

<u>View of errors and current historical data of parameters indicating the health of drive on</u> <u>CM Portal</u>

Remote tests of hard drives

Example of remote tests result - faultless state of disk, defective disk

View of errors and current historical data of parameters indicating the health of drive on CM Portal

Health of disks is checked automatically on each PC, where C-Monitor client is installed, by monitoring of S.M.A.R.T. parameters. If status of the critical parameters gets worse, the operator is informed that the disk's health has worsen, automatically by an email message. The status will also appear in errors of the given customer. To remove the error, you must first confirm it. If you select perfect condition of disk at the confirmation, the error will disappear. The error will also disappear, when the disk is replaced by a faultless one, and then full descript on PC runs normally. If by testing you find out that the disk is indeed defective, then select the option to confirm defective disk, after which the error will be marked by a green tick and remains in the list of errors until the disk is replaced by a faultless one.

| | Admin zóna Prehiladanie a Customer Desk | Operator: Pavel | C |
|--|--|---------------------------|--------|
| Zhatir diates . Processit vienes | 8 Poruchy | | ? |
| Upozernenia Estadhi História porich Poruchy na počítačoch | Nostolnosť Počítal & SWIPC13 Použivateľ Operátor Typ V Svipeštvené SWIPC13 Použivateľ Operátor Typ V Svipeštvené Zakajúca na uzavretie | | |
| - Zobrazenia | SWPC18 - SKPCBRA015 - Lucia : Zoznam poruchových niavov [zobrazené 2 položo] | Potentiť označené poruchy | |
| Zóny Watches (Online monitoring) | X • Id Úroveň Trvanie poruchy Popis poruchy Vyhodnotenů hodnota nodasta úrovne počítača v Použivateľ sietí | Społočnosť | |
| Počítače Online informácie | Hoditota Raw ja Hoditota Raw ja Hodito | Stovakia spel, s r.s. | Detail |

Image: Poruchy SMART parametrov

Information about the current state of local disks are gathered on CM portal in the section *Presentation and Evaluation -> Presentation -> Zones ->* Zone Disks - SMART as displayed on the next image.

| | Admin zóna | Prehliadanie a Vyhodnotenie | Customer Desk | Operátor: Pavol |
|-------------------------------|---|--------------------------------|---|-----------------|
| Zbaliť všetko Rozbaliť všetko | Zóny | | | |
| - Upozornenia | Systémové zóny | Spoločnosť | Počitač & 6930 Použivateľ | |
| Poruchy | Disky - SMART | Operátor | Zoradiť podľa CM-ID 💌 Zoradiť ako Vzostupne 💌 | Hfadat |
| História porúch | Antivírusy Disky - lokálne | OS | Zahrnúť ručne zadané počítače 🔲 Len online počítače | |
| Poruchy na počítačoch | Disky - sietové | | | |
| Zobrazenia | Deky - SMART IP Scenner Online Informácie | - | | |
| Zóny | Z OS Aktualizácia OS Body obnovy | brazená 1 položka] | po kliknuti sa zobrazi história | |
| Watches (Online monitoring) | Počítače v sieti Sletové nastavenia | Parameter | 1. SEANBO2 | |
| Počítače | Skužby Spúliťané po litarte | History | Shew.history | |
| Online informácie | Zdieľania | Network Name | HP6930P | |
| Internet bandwidth monitor | | User | Pavol | |
| Zmeny na počítači | | Current Login | HP6930P/pavolp | |
| Foto dokumentácia | | Location | prenosny BA | |
| Manažerské informácie | Sekcia | Parameter | 1. SEANB02 | |
| | Device 0 | Status | OK | |
| Reporty | PUTTLE V | SMART Test | Spustifiest | |
| Prenesené dáta na ADSL a FW | | Model number | ST9500420AS | |



Image: Zobrazenie zóny Disky - S.M.A.R.T s možnosťou zobrazenia históre

The next image shows the current state of S.M.A.R.T parameters. If the values aren't red, the disk should be fine. By clicking on a PC name, you'll see the history of SMART parameters changes.

| | | | * = = | | Úvodn | ý prehľad 👘 | E Kredit ? Manual | () Odhlä |
|-------------------|-----------------------|--|--------------------------|---------|--------|--------------|---------------------|-----------------|
| | Admin zóna | Prehliadanie a Vyhodnotenie Gu | stomer Desk | | Com | municator | Operátor: Meno oper | rátora 🚺 |
| ko Rozbeliť všeko | 🚦 Zóny | | | | | | | ? |
| enia | | | Počitač & | | | | | |
| | | | Umiestnenie | | nb08 | Použi | | |
| | Disky - SMART | Operátor | Zoradiť podľ | | | | iiťako Vzostupne 🔻 | HFa |
| itačoch | | OS | Zahrnúť | ručne | zadané | počítače 📃 L | en online počítače | |
| chacoch | • | | | | | | | |
| | Zóna Disky - SMART [1 | zobrazená 1 položka] | | | | | | |
| | Sekcia | Parameter | 1. SEANBOO | 1 | | | | |
| ng) | | History | | | | | | |
| | | Network Name | Show history JURAJ-HP | | | | | |
| | | Online connection | 13. Feb 2013 | 10:10:3 | 37 | | | |
| onitor | | User | Juraj | | | | | |
| | | Current Login | Juraj-HPUura | | | | | |
| | | Location | Topolova | | | | | |
| ácie | | | | | | | | |
| | Sekcia | Parameter | 1. SEANBOS | 1 | | | | |
| ADSL a FW | Device 0 | Status | OK | | | | | |
| SL a FW | | SMART Test | Spustit' test | | | | | |
| | | Model number | ST9500420A | 5 | | | | |
| | | Supported smart | Yes | | | | | |
| | | Firmware revision | 0006HPM1 | | | | | |
| | | Serial number | 5VJ7SW7Z | | | | | |
| | | Disk size | 466.0 GB | | | | | |
| | Sekcia | Parameter | Value / Thre | eshold | /Worst | / Raw | | |
| | Device 0 | [1] Raw read error rate | 115 | 6 | 99 | 4163 | | |
| | | [3] Spin up time | 97 | 0 | 97 | 0 | | |
| | | [4] Start/stop count | 99 | 0 | 99 | 1210 | | |
| | | [5] Reallocated sector count | 100 | 36 | 100 | 0 | | |
| | | [7] Seek error rate | 71 | 30 | 60 | 9392 | | |
| | | [9] Power on hours count | 98 | 0 | 98 | 2572 | | |
| | | [10] Spin retry count | 100 | 97 | 100 | 0 | | |
| | | [12] Power cycle count | 99 | 20 | 37 | 1192 | | |
| | | [183] Sata downshift error count | 100 | 0 | 253 | 0 | | |
| | | [184] End to end error | 100 | 97 | 100 | 0 | | |
| | | [187] Reported uncorrectable errors | 100 | 0 | 100 | 0 | | |
| | | [188] Command timeout | 100 | 0 | 98 | 5 | | |
| | | [189] High fly writes | 100 | 0 | 100 | 0 | | |
| | | [190] Temp difference from 100 | 61 | 45 | 47 | 39 | | |
| | | [191] G sense error rate | 100 | 0 | 100 | 136 | | |
| | | [192] Power off retract cycle | 100 | 0 | 100 | 20 | | |
| | | [193] Load unload cycle count | 97 | 0 | 97 | 6958 | | |
| | | [194] Temperature | 39 | 0 | 53 | 39 | | |
| | | [195] Hardware ecc recovered | 48 | 0 | 42 | 4163 | | |
| | | [196] Reallocation events count | 100 | 36 | 100 | 0 | | |
| | | [197] Current pending sector count | 100 | 0 | 100 | 0 | | |
| | | [198] Uncorrectable sector count | 100 | 0 | 100 | 0 | | |
| | | [199] Ultradma crc error rate | 200 | 0 | 200 | 0 | | |
| | | | | | | | | |

Image: Zobrazenie aktuálneho stavu S.M.A.R.T parametrov pre konkrétny počítač

There are four values for each parameter. Columns: **Value** - a constant defined by SMART standard (current value) **Threshold**- a value, below which Value cannot go, otherwise the disk is defective



Worst - the worst recorded value so far

RAW - absolute value of the monitored parameter (e.g. number of reallocated sectors)

Critical S.M.A.R.T parameters evaluated in CM according to increase of error events

Reallocated Sectors Count: The number of sectors, that were marked as inapplicable by the disk's electronics, and the data was moved to another sector. The data transfer doesn't mean the data has been damaged, though for an increasing amount of bad sectors, the reading and writing speed decreases. This doesn't mean that these sectors will be displayed as bad when we'd scan the disk. Modern disks have an area of sectors, which they use to replace bad sectors, if there are any found.

Reallocation Events Count: Total number of both successful and unsuccessful tries to move data from damaged sectors.

Current Pending Sector Count: Number of sectors in the failing state. If the operation of writing and check of the written data is successful, the sector is classified as functional. Otherwise, the system will try to transfer these data.

Uncorrectable Sector Count: Number of permanently damaged sectors. The higher this number is, the bigger is the risk of failure of the entire disk.

Other parameters evaluated in CM only by Value reaching a value under Treshold

Read Error Rate: Errors of data reading. Any deficiencies in this area reffer to an error of reading heads or the disc surface. Intensive increasing of defectiveness almost always leads to irreversible data losses.

Spin Retry Count: Number of repeated tries to spin the discs. An increasing value indicates a problem with the engine, or the control electronics.

Spin-up Time: Time, in which the drive's discs spin up to the operating speed. Its increasing indicates malfunction of the engine, or eventually of the control electronics. When combined with high temperature, it's most likely a case of worn bearings.

Start/Stop Count: Number of cycles of the disk's turning on/off. High values in combination with a low amount of working time may be caused by bad setup of saving modes (for example turning off the disk after three minutes of inactivity, if data is written every four minutes).

Power On Hours count: Total running time since the disk's production. There's nothing we can do with high values.

Temperature: There can be more than one information, temperature sensors can be found in the disk's body, in the outside environment, as well as inside.

If some parameter values are red, it's necessary to check the disk's status. In C-Monitor version 2.6 and higher, there are <u>Remote tests of hard drives</u> available, read more in the text below. If a disk doesn't pass these tests, the user must be notified, that it's effective to replace it, at best along with export of parameter history output. The export is done by clicking on the Excel icon in the top right corner.

If you don't want to use the integrated solution for testing disks via C-Monitor client, you can use the manufacturer's own software for testing potentially defective drives.

Remote tests of hard drives

Launch of the remote test from the zone - Disks - S.M.A.R.T

Launch of the remote test from the section Errors



Launch of the remote test of hard drive from e-mail

Assessment of the final and ongoing reports from remote drives tests

Since version 2.6, C-Monitor client provides an option to remotely test hard drives. The test of a drive can be launched on several places. The test's result, as well as the ongoing status will be delivered to you by email. During the test, the user may work normally and won't be limited at all, as he won't even be aware that the test is running. Read more information in the text below.

Launch of the remote test from the zone - Disks - S.M.A.R.T

Test of a disk can be carried out directly from the zone Disks - SMART, which is located in the section *Presentation and Evaluation -> Presentation -> Zones -> Zone Disks - SMART.* Search for a specific computer using the upper filter, and press the button *Run test* as displayed on the next image.

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|-------------------------------|------------------------|--------------------------------|---------------------|------------------------|------------|----------------|----------|------------------|------------|
| | Admin zóna | Prehliadanie a Vyhodnotenie | Customer Desk | Communicator | | | Oper | ator: Meno operi | atora 🕜 |
| - Zhair vieto 🔹 Rozhair vieto | 🚦 Zóny | | | | | | | | ? 9, |
| - Upozornenia | | Spoločnosť | Počítač & | PouSwater | | | | | |
| Poruchy | Daky - SMART | Operátor | Zoradiť podľa CM-ID | | Vapetupne | Hlada | 02 | | XX |
| História porúch | Daky - SHORT | OS | | ané počítače 🗌 Len oni | | • | | | |
| Poruchy na počítačoch | | 05 | annut ruche zao | ane pocrace initian on | ne pocrace | | | | |
| Zobrazenia | Zóna Disky - SMART [2 | obrazená 1 položka j | | | | | | | |
| Zlai | Sekcia | Parameter | 1. SEANBOB | | | | | | |
| Watches (Online monitoring) | | History | Show history | | | | | | |
| Počítače | | Network Name | JURAJ-HP | | | | | | |
| Online informácie | | Online connection | 13. Feb 2013 21:335 | 57 | | | | | |
| Internet bandwidth monitor | | User | Juraj | | | | | | |
| Zmeny na počítači | | Current Login | Juraj-HPUuraj | | | | | | |
| Foto dokumentácia | | Location | Topolova | | | | | | |
| Manažerské informácie | Sekcia | Parameter | 1. SEANBOB | | | | | | |
| Reporty | Device 0 | Status | OK | | | | | | |
| Prenesené dáta na ADSL a FW | | SMART Text | Soustif test | _ | | | | | |
| | | Model number | ST9500420AS | Spustenie vzdial | eného | | | | |
| | | Supported smart | Yes | testu diska | | | | | |
| | | Firmware revision | DODGH PM 1 | | | | | | |
| | | Serial number | 6V/75W7Z | | | | | | |

Image: Spustenie vzdialeného testu pevného disku zo zóny disky-smart

In the next window you can enter any email address of the test result's sender, or keep the default address, and into the field *send test result to address* enter email or emails, to which the result is going to be sent, default address is the currently logged operator's one. Then press *Run test* which triggers an instruction to C-Monitor client to execute the test of drive. Here you can also interrupt a currently running test, as well as request the status of also running tests, which is also going to be sent to your email.



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|--|---|
| | Admin zóna Prehladanie a Customer Desk Communicator Operátor Meso operátora C |
| - Zhalif vletko 🔹 Rozhaliř vletko | 🚦 Zóny ? 🔾 |
| Upezomenia Poruchy História porúch Poruchy na počítačoch | spskolnosť Podľad & tentról Pouľkvateť Daky - SNART Operátor Zorasiť podľa OHD z Zorasiť ako Vzotupne Hďadať CČ M < |
| — Zobrazenia | Spusterie SMART Testu |
| <u>Zóny</u> Wiatches (Online monitoring) Poôtače Online informácie Internet bandwidth monitor Zmany na poôtača Poto dokumentácia | Spolačnosť IT Services, s.r.o. Počtač SEANDOB / JURAJ HP / Juraj 13, Feb 2013,10,39,53 Model disku STB500420A.S Sésové čisla SVJ7SV7Z Kapadta disku 466.0 GD PhysicalDate PO Spisočetke listka* Inter počitač |
| Manažerské informácie | Ernall odosielateľa výsledku testu * Vlastvá voľba 💌 enaritest@customemonitol.sk |
| Reporty | Wysłedok testu posłaf na adresu * Vłastwi w ba 💌 enaleperatoratienal sk. Viac emailov oddelte čiarkou alebo bodkočiarkou |
| Prenesené dílta na ADSL a FW | Spôšob odoslania emaile s výsledkom lestu z C-Mositora * Zmenit Po spustení testu bude bez vysušenia používateľa otestovaný disk. Test obvýšle trvá 1 - 3 hod. Zabezpečke, aby bol počásč počas testu stále zaprutý, inak test zopakujte. Po 6 hod. bude zaslaný stavkýsledok testu na výššie zadanú adresu (v emaile bude príložený súbor). Pre vázc informácii kliknite: www.customermonitor.sk. Spustiř test Pierušiť aktušíne bežiasi test Jednorázové vyšladanie stavu História odostaných požlačaviek (zobrazuje sa posledných 15 sdalostí) |
| | Dátum Udalosť Spustenie testu PhysicalDrive Odosielateľ Príjemca Príkazový riadok Spustil |

Image: Spustenie vzdialeného testu pevného disku zo zóny disky-smart

Launch of the remote test from the section Errors

Another option to launch the test is in the section *Presentation and Evaluation -> Warnings -> Errors*, then search for a specific S.M.A.R.T error. In this error's detail, there's a button to launch remote test of the disk, as displayed on the next image. The following window is the same as described for launching the test through the <u>zone Disks - SMART</u>, therefore, all settings are the same as well.

| | | | | Úvodný prehľav | d € Kredit 🤉 Manual | 🙂 Ochläsit |
|---------------------------------|-----------------------|--|-------------------------|----------------|---------------------------|------------|
| | Admin zóna | Prehliadanie a Vyhodnotenie Customer Desk | Communicator | | Operátor: Meno operátora | ୦ ୦ |
| Zhalif viello - Rozhalif viello | 😣 Poruchy | | | | | ? |
| Upozomenia | Spoločnosť | Polital & parpell2 Poulivatef | Operator | Тур | - | |
| Paruchy | | Umiestnenie Dispette Politikatian | · · | 136 | Hisdat | |
| História porúch | | Varovanie Bez chyby Nedefinovaně V Blo | hanned a | | | |
| Poruchy na počítačoch | | | | | | |
| Zobrazenia | Detail poruchy č | . 13749182 | | | | |
| Zónv | Informácie o počítači | | Založiť požiadavku do C | Desk-u Spust | iif test Potyrdiif poruci | hu 🦘 |
| Watches (Online monitoring) | ld počitača | 3765 | | - | | |
| Počítače | CIII-ID počítača | Z0ZPC02 | | | | |
| Online informácie | Heno počitača v sieti | PC02811A | | / | | |
| Internet bandwidth monitor | Spoločnosť | Z0, 5.10. | | | | |
| Zmeny na počítači | Sigt' | Domain: zolocal | | | | |
| Foto dokumentácia | Použivateľ | Lubica | | | | |
| | Email | | | | | |
| Manažerské informácie | Umiestnenie | 709A | | | | |
| Reporty | Informácie o poruche | | | | | |
| Prenesené dáta na ADSL a FW | Porucha | Disk - SMART parametre | | | | |
| | Úroveň poruchy | Kritický alarm | | | | |
| | ld poruchy | 13749182 | | | | |
| | | | | | | |
| | Zaznamenaná v CII | 22. Jan 2013 09:05:35 | | | | |

Image: Spustenie vzdialeného testu pevného disku z poruchy



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For each error that is automatically evaluated on a computer, an information about the error is sent to the operator by email. When one of the important S.M.A.R.T parameters is changed, an error is generated that warns about defective disk. An email is sent to the operator regarding this situation, which is displayed on the next image. A link to execute a remote test of the disk from CM Portal is highlighted in the text. By clicking on this link, you'll be automatically redirected to CM Portal webpage.

| ت 17 🖬 🖃 🖻 | | 69 - 801C : Disk - SMART para | ametre, Kritický alar | m - Správa (HTML) | | - |
|--|---|---|--|--|------------------------------|--------------------------------------|
| Súbor Sp | ráva Dopinky ESET | | | | ۵ | ? |
| Solution Constrainte Solution Constrainté | Odpovedať Odpovedať Poslať to reagovať | Cm_watches_por ^ Andriadenému * Tímový e-mail * Rýchle kroky * | Premiestniť | Cznačiť ako neprečitané Kategorizovať * Y Spracovať * Značky G | Preložiť Lupa Úpravy Lupa | |
| Komu: Milan; Kópia: | istomer Monitor Juraj C69 - 801C : Disk - SMART parametre, Krit | ický alarm | | | Odoslané: so 9. 2. 2013 17: | 13 |
| Parameter a Príčinou pon Trvanie poru Zobraziť hisi Technik(ci) i otestovanie výmenu. Poznámka: t blokovať v č | 20ZPC69 - 801C, ktorý používa Filip zá fyzický disk je : Reallocated Sector uchy je: Hodnota Raw je rôzna od nul chy: 33d 4h 23m 36s tóriu zóny s ďaľšími informáciami Milan Vysoký: +421 900 123456, mila disku buď <u>vzdialeným testom z CM</u> al Niektoré počítače, napríklad notecnok asti Počítače v záložke Vyhodnocotor IER MONITOR | Count - Drive 1 (Size: 23 y (3) od 31. Dec 2012 17:0 n@modra.sk Filip Velky: +4 ebo programom od výrobcu y firmy Lenovo, počítače s s | 3.0 GB, Model: S 5:42 21910000000, <u>filig</u> , <u>v detaile chyby</u> u SSD diskami, nesp | T3250410AS, Serial: 6RYK D@email.sk Juraj Hrubý: juraj vedú výsledok testu a v prípa | CUSTOMER MONITOR (APNM). | III III |
| Zobrazi | í ďalšie informácie o: SM Customer Mor | nitor. | | | | • |

Image: Spustenie vzdialeného testu pevného disku z emailu

After login to CM portal, you'll see this next window, where you just perform the same settings as are described at launch of the remote test from the section <u>zone Disks - SMART</u>, and start the test



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| | | | | | | Ovodný prehľad | E Kredit ? Mar | ual 🌵 🤇 | Odhlásiť | |
|--|---|--------------------------------|--|-------------------------------------|-----------------|-------------------------|--------------------|----------------|----------|---|
| | Admin zóna | Prehliadanie a Vyhodnotenie | Customer Des | k Communicator | | | Operátor: Meno | operátora | C | |
| Zbalif viello Rozbalif viello Hiavné menu | Spustenie SMART Testu | | | | | | | | • | ŕ |
| Zákaznici Počítače Audit SW a evidencia HW | Spoločnosť Počitač Nodel disku Sériové číslo | Z0 ST | Services, s.ro. IZPC02 / PC02811A / Lubk 3250310AS Y75M7V | a 13. Feb 2013 11:41:24 | | | | | | |
| - Použivateka | Kapacita disku PhysicalDrive | 23 PD | | | | | | | | |
| Mój profil Zákaznicke kontá Používateľská história | Spustenie testu * Email odosielateřa výsledk | u testu * | astná voľbe | • mattest@m.sk | | | | | | |
| – Admin. nästroje | Výsledok testu poslať na a | dresu* bo | astná voľbe dkočiarkou | operator3@am.ak | | | Viac emailov oddel | le čiarkou ale | .00 | |
| Inštalácie a skripty Udržiavanie PC | | vyrušenia použivateľa | | ide trvá 1 - 3 hod. Zabezpečte | | č počas testu stále zap | | | | |
| - C-Monitor klient | Po 6 hod. bude zaslaný stav | výsledok testu na vyš | šle zadanú adresu (vema | le bude priložený súbor). Pre | viac informácii | kliknite: www.customer | rmonitor.sk. | | | |
| Nastavenia C-Monitor na PC Rozvrhy a stav úloh | Spustit test | | rušiť aktuálne bežiaci test | Jednorázové vyšao | danie stavu | | | | _ | |
| Watches - nastavenia Aktualizácia C-Monitor kl. | História odoslaných požia | daviek (zobrazuje sa) | posledných 15 udalosti) | | | | | | | H |
| Verde Licencie | ▼ Dâtum Udalosť | Spustenie testu | PhysicalDrive Odosi | alatel" Prijemca | P | rikazový riadok | | Spustil | | |

Image: Spustenie vzdialeného testu pevného disku z emailu

Logs recording the test's execution, single status requests, as well as completion, are located in the bottom part of the window from where the tests are launched, and are displayed on the next image.

| | | | | | * | 🛁 🔤 🛛 Úve | iný prehľad | € Kindl ? | Manual 🛛 🕲 Odhilasif |
|--|---|----------------------------------|--------------------------|---------------------------------------|-----------------------------|-------------------------|-------------|--------------------|----------------------|
| | Admin zóna | Prehliadanie a Vyhodnotenie | Customer D | esk Communi | cator | | | Operator | Meno operátora |
| Zbalif vlatko Rozbaliř vlatko | Zóny | | | | | | | | ? 9 |
| — Upozornenia | | Spoločnosť | Počítač & | searbill P | feasivater | | | | |
| Poruchy | Daky - SMART | Openitor | Umiestnen Zoradif por | | oradit'ako Vzostupne | Hadat | 02 | | |
| História porúch Poruchy na počítačoch | | OS | Zahrnút | ručne zadané počítače | Len online počítače | | | | |
| Zobrazenia | | | | | | | | | |
| Zim | Výsledok testu poslať | na adresu * vlast | ná voľba | emaloperatora@ema | il sk | | Viac emails | ov oddefte člarkou | alebo bodkočlarkou |
| Watches (Online monitoring) Počitače | Spòsob odoslania ema z C-Monitora * | ilu s výsledkom testu CM S | ierver (s doručenim na | CM server cez HTTP) | Zmer | uit . | | | |
| Online Informácie | | bez vyrušenia použivateta ot | | | | | | ipakujte. | |
| Internet bandwidth monitor | Po 5 hod, bude zaslany | stawysledok teatu na vyššie | zadanu adresu (v e | maile bude priložený subr | or). Pre viac informacii ki | profe. www.customen | nonitor.sk. | | |
| Zmeny na počítači Folo dokumentácia | Spustif te | et Prenal | iť aktuálne bežiaci te | at Jednonizov | uvete einebeitigv è | | | | |
| – Masažerské informácie | Wethin education with a | ožiadaviek (zobrazuje sa po | eladedek #Eudalaet | e1 | | | | | |
| | Historia odosianych p | ozialewek (zoorazuje sa po | sidenych 15 dealosi | 4 | | | | | |
| Reporty Prenesené dáta na ADSL a FW | • Dátum Udalosť | Spustenie testu | PhysicalDrive Od | osielateľ | Prijemca | Prikazový riadok | | | Spusti |
| | 13. Feb Jednorázov 2013 vyžiadanie | | PD0 sma | rtlest@customermonitori.sk | emailoperatora@email.sk | smartctl.exe -a /dev/po | 0 | | Juraj |
| | 13. Feb Prerußenie 2013 sktakine 10.43.39 bežiacete I | esta | PD0 sma | rtlest@customermonitori.sk | enaloperatora@enal.ak | amartoti exe -X idevija | 10 | | Junij |
| | 13. Feb 2013 Spustenie h 10:43:24 | estu inned po prijeli na počitač | PD0 sma | rtesl@customermonitori.sk | emailoperatora@email.sk | smartctl.exe -a /dev/pr | 0 | | Juraj |
| | | | | | | | | | • |

Image: Zobrazenie histórie odoslaných požiadaviek SMART testu

Assessment of the final and ongoing reports from remote drives tests

Request for status of a disk's test is performed automatically after 6 hours since the test started. You may request an ongoing status of the test anytime by clicking on the button onetime check of status, which is in the same section as the button for the test's execution. Results and status of the



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test will be delivered to you by email, which is displayed on the following image. The results are saved in the attachments, marked by an arrow on the image, and it can be opened in the Notepad.

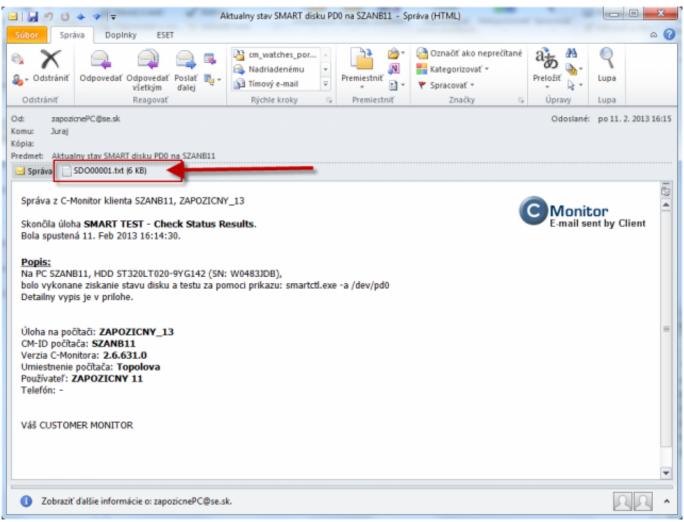


Image: Email s prílohou zobrazujúci priebežný a finálny stav vzdialeného testu disku

After opening the attachment, you'll see a report from the disk's test. Important parts that you should see are displayed on the next image.

First, check if the test ran on the required disk, by capacity or serial number. Sometimes, it might happen that name of the disk has changed after PC restart, and doesn't match the name on CM portal. Disks are only called according to PDx (Physical disk x).

In the bottom part of the report, marked as *SMART Self-test log structure revision number 1*, is the result of the test. Possible final states are described in the text below.



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| SDO00001.txt - Poznámkový blok | 8 |
|--|---|
| Súbor Úpravy Formát Zobraziť Pomocník | |
| smartct] 6.0 2012-10-10 r3643 [i686-w64-mingw32-win8(64)] (sf-6.0-1) Copyright (C) 2002-12, Bruce Allen, Christian Franke, www.smartmontools.org | * |
| <pre>=== START OF INFORMATION SECTION === Device Model: ST320LT020-9YG142 Serial Number: w0483JDB LU WWN Device Id: 5 000c50 0534284e1 Firmware Version: 00031VM1 User Capacity: 320 072 933 376 bytes [320 GB] Sector 51zes: 512 bytes Togrcal, 4096 bytes physical Rotation Rate: 5455 rpm Device is: Not in smartctl database [for details use: -P showall] ATA Version is: ATA8-ACS T13/1699-D revision 4 SATA Version is: SATA 2.6, 3.0 Gb/s (current: 3.0 Gb/s) Local Time is: Mon Feb 11 16:14:31 2013 SMART support is: Available - device has SMART capability. SMART support is: Enabled</pre> | |
| SMART Self-test log structure revision number 1 Num Test Description Status Remaining LifeTime(hours) LBA_of_first_error # 1 Extended offline Completed without error 00% 528 - # 2 Vendor (0x50) Completed without error 00% 0 - | |
| SMART Selective self-test log data structure revision number 1 SPAN MIN_LBA MAX_LBA CURRENT_TEST_STATUS 1 0 0 Not_testing 2 0 0 Not_testing 3 0 0 Not_testing 4 0 0 Not_testing 5 0 0 Not_testing selective self-test flags (0x0): After scanning selected spans, do NOT read-scan remainder of disk. If selective self-test is pending on power-up, resume after 0 minute delay. | |

Image: Časti z výsledného reportu, ktoré sú pre vás dôležité

Test has verified faultless state of the disk

The test ran without any errors, output from such test is displayed below. Text in the column *Status* gives information whether the test ran without errors - the disk is fine.

| SMART Error Log Version: No Errors Logged | 1 | | |
|--|--------|-----|------------------------------|
| SMART Self-test log stru Num <u>Test Description</u> # 1 Extended offline # 2 Vendor (0x50) | Status | 00% | LBA_of_first_error - - |

Image: Test overil bezchybný stav disku

Test has proven a defective disk

The test is completed and an error has been found, the next image nicely shows result of a test, which has proven that the disk is faulty. For such tests, we recommend to replace the disk.

| SMAR | | ucture revision number 1 | | | |
|------|------------------|--------------------------|-----------|-----------------|--------------------|
| | | Status | Remaining | LifeTime(hours) | LBA_of_first_error |
| | Extended offline | Completed: read failure | | 1172 | 7726402 |
| # 2 | Extended offline | Interrupted (host reset | 80% | 1 | - |

Image: Vyhodnotenie chybného stavu disku



Other possible states

1. Test is still running, output from this status is displayed below, there's also an information how many % remain to the test's completion.

| SMART Error Log Version: 1 No Errors Logged | | | | | | |
|--|---|------------------------------|--|--|--|--|
| | Cture revision number 1 <u>Status</u> <u>Remaining</u> LifeTime(hours) <u>Self-test routine in progress 90%</u> 526 <u>Completed without error</u> 00% 0 | LBA_of_first_error - - | | | | |

Image: Test ešte stále beží

2. The test hasn't run at all, description of possible states and reasons

a, If the output report contains the message Interrupted (host reset), it means that a user has most likely turned off the device, on which the disk was tested. We recommend to settle on, that the user keeps the device turned on for at least 6 hours since beginning of the test, to be sure that the test will have enough time to be completed.

b, In case you're sure that the device has not been turned off, this message means that the test couldn't be finished, as the disk's defection is at such a high level, it simply wasn't possible. Therefore, we recommend to immediately backup all important data and replace the disk.

| SMART Self-test log structure revision number 1 | | | | | | | |
|---|------------------|--------------------------|-----|-----------------|--------------------|--|--|
| Num | Test_Description | | | LifeTime(hours) | LBA_of_first_error | | |
| | | Interrupted (host reset) | | 454 | - | | |
| | | Interrupted (host reset) | | 362 | - | | |
| # 3 | Extended offline | Interrupted (host reset) | 90% | 1 | - | | |

Image: Testovanie sa nedokončilo

c, If the ouput report contains a message **Aboted by host** it means that the user, under which the test was carried out has logged off. As you can see on the next image, the test was not successful until the 5th time. We recommend to notify the user, that his disk is going to be tested, and he should not turn off the PC, or log out.

| SMART Self-test log structure revision number 1 | | | | | | | |
|---|------------------|-------------------------|-----------|-----------------|--------------------|--|--|
| | | Status | Remaining | LifeTime(hours) | LBA_of_first_error | | |
| # 1 | Extended offline | Aborted by host | 90% | 1872 | - | | |
| # 2 | Extended offline | Aborted by host | 90% | 1872 | - | | |
| # 3 | Extended offline | Aborted by host | 90% | 1872 | - | | |
| # 4 | Extended offline | Aborted by host | 90% | 1872 | - | | |
| # 5 | Extended offline | Completed without error | 00% | 1871 | - | | |
| | | | | | | | |

Image: Testovanie bolo viackrát zrušené ale nakoniec sa test dokončil

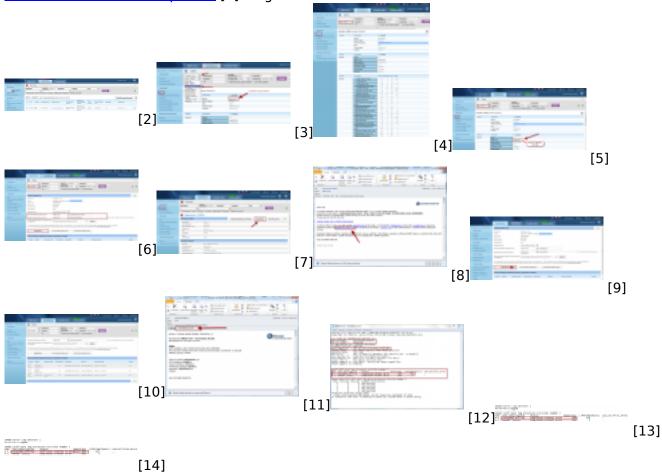
d, **Request of ongoing status didn't show the running test** - in some cases, it might occur that after requesting ongoing status of the disk, it states that there are no running tests. In this case, we recommend to wait the 6 hours since beginning of the test and just view the report after the test is completed, as it already contains information about course of the test.

```
SMART Self-test log structure revision number 1
No self-tests have been logged. [To run self-tests, use: smartct] -t]
```

Image: Pri zisťovaní priebežného stavu sa nezistila prítomnosť žiadneho bežiaceho testu



Date: 03/28/2012External Links: <u>Nastavenia a notifikácia porúch</u> [1]Images:



Links

[1] https://www.customermonitor.eu/node/605

- [2] https://www.customermonitor.eu/sites/default/files/10_2.png
- [3] https://www.customermonitor.eu/sites/default/files/1_2_0_0.png
- [4] https://www.customermonitor.eu/sites/default/files/zona%20smart.png
- [5] https://www.customermonitor.eu/sites/default/files/spustenie%20smartu%20zo%20zony.png

[6] https://www.customermonitor.eu/sites/default/files/spustenie%20smart%20testu%20zo%20zony %20disk%20smart.png

[7] https://www.customermonitor.eu/sites/default/files/spustenie%20smart%20testu%20z%20poruch y.png

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