

УДК 330.4

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Операционные системы и оболочки : методические указания к лабораторным работам: / Юго-Зап. гос. ун-т; сост. А.И. Катыхин. Курск, 2019. 143 с. Библиогр.: с. 143.

Определены основные действия и настройки при работе в системе Windows. Приведены теоретические положения, практические примеры и задания.

Методические указания предназначены для студентов, обучающихся по направлению 02.03.03 Математическое обеспечение и администрирование информационных систем.

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1	Windows,	4
2		33
3		46
4		75
5		99
6		
7	STOP	121
		132

1.
1.1

WINDOWS,
WINDOWS XP

Windows XP –

2

indows XP

Windows XP (eXPerience –)
- - SP1, SP2, SP3.

2001 .

- (SP3).

Professional.

- Windows XP

Windows XP + SP3.

0.5 – 1 . ()
"Microsoft Windows XP",
(. 1).

-

User.

Windows

().

Whistler

Start:

My Computer –

My Documents –

My Network Places –

Control Panel –

() Log Off –

() Turn Off Computer –



.3.

Start

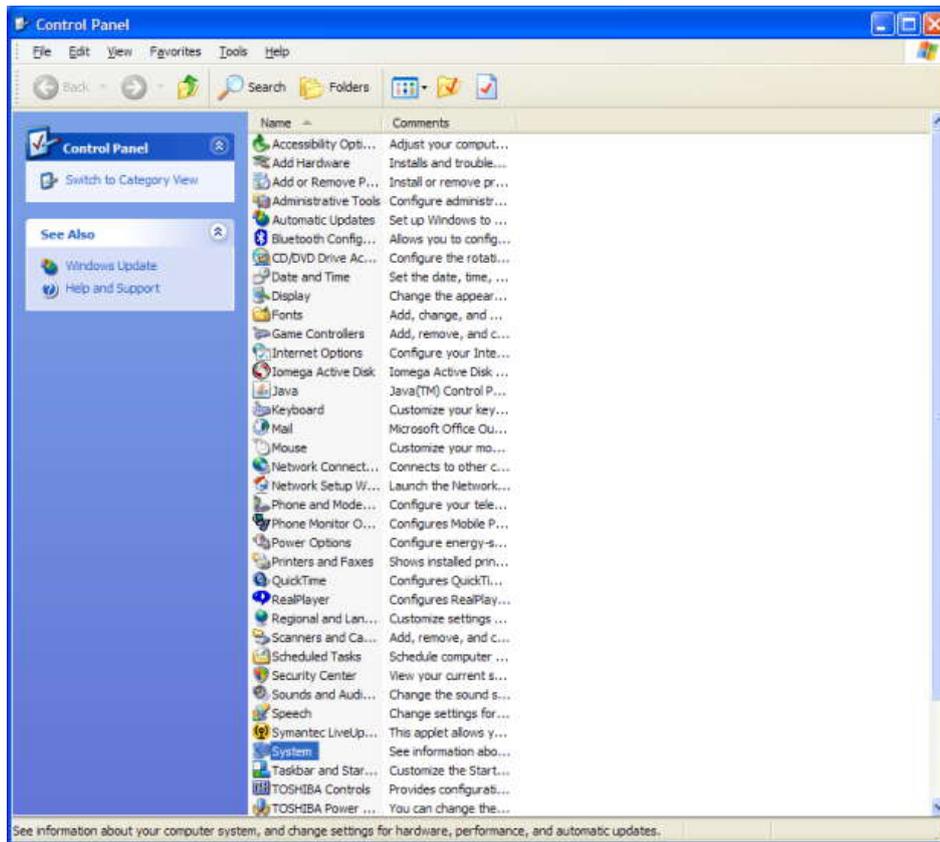
(.4).

Add or Remove Programs

(" ")

My Computer,

(.4):



. 4.

My Computer (. 4)

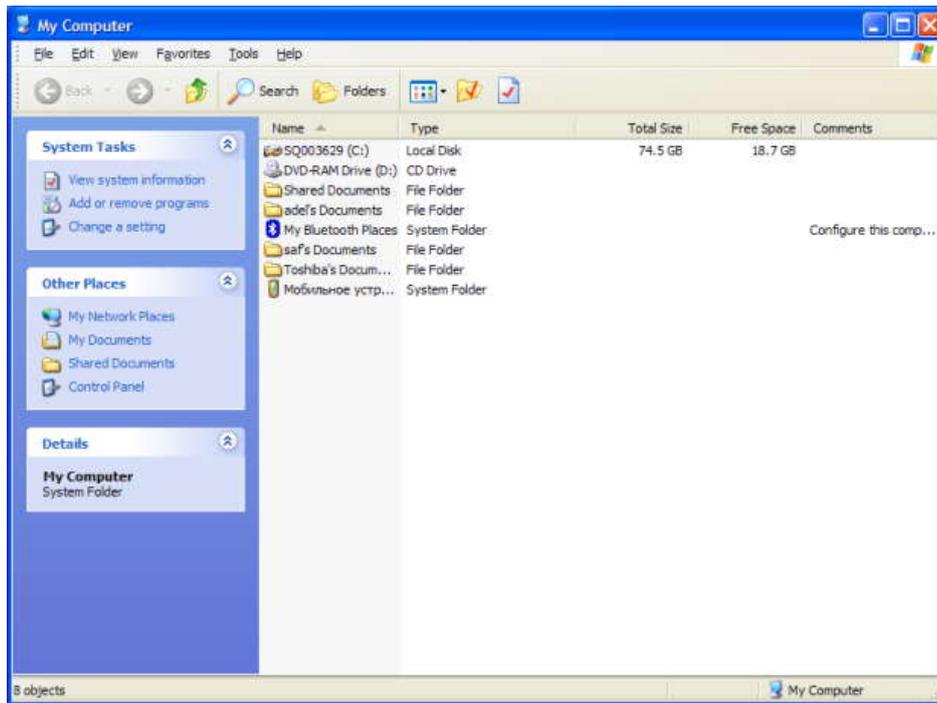
Places).

(, My Network

()

: My Computer / () / Properties.

(.5):



.5. My Computer

, *Computer Name*,

,
Hardware/Device Manager,

(folders) –

Windows Explorer.

Windows Explorer,

. 4

C:,

(Up)

(notepad, WordPad, MS *Word*),

.pdf –

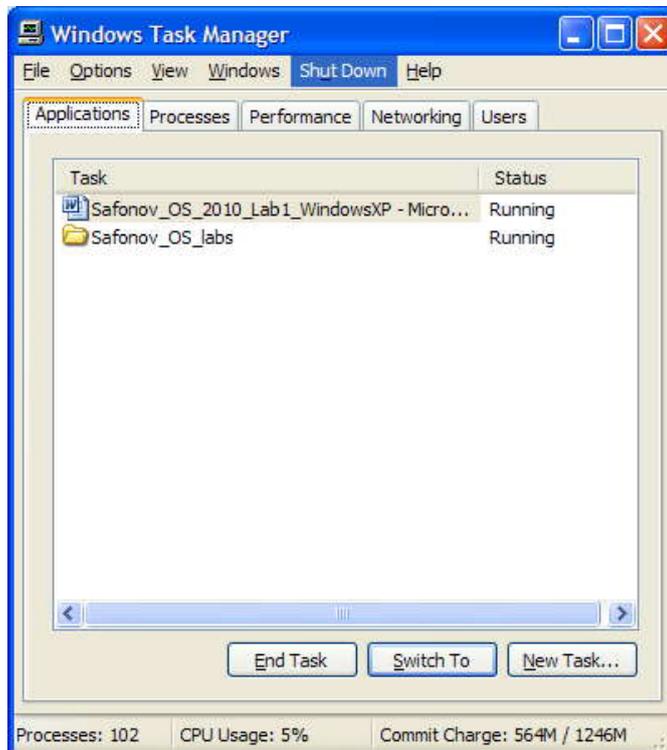
Adobe

Acrobat,

Windows Explorer – ;
 Start – Run,
 (.exe); , notepad –
 (ASCII) ;
 (Command Prompt): Start / All Programs /
 Accessories / Command Prompt, Start / Run / cmd;
 Enter.

(PATH).
 , Start / My Computer/ (
) Properties /Advanced/Environment Variables.

Windows Task
 Manager, 1-2
 Ctrl /Alt/ Del. (. 6):



. 6. Windows Task Manager

Applications
 Task", , - , "End
 Processes

Performance

Windows Task Manager.

TCP/IP-

IP-

(RJ45) *(twisted pair (hub),*

(switch). *()*

() *()* *Start / Connect To /*

IP-

Show All Connections.

(Network Connections)

(Local Area Connection) ,

Properties. Local Area Connection Properties,

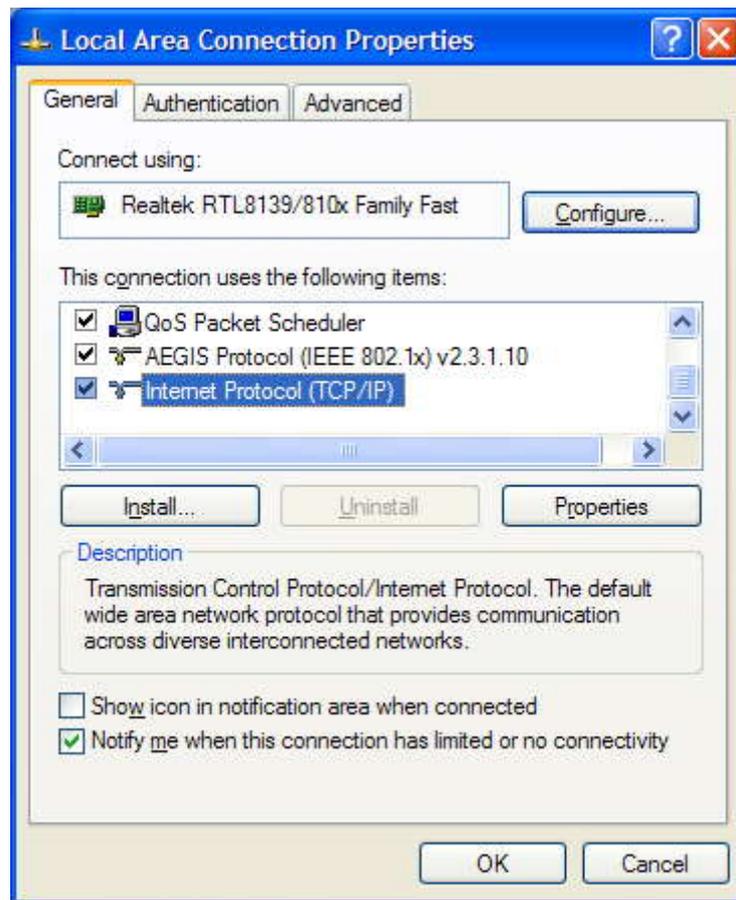
Internet Protocol (TCP/IP) (. 7):



. 7.

Properties (. . TCP/IP –)

. 8 :



. 8.

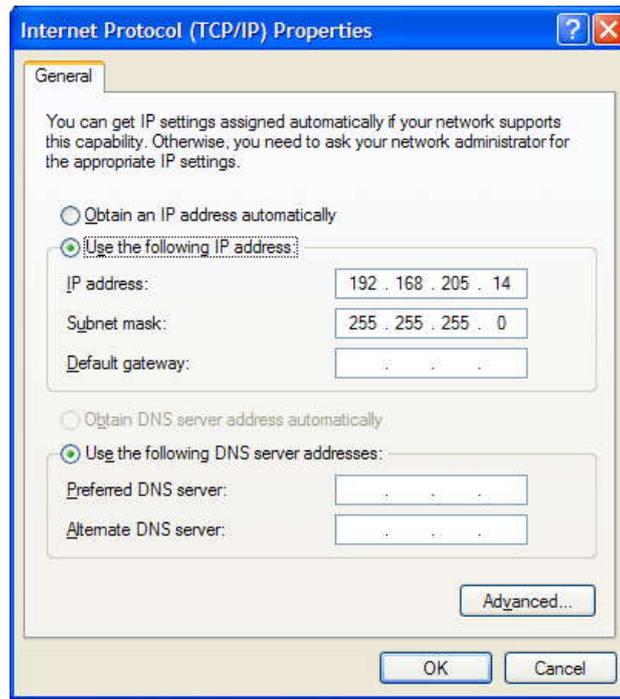
, "Obtain IP address automatically".
 , "Use the following IP address" IP-
 , . 8 . OK.

Windows XP –
 Windows

Remote Desktop Connection (

).
 aphrodite.

Start / All Programs / Accessories / Communications
 / Remote Desktop Connection. (.9):



.9. TCP/IP-

Connect.

()

Computer,

My

.),

Start / Log Off / Log Off.

(. 1).

Start / Turn Off Computer / Turn Off

).

(Start

Windows XP

Windows XP.

1.2

WINDOWS 7

Windows 7 –

Windows 7

2

indows 7

Windows 7 –

Microsoft,

2009

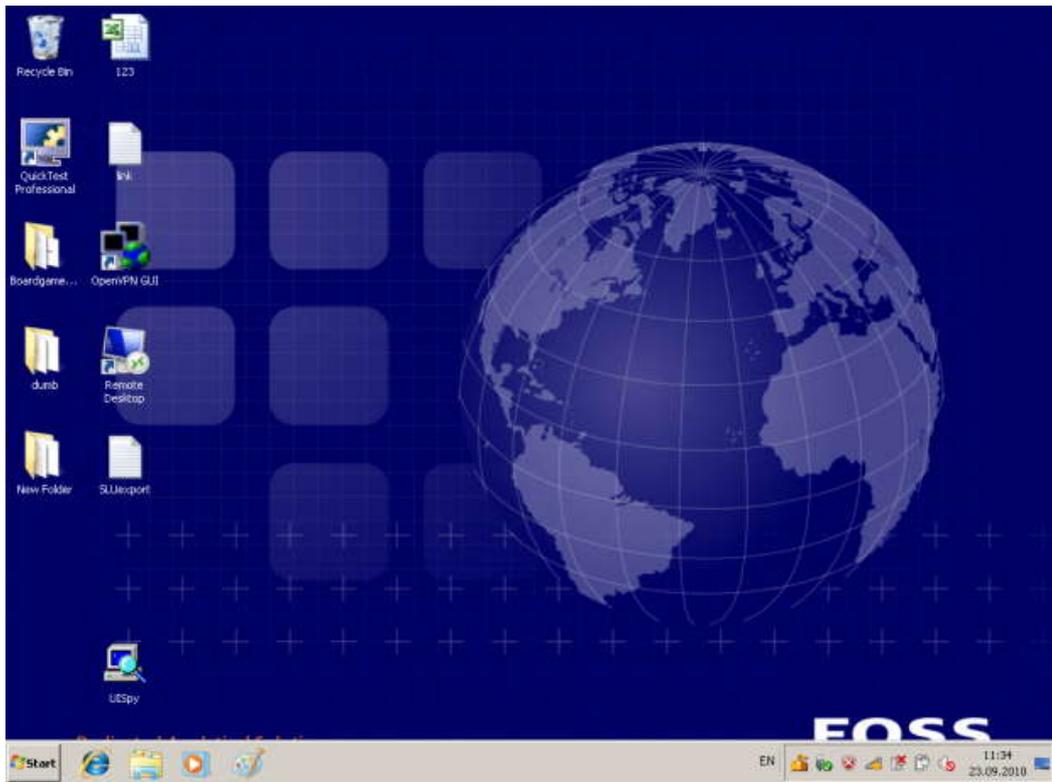
Windows

Windows 7.

User.

(desktop)

(..1):

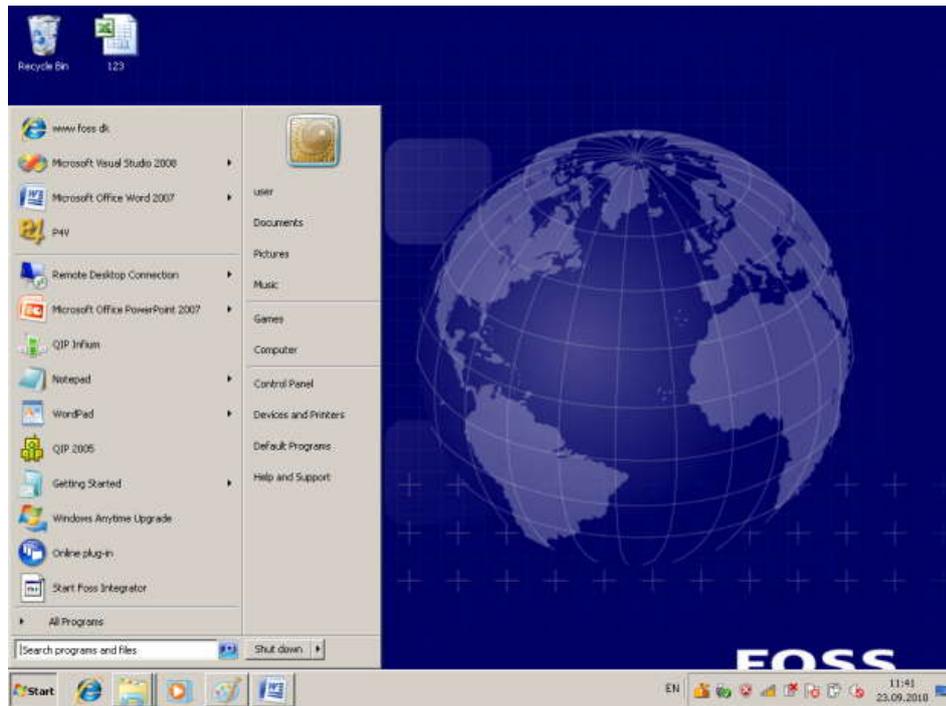


. 1. Windows 7

, ,
 (taskbar) – Start, (, Internet Explorer)
 .
 . (.2).

2

Properties / Desktop,



. 2.

Start

Start:

Computer –

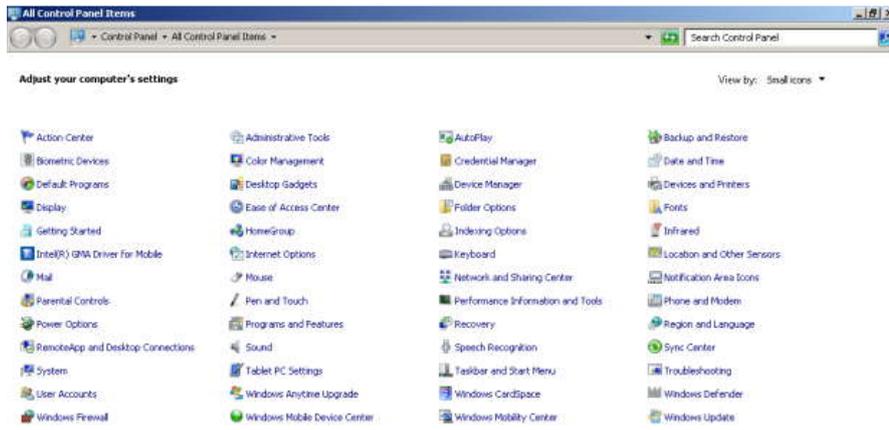
Documents –

Control Panel –

Search programs and files –

() Shut down –

(. 3)



1.



.3.

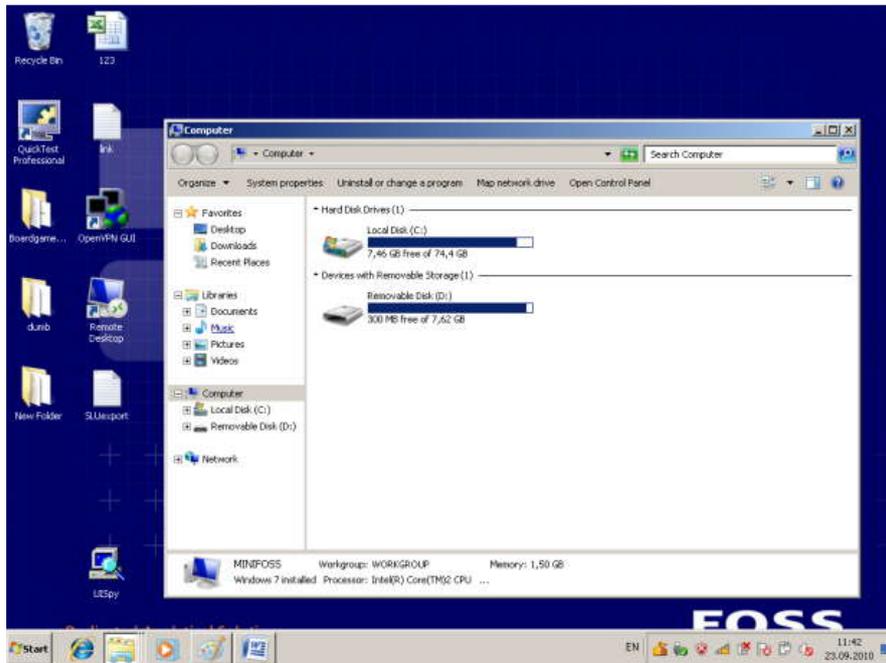
(. 3).

Programs and Features

(" ")

Computer,

(. 4):



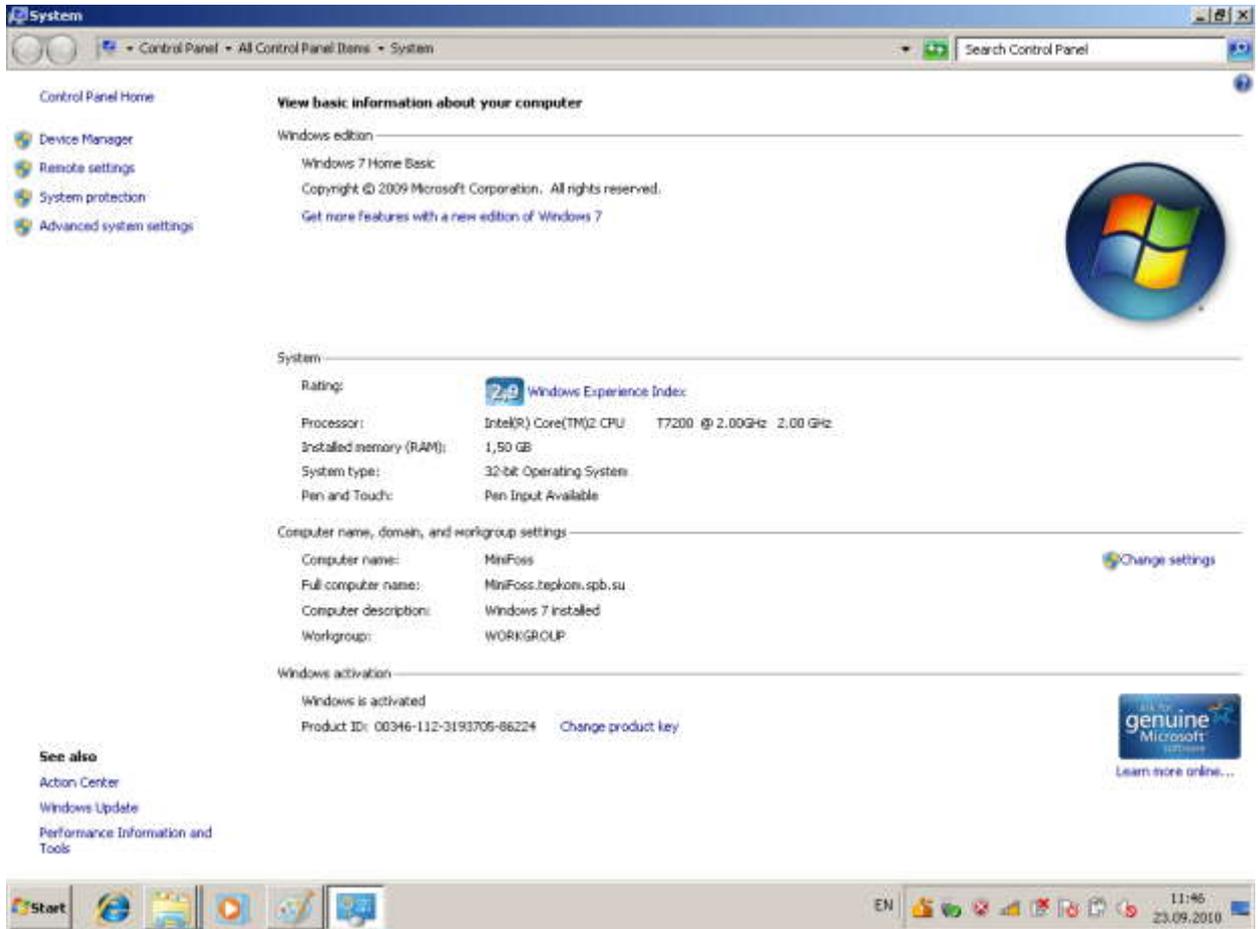
.4. Computer

Computer (. 4)

(, Network).

: Computer / () / Properties.

(. 5):



. 5.

, , Device Manager, ,

(folders) –

Windows Explorer.

4

Windows Explorer,

C:;

-> .

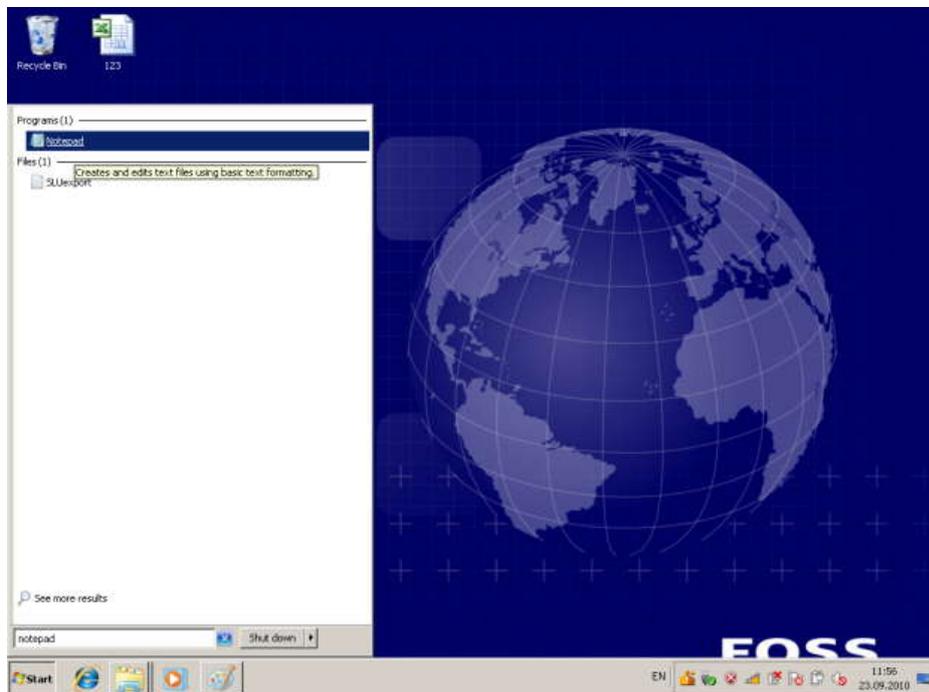
<-

Acrobat, (notepad, WordPad, MS Word .), .pdf – Adobe

Windows Explorer – Start – Search programs and files. –

Windows 7. () ,

notepad.
(. 6):

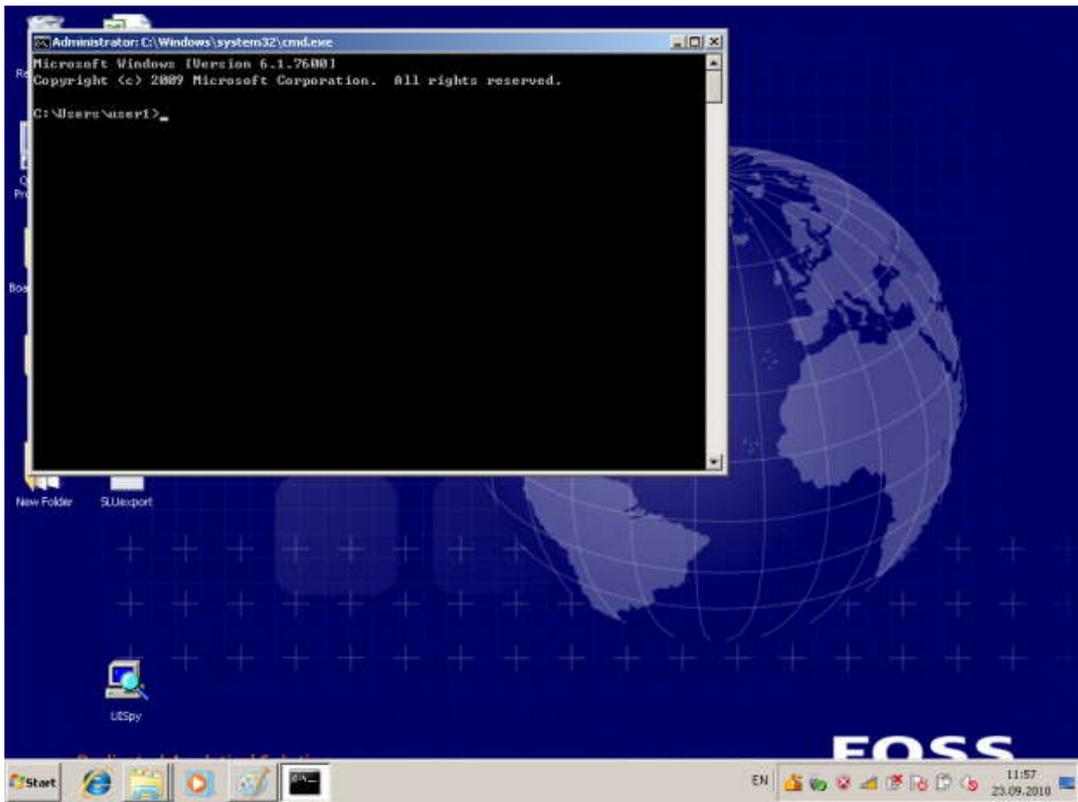


. 6.

Windows 7

(Command Prompt): Start /

Search Programs and Files / cmd.
(. 7):



. 7.

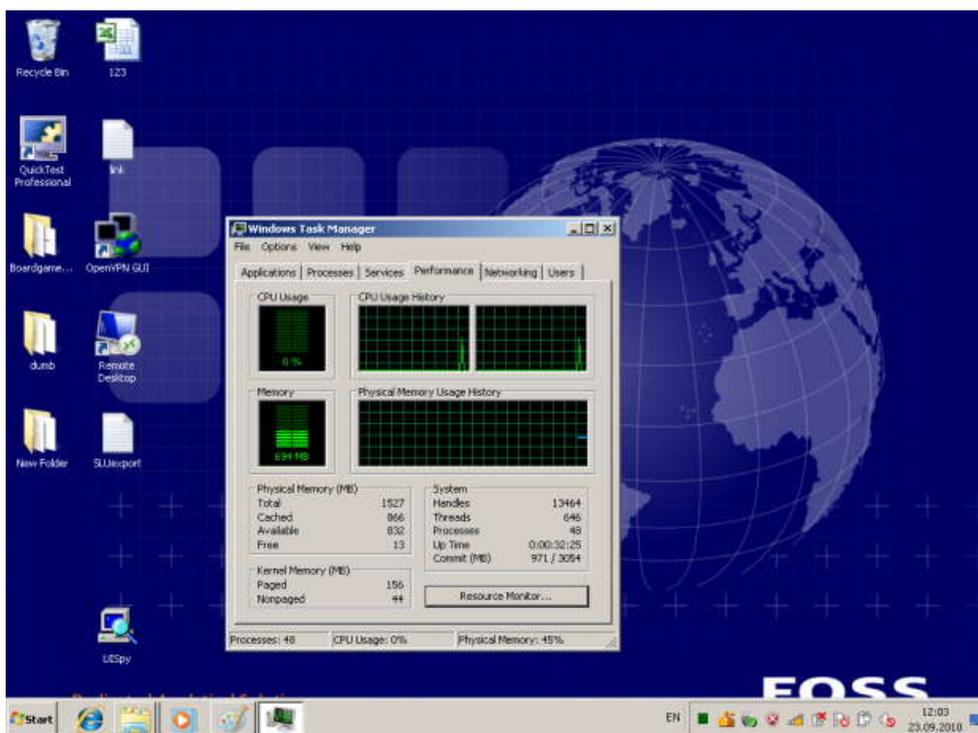
(, notepad)

Enter.

Manager,

Windows Task
Ctrl / Alt / Del.

(. 8):



8. Windows Task Manager (Performance)

Applications

"End Task",
Processes

Performance (8)

Windows Task Manager.

TCP/IP -

IP-

(RJ45)

twisted pair (hub)

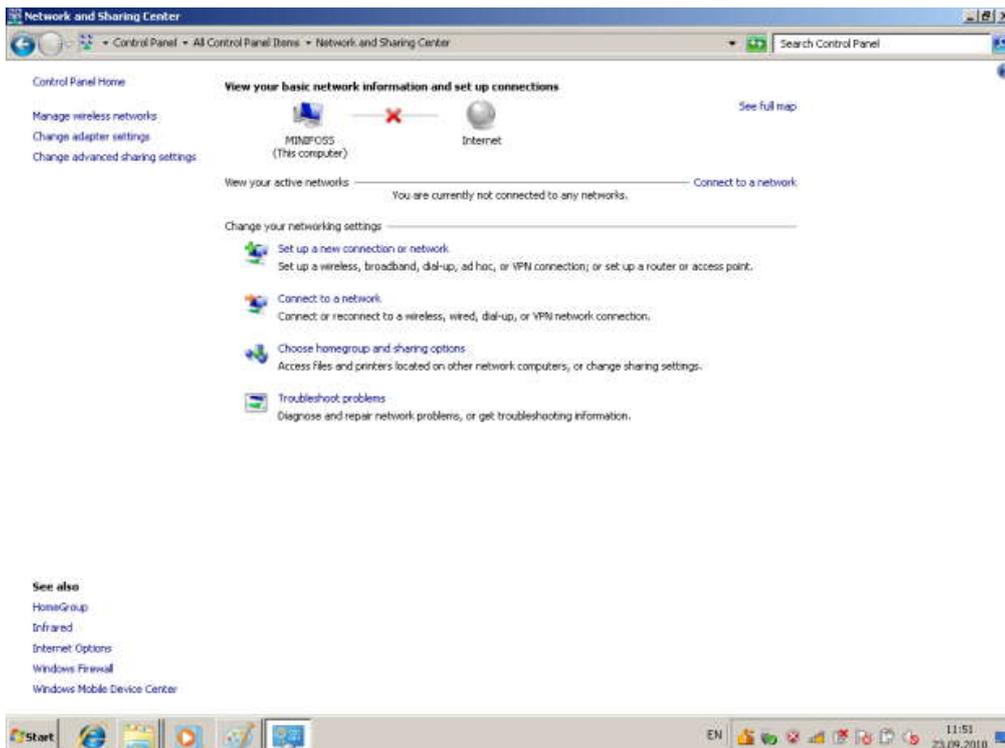
(switch).

()

()

IP-

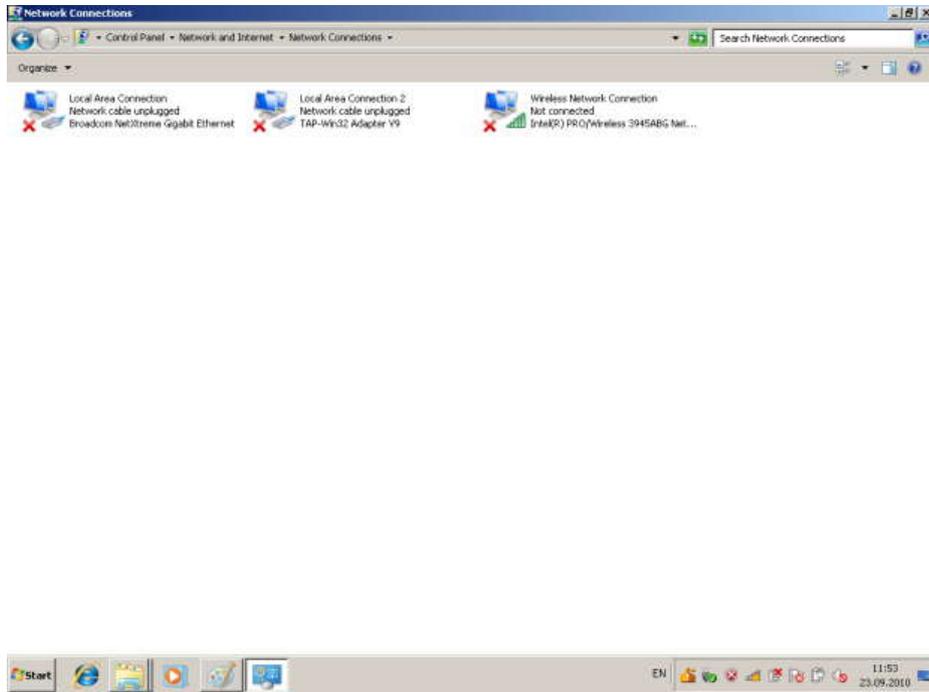
Start / Control Panel / Network and Sharing Center (9).



9. Network and Sharing Center

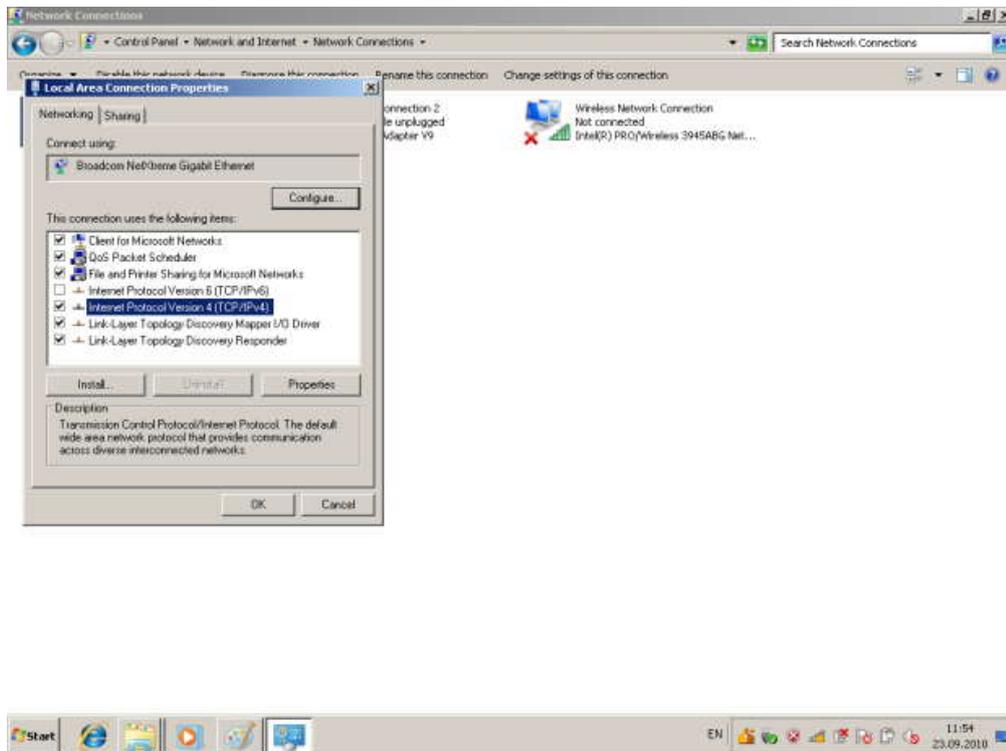
). Change adapter settings (

(. 10):



. 10. Network Connections

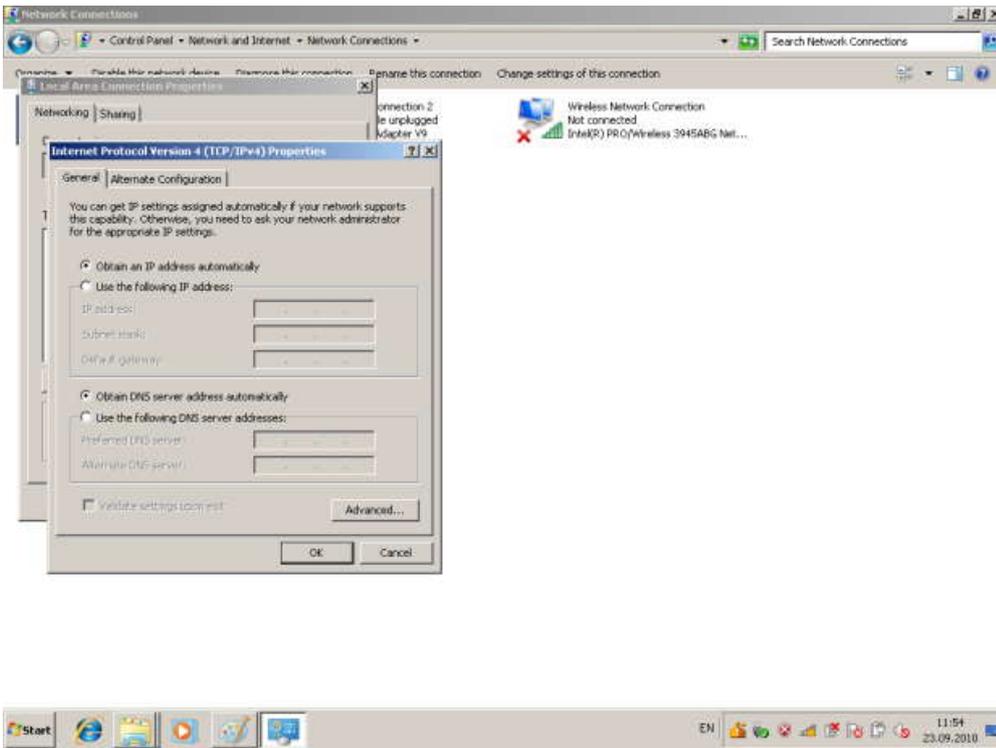
Local Area Connection –
Properties (. 11):



. 11.

TCP/IPv4

Properties (. 12):



. 12.

IP-

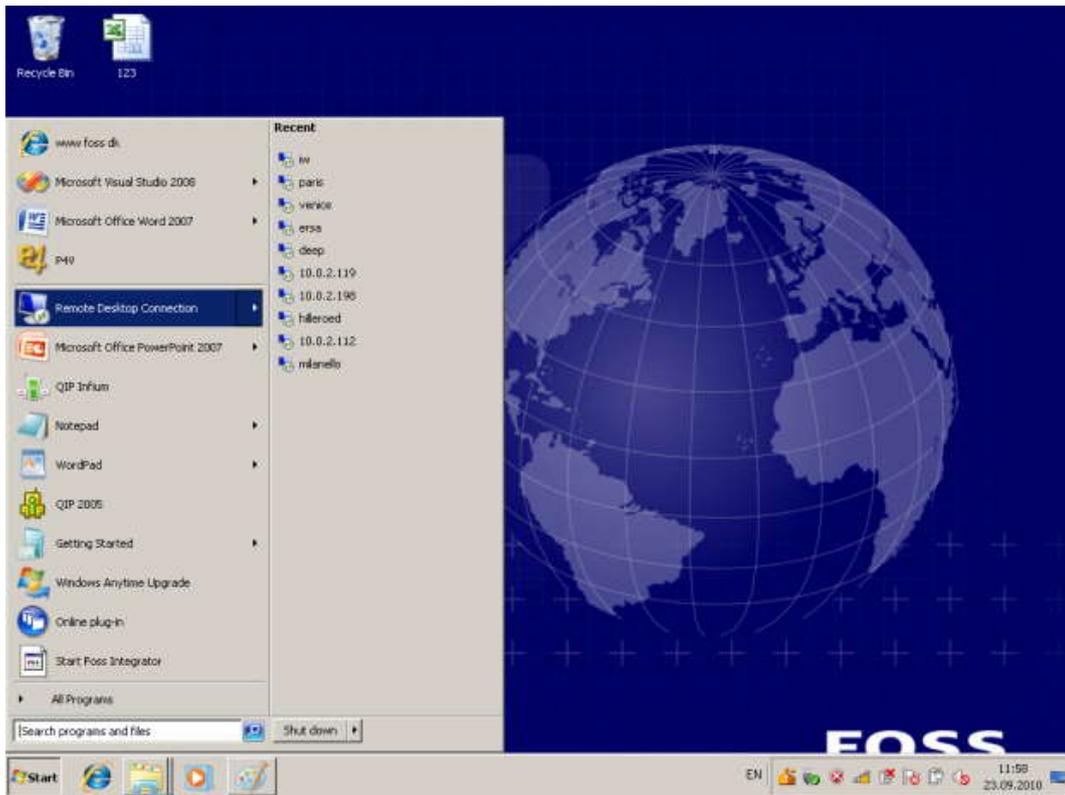
, "Obtain IP address automatically".
 "Use the following IP address" IP-
 , . 9 . OK.
 , .

Windows 7 –
 Windows

Remote Desktop Connection (

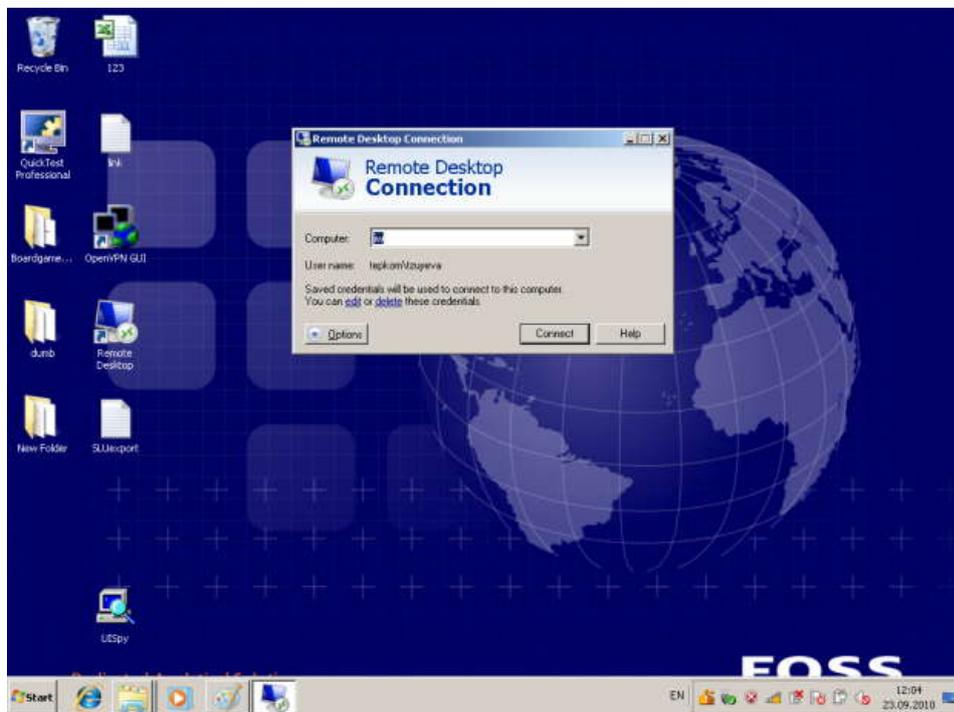
), dit.

Start / Remote Desktop Connection.
 (. 13):



. 13.

(. 14):



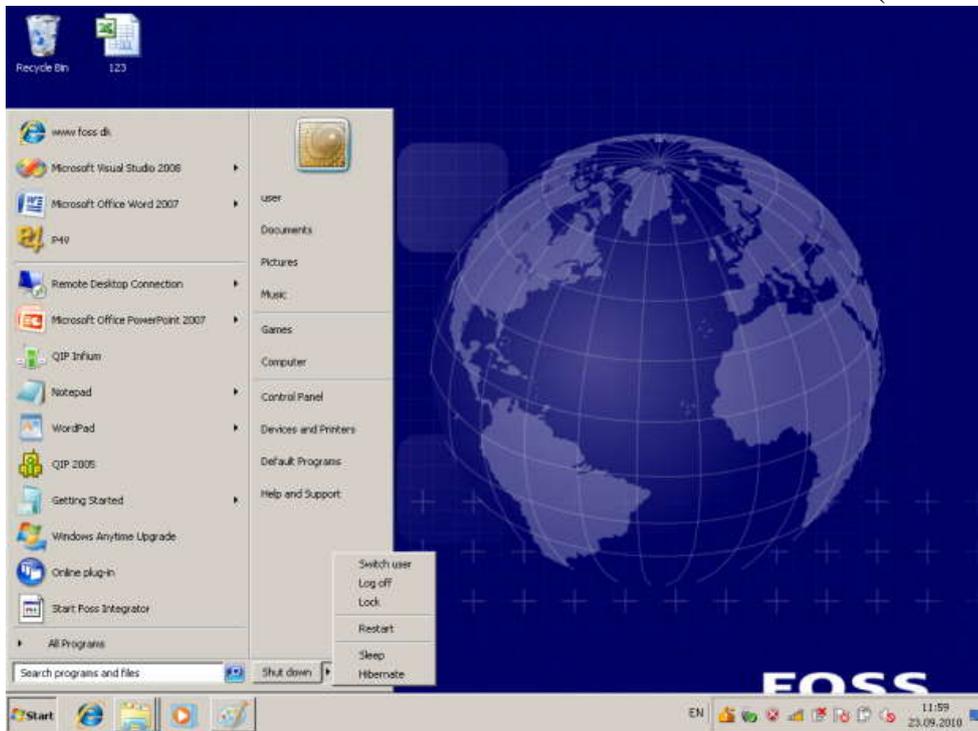
. 14.

Connect,

()

Computer,

Start / Shut down.
(. 15):



. 15.

().

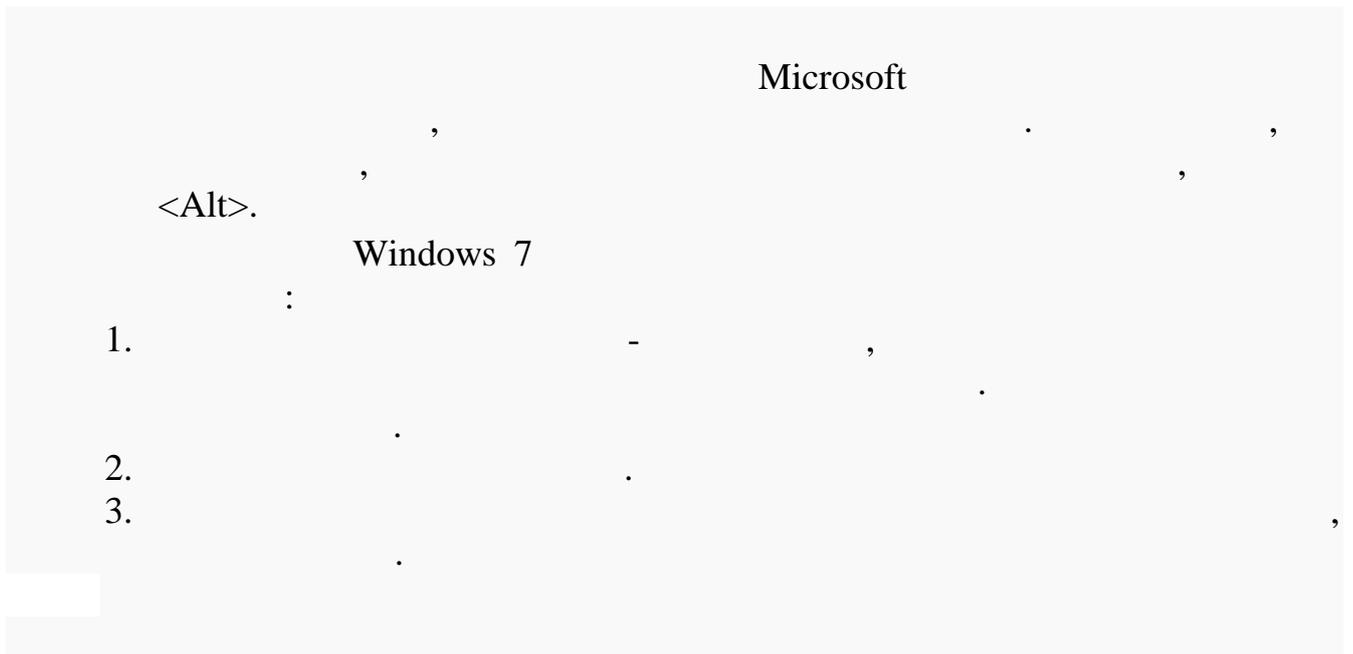
Windows 7.

1.3

Windows

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2



Windows

, Windows 7

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1.

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2.

3.

4.

Windows

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1.

2.

3.

- 1.
- 2.
- 3.
- 4.

Windows

Windows,

- 5.
- 6.

Windows

Windows

(,);

<Enter>

Windows

Windows

Windows

Windows

Windows

Windows

Windows 7

Windows,

Windows 7

Windows 7

NTFS

Windows

Windows 7

1.

2.

3.

4.

5.

6.

7.

8.

9.

. Windows

10.

11.

12.

13.

14.

15.

16.

Windows

(Advanced Query Syntax – AQS).

:

« »

« » - ,

Windows.

« »

()

	:	
> (<)	()	> 1.1./2016
>= (<=)	()	> 10000
..		1.1.2015..1.1.2016
*		*
?		?

()

	, >1.1.2015 > 100000
	, jpeg

Windows 7

(Natural language search),

1.

2.

3.

jpeg

jpeg

PrintScreen

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

, . , .

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/

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.

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5 . (

).
5

.

Windows.

« »
« »

2

, printscreen .

Windows 7

, . ,

.txt Windows 7 , .bmp ,
“ ”, ”. , .txt Windows 7

, Windows 7 ,

, . Microsoft 7

(

```

    <F2>), Windows
    , ( . . . ,
)
,
    ,
    Windows 7,
    .
    1.
    , Windows 7 ,
    ,
    ( , . , regedit,
    <Enter>) HKEY_CLASSES_ROOT.
    ,
    HKEY_CLASSES_ROOT
    , ( .bmp .txt).
    Windows 7
    400,
    ,
    HKEY_CLASSES_ROOT
    ,
    Windows 7
    ,
    .txt. ( )
    txtfile ,
HKEY_CLASSES_ROOT.
    , (txtfile ),
    :
    ( ) (
    Text Document).
    . DefaultIcon ,
    . shell ,
    . Open Print . Open
    ,
    Open Text Document
    :
    % SystemRoot %\system32\NOTE PAD.EXE
    %1
    ,

```

2.

Windows 7

Preview (),

Windows”.

Edit ().

1.

2.

3.

4.

Shell.

(),

5.

Edit,

Edit.

6.

Windows

Folder

Explore.

3.

Windows 7

Edit ()

in HTML Editor (

HTML), —

, Open

HTML.

HTML-

: Edit (

) Open in HTML Editor (

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Shell.

<Enter>.

<Enter>.

"C:\Program Files\My Program\program.exe"

%1:

"C:\Program Files\My Program\program.exe" "%1"

%1

(. . . ,) ,

Print,

"C:\Program Files\My Program\program.exe" /

(,) ,

&.

& ,

Open in

&HTML Editor

< >.

8.

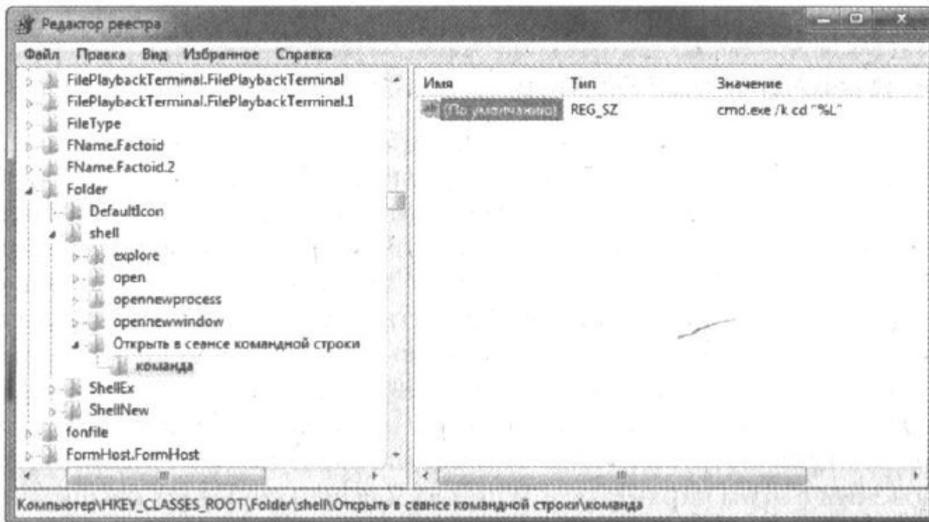
4.

Windows

%USERPROFILE%, -

Windows.

- 1.
2. Folder.
3. shell.
4. <Enter>.
5. <Enter>.
6. (),
7. : cmd.exe /k cd "%L"
cmd.exe /k Windows 7 (cd), -
%L
- 8.



5. Windows .lnk, Inkfile.

. Ink

Windows 7

. Windows 7

Inkfile (

NeverShowExt

Windows 7

- 1.
- 2.
- 3.
- 4.

NeverShowExt

<Enter>.

6

Windows 7

WordPad, HTML-
Internet Explorer,

Windows 7

Windows

1.

2.

3.

7

Windows 7

Windows Media

30

1.

2.

3.

4.

a.

b.

c.

8

.lst

Text Document
Windows 7

()

1.

2.

HKEY_CLASSES_ROOT.

3.

4.

(, .lst), <Enter>

5.

()

6.

Text

Document (.txt), txtfile.

7.

9

“ ”

Windows 7

Windows ()

WordPad,

HKEY_CLASSES_ROOT.

()

(

),

ShellNew.

.bmp,
ShellNew

Windows 7

ShellNew,

ShellNew
Windows 7

NullFile

(" "),

Windows 7

NullFile: (.txt),

(.bmp) (.Ink).

Directory

Windows 7

Briefcase\ShellNew).

Command

Windows 7

Command

Data

RTF

ZIP.

10

“ ”

Windows 7

1.

ShellNew

HKEY_CLASSES_ROOT.

2.

(NullFile, Directory, Command Data).

3.

NullFile

11

“ ”

Windows 7 (

Microsoft Office)

“ ”

ShellNew.

ShellNew

(, ShellNewOld).

Windows 7

“

” **Windows 7**

12

Windows 7

1.

HKEY_CLASSES_ROOT.

2.

Default

3.

HKEY_CLASSES_ROOT.

4.

shell\open\command,

()

5.

Windows

7

?
WordPad?

Windows

1.

Windows.

2.

3.

(, ,

).

4.

, .

5.

,

Windows 7 “

Windows 7

13

”

”

Windows 7

Windows 7

HKEY_CLASSES_ROOT\

.ext (

.ext

).

OpenWith,

Windows 7

HKEY_CLASSES_ROOT\.ext,

PerceivedType.

BMP, GIF

JPEG,

—

TXT,

XML.

Windows 7

:

HKEY_CLASSES_ROOT\SystemFileAssociations\PerceivedType\OpenWithList

t

PerceivedType

PerceivedType.

OpenWithList,

Windows 7

HKEY_CLASSES_ROOT\Applications,

\shell\open\ command

()

Windows 7

HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\FileExtsN.ext\OpenWithList

ext

MRUList

14

" "

c

(ext):

HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\FileExts\ext\OpenWithList

MRUList.

b, MRUList

b.

15

“ ”

HKEY_CLASSES_ROOT/Applications

notepad.exe

Windows 7

NoOpenWith.

(.)

NoOpenWith.

NoOpenWith

notepad.exe

HTML.

16

“ ”

HKEY_CLASSES_ROOT/

lications

(
\shell\open\command

),
()

3

2

printscreen

Windows 7

Windows

Windows 2000.

Windows 7

Windows 7

Windows 7
Windows 7

Windows

« »

Windows,

Windows,

2000

Linux

FireWire

USB,

(Disk Management).

(Disk Management)

1.

(Computer)

(Start).

2.

(Management),

(Computer Management).

3.

(Computer Management)

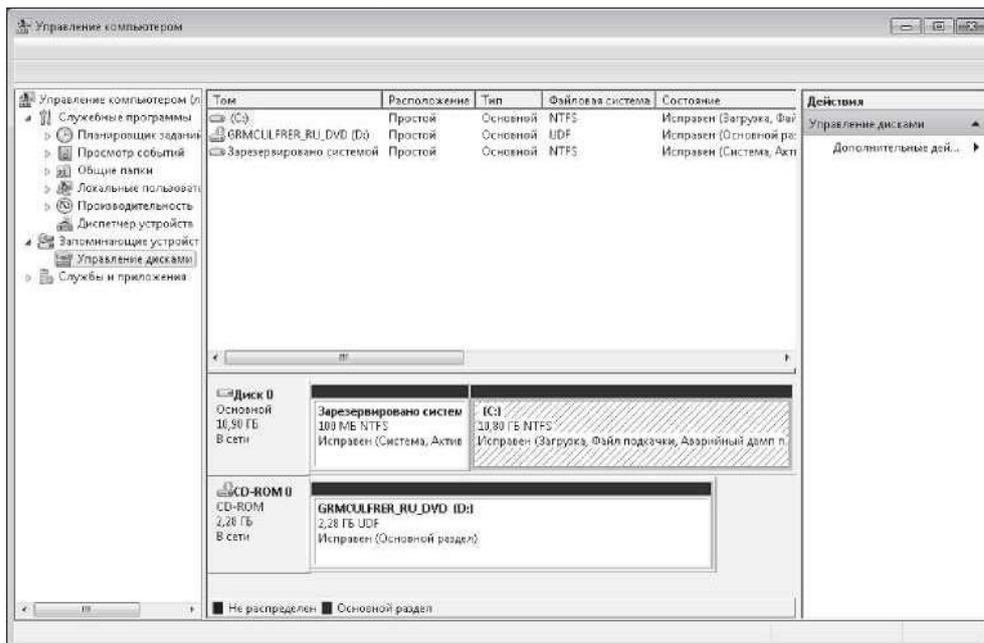
(Disk Management)

(Storage).

1,

(Disk Management)

(Disk Management)



1.

CD-ROM DVD-ROM,
 DVD.
 (Volume).
 C: (C:).
 (Layout).
 (Type).
 (File System).
 FAT NTFS.
 (Status).
 (Healthy (Active, Primary Partition)).
 (Capacity).
 (Free Space).
 % (% Free).
 (Fault Tolerance).
 (Overhead).
 ()

Диск 0 Основной 10,90 ГБ В сети	Зарезервировано системой 100 МБ NTFS Исправен (Система, Активен, Основн	(C:) 10,80 ГБ NTFS Исправен (Загрузка, Файл подкачки, Аварийный дамп памяти, Основной разде
--	---	---

. 2.

(Disk Management)

. 3,

* (Disk). 0
CD-ROM 1.

* (Type).
DVD.

* (Capacity).

* (Unallocated Space).
().

* (Status).
(Online), () (Online (Errors)), (No Media),
(Offline).

* (Device Type).

(Integrated Drive Electronics, IDE),
(Small Computer System Interface,

SCSI), USB FireWire (1394).

* (Partition Style).

. Windows 7

(Master Boot Record, MBR), GUID
(GUID Partition Table, GPT).

Диск	Тип	Емкость	Свободное место	Состояние	Тип устройства	Стиль раздела
 Диск 0	Основной	10,90 ГБ	1 МБ	В сети	IDE	MBR
 CD-ROM 0	CD-ROM	2,28 ГБ	0 МБ	В сети	IDE	MBR

. 3.

* (Active).

ReadyBoost.

* (System).

* (Boot).

* (Page File).

* (Crash Dump).

* (At Risk).

« () (Online (Errors)). »

* (Primary Partition).

(Disk Management).

(Rescan
Disks) (Action). (Disk Management)
(Initialize Disk)

1.

(Select Disks).

2. (Next).

2

MBR.
GPT,

3. OK.

Windows 7

* 1
(Disk Management)

*

*

*

*

1. (Disk Management)

(Convert to Dynamic Disk).

2. (Convert to Dynamic Disk), 4,

3. OK,

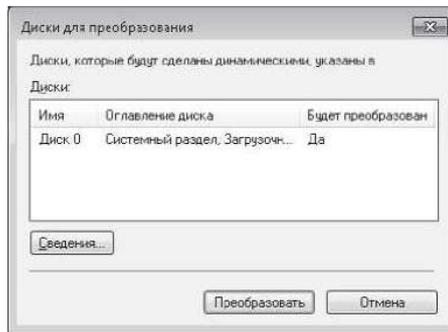
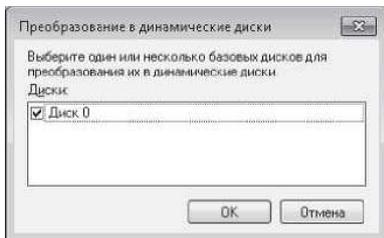
4. OK.

5. 5,
(Disks to Convert)

(Will Convert) (Yes),

6. (Details),

OK,
(Convert Details).



. 13.4.

. 13.5.

7. (Convert)

(Yes),

8. (Disk Management)

(Yes),

9. (Disk Management)

1. (Windows Explorer),

2. (Disk Management)

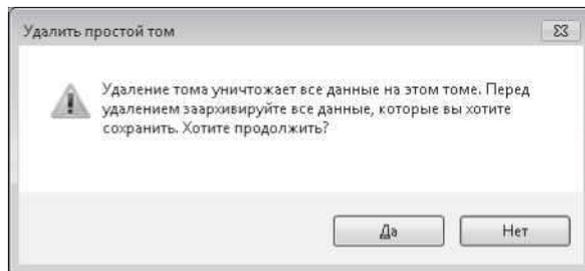
(Delete Volume).

(Disk Management)

(. 6).

(Yes).

3. Windows



. 13.6.

(Disk Management)

(Disk Management)

1. (Disk Management),

(New Simple Volume).

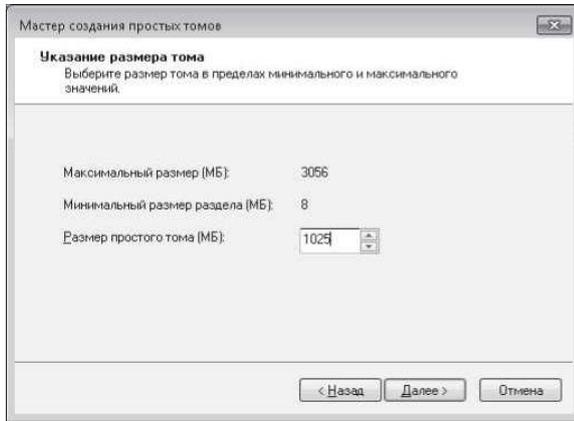
(New Simple Volume Wizard),

(Next).

2. (Specify Volume Size),

.7,

(Next).

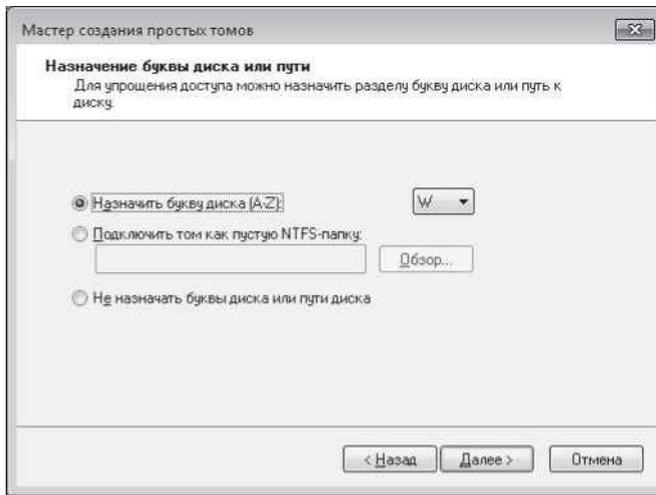


. 7.

3.

Path), . 8,
(A-Z) (Assign the following drive letter),
(Next).

(Assign Drive Letter or



. 8.

D — *B*, *E* *Z*, *A*
C,
- /DVD.
E, *F* - /DVD

4.

(Format Partition),

. 9,

FAT, FAT32

NTFS.

NTFS.

FAT

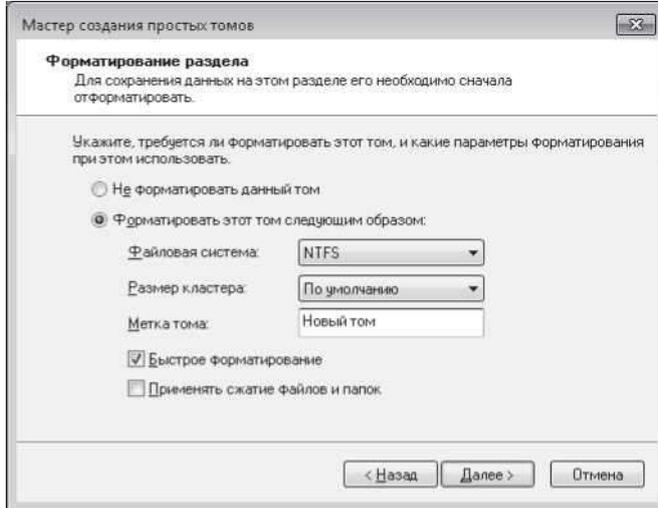
FAT32,

NTFS.

NTFS

FAT

FAT32



. 9.

5.

(Allocation unit size)

(Default).

Windows 7

Windows

512

4096

512-

— 512 1024

(Volume label)

« ».

6.

format),

Windows 7

(Perform a quick

(Disk Management)

7. (Enable file and folder compression)

NTFS.

8. 10.

(Next),
(Disk Management)

(Finish).

(Disk Management),

750

750

750

1500

64

1,

2,

3

Windows 7

(New Mirror Volume).
(Finish),

(Yes), (Disk Management) (No),

(Disk Management),

1. (Disk Management),

(New Mirrored Volume),
(New Spanned Volume)
(New Striped Volume).
(Next).

2. (Select Disks)

(Add), (Selected).

3. (Remove).
(Maximum available space)

(Total volume size)

4. («Select the amount of space in MB»).

(Next).

5. « 4 10 ».

1. (Disk Management),

2. (Add Mirror).

(Disks) (Add Mirror).

(Add Mirror).

3.

4. Windows 7

(Disk Management)

(Resynching)

(Healthy),

(Disk Management)

NTFS.

1.

(Disk

Management),

(Shrink Volume).

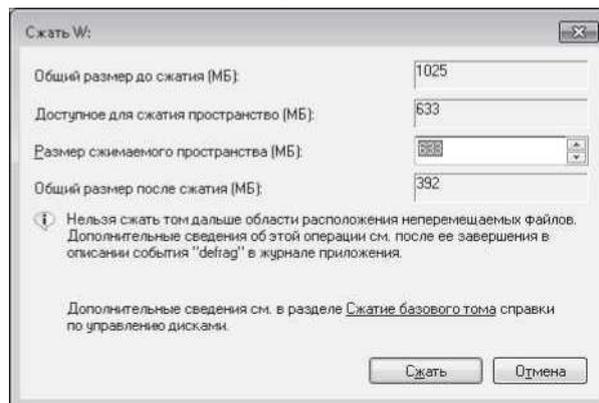
(Disk Management)
(Shrink),

. 10.

2.

- () (Total size before shrink in MB).

- () (Size of available shrink space in MB).



. 13.

- () (Enter the amount of space to shrink in MB).

- () (Total size after shrink in MB).

3.

(Shrink),

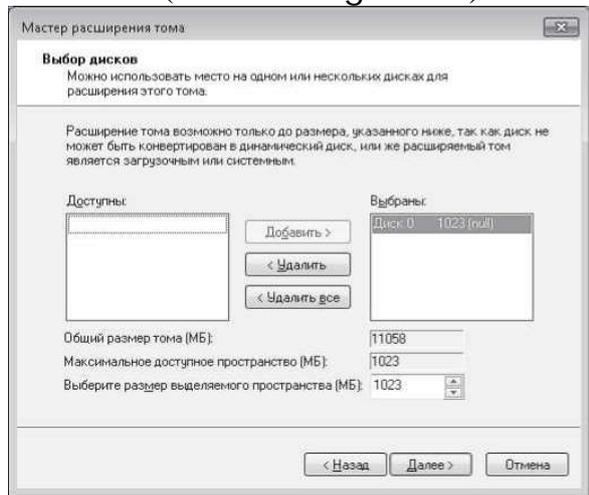
1.

(Disk Management),

(Extend Volume).

2. (Extend Volume Wizard), (Next).
3. (Select Disks), . 11, (Selected),
4. (Available)
5. (Next), (Finish).

(Disk Management)



. 11.

Windows 7

(VHD).

1. (Disk Management) (Action) (Create VHD).
2. (Create and Attach Virtual Hard Disk) (Browse) c:\1.vhd, .vhd, (Save).
3. (Virtual hard disk size)

4.

5.

OK,

6.

(Disk Management)

7.

(Initialize Disk).

(Initialize Disk)

2

MBR.

GPT,

OK.

8.

(Offline)

(Online)

(Detach Virtual Hard Disk),

OK

(Detach Virtual

Hard Disk).

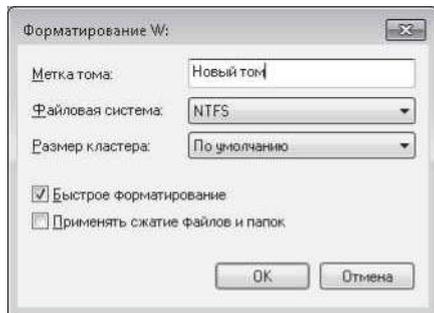
1.

Management),

(Disk

(Format).
(Format),

. 12.



. 12.

2.

(Volume label)

3.

FAT, FAT32 NTFS.

4.

(Allocation unit size)

unit size)

(Allocation

(Default).

Windows 7

5.

format),

(Perform a quick

Windows 7

(Disk Management)

6.

compression)

(Enable file and folder

NTFS.

7.

OK,

(Disk Management)

OK,

(Cancel)

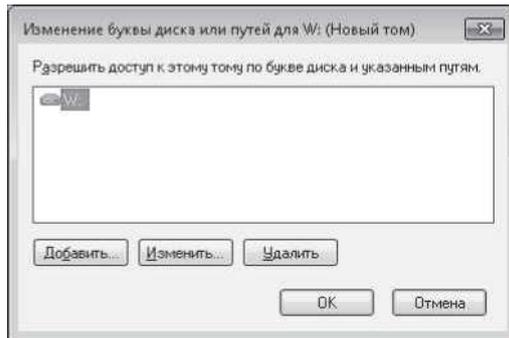
1.
(Disk Management),

(Change Drive Letter and Path).

... (Change Drive Letter and Paths

for..),

. 13.



. 13.

2.

(Change).

(Change Drive Letter or Path)

3.
(Yes),

OK,

Explorer)

Windows.

(Windows

«

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«

».

1.

(Disk Management),

(Properties).

2.

(General)

(Properties)

3. OK.

NTFS

Windows 7

Convert,
FAT

FAT32

NTFS. Convert

FAT32,

NTFS FAT

NTFS

FAT FAT32.

Windows 7

(Yes)

25 %

Convert

500

5

1. Programs Accessories).

(Start All

2. (Command Prompt),
(Run As Administrator).

3. : convert volume /FS:NTFS

volume —

(:).

H NTFS,

convert H: /FS:NTFS

4.

1. (Disk Management),
(Delete Volume).
2. (Yes).

(Disk Management),

() (Online (Errors)) (Failed),
(Unreadable).

Windows

(Reactivate Disk).

(Action)

(Rescan Disks).

(Failed) (Unreadable)
(Healthy),

() (Online (Errors))
(Online),

() (Online (Errors)) (Unreadable). (Failed),

(Rescan Disks). (Missing) (Reactivate Disk). (Action) (Offline),

(, , . .)

(Disk Management),

1.

2.

(Break Mirror Volume).

3.

(Yes).

(Yes),
4. Windows

(Disk Management)

(Unallocated).

1.

(Remove Mirror).

(Remove Mirror).

2.

3.

Windows

(Failed Redundancy).

—

(Missing)

(Offline),

(Disk Management),

(Reactivate Volume).

(Regenerating),

—

(Healthy).

(Healthy),

(Resynchronize Mirror).

— () (Online (Errors)),

(Reactivate Volume).
(Regenerating),

(Healthy).

— (Healthy),

(Resynchronize Mirror).

— (Unreadable),

(Rescan Disks)

(Action).

Mirror).

(Remove

(Add Mirror).

— MBR, GPT.

Windows 7

BCD (BCD Editor, Bcdedit.exe).

(Boot Mirror — Secondary Plex).

1.

0.

(Add Mirror).

(Add Mirror).

(Add Mirror).

(Disks)

2.

(Add Mirror). Windows 7

(Disk

Management)

(Resynching)

3.

(Disk Management),

4.

(Add Mirror),

5.

NTFS

Windows 7

Windows 7
NTFS.

(Windows Explorer)

NTFS, Windows 7

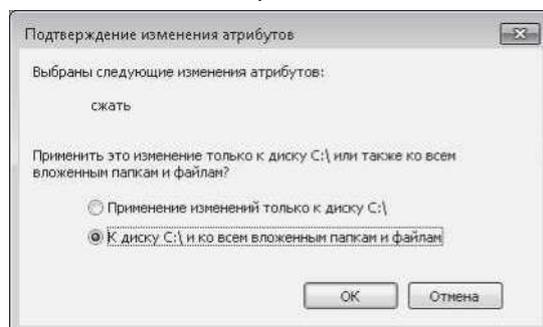
Windows 7

NTFS

, Windows 7

Windows 7

1. (Windows Explorer) (Disk Management)
2. (Properties). (General) (Compress drive to save disk space) OK. (Confirm Attribute Changes), 14.
3. X:\ (Apply changes to drive X:\ only).
4. X:\ (Apply changes to drive X:\, subfolders and files). OK.



. 14.

1. (Windows Explorer) (Disk Management)

(Properties).

2. (General) (Compress drive to save disk space)

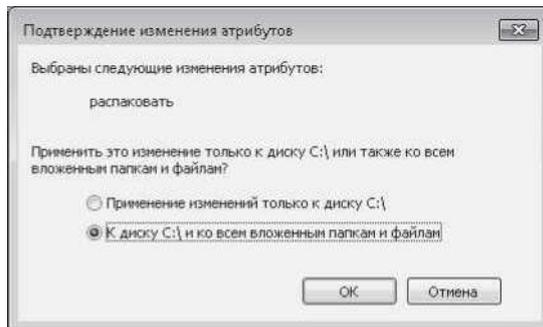
OK. (Confirm

3. Attribute Changes), . 15,

X:\ (Apply changes to drive X:\ only).

X:\ (Apply changes to drive X:\, subfolders and files).

4. OK.



. 15.

1. (Windows Explorer)

(Properties).

2. (Properties)

(General)
(Advanced).

3. Attributes),

. 13.16,

(Advanced

(Compress contents to save disk space)

OK.

4.

, Windows 7

, Windows 7

Windows 7

(Confirm Attribute Changes)

(Apply changes to this folder only)

OK.

(Apply changes to this folder, subfolders and files)
OK.

50 %,

2

1

1.

(Windows Explorer)

(Properties).

2.
(Properties)

(General)

(Advanced).

3.

(General)

(Compress contents to save disk space)

OK.

4.

, Windows 7
, Windows 7

, Windows 7

(Confirm Attribute Changes)

•

(Apply changes to this folder only)

OK.

•

(Apply changes to this folder,
subfolders and files) OK.

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, printscreen .

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(Windows Vista), Windows 7

Windows 7

Windows 7

Windows Vista, Windows 7

Windows 7

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Aero.

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Windows 7

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Windows
Windows System
Windows),

7,
Assessment Tool (, *WinSAT*.

WinSAT

XML.

, Windows 7

- API-

WinSAT.

- (RAM).
- Desktop Window Manager,
- WinSAT Windows 7

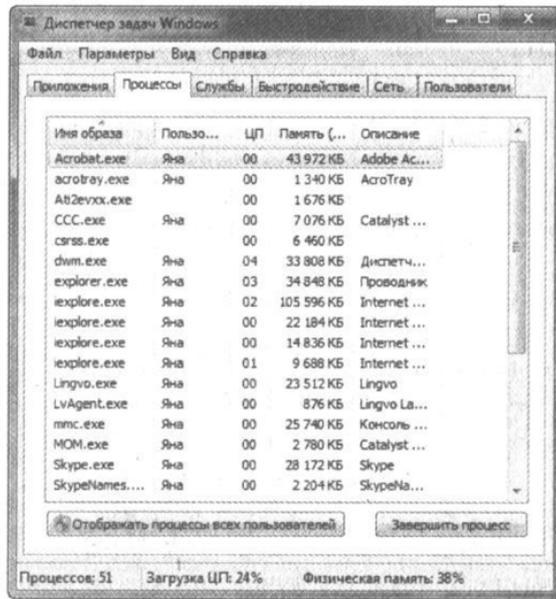
Windows.

Windows 7

- 1,0.
- 7,9 (Windows Vista,
- 5,9,
-).
- 5,0
- 1,0.

<Ctrl+Alt+Delete>

Windows.



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Windows

<Ctrl+Shift+Esc> ,

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(Windows 7 ,

Windows 7 ,

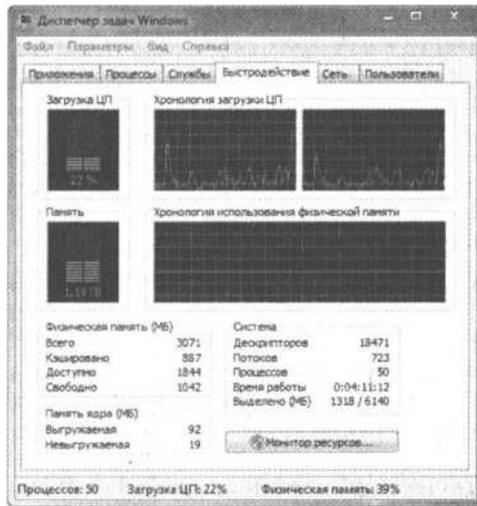
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100%

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(RAM)

Windows 7

Windows 7

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Windows 7

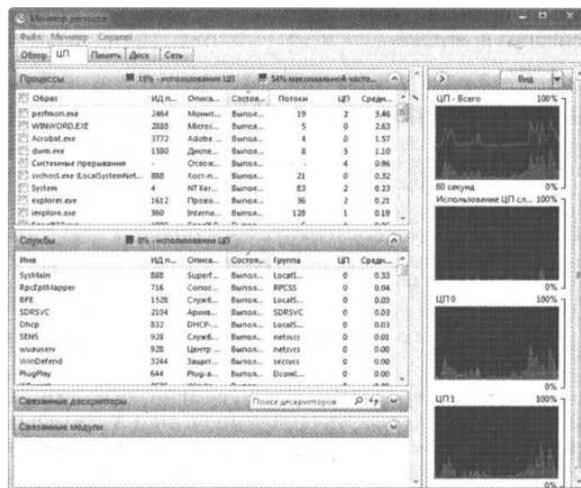
Windows 7

Windows 7

(Vista.)

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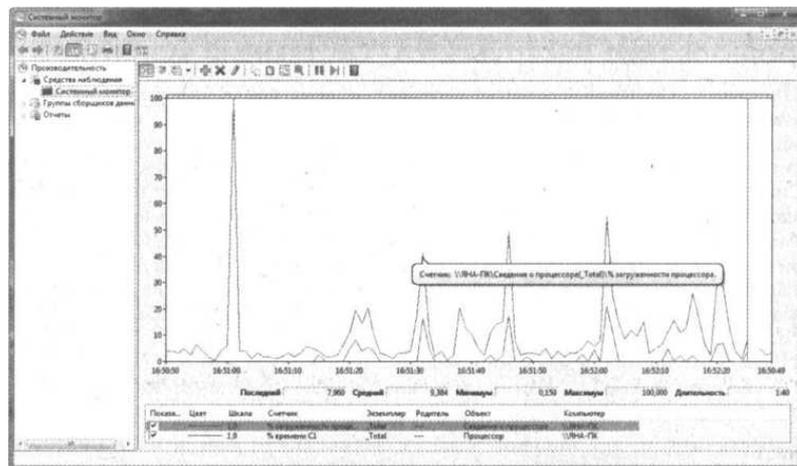
2-5

7.

. 6).

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. 6.

Windows 7

100;

1. ,
(. . 50 , 50%).

0.00000001, - 20 , 2

• GIF,

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• () ,

2 1000 .

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.blg,

(,).

POST.

Windows 7

<Enter>

30

30-

<Enter>

<Enter>

(
-):
BCDEDIT /timeout

Windows 7

<Enter>

GUI.
GUI

Windows 7

Windows 7

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-
-

Windows 7

”),

(“

EnableSuperfetch

EnablePrefetcher
1,

(Windows Update),

Windows

Windows 7

Windows 7

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Windows

Windows 7

<Enter>



.7.

.7.

Windows 7

OK. Windows 7

9. — 10, 12 —

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Windows 7

NTFS,

Windows 7

Windows 7 (Windows 7

- 1.
- 2.

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Windows 7

1.

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Windows

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Windows

Windows 7

FAT16 FAT32 NTFS
NTFS

FAT32 (, NTFS , FAT16). , NTFS. , Windows 7 , FAT 16 FAT32
CONVERT, NTFS:

Last Access Time
NTFS Last
Access Time (,), ,
, ,
NTFS.

:
fsutil behavior set disablelastaccess 1
To

1 (, , Windows 7):

HKLM\SYSTEM\CurrentControlSet\Control\FileSystem\NtfsD
isableLastAccessUpdate = 1

7 , Windows

. , Windows 7

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Windows 7,

. Windows 7
NTFS.

Windows 7

Windows 7.

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Windows 7

192

384

Windows 7

1,5

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1,5

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Windows 7

512

Windows 7

Windows 7

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16

(Windows 7).

Windows 7

Windows 7,

(2)

Windows 7

Windows 7

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()

Pagefile.sys
(%SystemDrive%).
Windows 7

Pagefile.sys

1.

2.

<Enter>.

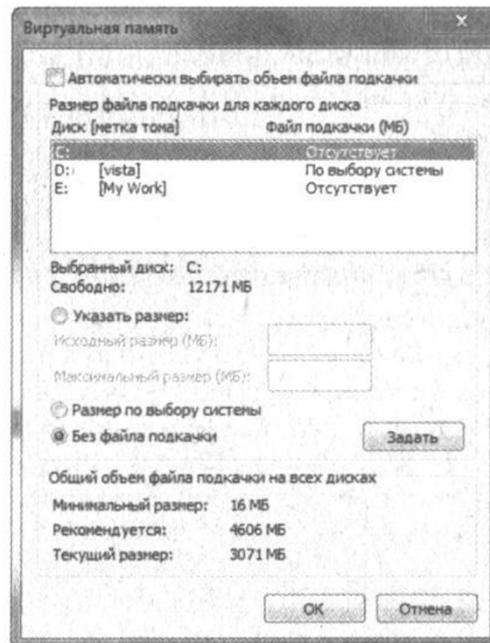
3.

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Windows 7

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Windows 7

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Windows 7

7.

File0000 . chk,

File0001. chk . .

) , (, , .

• . (FAT 16
1, 2.)

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, .

, - ()

NTFS

:\Data :; :\Data

“ ”.

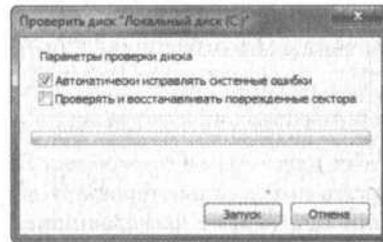
“ ”

1.

2.

3.

. 1.



. 1.

4.

5.

6.

7.

()

AUTOCHK

HKLM\SYSTEM\CurrentControlSet\Control\SessionManager\BootExecute

Windows 7

Session

Manager (). AUTOCHK

AUTOCHK

DWORD-

AutoChkTimeOut

HKLM\SYSTEM\CurrentControlSet\Control\Session Manager

CHKNTFS/ : [],

CHKNTFS

.)

60-

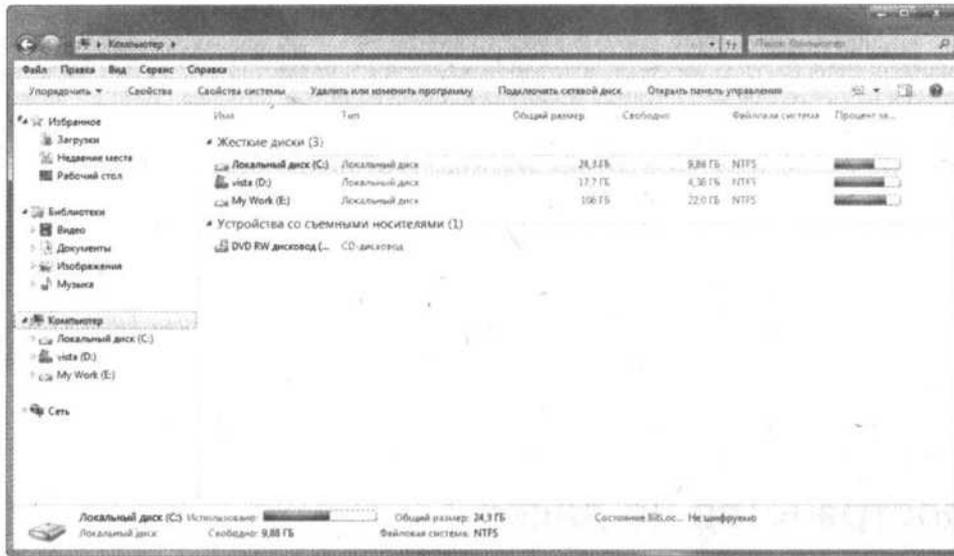
CHKNTFS/ :60

AUTOCHK

0,

(60).

2)



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Windows 7

ZIP-

(,)

, DVD-

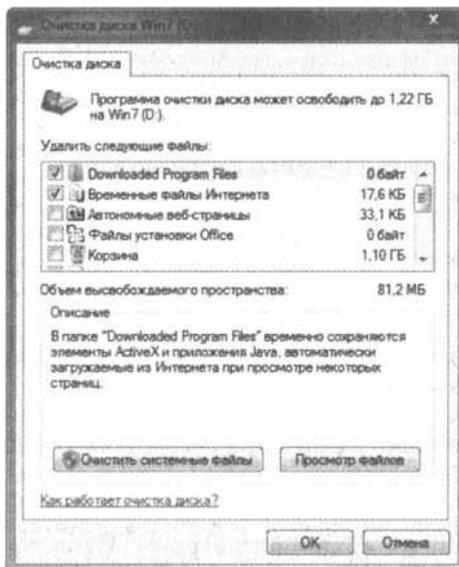
.bak , .old.
Windows 7

Internet Explorer,

1.

2.

.4.



.4.

3.

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5.

6.

<Enter>:

cleanmgr/sageset:1

1

0 65535.

<Enter>:

cleanmgr /sagerun:1

Windows 7

Windows 7

Windows 7

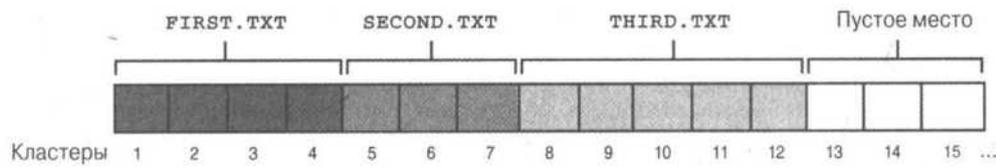
Windows 7

Windows 7,

SECOND.TXT THIRD.TXT-

.5

— FIRST.TXT,



. 5.

SECOND.TXT, 5, 6 7

FOURTH.TXT, —

Windows 7

6 7

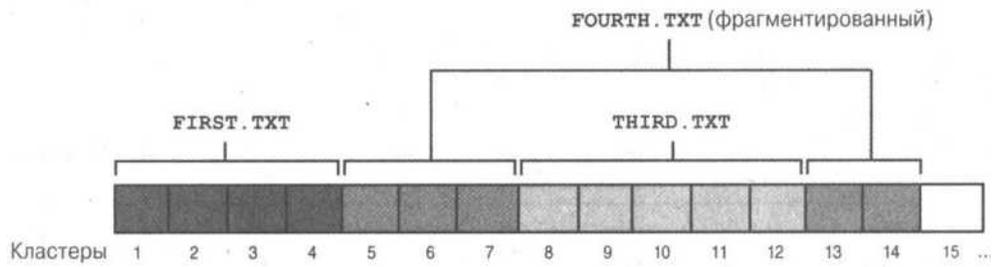
FOURTH.TXT

, Windows

13 14

FOURTH.TXT

. 6



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FOURTH.TXT

Windows 7

1:00.

1.

Windows

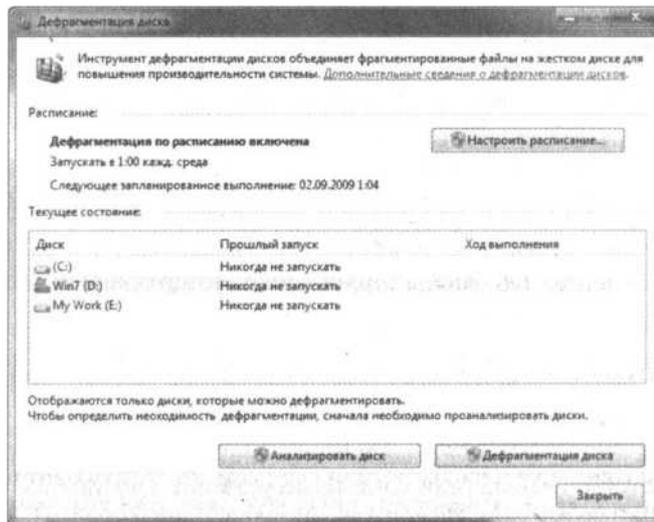
.7.

2.

3.

4.

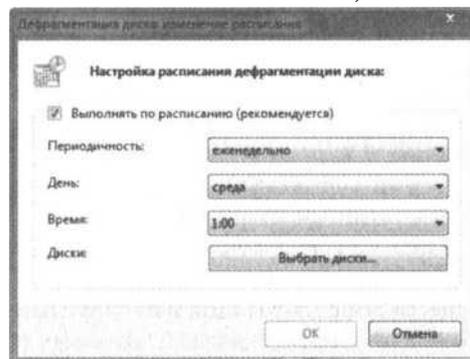
Windows



.7.

1.

.8.



.8.

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3.

4. :
5. .
6. ,
7. .

Windows
 “ ”
 Windows Windows.

Windows 7

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 24).

Windows SystemRestore, SR
 , Microsoft,

(Windows 7),

Windows 7

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Windows Update.

Windows Update,

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Windows 7

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Windows 7

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Windows 7

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Windows 7

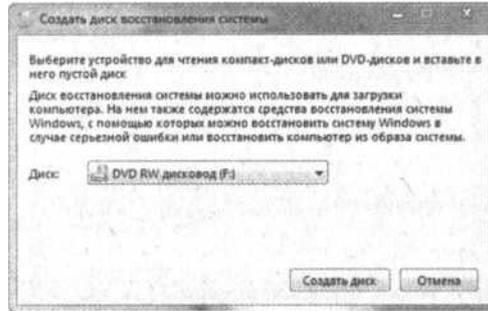
1.

. 11.

2.

CD- DVD-

3.



. 11.

4.

. Windows 7

(

)

5.

:

“ ”

Invalid system configuration (

) Hard disk failure (

“ ”

(, ,)

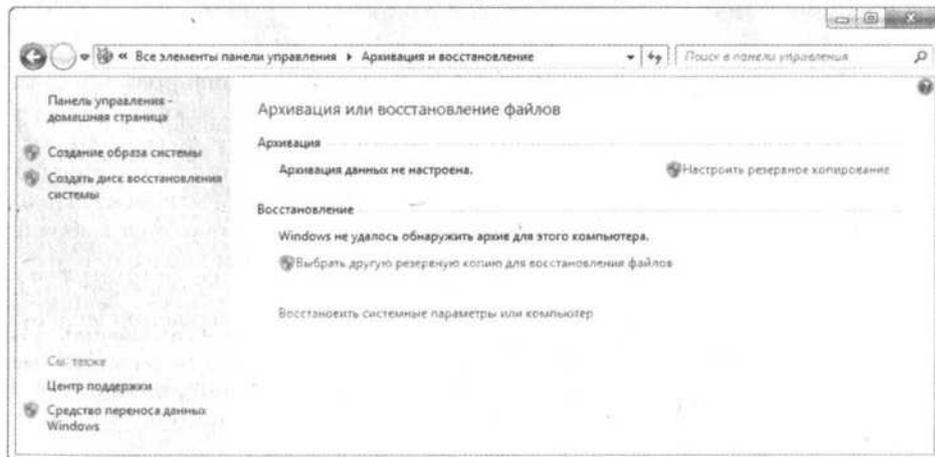
Windows,

Vista,

Microsoft

Windows

. 12



. 12.

Windows 7

1.

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UNC,

3.

Windows.

Windows 7

Windows Vista

. 13,

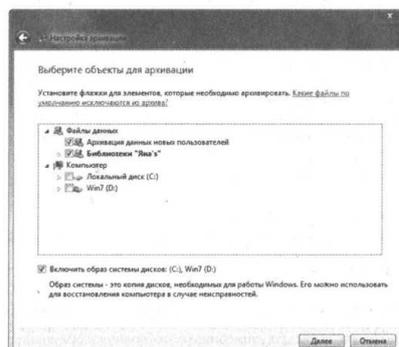
4.

().

5.

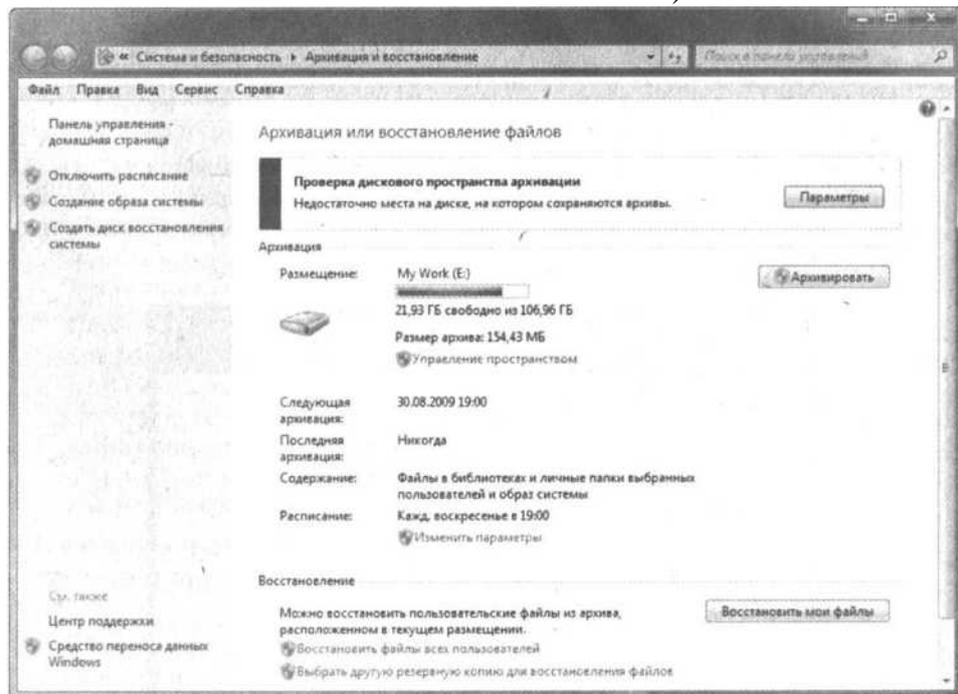
Windows 7

. 14.



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Windows 7,

Windows 7,

Windows 7.

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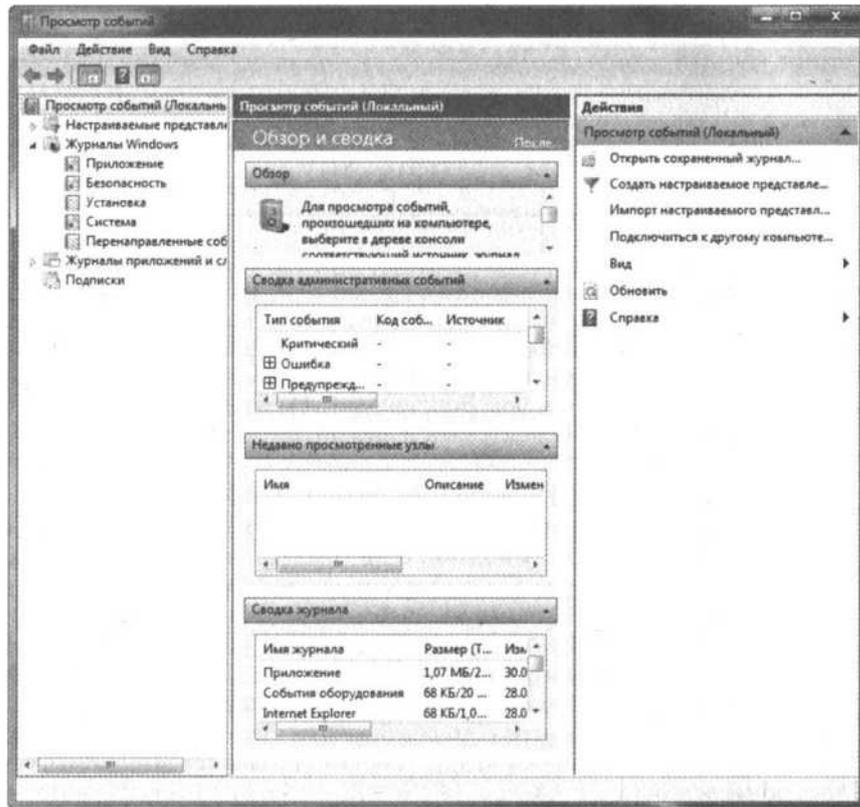
-), .
1. , .
 2. .
 3. , (,
 4.).
 5. .
 6. .

Windows 7

Windows 7,

Windows 7

<Enter>. . 16



. 16.

Windows

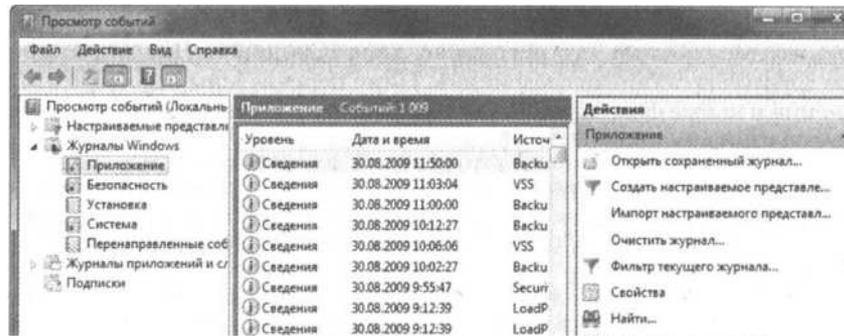
Windows

. 17).

Windows.

Windows 7,

Windows 7



. 17.

Windows 7

22,

(Msinfo32.exe),

1.

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7.

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Windows 7

Windows 7.



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Windows

2

, printscreen .

Windows

“ ”

Windows.

150

. Windows 7

Windows

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services

<Enter>.

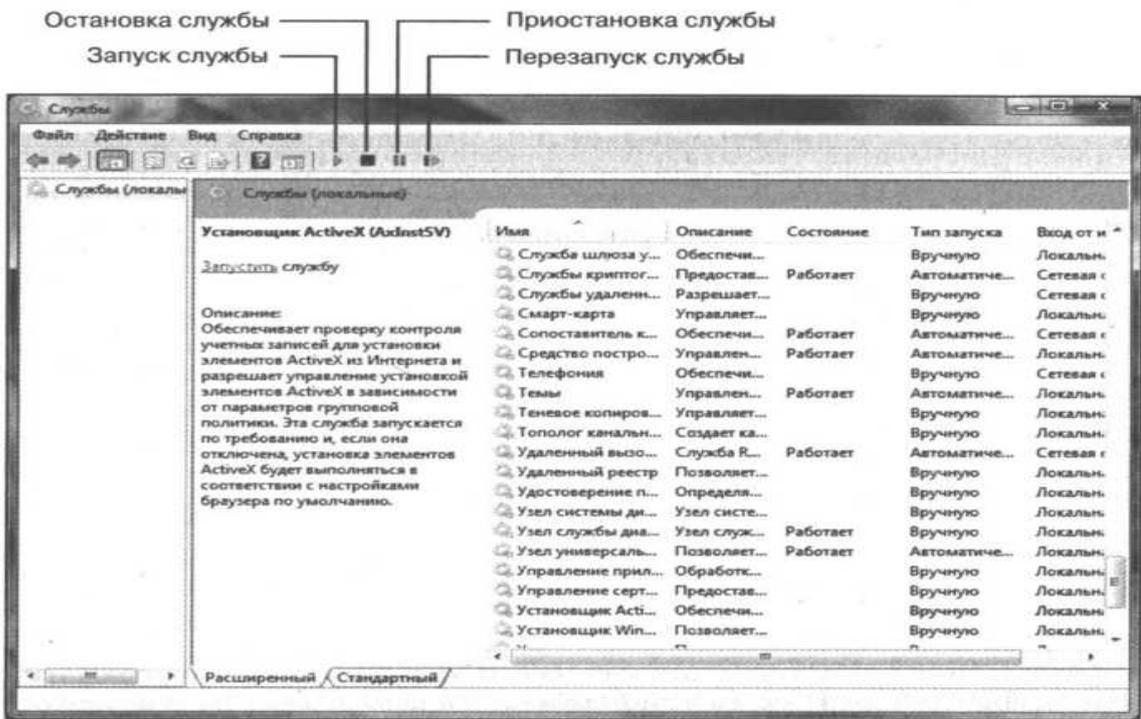
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(, ,)

1.



1.

Windows 7

Windows 7

Plug-and-Play,

DCOM-

(RPC)

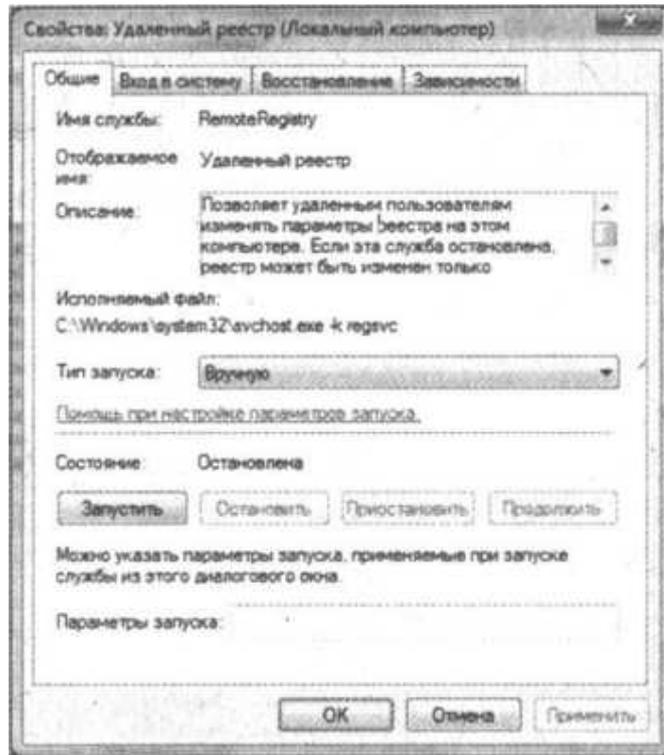
Windows 7

Windows 7

Windows 7

1.

. 2.



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2.

Windows 7

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Windows 7,

Windows 7.

Windows 7

3.

Windows 7

.2

NET STOP NET START,

NET PAUSE NET CONTINUE.

:

NET STOP

NET START

NET PAUSE

NET CONTINUE

net start Telephony
net stop "Disk Defragmenter"
net pause "World Wide Web Publishing Service"
net continue "Windows Time"

net start

Windows

Windows

Windows

Windows

().

1. , services <Enter:

2. , .

3.

4.

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Windows,
. 2.
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Windows

Windows.

Windows 7 Home Basic (Windows 7) Windows 7
Home Premium (Windows 7).

Windows 7

2. Windows,

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		.
		Windows Vista
		Windows 7,
		,
BitLocker		BitLocker
		Windows 7

BranchCache		Windows 7 ()
		- .
		()
		Aero .
		, Windows ()
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		.
		, (,)
Bluetooth		Bluetooth Windows 7.
		, - .509,
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HID-		,
IPsec		.
IP		.
(ICS)		.
IP		(IPv6) IPv4 (,)
IPsec		,
Wi-		Wi-Fi.
Fi-		Windows 7
iSCSI		SCSI
(Microsoft)) (,

Net.Tcp.		(TCP.)
PNRP		Windows Meeting Space,
IP- n -		Windows
PNRP		PNRP (Peer Name Resolution Protocol —
Pong USB-		USB-
" "		
Quality Windows Audio Video Experience		
Windows		
Media Center		Media Center
Windows Media Center		Windows
Windows Media Center		Media Center
Windows Media Center		.(
		.)
Windows Media Player		Media Player
Windows Search		Vista
		(Google Desktop Search).
Windows		Windows 7
WMI Performance Adapter		,
		Windows (WMI)
		,

		Media Transfer Protocol ()
-		-
SNMP		SNMP (Simple Network Management Protocol —).
Superfetch		Windows SuperFetch
		BitLocker
Windows		Windows
Windows		()
Windows CardSpace		CardSpace
Windows -		Wi-Fi.
Windows		Windows.
Windows		Microsoft.

Windows

Windows

Windows

Windows

, Windows

“ ”.

Windows.

Windows

Windows

Windows

1. regedit <Enter>.
2. :
3. HKLM\SYSTEM\CurrentControlSet\Control
WaitToKillServiceTimeout.
4. 20000 1000.
- 5.

Windows 7

1. :
2. HKCU\Control Panel\Desktop
WaitToKillAppTimeout. (
3. , - - ,
4. WaitToKillAppTimeout .
5. 5000 .

Windows 7

Windows 7

1. (, ,) .
2. .
3. .
- 4.

1. services <Enter> Windows

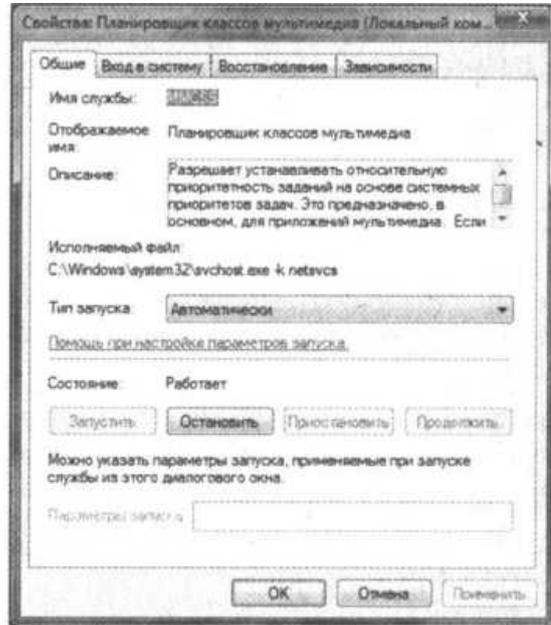
7

2.

3.

(. 3)

4.



3.

1.

Windows 7

2.

(
):

sc delete

3.

<Enter>. Windows 7

[SC] DeleteService SUCCESS

HKLM\System\CurrentControlSet\Services

```

system
1. regedit, <Enter>
2. Y_LOCAL_MACHINE.
3. ^
4. :
   %SystemRoot%\system32\config\RegBack\SYSTEM. OLD
5.
6. reset
   HKLM\reset.

1.
2. ( —
   ):

reg
hklm\reset\controlset001\services\
hklm\system\currentcontrolset\services\ /s /f
3. <Enter>. Windows 7
4.

```

STOP.

BSOD
BSOD Windows
STOP
BSOD

2

BSOD
STOP
PrintScreen.

BSOD (BlueScreenOfDeath,
").
" STOP" " STOP"),
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" "
" WindowsXP
, BSOD
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(" ")
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" "
" "
, Microsoft
, BSOD
" "
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Windows



. 1.

"c

" Windows7,

"

" Windows7

(bugcheckinformation),

(recommendeduseraction)

(debugportinformation).

STOP-

(" ")

,
:

HKEY_LOCAL_MACHINE

" "

;

;

(: ,)

(LastKnownGoodConfiguration).

<F8>

Windows7

() (LastKnownGoodConfiguration (Advanced)).

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet

(SafeMode),
(SafeModewithNetworking)
(SafeModewithCommandPrompt),

Windows

Windows,
(HardwareWizard) (DeviceManager).

BSOD

Windows 7

Memory.dmp.

STOP,

STOP: 0x000000E2 (0x00000000,0x00000000,0x00000000, 0x00000000)

The end-user manually generated the crashdump.

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\i8042prt\Parameters
CrashOnCtrlScroll
1.

REG_DWORD.

<ScrollLock>.

<Ctrl>.

DSOD Windows7

Windows 7

STOP

1.

(ControlPanel),

(System),

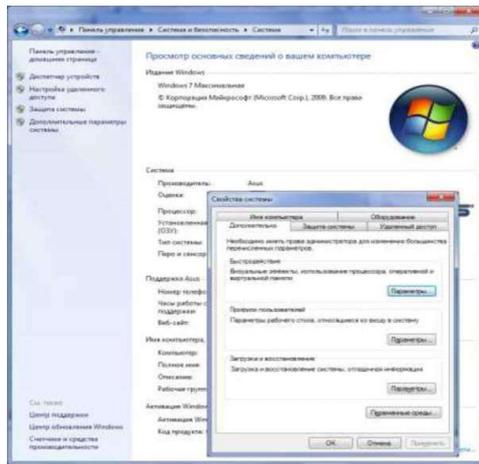
(AdvancedSystemProperties).

2.

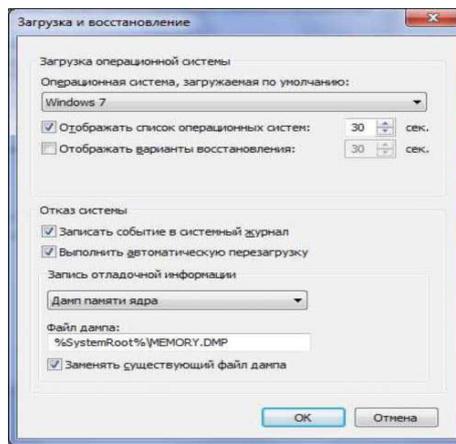
. 2,
(Settings)

(SystemProperties),
(Advanced).

(StartupandRecovery).



. 2.



. 3.

(StartupandRecovery),

. 3.

(SystemStartup),

(,) ,

(SystemFailure),

STOP.

(Writeaneventtothesystemlog).

STOP

STOP.

(Automaticallyreboot).

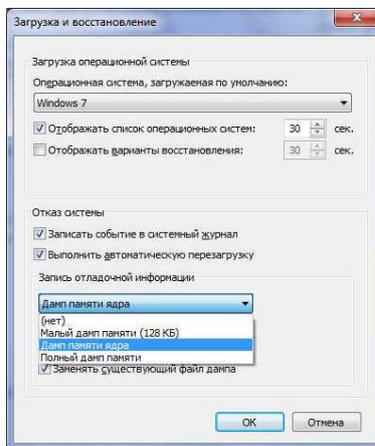
(WriteDebuggingInformation).

(DumpFile)

(Overwriteanyexistingfile)

Windows2000,

(StartupandRecovery)



. 4.

(WriteDebuggingInformation)

Windows 7

(KernelMemoryDump),

dumpexam WinDbg,

).

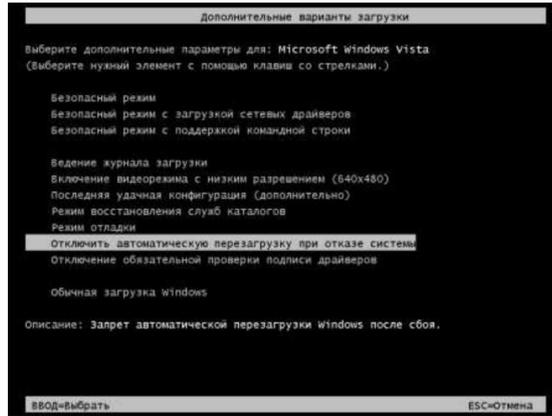
STOP

STOP Windows7

1. ,) Windows7 (—
<F8>.

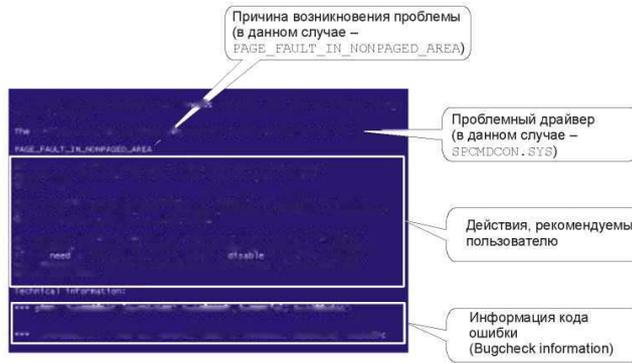
Windows 7,
BIOS,

2. , .
(Disableautomaticrestartonsystemfailure), . 5.



. 5.

3. , ,
(. 6).



. 6. BSOD

. 6,

() .

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BIOS) . . .

— Technical Information,

KMODE_EXCEPTION_NOT_HANDLED);

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);
(
STOP 0x,

STOP 0x0000000A STOP 0xA),

(
,
,
, IRQL_NOT_LESS_OR_EQUAL.
STOP,

Microsoft

Windows 7.

INACCESSIBLE_BOOT_DEVICE (STOP 0x0000007B)

Windows 7,

SATA (Serial Advanced Technology Attachment)
, SATA (disabled).

BIOS Setup

AHCI

(Advanced Host Controller Interface),

AHCI (Msahci.sys)

Windows 7

(

Windows 7

).

STOP 0x0000007B INACCESSIBLE_BOOT_DEVICE

SATA

BIOS Setup,

1. Windows 7,

2. : HKEY_LOCAL_MACHINE\System\currentcontrolset\services\MSahci.

Start

0.

3.

BIOS Setup

SATA

BIOS

Windows 7;

Microsoft Knowledge Base (<http://support.microsoft.com/kb/935806/en-us>).

PAGE_FAULT_IN_NONPAGED_AREA (STOP 0x00000050)
STOP

i8042prt.sys.

(hotfix),

Microsoft Knowledge Base:

«Error message when you start a Windows based computer»:

STOP: 0x00000050 PAGE_FAULT_IN_NONPAGED_AREA"

(<http://support.microsoft.com/kb/939720/en-us>).

CardBus,
(CF),

Secure Digital (SD)

CompactFlash
SATA (eSATA),

AHCI.

(hotfix),

Microsoft Knowledge Base:

"Error message on a Windows -based computer that has a storage device inserted into a card bus adapter:

STOP: 0x00000050" (<http://support.microsoft.com/kb/938239/en-us>).

IRQL_NOT_LESS_OR_EQUAL (STOP 0x0000000A)

3 RAM;

- Storport;

32-

(DMA);

NVIDIA.

Microsoft Knowledge Base: "Error message when you try to install Windows Vista on a computer that uses more than 3 GB of RAM: STOP 0x0000000A" (<http://support.microsoft.com/kb/929777/en-us> 929777).

Windows 7

Microsoft Knowledge Base: "Stop error message when you start a portable Windows Vista-based computer that has the lid closed:

STOP: 0x0000000A" (<http://support.microsoft.com/kb/941507/en-us>).

KERNEL_MODE_EXCEPTION_NOT_HANDLED (STOP 0x0000008E)

Microsoft—

MicrosoftMaliciousSoftwareRemovalTool (<http://support.microsoft.com/kb/890830/ru>).

REGISTRY_ERROR (STOP 0x00000051)

PFN_LIST_CORRUPT (STOP 0x0000004E)

RAM.

MACHINE_CHECK_EXCEPTION (0x0000009C)

has occurred"). ("Unrecoverable hardware error

RAM,

MULTIPLE_IRP_COMPLETE_REQUESTS (0x00000044)

DRIVER_POWER_STATE_FAILURE (0x0000009F)

STOP

STOP,

STOP,

Microsoft (<http://support.microsoft.com/search>),
(, 0x0000007B).

BSOD

<http://www.sun.com/desktop/products/sunpci/bsod.pdf>

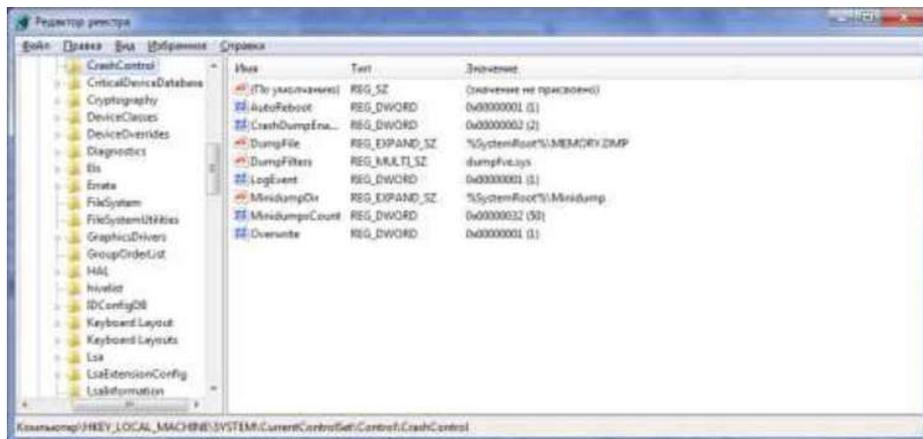
<http://aumha.org/aZstop.htm>

Microsoft Online Crash Analysis (<http://oca.microsoft.com/en/windiag.asp>).

Microsoft

(.7).

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\CrashControl



.7.

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1. []: / . . , . . . - 6- . , . . .
.- : , 2015. - 263 .

[] : / . . , . . . - : :
- , 2014. - 223 .

3. [] :
/ . . , . . . - 4- . , . . . - . :
, 2012. - 560 .

4. []: / . . .
, . . . , . . . - 2- . , . - . : , 2012.- 304

.

5. [] :
/ . . . - : , 2011. - 144 . //
- <http://biblioclub.ru/index.php?page=book&id=228789>

6. []: / . . .
, . . . - 2- . , . - . : , 2005. - 263 .