efficiency

- BlueStore/RocksDB optimizations

Built On

- Ceph Nautilus release
- SUSE Linux Enterprise Server 15 SP1

Manageability

- Ceph Dashboard (oA replacement)
- Phone home (metrics and error analysis)
- Enhanced PG balancing
- Autonomous PG scaling**
- CephFS directory quotas
- Graceful system shutdown
- Storage enclosure disk integration

Interoperability

- IPv6
- RGW Elasticsearch sync module
- Node to node encryption**
- Multiple CephFS instances in one cluster**
- NFS-Ganesha active/active architecture**

Availability

- Unidirectional sync external cloud via S3
- CephFS snapshots
- Asynchronous file replication**

Efficiency

- QoS for RBD and background operations
- S3 object policy driven tiering**

Built On

- Ceph Octopus release
- SUSE CaaS Platform

Manageability

- Integration with Rook + Kubernetes
- Phone home phase 2
- Autonomous PG scaling
- Self-healing PG

Interoperability

- Containerized deployment
- Native Windows client drivers
- Node to node encryption
- Multiple CephFS instances in one cluster
- NFS-Ganesha active/active architecture
- RDMA back-end**

Availability

- Bidirectional sync external cloud via S3
- Asynchronous file replication

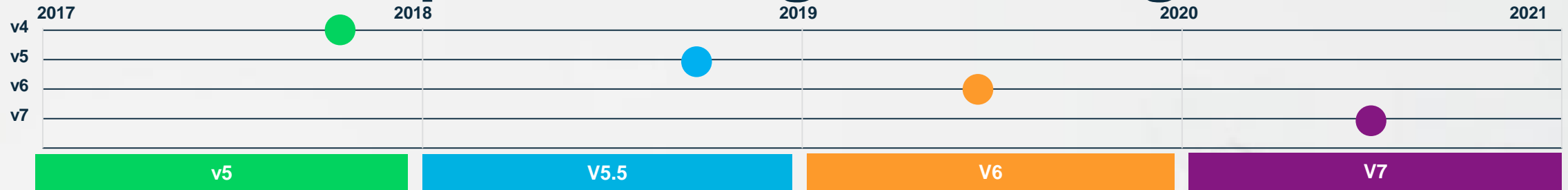
Efficiency

- Data deduplication
- SW cache layer
- Object Storage Daemon optimizations
- S3 object policy driven tiering

** Items are tech preview

* Information is forward looking and subject to change at any time.

SUSE Enterprise Storage — Management



Install

- Import unmanaged SUSE Enterprise Storage cluster

Configure

- Online Filestore to BlueStore

Manage

- Deploy, configure, assign nodes
- iSCSI target management
- RGW users, buckets, keys
- View, create, delete CephFS
- NFS Ganesha gateway

Monitor

- Grafana dashboards
- CephFS status

Diagnose

- OSD health status

Configure

- Convert EC to replication (visa versa)

Manage

- RBD snapshot
- OpenStack integration
- Cluster rebuild progress
- Admin node redundancy phase 1

Monitor

- Event notification alerts**

Configure

- iSCSI
- NFS-Ganesha
- Phone home
- RBD QoS parameters
- Background operation parameter (QoS)
- RBD remote replication

Manage

- Role-based Ceph Dashboard
- Localized Ceph Dashboard
- Ceph Dashboard SSO (SAMLv2)
- Crush map viewer
- RBD snapshot

Monitor

- Real-time performance metrics
- Scale-out Prometheus monitoring
- Event notification alerts
- SNMP traps
- Command audit log

Configure

- Deploy new OSD to existing node
- CIFS/Samba
- RGW and CephFS remote replication
- Sync to external cloud

Manage

- CephFS snapshot
- Cluster topology map
- Guided upgrade process

Monitor

- OSD and MDS statistics
- Ceph client performance

Diagnose

- Predictive disk failure analysis
- Guided troubleshooting
- Guided OSD repair process

** Items are tech preview

* Information is forward looking and subject to change at any time.



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Neupartner

Michael Jonas



Why should YOU sell SUSE Enterprise Storage ?

Storage Channel Management & Programs

Michael Jonas
Partner Executive Storage
Michael.Jonas@suse.com
+49 173 58 767 89

Be loud!



Who is buying SES

Typical Customers

Automotive
University Hospitals
Research
Public
CSPs
Media and Entertainment

High Potential Customer

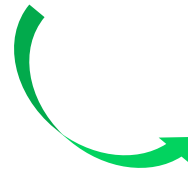


Typical SES Usecases

Open Stack
File Sync & Share
Cloud Storage
Backup
Large Simulations
Archive and Compliance
Long-Term Retention

Recommendation

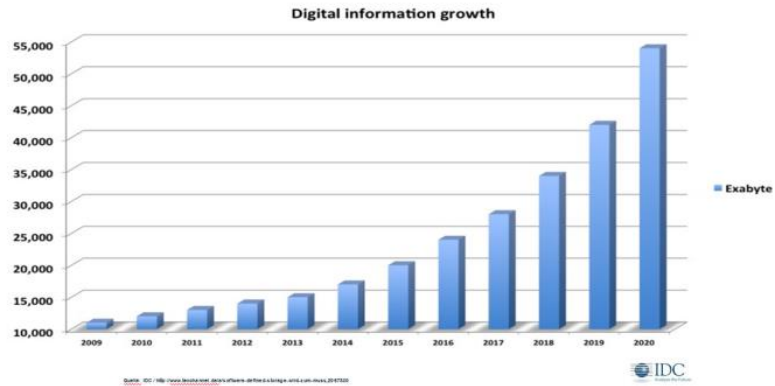
No migration
200 TB and more
Dynamic Storage growth >20% p.A.
No vendor lock



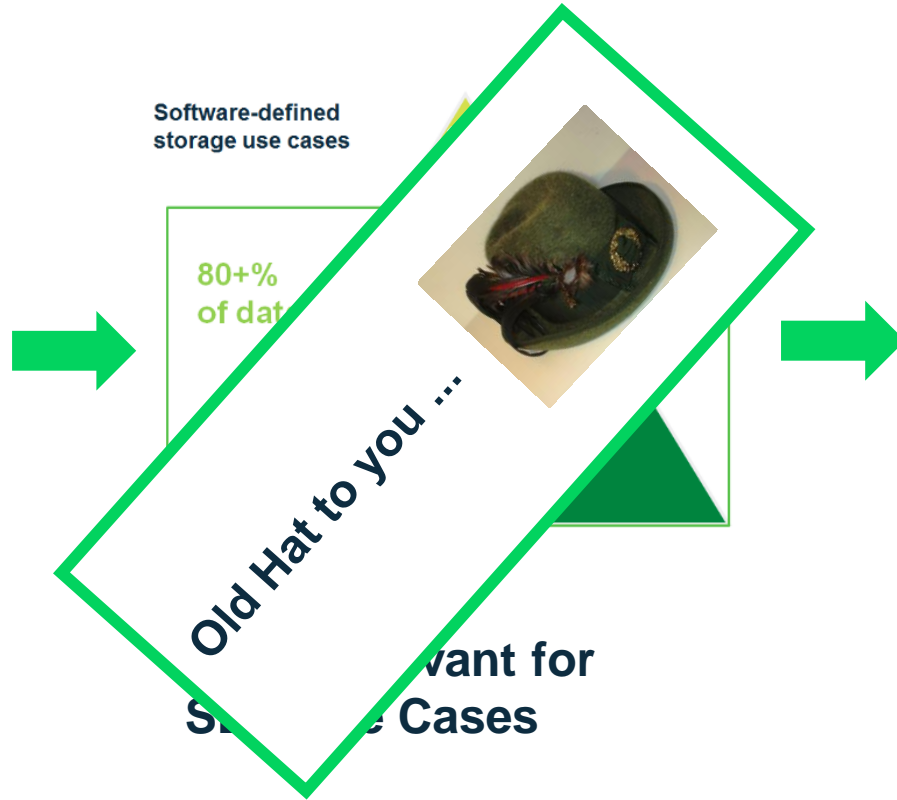
Why should YOU sell SUSE Enterprise Storage



Software defined Storage Growth



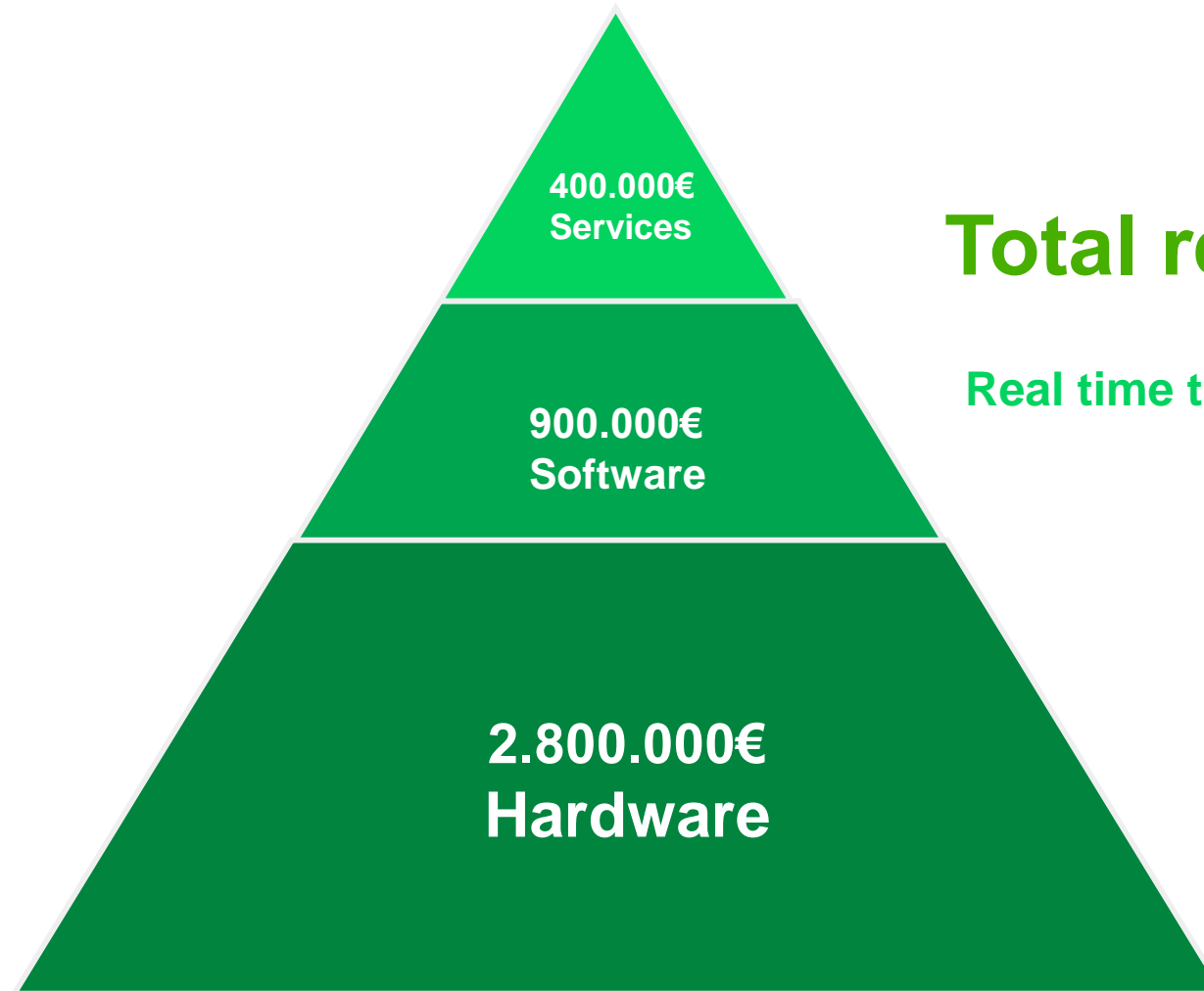
28.000 EB in 2017
54.000 EB in 2020
26.000 EB growth



21.000 EB relevant Growth

What`s in for you ?

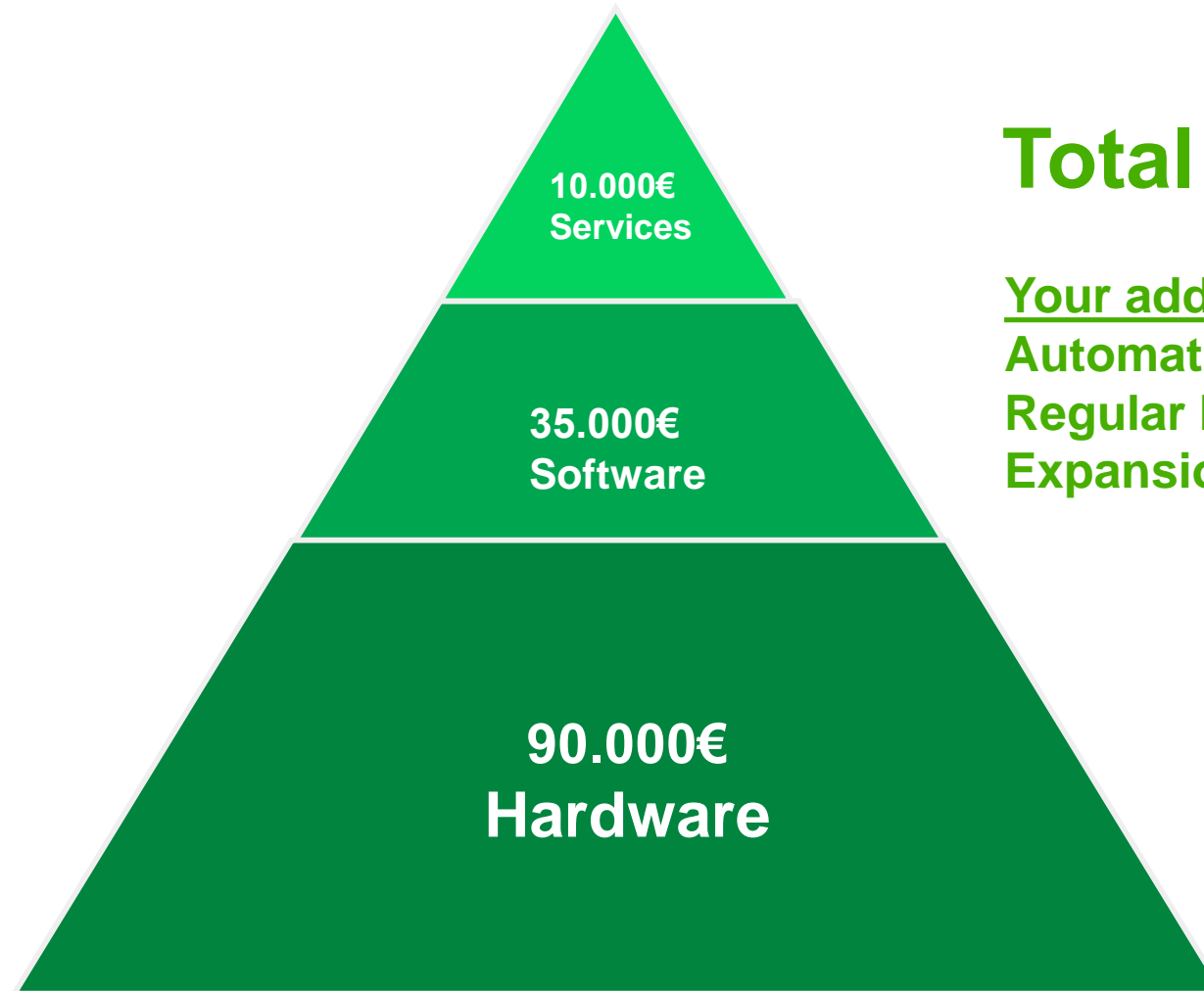
Huge SES Project Asia Pacific 39 PB



Total revenue 4.100.000 €

Real time traffic prediction

Average SUSE Enterprise Storage Project



Total revenue 135.000 €

Your additional Value:

Automatic Software renewal after 3 years

Regular HW Updates

Expansion in average each 1,5 years

In average 250 TB / basis for configuration / SW – HW 1:2,5 / Factor pending by Customer requirements

SES 2020 Potential EMEA



Total revenue 34.500.000 €

Additional:

Regular automatic Software Renewals

Continuous Hardware extensions

Continuous Software extensions

How can we cover the Opportunity

SUSE Storage Partner Support

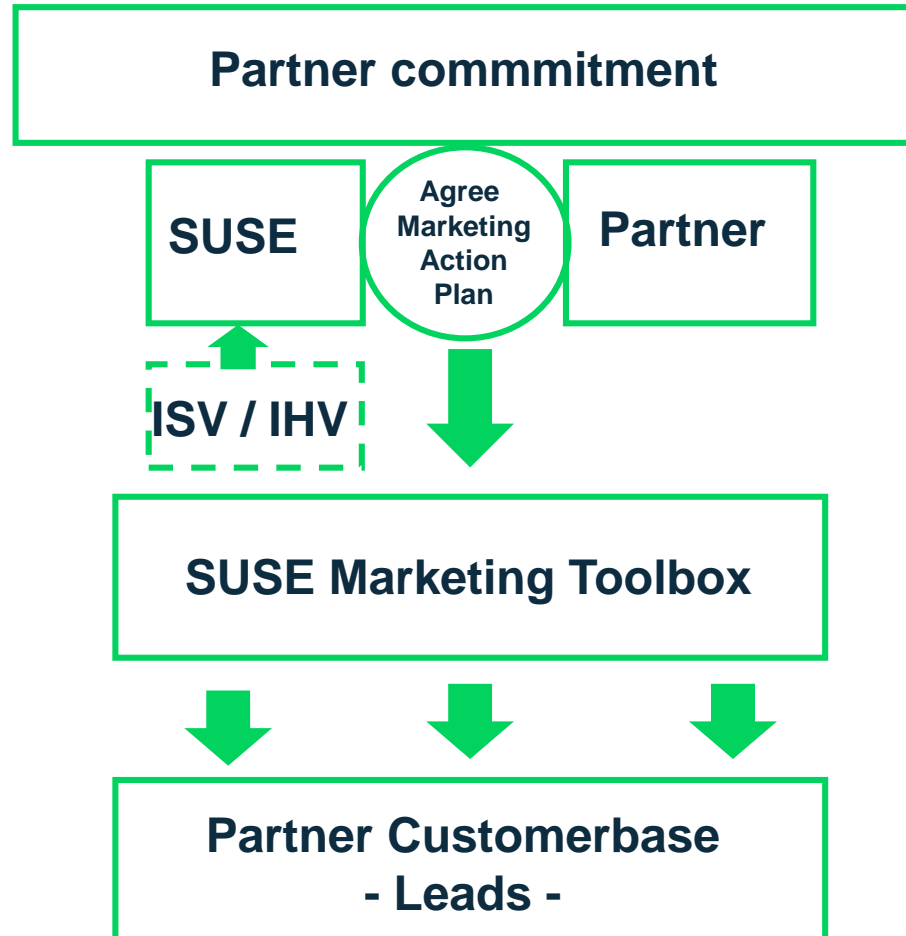


Marketing Toolbox

Be loud!



Marketing Toolbox – What's in for you



Marketing Toolbox is a preconfigured set of Marketingactions

Requirements:

Revenue commitment

Agreed Businessplan

One Storage Sales certification done

Marketing Toolbox Activities for You

Reference Video

- WebCasts
- Customer Events
- Mailings
- Call Out
- Newsletter
- Flyer
- Reference Video
- White Paper
- Press Release
- Customer + Reference Stories
- Certified ISV capabilities
- Hardware vendor capabilities

WebCast and Call Back

Regular Storage WebCast
„SUSE Storage Friday“
More than 100 participants



Flyer

A flyer for ProtoSoft Enterprise Storage. It features the ProtoSoft logo and the text "Performance der SUSE Enterprise Storage Lösung". There are two line graphs showing performance metrics. Below the graphs, there is a list of benefits: "Zukunftsfähige Storage auf Standardhardware", "Hohe Performance", "Geringe TCO/GB durch automatische Verschiebung", "Hohe Verfügbarkeit und Skalierbarkeit", and "Übersichtliches Admin- und Management". There is also a photo of a server rack. At the bottom, there is contact information for Michael Hojnick, including his phone number and email address. The flyer also mentions "SUSE Certified" and "ITec".

Additional Support for Your Business

➤ Deal-Registration-Programm

up to 15 % additional Margin for Storage Opportunities
Register per E-Mail: storage@suse.com

➤ Distribution Support

Configuration and enablement
Automatic renewal-Prozess
Sales and technical support
Marketing Support

➤ POC Hardware Support

➤ Certification / Enablement and Education

➤ Onside Sales and Technical Support

➤ Individual Business Development Programs

SUSE Enterprise Storage, powered by Ceph

**Keep Pace with the
Rapidly Growing
Demand for Data
Storage**

Start Free Trial

60 Days of Patches and Updates



Ready to Start ?

Contact us:



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PRIANTO



Die Prianto

Werner Dobbeck

Prianto GmbH



Prianto - Das Unternehmen

- Gründung 2009
- 530k Euro Eigenkapital
- Mitarbeiter 2018: 100
- Web-Präsenz: www.prianto.com
- Verkauf zu 100% an IT-Reseller
(kein direktes Endkunden-Geschäft)
- Unternehmenszentrale in München
- Vertriebsbüros in Castrop-Rauxel,
Köln und Gießen



SUSE Enterprise Storage

...Sie wollen mit SUSE Enterprise Storage Geld verdienen? – wir unterstützen Sie hierbei gerne:

- **Partner Enablement/know how transfer:**
 - Aufbau know how / Partner Enablement: wir unterstützen Sie SUSE Solution Partner zu werden (Vorteil: u.a Deal Registration)
 - Ihr Kunde ist mit seiner derzeitigen Lösung eines anderen Herstellers einer Storage Lösung nicht zufrieden? – hier können wir Ihnen gerne interessante und lukrative cross selling Angebot machen.
- **Technische Unterstützung:**
 - Sie haben aktuell ein Storage Projekt? ...es fehlt Ihnen aber das know how zum SES? – gerne unterstützen wir Sie hier das Projekt zu gewinnen und abzuschließen.
- **Marketing/Vertrieb:**
 - Sie haben die Möglichkeit für eine Hausmesse? – sie laden Ihre passenden Kunden für dieses Thema ein, SUSE stellt Ihnen einen Präsentator zur Verfügung.
 - Sie laden Ihre potentiellen Kunden zu einem Webinar ein, SUSE präsentiert und informiert Ihre Kunden zum Thema SES.
 - Sie informieren Ihre Kunden regelmäßig mit eigenem Marketingmaterial (Newsletter, usw.) und wollen SES positionieren?– wir unterstützen Ihre Marketingaktivitäten mit entsprechendem MDF Geld.



Wir unterstützen Sie!



- Dedizierte Vertriebsmitarbeiter für SUSE und SUSE Storage
- Technischer Support und Enablement (Wichtig für Deal Reg!)
- SUSE Certified Administrator in Enterprise Storage
- Prianto ist SUSE Cloud Service Program Fulfilment Agent
- Einkaufsmanagement
- Financial services und credit limit management
- Renewal Services



Das Prianto SUSE Team



- Werner Dobbeck – Manager Business Unit Micro Focus
- Christoph Hauschild – Senior Inside Sales Manager SUSE
- Kathrin Arnold – Inside Sales Manager SUSE
- Sibylle Regener - Inside Sales Manager SUSE
- Thomas Hörig-Braun – Business Development Manager SUSE
- Andre Plagemann – Technical Consultant
(SUSE Certified Administrator in Enterprise Storage)
- **eMail: suse@prianto.com**

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Thank you

Q & A