



TABLE OF CONTENTS



Hardware Support	<ul style="list-style-type: none"> ○ ZPA Features - Optional Services PG. 2-3 <li style="padding-left: 20px;"><i>The Zerowait Parts Assurance Policy</i>
Engineering Services	<ul style="list-style-type: none"> ○ Unbiased Expertise PG. 4-5 <li style="padding-left: 20px;"><i>Long Term Solutions For High Availability Storage Infrastructure</i>
Hardware Sales	<ul style="list-style-type: none"> ○ Quality Assured PG. 6-7 <li style="padding-left: 20px;"><i>Cost-Effective Solutions For The Storage & Performance You Need.</i>
Training	<ul style="list-style-type: none"> ○ Key Topics - Course Details PG. 8-9 <li style="padding-left: 20px;"><i>Customized Instruction To Match Your Staff & IT Needs</i>
Exception Reporter	<ul style="list-style-type: none"> ○ Details - Features PG. 10-11 <li style="padding-left: 20px;"><i>Have You Read Your Filer's Weekly Log Recently?</i>
Universal Rack Mount Kit	<ul style="list-style-type: none"> ○ Simple To Use, Easy On Your Budget PG. 12-13 <li style="padding-left: 20px;"><i>Who Doesn't Need A Spare Rack Mount Kit?</i>



Video Surveillance	<ul style="list-style-type: none"> ○ Turnkey Solutions with Extensible Storage PG. 14-15 <li style="padding-left: 20px;"><i>The Ideal Platform For PCI Compliance</i>
Cloud	<ul style="list-style-type: none"> ○ Maximum Storage - Minimum Price PG. 16-17 <li style="padding-left: 20px;"><i>Space You Need At A Price You Can Afford</i>
Data Sheet	<ul style="list-style-type: none"> ○ Key Components - Frequently Asked Questions PG. 18-19 <li style="padding-left: 20px;"><i>An Affordable Solution From Zerowait Has Arrived!</i>
Tape Is Dead	<ul style="list-style-type: none"> ○ Tape Storage Alternatives PG. 20-21 <li style="padding-left: 20px;"><i>There Has To Be A Better Way</i>
Exception Reporter	<ul style="list-style-type: none"> ○ Details - Features PG. 22-23 <li style="padding-left: 20px;"><i>Easy To Read Reports Make Management Simple</i>

707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@zerowait.com | W: www.zerowait.com





The Zerowait Parts Assurance Policy

Maximize your ROI, not NetApp's

Don't let your storage vendor force you to upgrade stable, functional storage platforms because they will no longer service them. Zerowait has been extending the life, and maximizing the ROI, of Network Appliance storage platforms since 1998. We maintain an extensive inventory of spare parts for these older platforms, and our technical support team knows these platforms, and their O/S versions, inside and out.

Our ZPA policies, with next business day parts delivery, will allow you to maintain older platforms within your IT infrastructure, whether front-line or redeployed to provide near-line storage. And our cost structure will help you squeeze every possible megabyte out of your storage budget.

Zerowait Parts Assurance Policy

The Zerowait Parts Assurance Policy (ZPA) is a comprehensive hardware replacement policy with a technical support component. When your system suffers a failure, our technical staff is there to assist you in troubleshooting your Filer or NetCache. We provide the correct replacement part via next day air, and our technical staff will walk you through the installation of the new part.

Based on your application and configuration, Zerowait will design a cost-effective ZPA policy to suit your precise requirements. For critical applications, this can include an on-site spares kit allowing the immediate replacement of failed parts. The on-site kit is replenished by next business day air, ensuring you always have the parts you need to maintain 24x7 operation. This comprehensive support is surprisingly affordable, with even greater levels of discount as your term of service is extended.

STANDARD FEATURES OF A ZPA POLICY

• Next Business Day Shipping

We ship every part for next business day delivery.

If we receive your call before 12:00 PM EST Monday-Friday, we'll make sure it gets out that same day.

• 24/7 On-Call Support

Our engineers are available 24 hours a day, seven days a week. We're on-call to ensure that you can report an outage and receive technical support at anytime.

• AutoSupport Monitoring Service

All ZPA policies sold include our new ZHA™ Exception Reporter tool. Receive weekly reports loaded with useful information to give you a quick synopsis of your system.

• Green Shipping

Our experienced shipping team has developed reusable packing to ship equipment which you can then reuse to ship your failed equipment back to Zerowait. Given the number of items we ship, this eliminates tons of cardboard and foam waste that was going into landfills.

• Flexible Contract Terms

Flexible ZPA terms from 3 months to 3 years.

• Predictive Failure Monitoring

Our experienced engineering staff monitors your autosupports to verify everything is working smoothly. If a failure is found, our staff will contact you and verify the problem prior to issuing an RMA.



OPTIONAL SERVICES

Prepaid Shipping Services

Returning failed drives can be a hassle, especially if the engineer who receives the RMA does not have authorization to ship equipment. With Pre-Paid Shipping Service, we include the return label back to Zerowait. Now your engineer will have everything they need to return a drive!

Proactive Disk Replacement

Verifying drive failures can be a distraction when your staff is busy diagnosing and solving other problems. Our engineering staff normally requests verification prior to issuing an RMA for a failed drive, but if you select Proactive Disk Replacement, Zerowait will proactively issue your RMA without any verification.

Non-Returnable Disks

Is your data sensitive and does your company policy require all hard-drives be destroyed? No Problem! With our Non-Returnable Disk service you never have to ship a failed drive back to Zerowait!

On-Site Spares

For systems with critical uptime requirements, a spares kit on-site can make all the difference. Instead of an exorbitant surcharge for 4 hour on-site support, Zerowait will configure a comprehensive spares kit to be kept on-site. When a failure occurs, our engineers will assist you in determining which component from the kit to use, walk you through the installation of the new part, then ship a replacement part for your spares kit. You then return the defective part. With this option, replacement time can be less than 30 minutes, while substantially reducing the cost of service as provided by Network Appliance. Our spares kits include replacements for all critical components, and our extensive knowledge of NetApp systems and broad inventory allows us to design a kit that suits your environment and precise requirements.

INCLUDED WITH EVERY ZPA POLICY

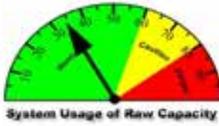
Supports all versions of Data ONTAP up to & including 8.0

ZHA[®] EXCEPTION REPORT

Report Generated:	2011-04-01 09:22:03
Autosupport Generated:	2011-04-01 08:30:59
Log Type:	USER_TRIGGERED
Severity:	INFO
Mail From:	ffier@zerowait.com
Client Name:	Nobody.com
Vendor Name:	Zerowait
Support Expires:	2011-09-16

System Info

System Name:	filename
System Model:	FAS270
System Serial Number:	XXXXXXXX
System ID:	XXXXXXXXXXXX
Data On Tap Version:	7.3.2
System Uptime:	900 days, 20:42
System Memory:	1022 MB
Cluster Member:	False



Installed Cards

Slot Card
0 System Board 650 MHz (TSANTSA E0)

Storage Overview

Total Storage:	1730.88 GB
Total Volumes:	9
FAS270 Maximum Capacity:	8192 GB
Total Spares:	4 x 144.0 GB drives

Volume Overview

Volume Name	Used GB	Total GB	Avail %
/vol/data/	150.36	162.9	7.7
/vol/terbackup/	13.88	56.0	75.21
/vol/mail/	43.15	80.0	46.06
/vol/vol/	0.69	11.2	93.84
/vol/scratch/	75.64	127.27	40.57

Storage Utilization

Total Raw Capacity:	1730.88 GB
Total Used Storage:	604.69 GB
System Usage:	34.94% of Raw Capacity
Average System Usage of Sample Population:	0.0% of Raw Capacity

Security Messages

Click the message links for solutions.

[rshd_0 error](#)

[rshd: when reading port number for standard error from 192.1.1.117:Premature EOF.](#)

Critical Messages

Click the message links for solutions.

[openssh.versionExchange.Fail error](#)

[Did not receive identification string from 192.168.4.117.](#)

[replication dst err error](#)

[SnapMirror: destination transfer from zvmalifer:test to test : destination : is offline, or does not exist.](#)

[waf.vol.guarantee fail error](#)

[Space for volume mail is NOT guaranteed](#)

Additional Important Messages

Click the message links for solutions.

[asup.smtp.fail warning](#)

[Autosupport mail to erftee@zerowait.com failed \(Unknown user\) for message: USER_TRIGGERED.](#)

[ems.engine.inputSuppress warning](#)

[Event 'openssh.invalid_channel_req' suppressed 3 times since Tue Mar 22 11:20:06 EDT 2011.](#)

Contact us today to get more information and a customized ZPA Policy for your environment.

707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@zerowait.com | W: www.zerowait.com





Long Term Solutions for High Availability Storage Infrastructure.

A hardware vendor makes money when it sells hardware. Is it any surprise then, that their engineering staff solves most problems by selling more hardware?

Unlike most hardware manufacturer's salespeople and engineers who are focused on their commission from the sale of products, Zerowait's engineering and consulting staff is paid based on customer satisfaction and retention. We focus on the long term solution that is best for you. Our business is service and support, not the next hardware sale. And our solutions go beyond the NetApp hardware you are using to encompass your network and environment where most problems really occur.

As a privately held company we're not worried about satisfying Wall Street this quarter; we're worried about satisfying you. If you need a reliable long term support partner for your high availability infrastructure, make the strategic decision to give us a call today!

Enough Time to Optimize Your ROI

Unlike the OEM, we don't need to sell new hardware every three years to generate the profits Wall Street expects - so we don't have to worry about artificial End of Life and End of Support dates. Storage hardware, like all other aspects of computer technology, has shown great improvements in both performance and reliability in the last 10 years. Many companies don't need the latest and greatest feature set or the inflated price tags of new hardware; their current platforms are stable and functioning well within their environments. Our engineers will work with you to optimize your current hardware so you can recognize the maximum ROI from your current investment, whether that happens in 4 years or 7, and all while delivering the performance and reliability your company requires. Now you can change your storage plan to meet your needs, not the OEM's.

Unbiased Expertise

Zerowait's consulting engineers are ready to tackle your installations, configurations, data migrations, trouble tickets and technical training on-site or remotely via phone or email. As experts in High Availability infrastructure, we specialize in NetApp network-attached storage and cache products. Combined with our extensive experience in the related technologies of switching, load balancing, security and disaster recovery, we know that whatever your requirement, our engineers can help.

If you are looking to add to or modify your current systems, we can provide you with unbiased information to help you make your long-term storage and network acquisitions. We can help define need, provide specifications for quoting, and review quotes received for completeness and suitability of solution. Where appropriate, we'll make you aware of the solutions we can provide, but unlike most hardware manufacturer's consultants and engineers who are focused on their commission from the sale of products, Zerowait's non-commissioned engineering and consulting staff is focused on the best solution, whether provided by us or other vendors. Our goal is a lasting partnership, so our focus isn't this deal or opportunity, but your long-term satisfaction.

Please give us the opportunity to show you what it's like to work with a partner, rather than a vendor. Give us a call today to discuss your requirements, and how Zerowait can help.



Incidental Technical Support (ITS)

Zerowait consulting engineers are ready to provide assistance on-site or remotely via phone or email. Zerowait's Incidental Technical Support (ITS) agreement makes it simple to access our support services. Once you have a signed ITS agreement in place, or a prepaid block of ITS hours, our engineering staff is available for emergencies 24/7. For non-emergency issues, such as scheduled maintenance or migrations, our staff is available during normal business hours, or by appointment for night and weekend support.

Training

Zerowait believes an informed customer is a happy customer. That's why we offer training services. We'll teach you what you need to know to install and maintain your equipment. Our classes are customized to your hardware and needs. While we prefer to train at our lab (because you can learn without interfering with any of your production equipment), we understand that some customers simply cannot do this and we'll travel to your site and train you in your own environment.

Data Migration

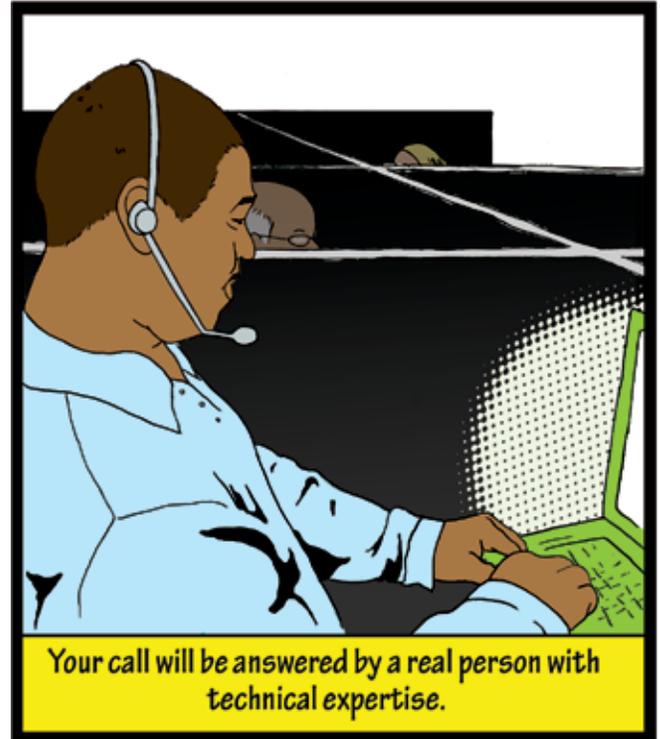
Migrating data can be tricky, even when going from one NetApp Filer model to another. Our engineers can steer you in the right direction, pointing out potential pitfalls before you get there. We can assist from planning through the actual migration.

Pre-Sales Consulting

Our knowledgeable sales and technical staff can assist you during the pre-purchasing process, from initial specification to order preparation. We can help design a solution that is right for you and fits within your budget. Zerowait will train you on how to negotiate with your vendors so you can save substantially on your next purchase. We can help you decide which licenses and upgrades you need, and whether you need to purchase everything that was proposed by your vendor. Knowing which parts are interchangeable between systems and how to leverage your current equipment can save you money.

Quote Review

If you would like help reviewing a proposed storage purchase, our engineers can provide independent guidance on the most cost-effective solution. We can assist from helping to determine requirements through reviewing quotes to ensure that only those components necessary to provide the optimum solution are specified. As support specialists, our goal is your satisfaction not this month's sales quota.



Contact us today to get more information about Zerowait's hardware sales and technical services

707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@zerowait.com | W: www.zerowait.com



The information contained herein is subject to change without notice. Reproduction, adaptation or translation without prior written permission is prohibited, except as allowed under the copyright laws. The Zerowait Logo, ZHA and Zerowait are registered trademarks of the Zerowait Corporation. NetApp and NetCache are registered trademarks of NetApp, Inc. Zerowait is not a part of, nor affiliated with, NetApp Inc. ©2016 Zerowait Corporation. All rights reserved. Revision: 03282016



Cost-Effective Solutions for the Storage and Performance you Need.

It's not the parts but the knowledge behind them that keeps our customers coming back

You are buying from the most knowledgeable people in the business. Whether it's diagnosing a failure, specifying an upgrade, or assembling a complete system – our engineers and sales staff can help you get the most from your NetApp investment. Since we don't have to worry about selling you the latest and greatest we can tell you the truth – what works and what doesn't – and offer the most cost-effective solution to get the storage and performance you need.

As the largest independent supplier of NetApp equipment, we have the parts you need. From cables and memory to disk drives and head units, every component in our stock of compatible and refurbished equipment is tested twice – before it enters our inventory and then before we ship it to you. That is why every part you purchase from Zerowait comes with a 30-day warranty against defects, which can be extended to a year for a small charge.

Zerowait Limited Warranty

Zerowait provides a limited hardware replacement warranty. This warranty covers hardware sold by Zerowait to end customers ("products") and does not cover any software that may accompany the hardware. If the products are properly installed and used for the design purpose, Zerowait warrants that the products will be free from defects in material and workmanship for a period of 30 days after the purchase date of the products.

Quality Assured

Every part Zerowait sells goes through our extensive testing process. Then they are tested again before they are shipped. This reduces the chance of DOA parts to near zero and all parts come with our 30-day warranty.

Knowledgeable Staff

Our sales and technical staff have over 50 years of combined experience with network appliance equipment and can assist you in purchasing the part you need.

Non-Commission Based Sales

Our sales and engineering staff are paid based on customer satisfaction, not commission. Instead of purchasing what will yield the highest commission on a sale, you will be buying the part you need for your system at a price you can afford!

Ready to Ship

With the largest inventory of legacy NetApp equipment in the world, Zerowait has everything you need to keep your Filers running for years to come. Every part is properly boxed in Zerowait designed packaging and shipped via air freight to ensure it gets there when it should and in perfect condition.

Customer Satisfaction

Our focus is customer satisfaction and that starts before you place your order. Not sure of the most cost-effective way to add storage? We'll discuss the advantages of more spindles vs. the cost savings of larger capacity drives, tell you where our current pricing sweet spot is, and help you specify the upgrade right for you. We'll walk you through firmware and compatibility issues to insure your new drive doesn't crash your system, and tell you how to install that new battery to maintain correct polarity. When you have made your decision, our staff will help you through the ordering process.



Flexible and Responsive

We offer flexible terms and multiple payment options. We accept purchase orders, PayPal, credit card and even COD if required. Need it shipped next day? No problem. With our fully automated shipping process, your orders can be shipped as soon as testing has been completed. Special shipping needs aren't a problem. We can ship on your account and even blind drop ship an order for your customer!

Extended Warranty

Every Zerowait product comes with a 30 day warranty, as noted on the front of this page. If you would like to extend this warranty, Zerowait can provide a Zerowait Parts Assurance policy for a period of one to three years, for one drive or your complete system. Please see our literature on Zerowait Parts Assurance policies, or contact Zerowait for more information.

Contact us today to get more information about Zerowait hardware sales.



707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@zerowait.com | W: www.zerowait.com



The information contained herein is subject to change without notice. Reproduction, adaptation or translation without prior written permission is prohibited, except as allowed under the copyright laws. The Zerowait Logo, ZHA and Zerowait are registered trademarks of the Zerowait Corporation. NetApp and NetCache are registered trademarks of NetApp, Inc. Zerowait is not a part of, nor affiliated with, NetApp Inc. ©2016 Zerowait Corporation. All rights reserved. Revision: 03292016



Customized Instruction to Match Your Staff and IT Needs.

What do you rely on?

A Sales Pitch, or Real World Experience

Zerowait's certified training curriculum concentrates on the information your staff needs most. Our modular curriculum focuses on practical every day issues to allow your staff to quickly build the knowledge base they need to effectively utilize the features of their NetApp storage systems.

With today's IT staff stretched thinner than ever we know you don't have weeks to allocate for training. Our modular approach allows you to tailor a half day of specialized training, or we can provide new administrators everything they need to know in a five day class. When possible, hands-on experience will be provided utilizing customers' equipment so administrators can build familiarity and expertise.

Our instructors are all practicing storage support engineers, and can provide insight into best practices and common issues. NetApp hardware is designed for ease of field service and while our engineer is on site we will provide training on how to replace those parts (drives, power supplies and fans) that typically fail, allowing you to reduce your support costs by removing the need for four-hour, on-site engineers from the OEM. Whatever your need, we can customize our instruction to match.

Key Topics Covered

Data Storage and NetApp Concepts

- ONTAP Basic Administration
- Disks, Aggregates and Volumes
- NFS and CIFS
- Multiprotocol Data Access
- Quotas
- SAN – FCP and iSCSI
- Data Protection
- High Availability
- Disaster Prevention
- Performance Tweaking

100% Independent

Zerowait is the only independent company providing in-depth training for both NetApp and IBM Filers. No hype, no marketing, just the information you need to make the most out of your NetApp investment.

DMI Approved

Zerowait has the distinction of receiving the Data Management Institute's (DMI) approval for independent Filer Training.

Real World Experience

Our content was designed by practicing storage experts using real world examples and strategies for maintaining and growing your storage infrastructure.

Continuously Updated

Zerowait's training program is constantly updated with the latest insight from our engineering and support organizations based on their experience and the feedback they receive from our customer base.



Data Management Institute
Certified Data Protection Training



COURSE DETAILS

The Basics

Our standard five day course is taught by our practicing support engineers. Courses begin with an introduction to NetApp technology and run through the basics of the Data ONTAP® operating system and its evolution over the last decade. Our instructors utilize their real world experience to provide insight into issues such as RAID structure to minimize disk overhead, strategies for data integrity and disaster recovery, and other best practices to help you to get the most from your NetApp investment. Since most organizations have a mix of new and legacy systems our instructors teach how to mix and match systems, components and applications to get the most from your storage budget.

Your Site or Ours

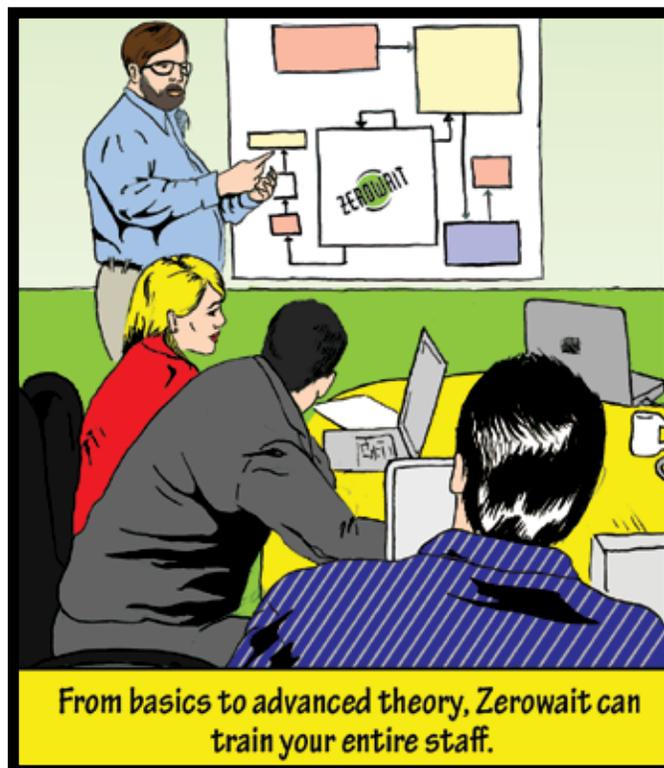
Training should never hinder your ability to do business on a day-to-day basis. With our engineers at your site you can be sure that disruptions to your operations will be minimal. Plus we will be able to provide training on your in-house system hardware. However, when on-site training is impractical for any reason we can provide the training in our Delaware facility. Along with the comfortable training rooms, we maintain a comprehensive lab for hands-on training and demonstration.

Do It Right The First Time

Our training is detailed yet concise because we know in today's environment there is never enough time to do things twice. If you need a specialized training program to address specific needs, we'll work with your staff to formulate the exact program you require. We can focus on backup strategies, disaster recover strategies, hardware replacement procedures, or any other aspect of the management of your NetApp system. Knowledge retention is the goal, so we encourage hands-on training to provide familiarity with the equipment, interfaces and commands.

Always Up To Date

As with any technology, there are always new features and technology being added to NetApp's products. Our engineers stay up-to-date on new NetApp technologies to ensure that our training classes are never out-of date. This ensures that you will always get the training you need whether it is on the latest and greatest model or on a new way to use your legacy hardware.



Contact us today to get more information about Zerowait's training or hardware sales.

For more information about Data Management Institute (DMI), visit: www.datainstitute.org

707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@zerowait.com | W: www.zerowait.com



The information contained herein is subject to change without notice. Reproduction, adaptation or translation without prior written permission is prohibited, except as allowed under the copyright laws. The Zerowait Logo, ZHA and Zerowait are registered trademarks of the Zerowait Corporation. NetApp and NetCache are registered trademarks of NetApp, Inc. Zerowait is not a part of, nor affiliated with, NetApp Inc. ©2016 Zerowait Corporation. All rights reserved. Revision: 03292016



Have you Read your Filer's Weekly Log Recently?

Relax, Everything is Fine

Running a storage network can be a challenging task. The health of each component and the efficiency of your storage solution need to be constantly monitored to ensure access to your data. While many systems now offer self diagnostics and monitoring, the cryptic messages they provide add another layer of complexity to your task, rather than simplifying it.

If your storage is based on Network Appliance Equipment, Zerowait has the solution. The ZHA® Exception Reporter translates a Filer's weekly log and error messages into simple and easy to read reports. These reports will keep you informed of everything from the space available on your shelves to any critical message alerts your Filer has reported. You'll save time and prevent outages by fixing problems before they become outages and save money by optimizing your storage architecture and usage.

Give yourself the peace of mind that comes from knowing everything is fine. Contact us today and we'll provide a free ZHA® Exception Report for your Filer.

Exception Reporter

Now available as a stand alone product and free with every ZPA.

Now you can understand what your Filer is trying to tell you

The ZHA® Exception Reporter collects and translates the raw data provided by each Filer, providing the information you need to optimize your storage. From utilization and expansion potential to security notices, all the information is presented in one concise report. And, where appropriate, your utilization information will be contrasted with the ZHA® sample population, to allow you better insight into overall management trends.

Please see the back of this document for an annotated sample of an ZHA® Exception Report.

Address Issues, Not Problems

When your Filer or cache reports a problem, Exception Reporter will notify you, and others you have selected, of the reported issue, and provide links to the ZHA® library of solutions to help you better understand and correct the problem before it becomes an outage. If your Filer is covered by a Zerowait Parts Assurance Policy, our engineers monitor your reports as well, and will contact you and work with you to ensure timely resolution of any issue.

Your business depends on high availability. Exception Reporter will assist you in proactively managing maintenance and failures, helping you deliver the access your clients expect and require.



System Usage

Graphical chart that represents the total raw storage used. The chart shows the percentage of your storage in use. The green, yellow, and red zones have been predetermined by Zerowait to be key identifiers on the health of your system. If your system is in the red area, you will need to reallocate or add storage as soon as possible!

Storage Overview

Shows the amount of aggregate storage on your Filer compared with the maximum capacity potential of the unit.

Volume Overview

Displays, in detail, each volume on the Filer, including the size of the volume, current usage, and available space.

Storage Utilization

Provides a snapshot of the Filer's locally-attached storage, presenting the percentage used in relation to its raw, available storage, and compares your usage to the ZHA® sample population.

Security Notices

Captures failed logins and other potential security threats that might otherwise go unnoticed and displays them here with links to further information.

Critical Messages

Parses the messages area of the log, locates messages of critical importance or interest, and displays them with links to further information and suggestions for solving issues.

Firmware

Shows which drives in the system may need firmware updates, with a link to information on upgrading firmware and why upgrading is important.

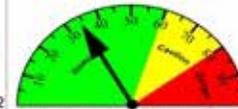
Contact us today to get more information about Exception Reporter or Zerowait hardware sales.

ZHA® EXCEPTION REPORT

Report Generated:	2011-04-01 09:22:03
Autosupport Generated:	2011-04-01 08:30:59
Log Type:	USER_TRIGGERED
Severity:	INFO
Mail From:	filer@zerowait.com
Client Name:	Nobody.com
Vendor Name:	zerowait
Support Expires:	2011-09-16

System Info

System Name:	filename
System Model:	FAS270
System Serial Number:	XXXXXXXX
System ID:	XXXXXXXXXXXX
Data OnTap Version:	7.3.2
System Uptime:	900 days, 20:42
System Memory:	1022 MB
Cluster Member:	False



System Usage of Raw Capacity

Installed Cards

Slot Card
0 System Board 650 Mhz (TSANTS A E0)

Storage Overview

Total Storage:	1730.88 GB
Total Volumes:	9
FAS270 Maximum Capacity:	8192 GB
Total Spares:	4 x 144.0 GB drives

Volume Overview

Volume Name	Used GB	Total GB	Avail %
/vol/data/	150.36	162.9	7.7
/vol/erbackup/	13.88	56.0	75.21
/vol/mail/	43.15	80.0	46.06
/vol/root/	0.69	11.2	93.84
/vol/scratch/	75.64	127.27	40.57

Storage Utilization

Total Raw Capacity:	1730.88 GB
Total Used Storage:	604.69 GB
System Usage:	34.94% of Raw Capacity
Average System Usage of Sample Population:	0.0% of Raw Capacity

Security Messages

Click the message links for solutions.

rshd_0 error

[rshd_ when reading port number for standard error from 192.1.1.117:Premature EOF.](#)

Critical Messages

Click the message links for solutions.

openssh.versionExchange.Fail error

[Did not receive identification string from 192.168.4.117.](#)

replication.dst.err error

[SnapMirror: destination transfer from zrwmailfiler.test to test - destination is offline, or does not a wail.vol guarantee fail error](#)

[Space for volume mail is NOT guaranteed](#)

Additional Important Messages

Click the message links for solutions.

asup.smtp.fail warning

[Autosupport mail to ertree@zerowait.com failed \(Unknown user\) for message: USER_TRIGGER](#)





Who Doesn't Need a Spare Rack Mount Kit?

Simple to use, easy on your budget

We designed the Zerowait Universal 4-Post Rack Mount kit with input from field engineers that install and maintain servers and storage on a daily basis. Our design maximizes rack and shelf space while providing the flexibility you need to meet varying installation requirements. Our design easily fits standard 19" racks and should be the first choice for anyone who performs server and storage installations. Variable in length from 23.5" to 33" and built of 0.075" thick Galvanneal Metal.

Proudly manufactured in the USA, our state of the art processes assure perfect quality for our customers. Zerowait's commitment to overall build quality, style, and user-friendly design set it apart from the rest of the Universal Rack Mount kits on the market. Simple to use, outstanding value, and backed by the reputation of Zerowait, you will find this to be one of the best server accessories you will ever purchase!



ONLY \$119+ S/H

PRICES VALID IN THE USA ONLY, CONTACT FOR INTERNATIONAL PRICING

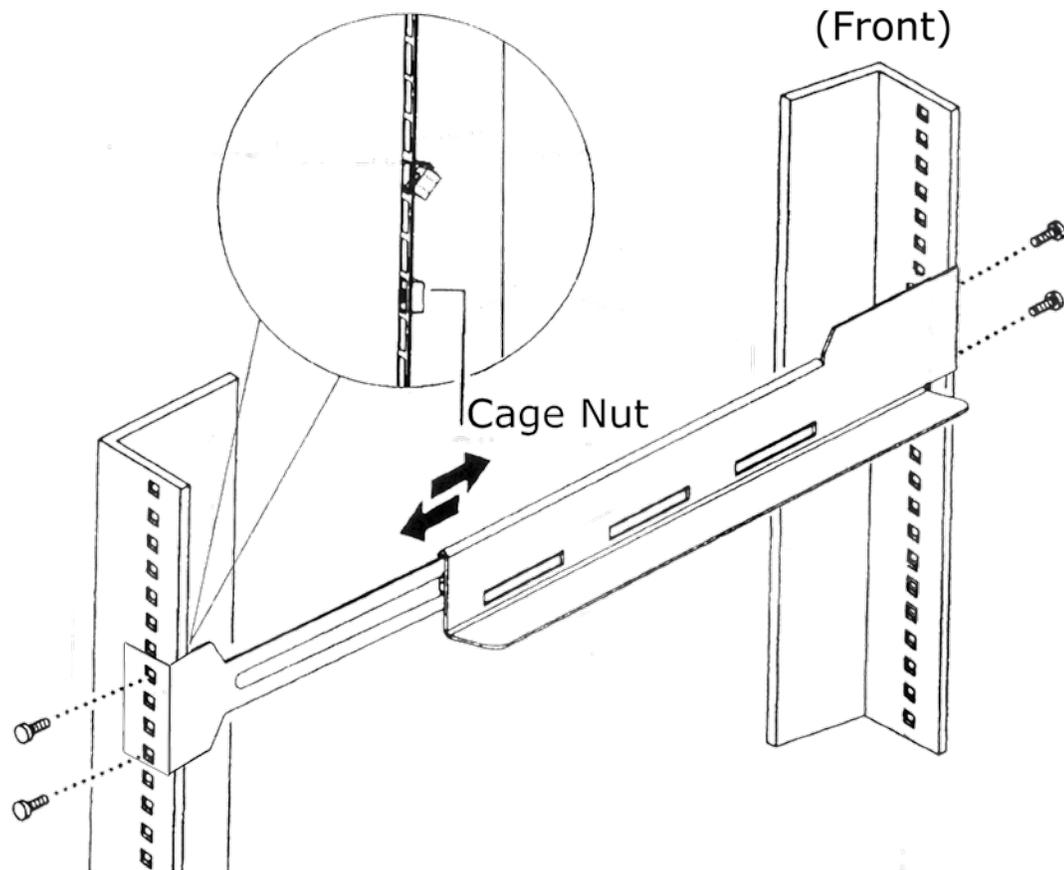


HIGH AVAILABILITY PRODUCTS

Attributes

Material	0.075" Galvanneal Metal
Max Load	150 Pounds (68 Kg.)
Max Length	33 Inches (0.8 Meters)
Warranty	Standard 30-Day

Contact us today to get more information and ask about volume discounts!



707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@zerowait.com | W: www.zerowait.com



The information contained herein is subject to change without notice. Reproduction, adaptation or translation without prior written permission is prohibited, except as allowed under the copyright laws. The Zerowait Logo, ZHA and Zerowait are registered trademarks of the Zerowait Corporation. NetApp and NetCache are registered trademarks of NetApp, Inc. Zerowait is not a part of, nor affiliated with, NetApp Inc. ©2016 Zerowait Corporation. All rights reserved. Revision: 03292016



SimplStor EVS Extensible Video Surveillance



In today's complex liability and safety environment, Video Surveillance should be part of every company's Security and Insurance policies. Video Surveillance provides the evidence you need to satisfy insurance, PCI and HSWA NZ requirements, allowing you to get back to focusing on your business.

The heart of any surveillance system is the performance, expandability, and most importantly, the reliability of the storage retaining the video, and Zerowait's SimplStor line of Network Attached Storage (NAS) products and support is based on over 20 years of Fortune 500 computer storage support. Zerowait's extensible video surveillance systems combine SimplStor's highly reliable, redundant and easily serviced storage architecture with industry leading AXIS HD cameras and software to provide everything you need in one easy to use package. Best of all, SimplStor EVS packages come with on-site installation and 24/7 monitoring and support to allow you to focus on your business, and 3 and 5 year financing packages make them easy to fit into your budget.

Each of our SimplStor EVS systems include 4 Digital HD indoor cameras (combination of Dome and Point depending on site requirements), Axis Camera Station Software with system security and audit features (meets all PCI 9.1.1 requirements), and all necessary cabling. It's surprisingly easy to ensure your business's security and compliance with one of our packages:

BC (Basic Compliance - 90 day video storage)

IS (Industry Standard - 180 day video storage)

MAX (Maximum Protection - 2 year video storage; meets all Statute of Limitation & recommended retention requirements)

Please contact us today for more information on our solutions and a quote. All of our systems are easily customized to meet your requirements, whether more cameras or storage, and we look forward to working with you to put together exactly the system you need – with monthly payments that fit in your budget.

SimplStor EVS Key Features

SimplStor EVS's systems provide the ideal platform for PCI compliance and are easily extended to create the perfect system for your business.

- **Modular Design Allows Easy Storage Expansion**
- **Easily Add Cameras, Door Controllers and Card Readers**
- **Monitoring & Alert Software with Automated Phone Home**
- **Mobile App Allows "Anywhere" Monitoring**
- **3 and 5 Year Support Options Available**

Are You PCI Compliant?
9.1.1 Use video cameras and/or access control mechanisms to monitor individual physical access to sensitive areas. Store for at least three months...



Vandal-resistant indoor and outdoor HDTV quality cameras available based on your requirements and conditions

SimplStor EVS Packages

BC - Basic Compliance

SSC-12-20EVS
 Recording Duration – 90 days
 Chassis – 2U/12 Slot
 Video Storage – 1 Hot Spare, 4 x 4TB drive in RAID 5 array

IS – Industry Standard

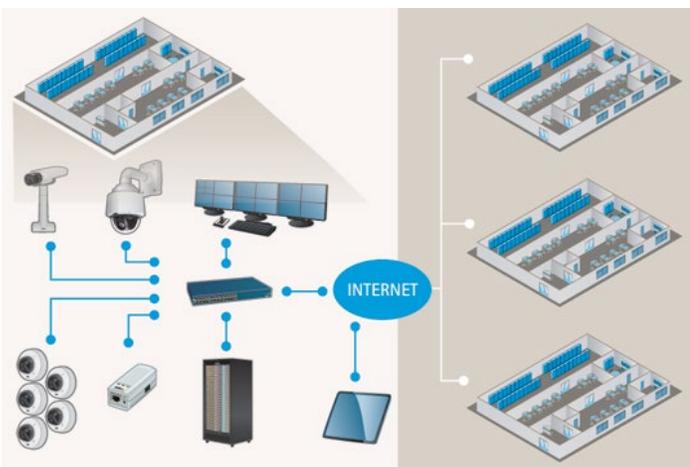
SSC-12-32EVS
 Recording Duration – 180 days
 Chassis – 2U/12 Slot
 Video Storage – 1 Hot Spare, 7 x 4TB drive in RAID 5 array

MAX – Maximum Protection

SSC-36-120EVS
 Recording Duration – 720 days
 Chassis – 4U/36 Slot
 Video Storage – 2 Hot Spare, (4) x 7 x 4TB drive in RAID 5 array

All packages include:

Number of Cameras – 4
 O/S - Windows Server 2012 R2 on:
 2 x 120GB SSD Mirrored
 Processor - Intel Xeon E5609v2 2.5GHz
 Memory – 16GB DDR3-1600 Memory
 Switch – 8 port Gigabit PoE



 Windows Server 2012 R2 brings Microsoft's experience delivering global-scale cloud services into your infrastructure with features and enhancements in management, storage, networking, access and information protection, providing the ideal platform for your storage needs .

 AXIS Camera Station is the perfect solution for client surveillance of small and mid-sized installations. When combined with Axis' wide range of network video products and product features it offers the system reliability clients expect. Whatever your operation, retail shop, hotel, school or manufacturing site, Camera Station offers a proven solution with more than 50,000 installations worldwide.

Mobile apps available for both Android and Apple



707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@SimplStor.com | W: www.SimplStor.com



ZERO WAIT

SimplStor CLOUD

1.5 PETABYTE

ONLY \$210K



INCLUDES:

- SimplSubscription Active System Monitoring / Notification
- 24/7 Engineering on Call
- Next Business Day Parts Replacement
- NFS / CIFS Support

SimplStor

NETWORK STORAGE SOLUTIONS BY



Space You Need At A Price You Can Afford

Zerowait's SimplStor® line of storage arrays is designed to take advantage of increasingly sophisticated off the shelf hardware and open source software to provide low cost, high availability and highly dense 2nd tier storage. Now, combining the dense, highly available storage of SimplStor with the CentO/S open source operating system, Zerowait's **SimplStor Cloud**, offers 1.5 Petabyte (raw) for only \$210K

SimplStor takes advantage of the engineering efforts of Supermicro, Intel, LSI, and Hitachi/Seagate to create highly available RAID storage. Utilizing CentO/S open source software SimplStor offers CIFS and NFS addressable storage, with no software licensing fees. And 10GigE is available to connect to your high performance backbone.

SimplStor Cloud products include SimplSupport, our Enterprise class support package. With system monitoring and phone home error messaging, 24/7 access to support engineers and **Next Business Day (NBD)** parts replacement your data will be available when you need it. And all SimplStor systems are designed for easy parts replacement in the field, with redundant hot swap power supplies and hot spare/hot swap drives ensuring minimal down time.

With SimplStor Cloud's dense packaging and competitive pricing, we've packaged 1.512 **PB of raw storage** in only **24 U** of rack space for just \$210,000! And that includes 1 year of SimplSupport. That's **\$.14/GB** for highly redundant, very dense storage including 1 year of hardware support! And with CentO/S there are no software licensing fees to worry about.

Give us a call today to discuss your requirements and how much SimplStor can save you on both purchase and long term support.

General Information

Supported Interfaces	CIFS & NFS
Node OS	Node O/S CentO/S
Node Options	SSC-12: 12-Bay 2U Controller SSC-36: 36-Bay 4U Controller SSA-45: 45-Bay 4U Expansion Shelf

Controller Details

CPU	(2) Intel Intel E5-2600
Chipset	Intel C606
Memory	32 GB DDR3-1600 ECC
RAID Controller	LSI 3108 Series (12.0 Gb/s) <i>Integrated Power Management Battery Backed Cache Protection Automatic Rebuild Hot Spares Dynamic Sector Repair</i>

Disk Drives

Manufacturer	Hitachi/Seagate
Capacity	2, 3, 4, 6, 8TB
Interface	SATA III 6.0 Gb/s
RPM	7200
Cache	64/128 MB

* Encrypted Drives Available On Special Request

**PRICES VALID IN THE USA ONLY,
CONTACT FOR INTERNATIONAL PRICING**

707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@SimplStor.com | W: www.SimplStor.com



All rights reserved. The information contained herein is subject to change without notice. Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws. SimplStor, SimplStor Cloud, the Zerowait Logo, ZHA, and Zerowait are registered trademarks of the Zerowait Corporation. Red Hat, Inc. Red Hat, Red Hat Storage Server, RHSS, Red Hat Enterprise Linux, and RHEL are trademarks of Red Hat Inc. ©2016 Zerowait Corporation. Revision: 05202015





Enterprise Solutions at Tier-2 Prices



SimplStor Key Components

SimplStor's open standards based system provides the ideal platform for your storage architecture

- **Modular design allows easy expansion**
- **Integrated RAID Power Management On-Board**
- **Monitoring & Alert Software**
- **Automated Phone-Home**
- **Up To 5 Year Support Options**
- **Installation, Training and Migration Support Available**
- **RedHat / CentOS / Windows Storage Server**

"SimplStor has been just that – simple to install, simple to integrate into our storage architecture, and there has been no need for support, it just works."

*Rick Bogehold,
Excel Geophysical Services, Inc.*

While the volume of data continues to grow, and retention policies become increasingly complex, storage administrators are finding their budgets and staffing under constant pressure. To meet these opposing requirements they need to find simpler and more affordable techniques for managing their data. It's not a trivial task, unless you are a Zerowait Customer.

Zerowait's SimplStor family of integrated storage solutions dramatically reduce the acquisition costs of enterprise storage and virtually eliminate the licensing costs associated with most other enterprise storage solutions. These integrated storage solutions are designed to provide reliable data access without the penalty of proprietary operating system and their associated high licensing and maintenance costs.

Zerowait SimplStor allows customers to take advantage of the best Open source and low maintenance cost operating systems - RedHat, CentOS, and Windows Storage Server. Using an O/S their company is already comfortable with allows enterprises to reduce the number of operating systems their staff must support.

SimplSupport provides built-in phone home diagnostics and weekly status updates, while easily integrating into existing management programs. And spares, when required, arrive next business day and are easily installed.

SimplStor is the perfect storage solution for today's mixed Windows and Unix storage environments, and allows for simple data expansion that won't break the budget in the future. Taking advantage of the performance, reliability and cost savings provided by the best off-the-shelf components, SimplStor was designed to define a new class of enterprise storage. The era of affordable enterprise storage has arrived.



Archive Solutions

Controller Details

Height	SSC-12: 2U SSC-36: 4U
CPU	(2) Intel E5-2600
Chipset	Intel C606
Memory	32 GB DDR3-1600 ECC
Expansion Slots	SSC-12/36: PCI-E 3.0 (6 slots)
Drive Bays	SSC-12: 12 Bays SSC-36: 36 Bays

Expansion Shelf Details

Height	4U
Drive Bays	SSA-45: 45 Bays

Disk Drives

Capacity	2.0 / 3.0 / 4.0 / 6.0TB
Interface	SATA III 6.0 GB/s
RPM	7200
Cache	64/128 MB

General Information

External Interfaces	Dual Intel Gigabit Ethernet, (2) Mini SAS2 6.0 GB/s
Supported Platforms	RHEL, CentOS, Windows Server
RAID Controller	LSI 3108 Series (12.0 GB/s) <i>Integrated Power Management</i> <i>Battery Backed Cache Protection</i> <i>Automatic Rebuild Hot Spares</i> <i>Dynamic Sector Repair</i>

Options

Cards	Dual Port 10 Gig-E Dual Port Fiber Channel (16 GB/s)
--------------	---



High Availability Solutions

Controller Details

Height	SSHA-24 2U
Drive Bays	24 x 2.5
Height	SSHA-18 3U
Drive Bays	18 x 3.5

Node Specifications (2 nodes per chassis)

CPU	(2) Intel E5-2403v2 - 1.8Ghz
Core Chipset	Intel C602J
Memory	96 GB D3-1866Mhz-ECC
Expansion slots	PCI Express 8x (3)
Disk Controller	LSI 2308 SAS2

Disk Drives

SSHA-24	4 x SSD 200 GB 20 x SAS 900 GB
SSHA-18	18 x Nearline SAS 4 TB

General Information

External Interfaces	Dual Intel Gigabit Ethernet SAS2 Expansion
Interface Options	Dual Port 10 Gig-E Dual Port Fiber Channel (16 Gb/s)
Supported Platforms	Windows Storage Server 2012 r2

707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@SimplStor.com | W: www.SimplStor.com



All rights reserved. The information contained herein is subject to change without notice. Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws. SimplStor, SimplStor Cloud, the Zerowait Logo, ZHA, and Zerowait are registered trademarks of the Zerowait Corporation. Red Hat, Inc. Red Hat, Red Hat Storage Server, RHSS, Red Hat Enterprise Linux, and RHEL are trademarks of Red Hat Inc. ©2016 Zerowait Corporation. Revision: 05202016





REPLACE YOUR TAPE STORAGE WITH

SimplStor

NETWORK STORAGE SOLUTIONS BY ZENONIT

TAPE IS DEAD

OK, maybe that's marketing hyperbole, but you feel it too. Every time you touch your backup system, you think "there has to be a better way". Every time you buy another box of expensive tapes, you wonder why this data isn't on disk. If you're backing up 10TB of data, with daily incrementals and weekly full backups, you're using almost 400 cartridges per year, and with a labeled cartridge averaging \$65.00, that's \$26,000 for tape alone. If you're storing those offsite, add \$1.10 per tape per month, for another \$5000. Now add in some time for someone to actually load, remove and transfer the tapes, and you can easily add another \$8000 per year (52 weeks x 8 hrs per week x \$20 per hour). That's almost \$40,000 for a slow, clumsy, labor intensive and tough to restore solution.

Then there's SimplStor. 68TB of RAID protected disk storage for only \$20,000. It fits in only 4U of rack space, and uses a Linux O/S so there are no software licensing fees. And it includes a monitoring and reporting utility to let you know how your system is doing – and to let us know when you need help. Did I mention it comes with one year of 24/7 access to our engineers and next business day hardware replacement? We know you'll still want that quarterly archive – so don't throw away your tape system just yet. But for day to day operations, it's time to make the shift to disk – SimplStor disk archive solutions.

For More Information on Tape Storage Alternatives Visit: SimplStor.com

SimplStor



Basic Server

SSC-36-68LC (36 drive server, 68 TB raw storage) **\$20,000**

Expansion Shelf

SSA-45-90LC (45 drive shelf, 90 TB raw storage) **\$20,000**

Archive Node 504TB Raw \$90,000 (4 TB Drives)

1 x SSC-36-144LC (36 drive server, 144 TB raw storage)
2 x SSA-45-180LC (45 drive shelf, 180 TB raw storage)

Petabyte Archive 1008 TB Raw \$180,000

2 x Archive Node (each node 504TB)

PRICES VALID IN THE USA ONLY,
CONTACT FOR INTERNATIONAL PRICING



Option Available

707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@SimplStor.com | W: www.SimplStor.com



All rights reserved. The information contained herein is subject to change without notice. Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws. SimplStor, SimplStor Cloud, the Zerowait Logo, ZHA, and Zerowait are registered trademarks of the Zerowait Corporation. Red Hat, Inc. Red Hat, Red Hat Storage Server, RHSS, Red Hat Enterprise Linux, and RHEL are trademarks of Red Hat Inc. ©2016 Zerowait Corporation. Revision: 05202016





Easy To Read Reports Make Management Simple

Relax, Everything is Fine

Running a storage network can be a challenging task. The health of each component and the efficiency of your storage solution need to be constantly monitored to ensure access to your data. SimplSupport, our resident diagnostic package for SimplStor, offers the real time notification you need, along with SimplStor Exception Reporter, an easy to read weekly status report.

SimplStor Exception Reporter turns log and error messages into simple and easy to read reports. These reports will keep you informed of everything from the space available on your system to any message alerts your system has reported. You'll save time and prevent outages by fixing problems before they become outages and save money by optimizing your storage architecture and usage.

Give yourself the peace of mind that comes from knowing everything is fine. SimplStor Exception Reporter is included as part of your SimplSupport Subscription.

Now you can understand what SimplStor is trying to tell you

The SimplStor Exception Reporter collects and translates the raw data provided by each system, providing the information you need to optimize your storage. From utilization and expansion potential to security notices, all the information is presented in one concise report.

Please see the back of this document for an annotated sample of a SimplStor Exception Report.

Address Issues, Not Problems

When your SimplStor system reports a problem, SimplStor Exception Reporter will notify you, and others you have selected, of the reported issue and provide links to solutions to help you better understand and correct the problem before it becomes an outage. Our engineers monitor your reports as well, and will contact you and work with you to ensure timely resolution of any issue.

Your business depends on high availability. SimplStor Exception Reporter will assist you in proactively managing maintenance and failures, helping you deliver the access your clients expect and require.

Now Free!
With Every SimplStor

SimplStor

System Info

Lists SimplStor system identification information. Also lists the version number, amount of memory and system uptime.

System Usage

Graphical chart that represents the total raw storage used. The chart shows the percentage of your storage in use. The green, yellow, and red zones have been predetermined by Zerowait to be key identifiers on the health of your system. If your system is in the red area, you will need to reallocate or add storage as soon as possible!

Installed Peripherals

Lists installed peripheral cards (RAID, Network Adapters, etc)

Storage Overview

Shows the amount of aggregate storage on your SimplStor compared with the maximum capacity potential of the unit..

Volume Overview

Displays, in detail, each volume on your SimplStor, including the size of the volume, current usage, and available space. Like the system usage overview, volumes that are reaching the limits of their capacity will be noted in yellow (caution) and red (changes needed now).

Storage Utilization

Provides a snapshot of your SimplStor's locally-attached storage, presenting the percentage used in relation to its raw, available storage.

System Messages

Parses the messages area of the log, locates messages of importance or interest, and displays them with links to further information and suggestions for solving issues.

Firmware

Displays the current firmware levels of devices within the system, and lists the current version available. Please contact Zerowait engineering to discuss firmware versions before updating stable systems.

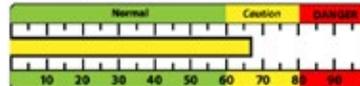
SIMPLSTOR EXCEPTION REPORT

Autosupport Generated:	Sun Mar 16 01:01:02 EDT 2014
Report Generated:	Sun Mar 16 01:05:09 EDT 2014
Log Type:	Weekly Status Report
Severity:	INFO
Mail From:	user@domain.com
Client Name:	Sample Report
Vendor Name:	Zerowait Corporation
Support Expires:	Mon Sep 30 2015

System Info

System Name:	SS35_zerowait_intl
System Model:	SSC-36
System Serial Number:	1201420118
System UUID:	49434f53-0201-9092-2500-92932500a632
SimplStor Version:	2.6.32-279.14.1.el6.x86_64
System Uptime:	745 days, 8:15
System Memory:	23 GB

SYSTEM USAGE OF RAW CAPACITY



Installed Peripherals

Bus:Slot:Func:	Card
01:00.0	Ethernet controller: Intel Corporation 82576 Gigabit Network Connection (rev 01)
08:00.0	RAID bus controller: LSI Logic / Symbios Logic MegaRAID SAS 2108 [Liberator] (rev 05)

Storage Overview

Total Storage:	49810 GB
Total Volumes:	6
Maximum Capacity:	69632 GB
Total Configured Spares:	2
Total Unconfigured Spares:	1

Volume Overview

Volume Name	Used GB	Total GB	Avail %
/dev/mapper/Vol2	7578	15748	51.9%
/dev/mapper/lv_home	0	1757	100.0%
/dev/mapper/rhel6bank_root	17	49	64.8%
/dev/sdb	11378	16126	29.4%
/dev/sdc	11378	16126	30.7%

Storage Utilization

Current System Capacity:	49810 GB
Total Used Storage:	33542 GB
System Usage %:	67.3%

System Messages

Count	Message
1	smbd: [2014/03/13 23:34:49.717160.0] lib/utl_sock.c:478(read_fd_with_timeout)
1	smbd: [2014/03/13 11:18:25.905359.0] smbd/nrtrans.c:2296(call_nt_transact_ioctl)
1	smbd: [2014/03/15 12:24:27.550169.0] smbd/process.c:79(svc_send_smb)
1	smbd: [2014/03/10 12:08:07.930391.0] lib/utl_sock.c:1441(get_peer_addr_internal)
1	smbd: [2014/03/11 18:13:07.131627.0] smbd/nrtrans.c:2296(call_nt_transact_ioctl)

Click any of the message links above to perform a Google search for solutions.

Firmware

Device	Manufacturer / Model	Running	Supported
Motherboard	Supermicro X8DTU	2.1c	(current)
RAID Adapter	Supermicro SMC2108	2.120.243-1482	2.130.363-1846



HIGH AVAILABILITY PRODUCTS

707 Kirkwood Highway | Wilmington, DE 19805 | P: 888.811.0808 | E: sales@SimplStor.com | W: www.SimplStor.com



All rights reserved. The information contained herein is subject to change without notice. Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws. SimplStor, SimplStor Cloud, the Zerowait Logo, ZHA, and Zerowait are registered trademarks of the Zerowait Corporation. Red Hat, Inc. Red Hat, Red Hat Storage Server, RHSS, Red Hat Enterprise Linux, and RHEL are trademarks of Red Hat Inc. ©2016 Zerowait Corporation. Revision: 05202016

