

Обслуживание и диагностика EMC VNX

Леонтьев Алексей
Системный инженер
E-Mail: aleontev@ocs.ru
tel. +7 (495) 995-2575 ext. 5556
tel. +7 (343) 379-4991 ext. 5556



1. Возможные проблемы в СХД

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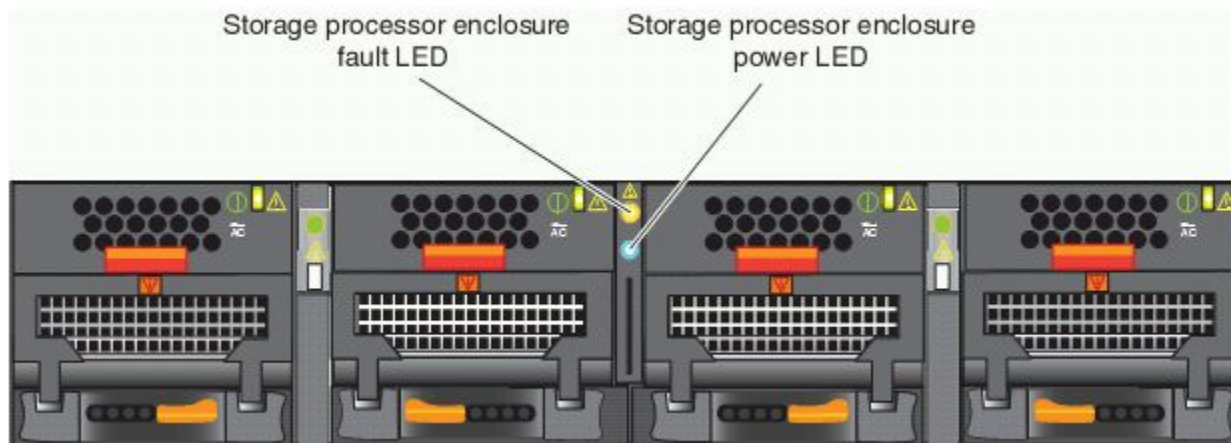
Возможные проблемы в СХД

Обслуживание и диагностика EMC VNX



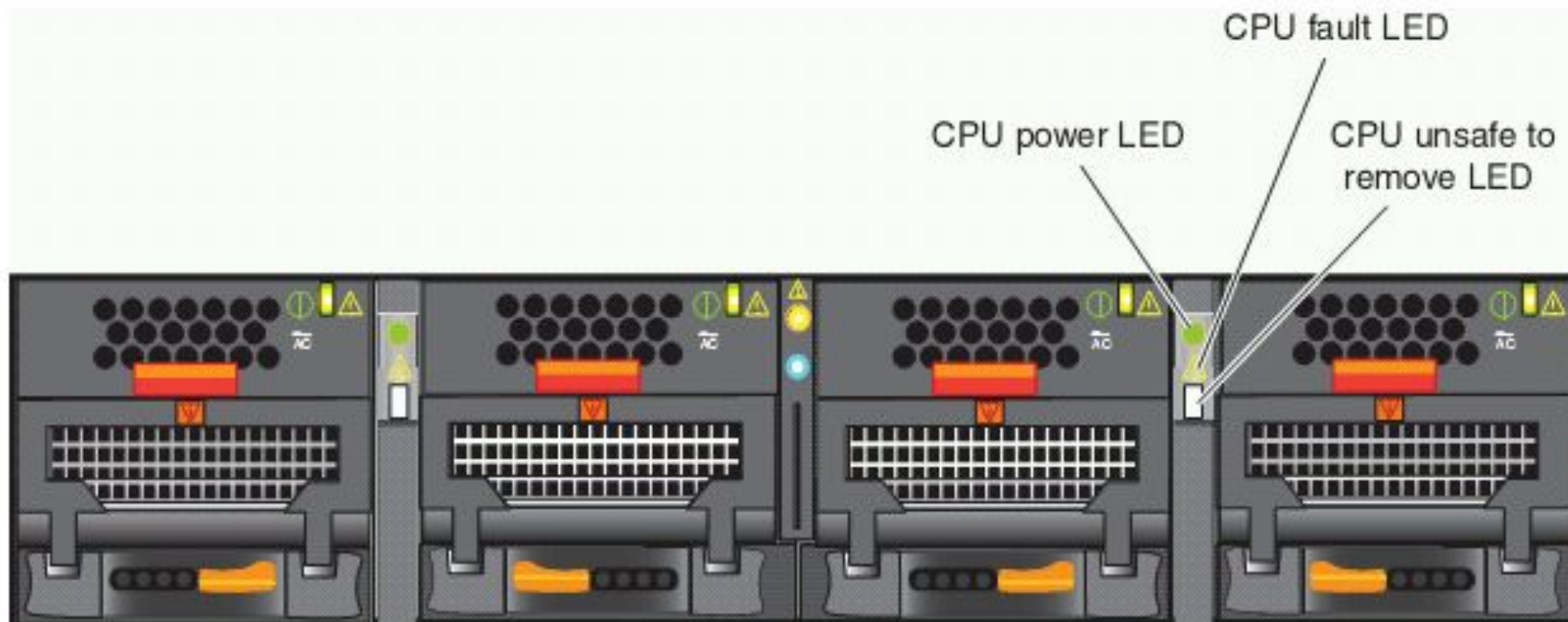
1. Ошибки на серверах
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 - Сбои SFP
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3. Ошибки на массиве
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Индикация VNX5700 (подробнее в «Hardware Information Guide»)



LED	Color	State	Description
Power	Blue	On	Storage processor enclosure is powered up and all the FRUs in the enclosure are operating properly
	—	Off	Storage processor enclosure is powered down.
Fault	Amber	On	A FRU failed within the enclosure.
	—	Off	Storage processor enclosure operating normally.

Индикация VNX5700

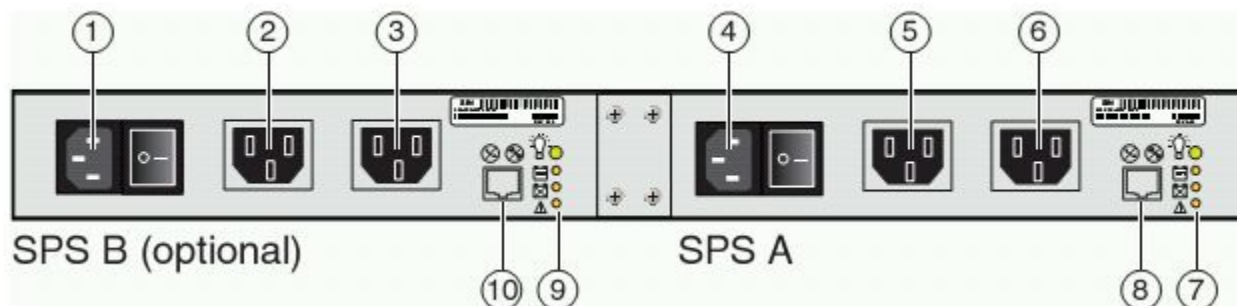


Индикация VNX5700

LED	Color	State	Description
Power	Green	On	Storage processor is powered up and all FRUs in the Data Mover are operating properly.
	—	Off	Storage processor is powered down.
Fault	Amber	On	Storage processor has faulted.
		Blinking	Storage processor goes through six stages of power up: 1. Executes a BIOS check, blinking once every 4 seconds 2. Executes a POST check, blinking once every second 3. Loads the operating system, blinking four times a second
	Blue (see Note)		4. Operating system loaded, blinking once every 4 seconds 5. Operating system starting operating system drivers, blinking once every second 6. Operating system drivers operating, blinking four times a second
	—	Off	Storage processor operating normally.
Unsafe-to-remove	White	On	Storage processor is unsafe to remove.
	—	Off	Storage processor is safe to remove.

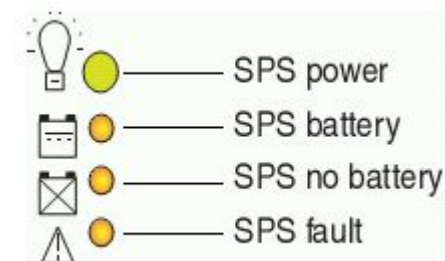
Note: The fault LED changes color from amber to blue when the operating system is loading, see step 4 in the description.

Индикация VNX (SPS)

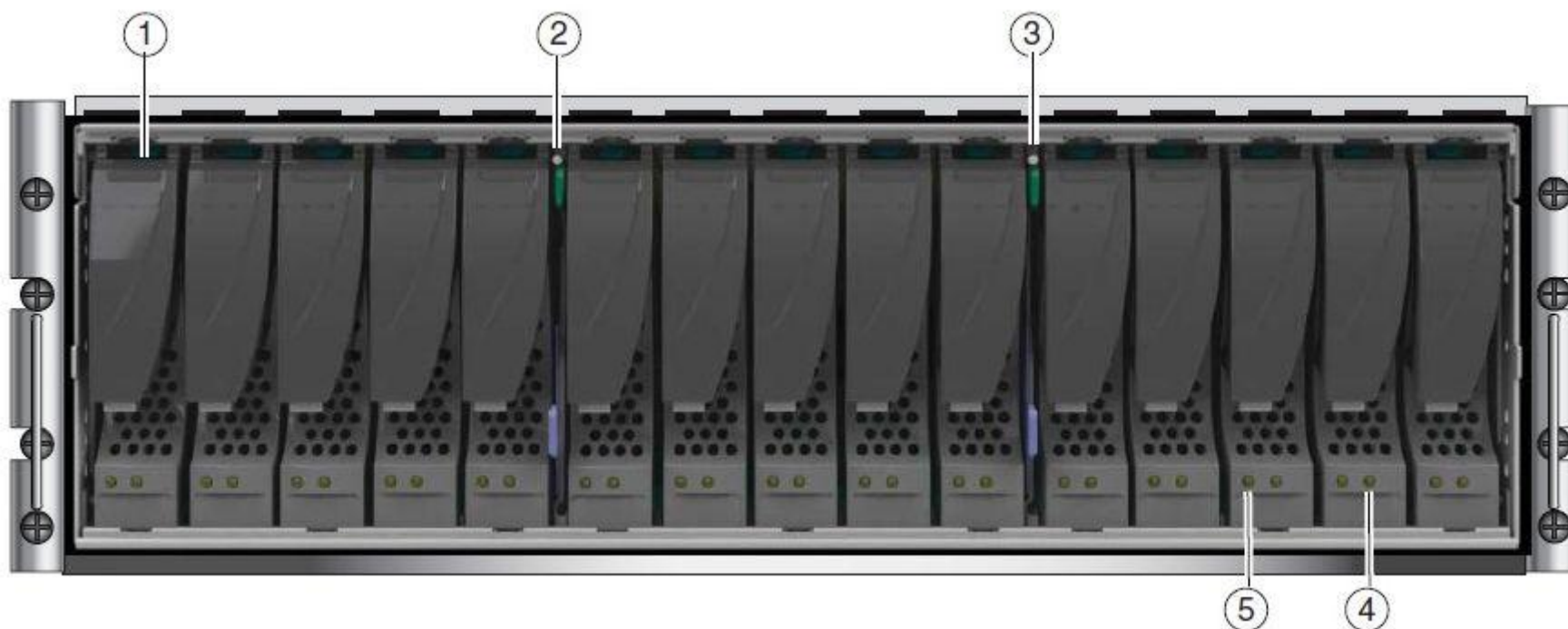


1	SPS B AC power in (recessed plug)	6	Power out socket to LCC A on the 1st DAE (ID 2)
2	Power out socket to LCC B on the 1st DAE (ID 2)	7	Four SPS A status LEDs (green and amber)
3	Power out socket to the SP B power supply on the SPE	8	SPS A to SP A management (RJ-12) connector
4	SPS A AC power in (recessed plug)	9	Four SPS B status LEDs (green and amber)
5	Power out socket to the SP A power supply on the SPE	10	SPS B to SP B management (RJ-12) connector

Led	Color	State	Description
SPS power	Green	On	SPS ready and operating normally; battery fully charged
		Blinking	On/battery charging
	—	Off	Off/disconnected



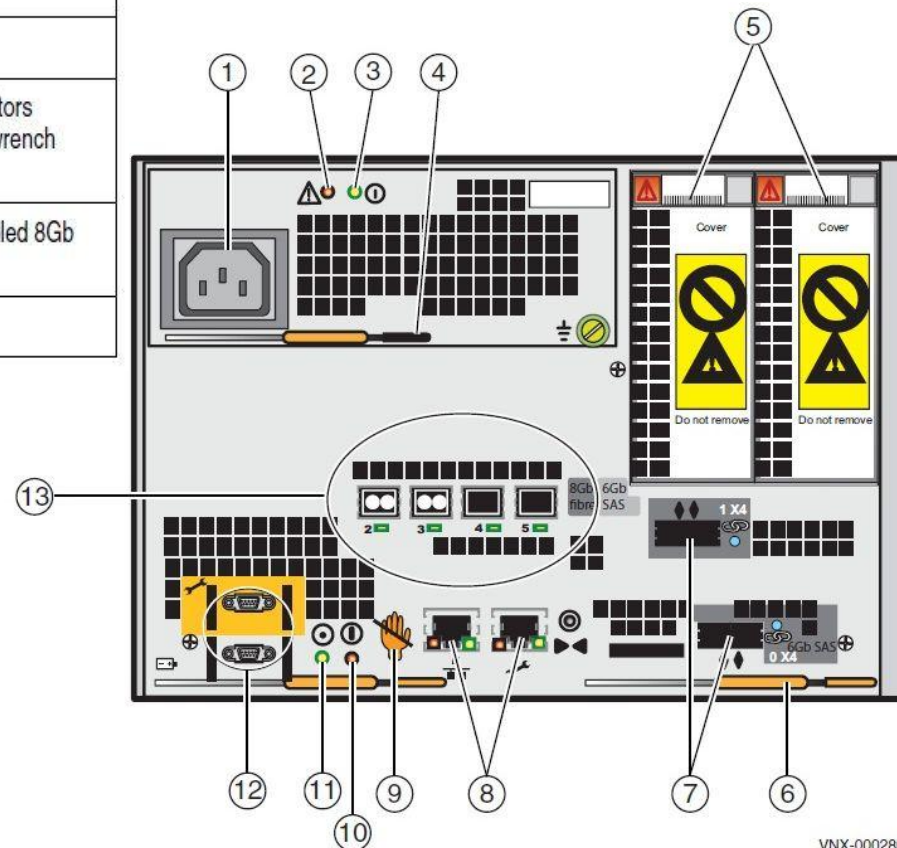
Индикация VNX5300



1	3.5-inch 6-Gb/s SAS drives or 6-Gb/s NL-SAS disk drives	4	Disk drive fault LED (amber)
2	DPE fault LED (amber)	5	Disk drive on/activity LED (green)
3	DPE power on LED (blue)		

Индикация VNX (SP)

1	AC power in connector (recessed plug)	8	Two RJ-45 (management and service laptop) connectors (labeled with a network management symbol and a wrench symbol, respectively)
2	Power supply fault LED (amber)	9	SP unsafe to remove LED
3	Power supply power on LED (green)	10	SP fault LED (amber)
4	Power supply latch handle	11	SP power on LED (green)
5	Two I/O module slots showing one four-port 8-Gb/s Fibre Channel (FC) I/O module and one four-port 1-Gb/s iSCSI I/O module	12	Two RS-232/EIA (micro DB-9) connectors (labeled with a battery symbol and a wrench symbol, respectively)
6	Two SP latch handles (bottom left and right)	13	Four 8-Gb/s Fibre Channel ports (labeled 8Gb fibre 2, 3, 4, and 5)
7	Two 6-Gb/s SAS ports		



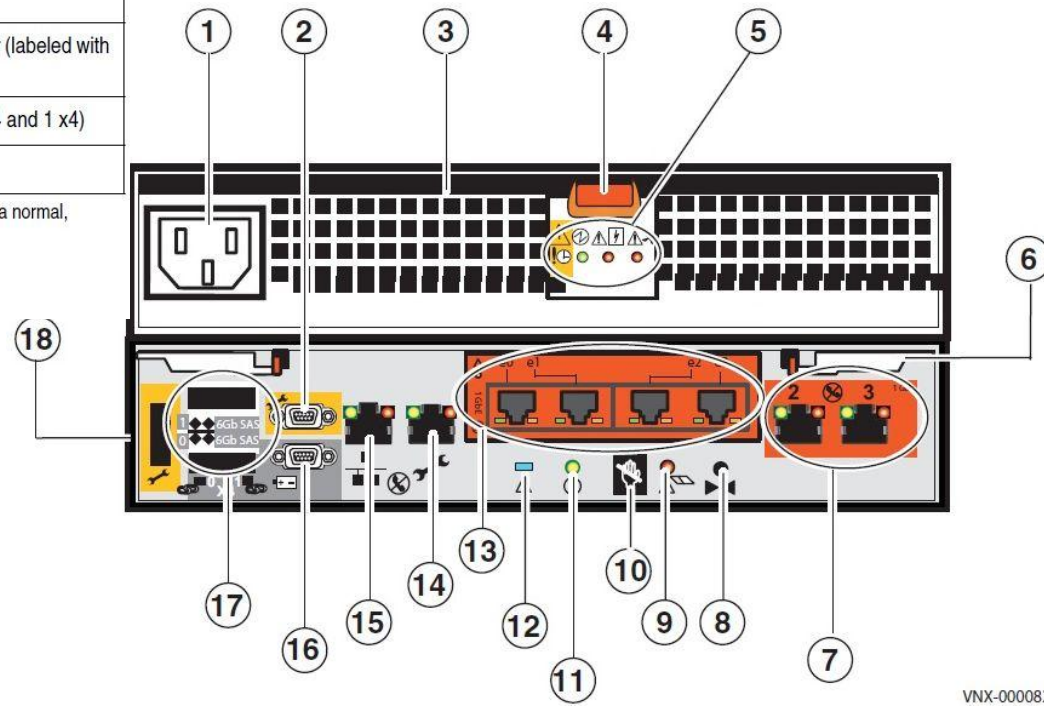
Индикация VNXe3100

1	AC power in connector (recessed plug)	10	SP unsafe to remove LED (white)
2	RS-232/EIA (micro DB-9) connector (labeled with a wrench symbol)	11	SP power LED (green)
3	Power supply module	12	SP status/fault LED (amber/blue ^a)
4	Power supply latch handle (top, middle)	13	Four-port 1-Gb/s (1000BASE-T) copper Ethernet I/O personality module (labeled e0, e1, e2, and e3)
5	Power supply module status LEDs	14	Service LAN (RJ-45) port (labeled with a wrench symbol)
6	SP latch handle (middle, left and right)	15	Management LAN (RJ-45) port (labeled with a network management symbol)
7	Two 1-GbE iSCSI (host IP connect) ports (labeled 2 and 3)	16	RS-232/EIA (micro DB-9) connector (labeled with a battery symbol)
8	NMI ^b (password reset) push button	17	Two 6-Gb/s SAS ports (labeled 0 x4 and 1 x4)
9	CRU fault LED (amber) ^c	18	SP

a. The SP fault status LED amber or blue, flashing at different rates, depending on current status of SP. In a normal, operational state, it will be off.

b. NMI = non-maskable interrupt

c. CRU fault LED lights amber when an internal CRU is faulted.



Методы диагностики ошибок

Обслуживание и диагностика EMC VNX



Виды логов массива EMC VNX

SPCollect

Требуется для всестороннего анализа утилитой CAP и дает полную картину всего происходящего на массиве, включая логи конфигурации, очевидные проблемы в графическом виде

Event Log (в Unisphere)

Последовательный список событий на массиве

Методы диагностики ошибок

Event Log (в Unisphere)

EMC Unisphere

Pool LUN Search... Advanced Search

Dashboard System Storage Hosts Data Protection Settings Support

VNX5300T > System > Monitoring and Alerts > SP Event Logs

SP Event Logs

- Show SP A Event Log
- Show SP B Event Log
- Open Events File

VNX5300T - SPA - Events

Current SP Date and Time: 2011-10-22 23:04

Line	Date	Time	Event Code	Description	Storage Syst...	Device	SP	Host
16	2011-10-22	22					N/A	SPA
17	2011-10-22	22					N/A	SPA
18	2011-10-22	22					N/A	SPA
19	2011-10-22	22					N/A	SPA
20	2011-10-22	22					N/A	SPA
21	2011-10-22	22					N/A	SPA
22	2011-10-22	22					N/A	SPA
23	2011-10-22	22					N/A	SPA
24	2011-10-22	22					N/A	SPA
25	2011-10-22	22					N/A	SPA
26	2011-10-22	22					N/A	SPA
27	2011-10-22	22					N/A	SPA
28	2011-10-22	22					N/A	SPA
29	2011-10-22	22					N/A	SPA
30	2011-10-22	22					N/A	SPA
31	2011-10-22	22					N/A	SPA
32	2011-10-22	22					N/A	SPA
33	2011-10-22	22					N/A	SPA
34	2011-10-22	22					N/A	SPA
35	2011-10-22	22					N/A	SPA
36	2011-10-22	22					N/A	SPA
37	2011-10-22	22					N/A	SPA
38	2011-10-22	22					N/A	SPA
39	2011-10-22	22					N/A	SPA
40	2011-10-22	22					N/A	SPA
41	2011-10-22	22:46:05	0x4600	'lun' called by...	CKM0011230...	N/A	N/A	SPA
42	2011-10-22	22:46:01	0x7208	There are no ...	CKM0011230...	N/A	N/A	SPA
43	2011-10-22	22:45:50	0x2086	Unable to rea...	N/A	N/A	N/A	SPA
44	2011-10-22	22:45:50	0x2006	Able to read ...	N/A	N/A	N/A	SPA

Event Details

Field	Value	Field	Value
Date:	2011-10-22	Type:	Warning
Time:	22:51:23	Category:	N/A
Log:	Application	Sense Key:	N/A
Host:	SPA	Ext Code1:	N/A
Event Code:	0x7208	Ext Code2:	N/A
Storage System:	CKM001123...	SP:	N/A
Source:	N/A	Device:	N/A

Description:

There are no available hot spares on the storage system. Creating hot spares is highly recommended. See alerts for details.

<<Previous Next>> OK Help

< > Save... Clear Print... Filter... Cancel Help

Alerts: 16 8 Critical Certificates: 1 User: sysadmin

Сбор SPCollect с массива из NaviCli

Запустить сбор SPCollect-ов на обоих SP командой:

```
NaviSECCli.exe -h IP_ADDRESS_SP -user USER -password PASSWORD -Scope 0  
spcollect
```

Подождать минут 10 пока соберутся логи. Посмотреть файлы доступные для скачивания можно следующей командой:

```
NaviSECCli.exe -h IP_ADDRESS_SP -user USER -password PASSWORD -Scope 0  
managefiles -list
```

Забрать последние SPCollect с обоих SP командой:

```
NaviSECCli.exe -h IP_ADDRESS_SP -user USER -password PASSWORD -Scope 0  
managefiles -retrieve -path c:\SPCollects -file FILE_NAME.zip
```

В примере файлы загрузятся на локальный компьютер в папку c:\SPCollects

Параметры в командах это:

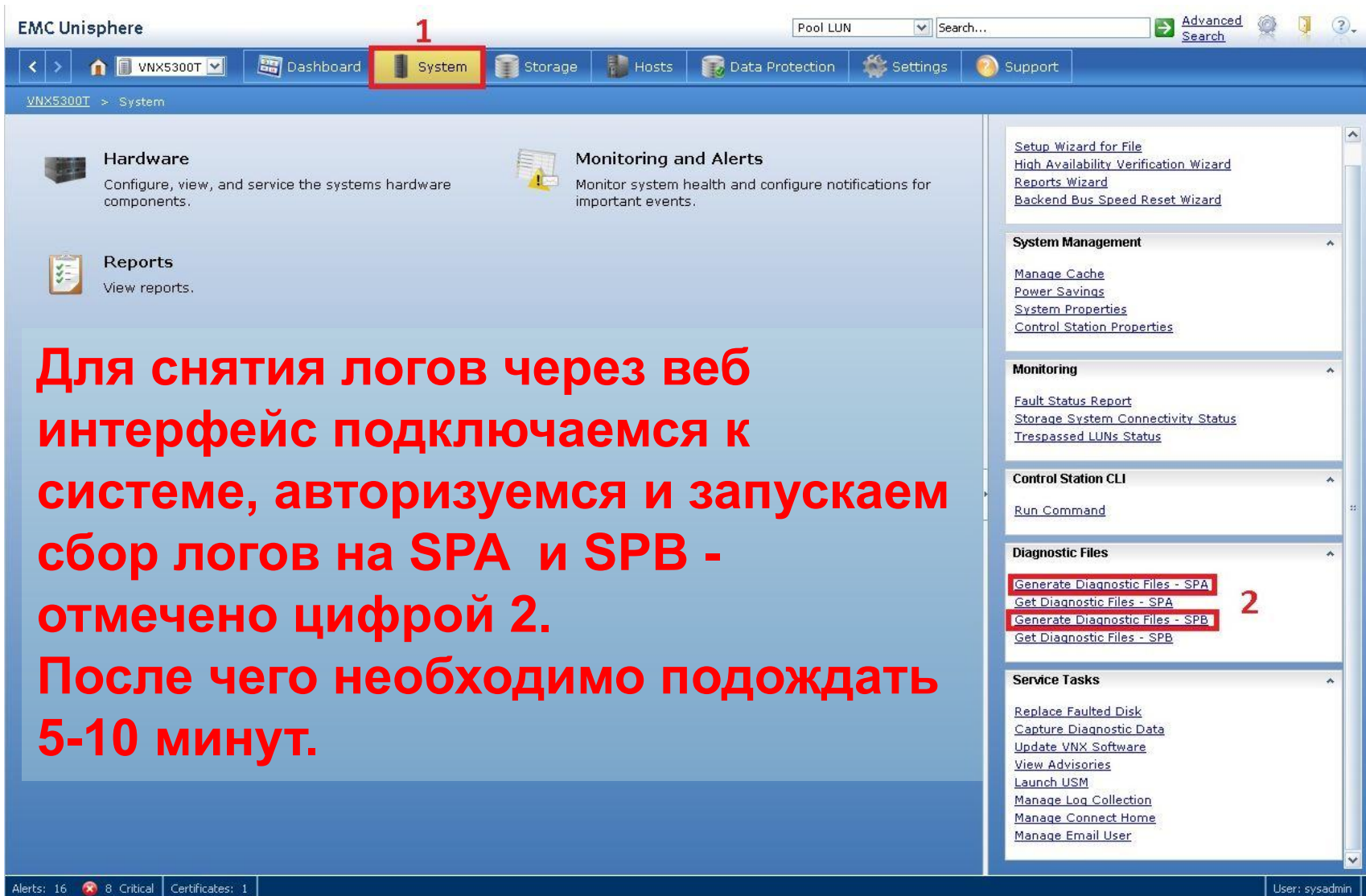
IP_ADDRESS_SP - ip адрес SP

USER - логин пользователя

PASSWORD - пароль пользователя

FILE_NAME.zip - имя загружаемого файла (можно забрать все файлы указав вместо параметра -file параметр -all)

Сбор логов с массива VNX в Unisphere (1/2)



EMC Unisphere

Pool LUN Search... Advanced Search

Dashboard System Storage Hosts Data Protection Settings Support

VNX5300T > System

Hardware
Configure, view, and service the systems hardware components.

Monitoring and Alerts
Monitor system health and configure notifications for important events.

Reports
View reports.

System Management

- [Setup Wizard for File](#)
- [High Availability Verification Wizard](#)
- [Reports Wizard](#)
- [Backend Bus Speed Reset Wizard](#)

Monitoring

- [Fault Status Report](#)
- [Storage System Connectivity Status](#)
- [Trespassed LUNs Status](#)

Control Station CLI

- [Run Command](#)

Diagnostic Files

- [Generate Diagnostic Files - SPA](#)
- [Get Diagnostic Files - SPA](#)
- [Generate Diagnostic Files - SPB](#)
- [Get Diagnostic Files - SPB](#)

Service Tasks

- [Replace Faulted Disk](#)
- [Capture Diagnostic Data](#)
- [Update VNX Software](#)
- [View Advisories](#)
- [Launch USM](#)
- [Manage Log Collection](#)
- [Manage Connect Home](#)
- [Manage Email User](#)

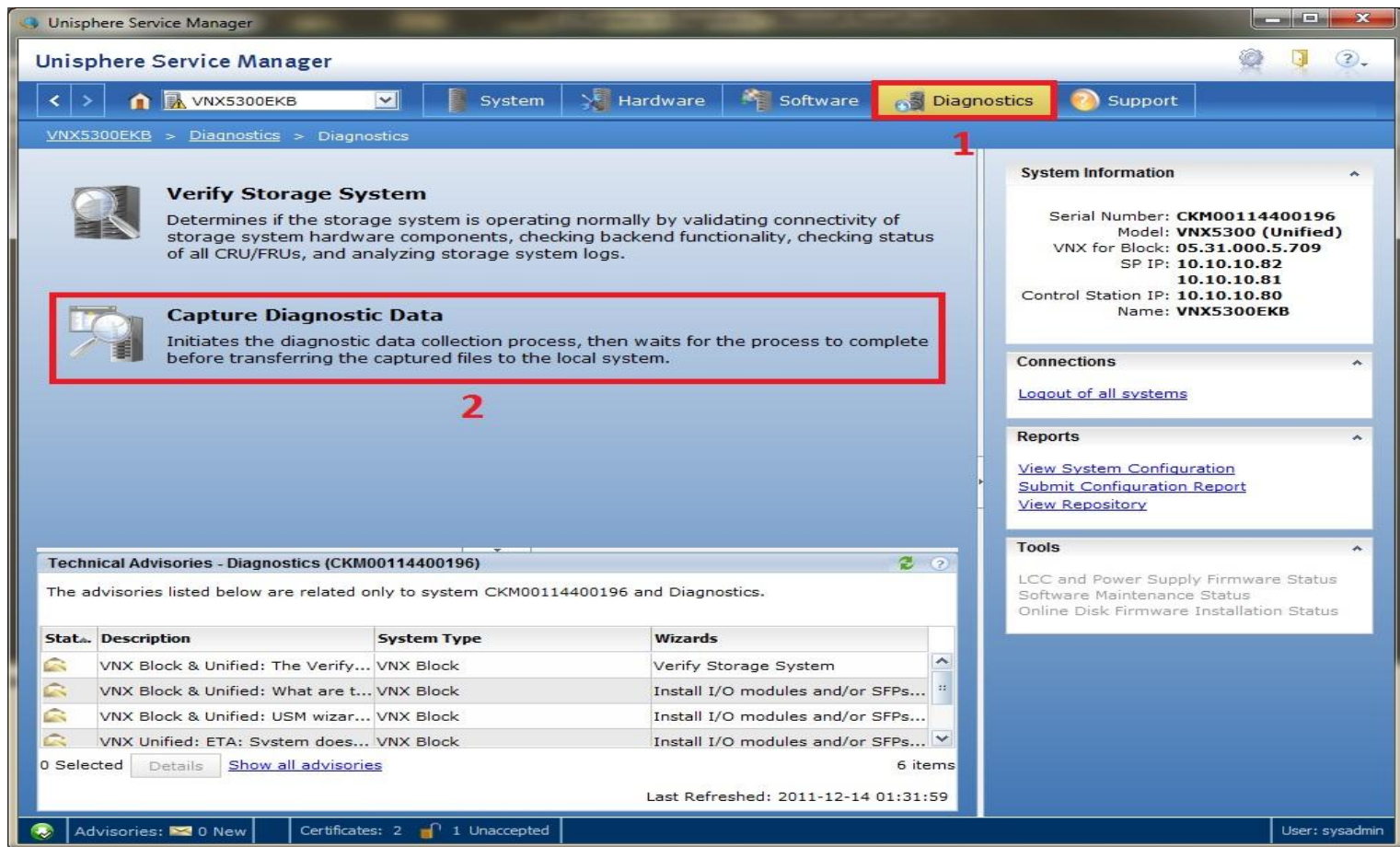
Alerts: 16 8 Critical Certificates: 1 User: sysadmin

Для снятия логов через веб интерфейс подключаемся к системе, авторизуемся и запускаем сбор логов на SPA и SPB - отмечено цифрой 2.

После чего необходимо подождать 5-10 минут.

Методы диагностики ошибок

Сбор логов с массива VNX через Unisphere Service Manager



SPCollect-ы сохраняются по следующему пути:
C:\EMC\repository\DiagnosticData\<S/N массива>

Методы диагностики ошибок

Сбор логов с массива VNXe

The screenshot displays the EMC Unisphere web interface for a VNXe3100 system. The browser address bar shows the URL 10.10.10.83. The interface includes a top navigation bar with tabs for Dashboard, System, Storage, Settings, Hosts, and Support. The breadcrumb trail indicates the current location: VNXe3100 > Settings > Service System. The main content area is divided into three sections: System Components, Storage System Details, and Service Actions. In the System Components section, the Storage System is selected. The Storage System Details section shows the system name (VNXe3100 Dual SP), status (Both Storage Processors are running in normal mode), software version (2.1.2.15342), product ID / SN (CKM00111000792), and SSH protocol (Disabled). The Service Actions section lists several actions, with 'Collect Service Information' highlighted. A description for this action states: 'Collect information about your system and save it to a file. Your service provider can use the collected information to analyze your system.' Below the description, there is a button labeled 'Execute service action' and a link for 'More information...'. The bottom status bar shows the system name (VNXe3100), alerts (2), user (admin), and system time (09:32).

10.10.10.83 EMC Unisphere

Файл Правка Вид Избранное Сервис Справка

EMC Unisphere

Dashboard System Storage Settings Hosts Support

VNXe3100 > Settings > Service System

Service System

System Components

- Storage System
 - Storage Processor SPA
 - Storage Processor SPB

Storage System Details

Storage System: VNXe3100 Dual SP
Status: Both Storage Processors are running in normal mode.
Software Version: 2.1.2.15342
Product ID / SN: CKM00111000792
SSH Protocol: Disabled

Service Actions

- Collect Service Information
 - Save Configuration
 - Restart Management Software
 - Reinitialize
 - Change Service Password
 - Enable SSH

Collect information about your system and save it to a file. Your service provider can use the collected information to analyze your system.

Contact your service provider determine if it is necessary to collect this information and to establish a process for sending the file to EMC support.

Execute service action

More information...

Refresh ☒ Auto refresh every 60 seconds

Name: VNXe3100 Alerts: 2 User: admin System Time: 09:32

Сервисные команды VNХе

Подключение консольным кабелем и траблшутинг «VNХе Configuration Utility» (Primus emc264232):

9600 baud, 8 data bits, no parity, 1 stop bit (defaults on most software)

Перевод SP в сервисный режим (выполняется на каждом SP):

> **svc_rescue_state -s**

> **svc_shutdown -r**

Реинициализация массива выполняется с одного SP:

> **svc_reinit**

Реимидж массива:

> **svc_reimage -r**

Просмотр текущего статуса компонентов массива:

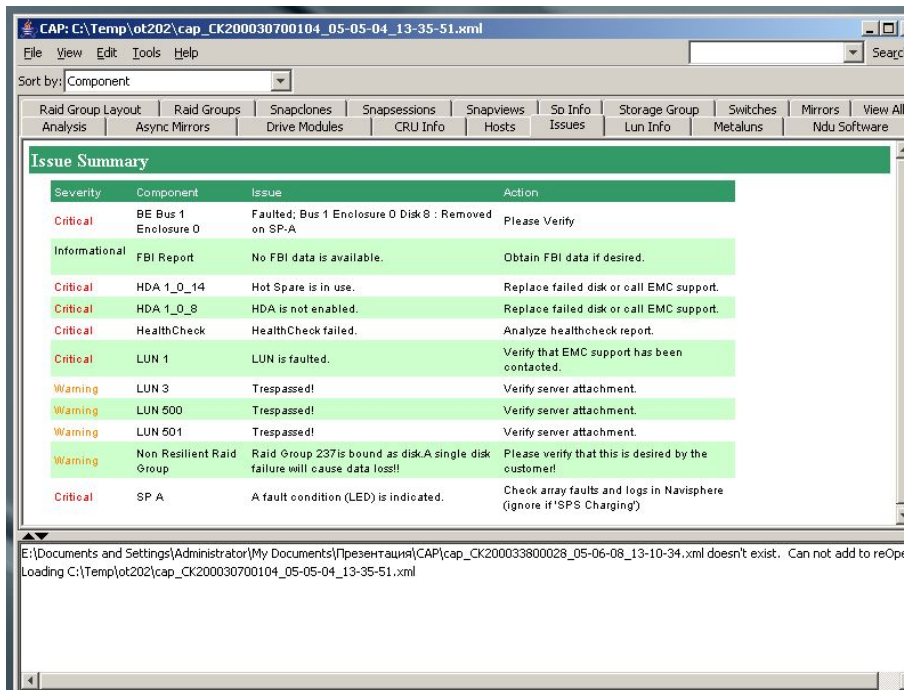
> **svc_diag --state=cru**

Описание остальных сервисных команд в документе:

[300-011-236_VNХе Unisphere CLI User Guide.pdf](#)

Разбор логов

1. CAP2 (Clariion Array Properties)
2. SPLAT (Storage Processor Analyze Tool)



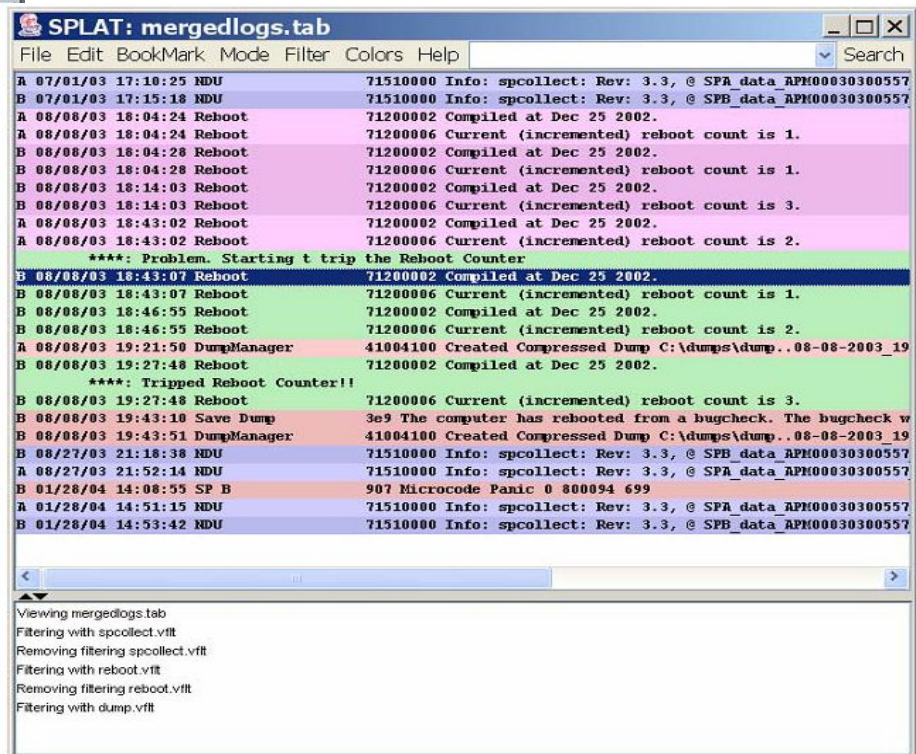
CAP: C:\Temp\ot202\cap_CK200030700104_05-05-04_13-35-51.xml

File View Edit Tools Help

Sort by: Component

Severity	Component	Issue	Action
Critical	BE Bus 1 Enclosure 0	Faulted; Bus 1 Enclosure 0 Disk 8 : Removed on SP-A	Please Verify
Informational	FBI Report	No FBI data is available.	Obtain FBI data if desired.
Critical	HDA 1_0_14	Hot Spare is in use.	Replace failed disk or call EMC support.
Critical	HDA 1_0_8	HDA is not enabled.	Replace failed disk or call EMC support.
Critical	HealthCheck	HealthCheck failed.	Analyze healthcheck report.
Critical	LUN 1	LUN is faulted.	Verify that EMC support has been contacted.
Warning	LUN 3	Trespassed!	Verify server attachment.
Warning	LUN 500	Trespassed!	Verify server attachment.
Warning	LUN 501	Trespassed!	Verify server attachment.
Warning	Non Resilient Raid Group	Raid Group 237 is bound as disk A single disk failure will cause data loss!!	Please verify that this is desired by the customer!
Critical	SP A	A fault condition (LED) is indicated.	Check array faults and logs in Navisphere (ignore if 'SPS Charging')

E:\Documents and Settings\Administrator\My Documents\Презентация\CAP\cap_CK200033800028_05-06-08_13-10-34.xml doesn't exist. Can not add to report
Loading C:\Temp\ot202\cap_CK200030700104_05-05-04_13-35-51.xml



SPLAT: mergedlogs.tab

File Edit BookMark Mode Filter Colors Help

Search

```
A 07/01/03 17:10:25 NDU 71510000 Info: spcollect: Rev: 3.3, @ SPA_data_APM00030300557
B 07/01/03 17:15:18 NDU 71510000 Info: spcollect: Rev: 3.3, @ SPB_data_APM00030300557
A 08/08/03 18:04:24 Reboot 71200002 Compiled at Dec 25 2002.
A 08/08/03 18:04:24 Reboot 71200006 Current (incremented) reboot count is 1.
B 08/08/03 18:04:28 Reboot 71200002 Compiled at Dec 25 2002.
B 08/08/03 18:04:28 Reboot 71200006 Current (incremented) reboot count is 1.
B 08/08/03 18:14:03 Reboot 71200002 Compiled at Dec 25 2002.
B 08/08/03 18:14:03 Reboot 71200006 Current (incremented) reboot count is 3.
A 08/08/03 18:43:02 Reboot 71200002 Compiled at Dec 25 2002.
A 08/08/03 18:43:02 Reboot 71200006 Current (incremented) reboot count is 2.
****: Problem. Starting the Reboot Counter
B 08/08/03 18:43:07 Reboot 71200002 Compiled at Dec 25 2002.
B 08/08/03 18:43:07 Reboot 71200006 Current (incremented) reboot count is 1.
B 08/08/03 18:46:55 Reboot 71200002 Compiled at Dec 25 2002.
B 08/08/03 18:46:55 Reboot 71200006 Current (incremented) reboot count is 2.
A 08/08/03 19:21:50 DumpManager 41004100 Created Compressed Dump C:\dumps\dump..08-08-2003_19
B 08/08/03 19:27:48 Reboot 71200002 Compiled at Dec 25 2002.
****: Tripped Reboot Counter!!
B 08/08/03 19:27:48 Reboot 71200006 Current (incremented) reboot count is 3.
B 08/08/03 19:43:10 Save Dump 3e9 The computer has rebooted from a bugcheck. The bugcheck was
B 08/08/03 19:43:51 DumpManager 41004100 Created Compressed Dump C:\dumps\dump..08-08-2003_19
B 08/27/03 21:18:38 NDU 71510000 Info: spcollect: Rev: 3.3, @ SPB_data_APM00030300557
A 08/27/03 21:52:14 NDU 71510000 Info: spcollect: Rev: 3.3, @ SPA_data_APM00030300557
B 01/28/04 14:08:55 SP B 907 Microcode Panic 0 800094 699
A 01/28/04 14:51:15 NDU 71510000 Info: spcollect: Rev: 3.3, @ SPA_data_APM00030300557
B 01/28/04 14:53:42 NDU 71510000 Info: spcollect: Rev: 3.3, @ SPB_data_APM00030300557
```

Viewing mergedlogs.tab
Filtering with spcollect.vfilt
Removing filtering spcollect.vfilt
Filtering with reboot.vfilt
Removing filtering reboot.vfilt
Filtering with dump.vfilt

CAR2 отчеты

- Issues
- Sp information
- LUN information
- Drive modules
- RAID Groups
- RAID-Group layout
- MetaLUNs
- Host ports
- CRU information
- SAN Copy
- Snap views
- Snap sessions
- Snap clones
- Mirrors (synchronous)
- Mirrors (asynchronous)
- Storage Groups
- NDU software
- Switches
- Analysis
- Virtual Provisioning

Triiage

Пример запуска из директории с SPCollects:

C:\Users\aleontev>d:

D:\>cd d:\\EMC_incidents\2152

d:\EMC_incidents\2152>triage -l -p -f -c

```
TRiiAGE                                REV: 26.2.7                                BUILD DATE: 091211
*****
Input specified:      [ triage -l -p -f -c ]
Generating:           [ full ] TRiiAGE Analysis.
Accessing TOOLS in:   [ C:\Tools ]

03/21/2012 00:32:10    Checking directory for SPcollects.
03/21/2012 00:32:10    Extracting SPcollects.
03/21/2012 00:32:12    Extracting enclosure geometry information.
03/21/2012 00:32:12    Merging and annotating SP event logs.
03/21/2012 00:32:13    Merging standard Ktrace logs.
03/21/2012 00:32:14    Scanning event logs for issues.
03/21/2012 00:32:15    Scanning ktrace logs for issues.
03/21/2012 00:32:15    Annotating ktrace log.
03/21/2012 00:32:17    Analyzing Flare checksum data.
03/21/2012 00:32:18    Creating LUN STATUS report (SPA).
03/21/2012 00:32:18    Creating LUN STATUS report (SPB).
03/21/2012 00:32:18    Creating ARRAY SUMMARY report.
03/21/2012 00:32:18    Creating DISK DETAIL report.
03/21/2012 00:32:19    Creating RESUME report.
03/21/2012 00:32:19    Creating SP STATUS report (SPA).
```

Triiage отчеты

Основной файл отчета: **TRiiAGE_full_Analysis.txt**

Полное описание смотреть в файле: C:\Tools\TRiiAGE_Companion.doc

Полный лог событий в файле: **TRiiAGE_full_SPlogs.txt**

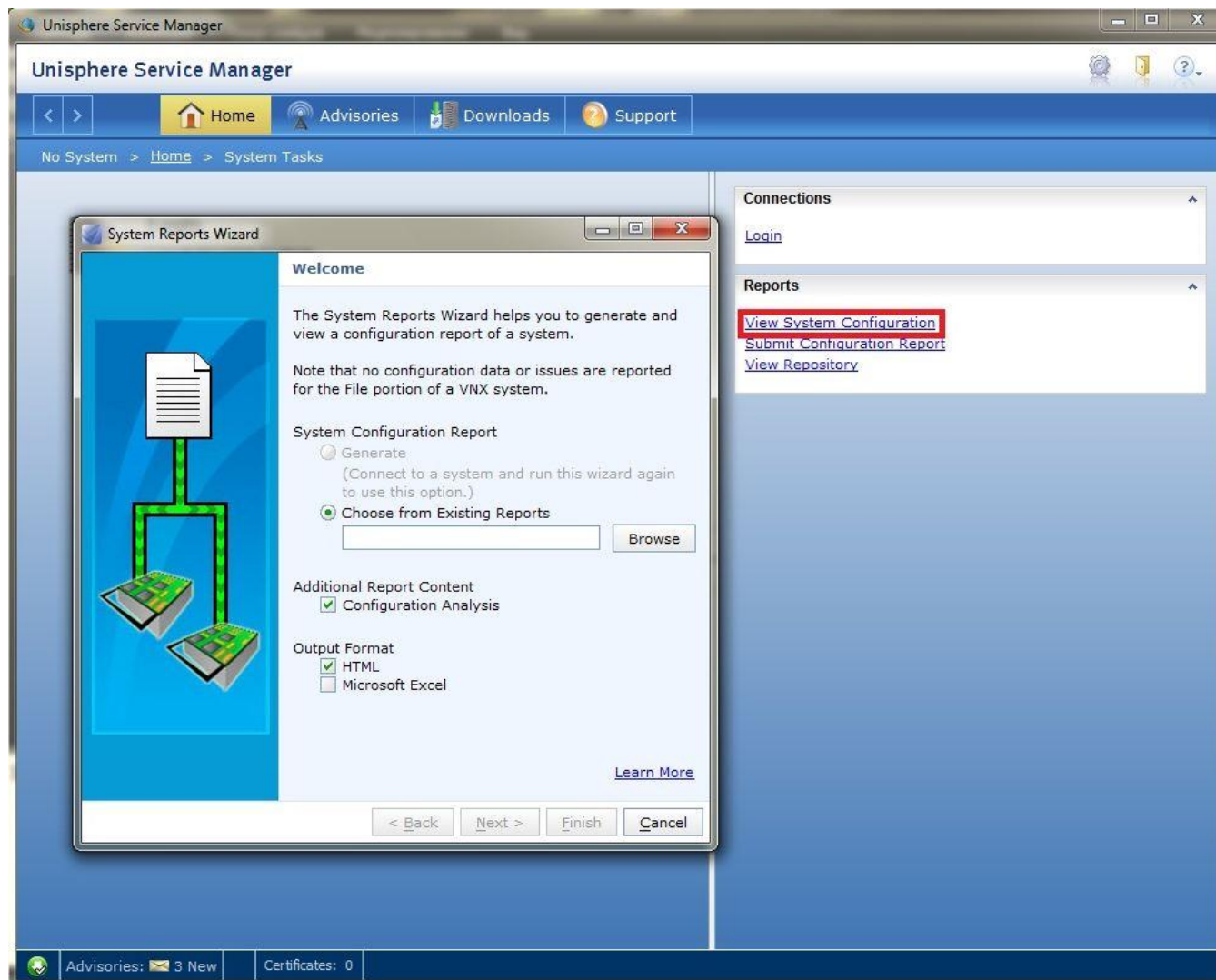
```
*****
ARRAY CONFIGURATION INFORMATION [ArrayInfo Script]
*****
Array Name: CK200082700617
Array Serial Number: CK200082700617
Array Model: CX3-40f

Array Software Revision: SPA----- SPB-----
SP Serial Number: 3.26.40.5.016 3.26.40.5.016
IP Address: CF2TK082400347 CF2TK082400343
PROM Revision: 192.168.0.149 192.168.0.150
SP Signature: 3.58.00 3.58.00
Agent Revision: 2171ba 2170d8
SP Memory: 6.26.7 (0.87) 6.26.7 (0.87)
SP Time: 4096 4096
Read Cache State: 08/29/2011 03:26:56 08/29/2011 03:25:38
Write Cache State: ENABLED ENABLED
Read Cache Size: 1012 1012
Write Cache Size: 2004 2004
Greater WC Availability: N/A N/A
System Fault LED: ON ON
Enclosures: 5 5
Disks: 64 64

Enclosure SPA Type Vers F SPB Type Vers F Notes
Bus 0 Enclosure 0 DAE3P 7.76 DAE3P 7.76 Stiletto 4G DAE
Bus 0 Enclosure 1 DAE3P 7.79 DAE3P 7.79 Stiletto 4G DAE
Bus 1 Enclosure 0 DAE3P 7.79 * DAE3P 7.79 * Stiletto 4G DAE
```

Методы диагностики ошибок

Анализ текущей конфигурации массива через USM



Виды ошибок

Ошибки массива

- Ошибки дисков
- Ошибки Storage Processor'ов
- Ошибки LCC/BCC
- Ошибки PS и SPS

Ошибки хостов

- Ошибки HBA
- Ошибки ПО (PowerPath, Naviagent)

Ошибки коммутаторов

- Ошибки SFP
- Ошибки настройки

Критические ошибки дисков (emc123689)

A	09/29/11 03:12:38 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5
A	09/29/11 03:12:39 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5
A	09/29/11 03:12:46 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5
A	09/29/11 03:12:48 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5
A	09/29/11 03:12:55 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5
A	09/29/11 03:12:57 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5
A	09/29/11 03:13:03 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5
A	09/29/11 03:13:04 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5
A	09/29/11 03:13:06 Bus0 Enc1 Dsk0	820 Soft Media Error [Bad block]	0	0	5

- **820 – Soft Media Error**
- **920 – Hard Media Error**
- **801 – Потребовался повтор SCSI операции. Успешно.**
- **901 – Потребовался повтор SCSI операции. Неуспешно.**
- **801 и 901 ошибка создается не диском, а LCC и тоже может говорить о неисправности диска.**
- **803 – Рекомендуется заменить диск.**

Background Verify (запуск)

```
naviseccli -h <SP_IP_address> setsniffer -rg <RAID_group_number> [-bv]  
[-bvtime <priority>]
```

*priority - может иметь одно из следующих значений

ASAP = 1 minute per gigabyte or faster.

High = 5 minutes per gigabyte

Medium = 10 minutes per gigabyte

Low = 15 minutes per gigabyte

Вместо **-rg** можно просто указать ID конкретного луна или ключ **-all**

Н-п: **naviseccli -user admin -password 123456 -scope 0 -h 192.168.3.207
setsniffer 3 -bv -bvtime medium**

В примере будет выполнен BV для луна, имеющего ID **3** на массиве.

Background Verify (проверка статуса)

Проверять статус процесса можно командой:

```
naviseccli -user USERNAME -password PASSWORD -scope 0 -h  
IP_ADDRESS getsniffer -rg
```

Н-п: **naviseccli -user admin -password P@ssw0rd -scope 0 -h 10.10.10.45
getsniffer -rg 1**

Ничего не происходит

Currently Running Full Unit Verify

Verify State: Idle
Percent Complete: 0
Corrected Uncorrectable
Checksum errors 0 0
Write Stamp errors 0 0
Time Stamp errors 0 0
Shed Stamp errors 0 0

Идет BV

Currently Running Full Unit Verify

Verify State: Sniff Running
Percent Complete: 60
Corrected Uncorrectable
Checksum errors 0 0
Write Stamp errors 0 0
Time Stamp errors 0 0
Shed Stamp errors 0 0

E-lab Advisor

Support > Product and Diagnostic Tools > Environment Analysis Tools > E-Lab Advisor

E-Lab Advisor

Upload

Reports Search

SANsummary

Help

File Upload (Required)

Обзор...



Accepts EMCGrab, EMCReport, Cisco, McData, Brocade, SYMAPI logs and Celerra files

Service Request number

Project Name

Site Name

CCA5 ☐ send to CCA5 server

CCA Party Number

Email Report ☐ to aleontev@ocs.ru

Upload and Create Report(s)

E-lab Advisor (справка)

E-Lab Advisor

<http://elabadvisor.emc.com/>

Upload

Reports Search

SANsummary

Help

Getting Started

Upload

Upload Summary

Data Collections

Reports Search

SANsummary

FAQ

Data Collections

All of the following are supported for upload into E-Lab Advisor:

Hosts

[EMCgrab](#): TAR.GZ files produced by EMCgrab for the following operating systems: AIX, HP-UX, Linux, Solaris, and Tru64.

[EMCREPORTS](#): ZIP files produced by EMCREPORTS for Windows hosts

SAN Switches

Brocade: *supportshow*

Brocade: *supportsave*

Cisco: *show tech-support details*

McData: Connectrix Manager Data Collection

McData: *show all*

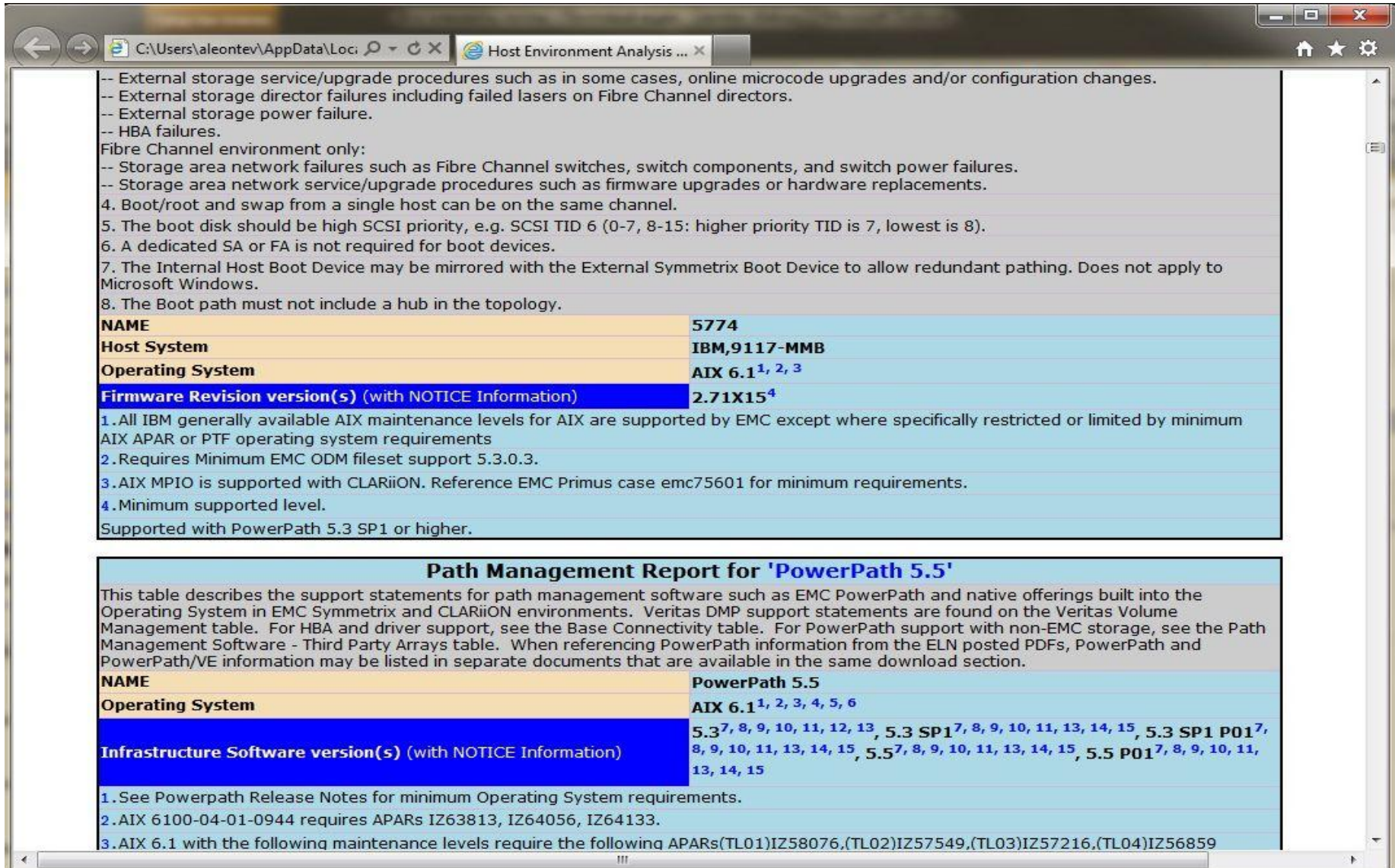
McData: Web interface -> Maintenance -> Product Information

Batches

ZIP file containing multiple items from Hosts or SAN Switches as described above.

NOTE: Batch files should not contain **folders or directories**

E-lab Advisor (отчет)



The screenshot shows a web browser window with the address bar displaying 'C:\Users\aleontev\AppData\Local\...' and the page title 'Host Environment Analysis ...'. The main content area contains a list of diagnostic steps and a table of system information.

-- External storage service/upgrade procedures such as in some cases, online microcode upgrades and/or configuration changes.
-- External storage director failures including failed lasers on Fibre Channel directors.
-- External storage power failure.
-- HBA failures.
Fibre Channel environment only:
-- Storage area network failures such as Fibre Channel switches, switch components, and switch power failures.
-- Storage area network service/upgrade procedures such as firmware upgrades or hardware replacements.

4. Boot/root and swap from a single host can be on the same channel.
5. The boot disk should be high SCSI priority, e.g. SCSI TID 6 (0-7, 8-15: higher priority TID is 7, lowest is 8).
6. A dedicated SA or FA is not required for boot devices.
7. The Internal Host Boot Device may be mirrored with the External Symmetrix Boot Device to allow redundant pathing. Does not apply to Microsoft Windows.
8. The Boot path must not include a hub in the topology.

NAME	5774
Host System	IBM,9117-MMB
Operating System	AIX 6.1 ^{1, 2, 3}
Firmware Revision version(s) (with NOTICE Information)	2.71X15 ⁴

1. All IBM generally available AIX maintenance levels for AIX are supported by EMC except where specifically restricted or limited by minimum AIX APAR or PTF operating system requirements
2. Requires Minimum EMC ODM fileset support 5.3.0.3.
3. AIX MPIO is supported with CLARiiON. Reference EMC Primus case emc75601 for minimum requirements.
4. Minimum supported level.
Supported with PowerPath 5.3 SP1 or higher.

Path Management Report for 'PowerPath 5.5'

This table describes the support statements for path management software such as EMC PowerPath and native offerings built into the Operating System in EMC Symmetrix and CLARiiON environments. Veritas DMP support statements are found on the Veritas Volume Management table. For HBA and driver support, see the Base Connectivity table. For PowerPath support with non-EMC storage, see the Path Management Software - Third Party Arrays table. When referencing PowerPath information from the ELN posted PDFs, PowerPath and PowerPath/VE information may be listed in separate documents that are available in the same download section.

NAME	PowerPath 5.5
Operating System	AIX 6.1 ^{1, 2, 3, 4, 5, 6}
Infrastructure Software version(s) (with NOTICE Information)	5.3 ^{7, 8, 9, 10, 11, 12, 13} , 5.3 SP1 ^{7, 8, 9, 10, 11, 13, 14, 15} , 5.3 SP1 P01 ^{7, 8, 9, 10, 11, 13, 14, 15} , 5.5 ^{7, 8, 9, 10, 11, 13, 14, 15} , 5.5 P01 ^{7, 8, 9, 10, 11, 13, 14, 15}

1. See Powerpath Release Notes for minimum Operating System requirements.
2. AIX 6100-04-01-0944 requires APARs IZ63813, IZ64056, IZ64133.
3. AIX 6.1 with the following maintenance levels require the following APARs(TL01)IZ58076,(TL02)IZ57549,(TL03)IZ57216,(TL04)IZ56859

Спасибо за внимание!

