

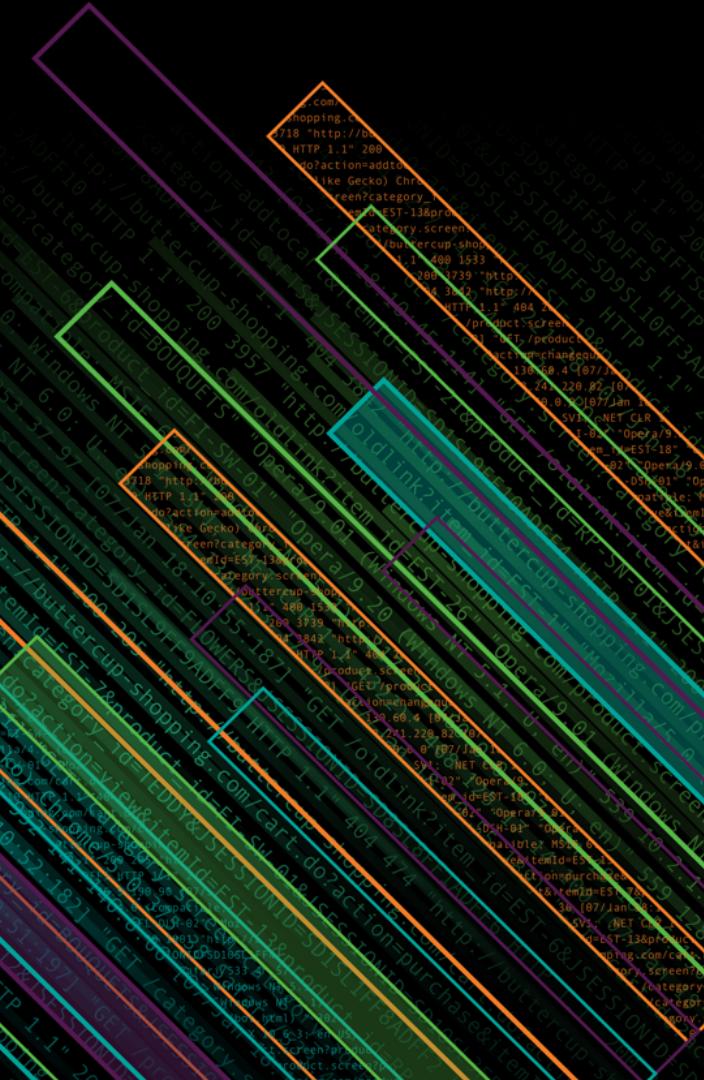


splunk&gt;

# Splunk for IT Ops: A Storage Perspective

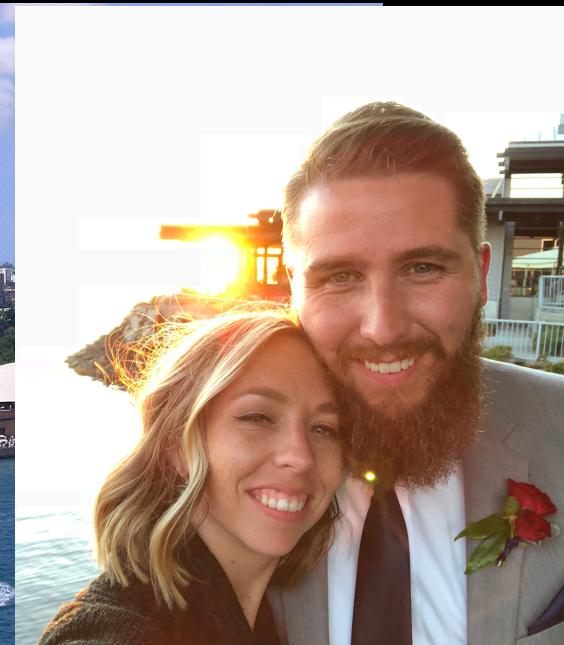
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# Who is Kyle Prins?

- ▶ Splunk Certified SE3 & Architect 2
- ▶ Current Expat
- ▶ BS Computer Engineering
- ▶ 2.5 Years at Dell EMC
- ▶ Former Dell EMC customer
- ▶ 17 year Scuba Diver
- ▶ Smart Home & Automation Victim
- ▶ Mediocre Snowboarder
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# Key Takeaways

1. Splunk is a business critical application
2. An Intelligent Storage System can add speed and resiliency
3. Having insights into your Splunk infrastructure is key to a successful deployment

# Splunk Storage Recommendations

HOT

WARM

DAS, SAN or SDS  
Flash  
>1000 IOPS

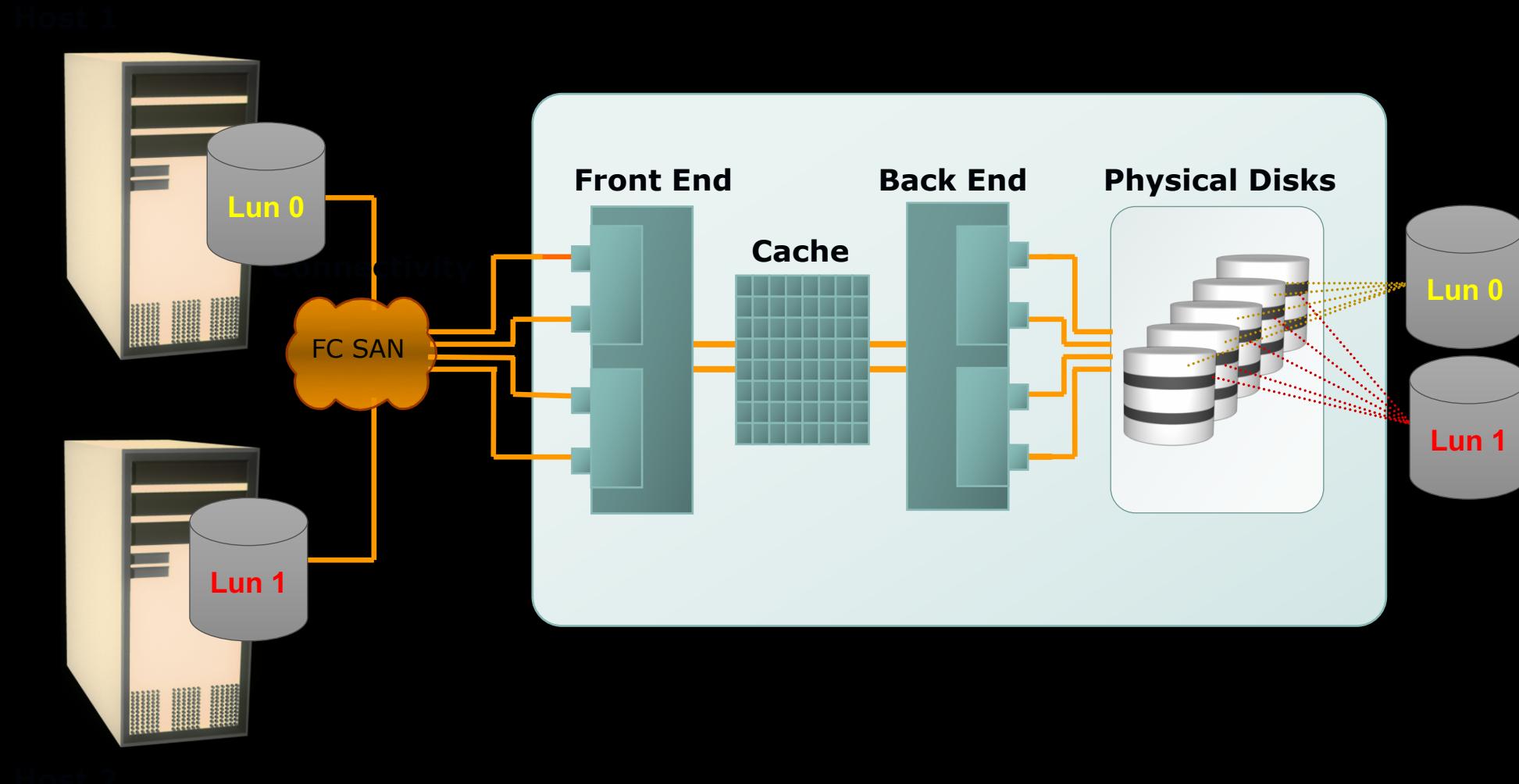
COLD

Option to use Hot/Warm infrastructure or add NAS  
HDD  
800 IOPS

FROZEN

NAS or Object Storage  
Data no longer able to be searched

# Intelligent Storage System Components



# Some Good Rules to Follow for ISS Running Splunk

- ▶ Multiple paths to the storage array
    - Across different engines

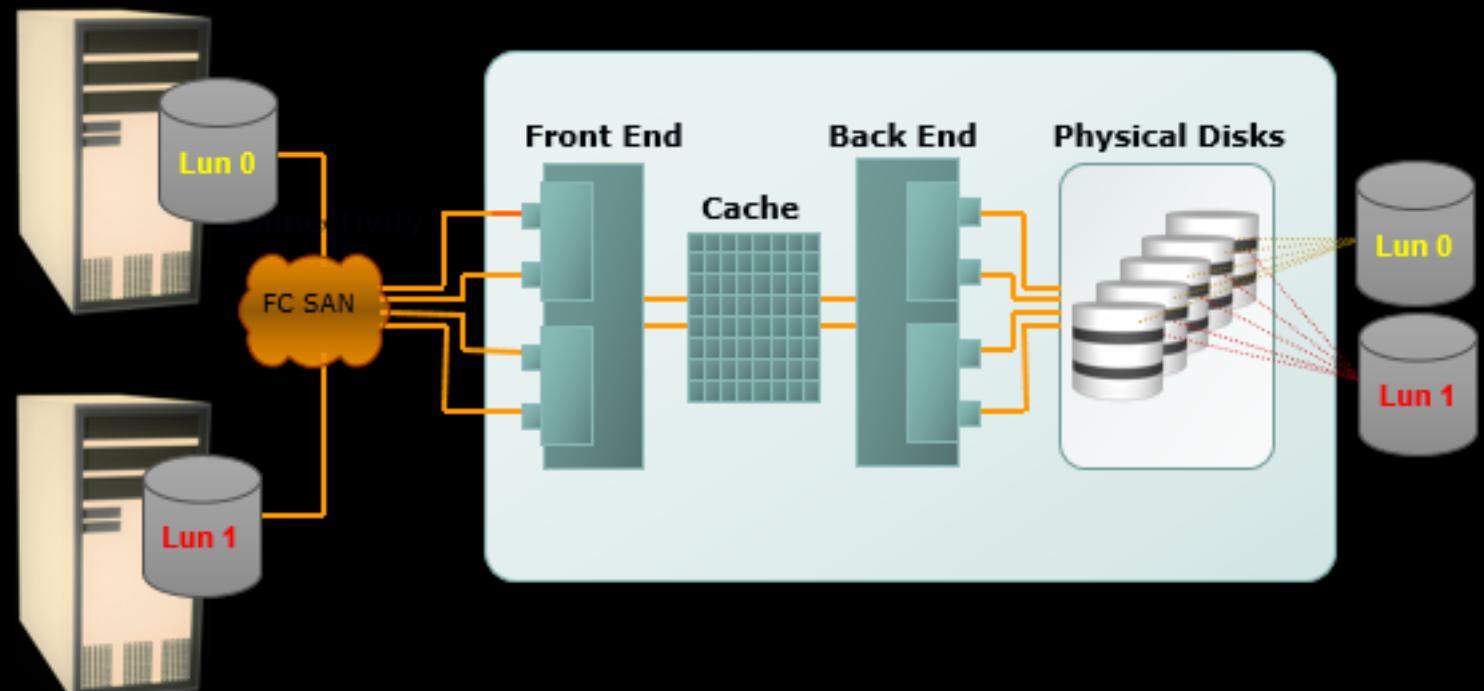
- ▶ Turn off auto tiering
    - Why not just go SSD?

- When in doubt, SSD.

- ## ► Mind your cold queries

- Cold is cold for a reason

- Watch your searches run from users



# Dell EMC's XtremIO

- ▶ Scale Out All Flash Storage Array
  - ▶ > 1 Million IOPS & < 1ms Latencies
  - ▶ D@RE with Self-Encrypting Drives
  - ▶ In-Memory Data Copy Services
  - ▶ Access via FC or iSCSI
  - ▶ BFS Support
  - ▶ Double parity data protection
  - ▶ Inline data reduction



HOT

## WARM

# XtremIO Demo

Cluster: cec-xio  Hide Filters

### Summary

Cluster Name: cec-xio  
 XtremIO Server: 10.63.48.94  
 System Start Time: 01/15/2015 05:32:20  
 XIOS Version: 3.0.1-11  
 Health: healthy  
 Overall Efficiency: 50.08:1  
 Data Reduction Ratio: 6.6:1  
 Dedup Ratio: 4.6:1  
 Compression Ratio: 1.4:1  
 Thin Provisioning Savings: 86.73%  
 Physical Space In Use: 286.24 GB  
 Logical Space In Use: 1.86 TB  
 Total Capacity: 14.00 TB

### Volume Summary

Index	Volume Name	Creation Timestamp	Volume Size	Total Snapshot	Total Lun Mapping
4	RSA_ISILON_1	06-09-2018 21:12:04	2.00 TB	0	2
1	oligr_1	06-09-2018 21:12:01	2.00 TB	0	4
2	oligr_2	06-09-2018 21:09:48	4.00 TB	0	4
3	horizon_1	06-09-2018 21:13:36	2.00 TB	1	2
7	horizon_1.onep.04292015-13:26	06-09-2018 21:08:19	2.00 TB	0	0
5	lun1	06-09-2018 21:05:54	1.00 TB	1	2
6	lun1.onep.04292015-13:26	06-09-2018 21:12:35	1.00 TB	0	0



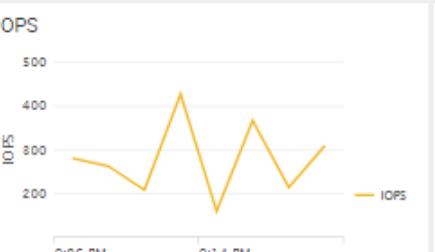
Bandwidth(MB/s)

Bandwidth

0.75  
0.5  
0.25

0:00 PM 0:14 PM

— E...h



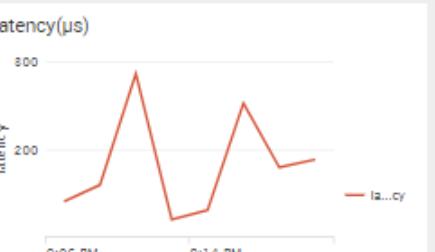
IOPS

IOPS

500  
400  
300  
200

0:00 PM 0:14 PM

— IOPS



Latency(µs)

Latency

800  
600  
400  
200

0:00 PM 0:14 PM

— Latency

► Demo

# Dell EMC's Isilon

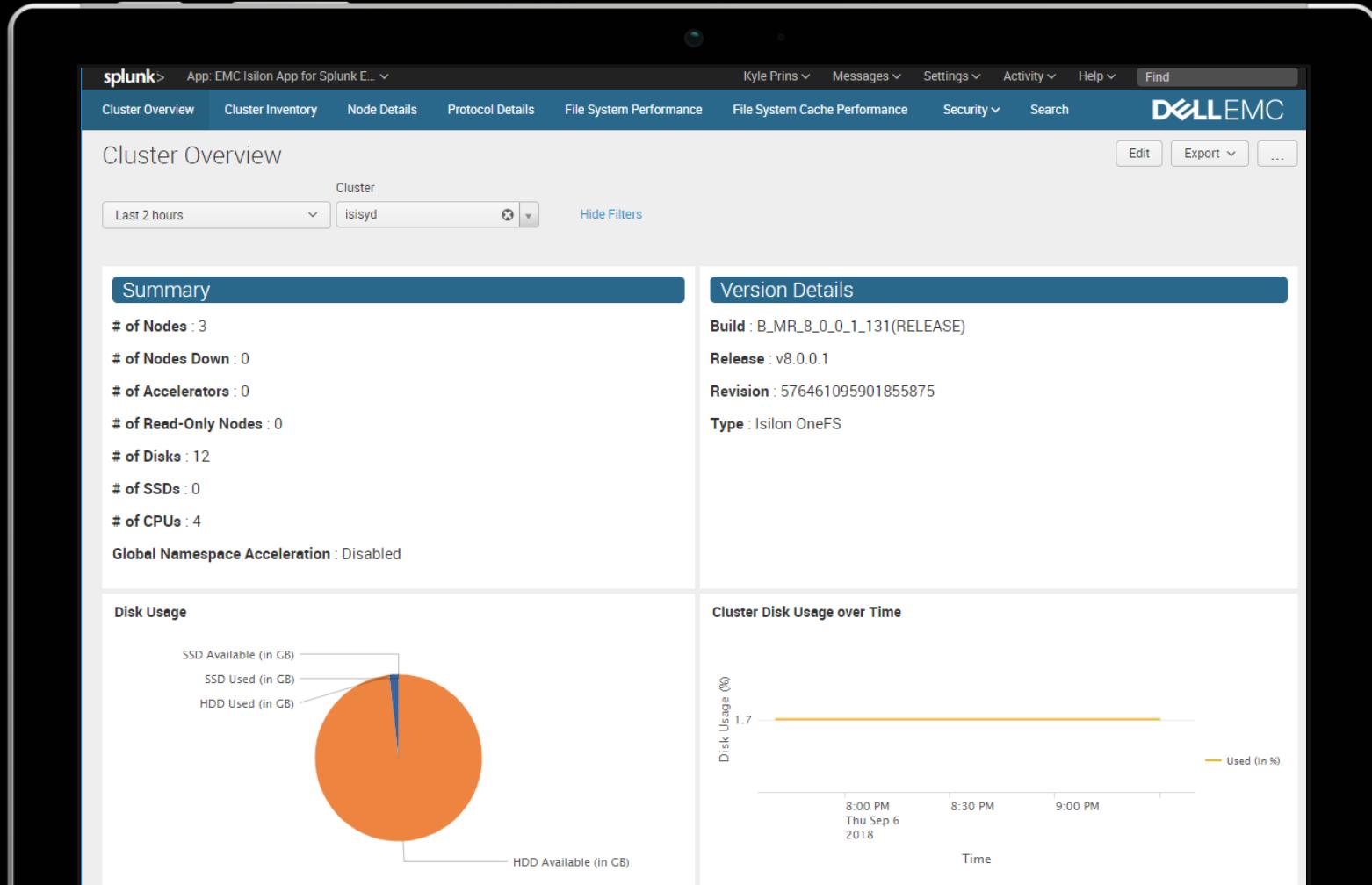
- ▶ Scale Out File System
  - ▶ Grow up to 68 Petabytes
  - ▶ OneFS Single Filesystem
  - ▶ Access via Multiprotocol
  - ▶ Dynamic Load balancing
  - ▶ Auto balanced nodes



# COLD

## FROZEN

# Isilon Demo



► [Demo](#)

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Trained by Splunk

# Splunk Architecture Experts

# Dell EMC Portfolio Experts

# Religious about Best Practices

**Available across the GLOBE!!!**

**Contact your local Dell EMC rep**

# Questions?

# Thank You

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