

updatexlrator – Update Accelerator

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Administrator's Guide

© Copyright 2006-2008
Author: Marco Sondermann
m.sondermann@directbox.com
<http://update-accelerator.advproxy.net>

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1 Preface

1.1 Rights and Disclaimers

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1.3 Acknowledgements

Thanks to all pre-release testers, bug reporters, code contributors and all translators for doing a great job.

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2 Introduction

2.1 Overview

The Update Accelerator caches files from update sites automatically at the first client request. All subsequent downloads of these files from other clients will be processed with LAN speed.

Even though the standard Web Proxy cache does almost the same job, there are important differences between the Web Proxy cache and the Update Accelerator cache.

For example, it would be difficult to store, reliably, a Service Pack with a size of about 300MB in the Web Proxy cache. Unlike a Web Proxy with its internal cache and uncontrollable results, the Update Accelerator works rather in a similar way to a File Server - dead reliable and independent of any Proxy cache size or replacement strategy.

2.2 Update Accelerator feature list

In addition to the default IPCop Web Proxy service, Update Accelerator offers these new features:

- Full automation of update caching and scheduled source checkup
- Increases download speed - up to factor 1.500 for a 64kBit/s ISDN connection.
- Bandwidth saving for slow or overloaded Internet connections.
- Guaranteed delivery from the local cache, even if the Web Proxy cache has been cleared.
- The Update Accelerator cache can be transferred from one to another IPCop for offline preloading.

2.3 Supported download sources

The Update Accelerator add-on caches updates and product downloads from these vendors:

- Adobe
- Apple
- Avast
- Linux (deb and rpm)
- Microsoft
- Symantec
- Trend Micro

Other download sources may follow in future releases.

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2.4 Hardware requirements

Update Accelerator has no special hardware requirements, except for the hard disk space. On machines without appropriate disk space (e.g. embedded CF based machines) you can also use an NFS share from your internal network as your update cache storage.

Explicit warning: For security reasons, you should not modify the absolute cache directory location or even move the cache directory to any other existing partition (e.g. `/var/log/`). If necessary, you should extend the hard disk space instead. For more details about additional partitions, refer to chapter 10 starting at page 27.

2.4.1 Hard disk

Sufficient free disk space required:

- At least 4GB for Windows XP clients (single language)
- More than 8GB recommended for Windows XP and Vista clients

Depending on the variety of systems, the cache may grow up to 20GB and even more.

2.4.2 CPU

There are no special requirements, but at least Pentium II class recommended.

2.4.3 Memory

There are no special requirements, but at least 64MB recommended.

2.4.4 Network

10MBit/s, but at least 100MBit/s recommended for maximum performance.

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3 Installation

3.1 Installation requirements

The web proxy service (built-in or Advanced Proxy) must be running. All clients must be configured to use the web proxy service. There are no further software requirements to be met before installing this add-on.

Note: Some other add-ons which are modifying the proxy settings (especially certain filter modules) may not work after installing this add-on.

Note: Advanced Proxy 2.x must be installed if you are already running the URLfilter add-on.

3.2 Updating the Update Accelerator add-on from 1.0 to 2.0

Warning: Do not remove the Update Accelerator before upgrading to a newer version. This will delete the complete update cache!

Even though updating the Update Accelerator to 2.0 is the same procedure like doing a fresh installation, there are some pieces of advice:

- The upgrade procedure from Update Accelerator 1.0 to 2.0 will automatically convert the cache database. This is an in-place conversion, so there is no additional disk space required. After conversion, the disk usage should be nearly the same.
- The new database structures can't be converted back to the old 1.0 format!

3.3 Installing the Update Accelerator add-on

Whenever the install script detects a previously installed version of Update Accelerator it will keep all settings and the cache. So you don't have to care whether this is a fresh install or an update.

Step 1: Download the installation package from <http://update-accelerator.advproxy.net>

Step 2: Copy the installation package to your IPCop box. For Windows clients, this can be done using the program WinSCP.

Note: Make sure you are using port 222 instead of port 22 for SCP

Step 3: Log in as root on the console or via SSH. For Windows clients, this can be done using the program PuTTY.

Note: Make sure you are using port 222 instead of port 22 for SSH

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Step 4: Extract the installation package using the command

```
tar -xzf ipcop-updatexlrator-version.tar.gz
```

Note: Replace *version* with the version of the installation package:

```
IPCop v1.4.21 - The Bad Packets Stop Here
ipcop login: root
Password:
No mail.
root@ipcop:~ # tar -xzf ipcop-updatexlrator-2.1.0.tar.gz
root@ipcop:~ # _
```

Step 5: Type `ipcop-updatexlrator/install` to start the installation of the Update Accelerator:

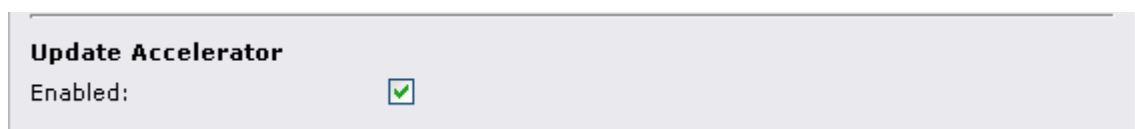
```
root@ipcop:~ # ipcop-updatexlrator/install

=====
IPCop 1.4 Update Accelerator add-on installation
=====

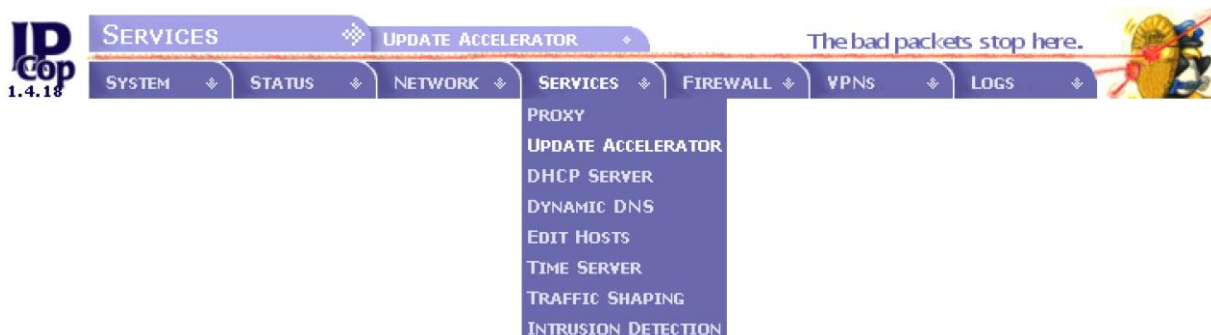
Rebuilding language cache
Patching IPCop main menu
Patching Web Proxy page

root@ipcop:~ #
```

Step 6: Open the Web Proxy GUI page and enable the Update Accelerator.



Step 7: Open to the Update Accelerator GUI under the Service section and change the configuration settings for your needs.



Step 8: Finally restart the Update Accelerator to save and activate your settings. The Update Accelerator will not cache any update until the default settings are confirmed once by hitting the "Save" button.

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3.4 Removing the Update Accelerator add-on

Step 1: Log in as root on the console or via SSH. For Windows clients, this can be done using the program PuTTY.

Note: Make sure you are using port 222 instead of port 22 for SSH

Step 2: Start the removal process by entering `ipcop-updatexlratr/uninstall`

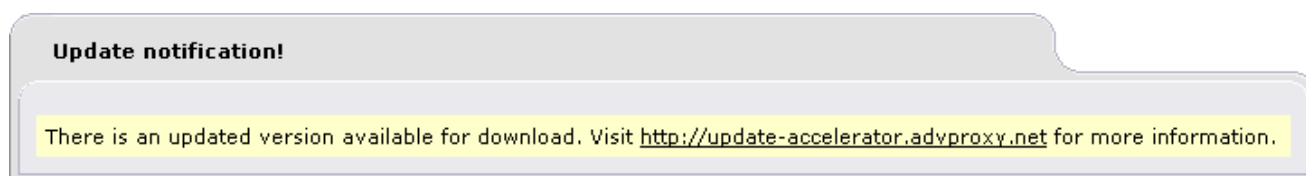
Step 3: Open the IPCop web GUI. Under the Service section select the entry "Proxy".

Step 4: Restart the Proxy Server to restore the previous configuration.

3.5 Automatic update notification

The Update Accelerator GUI checks the website www.advproxy.net at regular intervals for updates.

If there is a newer version available, an update notification will appear:



Note: The Update Accelerator GUI will not check for updates while the RED interface is inactive.

Note: Once a newer version is detected, the notification window will appear permanently until doing an upgrade to the latest Update Accelerator version.

3.6 Specific problems with official IPCop updates

Official updates are designed for unmodified installations and don't care about previous installed add-ons and the files modified by them.

After applying official updates, you may experience different kinds of problems:

The menu item for Update Accelerator disappears after applying an update

Some official updates will replace the file `/var/ipcop/header.pl` and reset all menu entries to default.

This can be fixed by re-installing the add-on again. There is no need to uninstall the add-on first, because it refreshes all necessary menu modifications and keeps the current add-on settings and update cache.

Update Accelerator doesn't operate properly after applying an update

It may be possible that some files necessary for Update Accelerator have been replaced.

This can be fixed by re-installing the add-on again. There is no need to uninstall the add-on first, because it installs all required files again and keeps the current add-on settings and update cache.

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4 Update Accelerator configuration

This is the main configuration GUI of the Update Accelerator:

The screenshot shows the 'Update Accelerator' configuration window. It is divided into three sections: 'Common settings', 'Performance options', and 'Source checkup'. At the bottom, there are four buttons: 'Save', 'Save and restart', 'Statistics >>', and 'Maintenance >>'.

Update Accelerator	
Common settings	
Enable log: <input type="checkbox"/>	Number of accelerator processes: <input type="text" value="5"/>
Enable passive mode: <input type="checkbox"/>	Max. disk usage: <input type="text" value="75"/> %
Performance options	
Lower CPU priority for downloads: <input type="checkbox"/>	Max. external download rate (kBit/s): <input type="text"/>
Source checkup	
Enable automatic source checkup: <input type="checkbox"/>	Source checkup schedule: <input type="text" value="daily"/>
Replace outdated files during checkup: <input type="checkbox"/>	
[Save] [Save and restart] [Statistics >>] [Maintenance >>]	

The Update Accelerator GUI contains the basic settings and options without any additional information about the cache. The statistics and maintenance sections are not shown by default to reduce the GUI loading time.

4.1 Common settings

The common settings are essential parameters related to the Update Accelerator service.

This screenshot shows the 'Update Accelerator' configuration window, specifically the 'Common settings' section. It includes checkboxes for 'Enable log' and 'Enable passive mode', and input fields for 'Number of accelerator processes' (set to 5) and 'Max. disk usage' (set to 75%).

Update Accelerator	
Common settings	
Enable log: <input type="checkbox"/>	Number of accelerator processes: <input type="text" value="5"/>
Enable passive mode: <input type="checkbox"/>	Max. disk usage: <input type="text" value="75"/> %

4.1.1 Enable log

This enables the Update Accelerator logging.

4.1.1.1 Cache log

Any cache access (hit or miss) will be logged. The cache log will be written to the file `/var/log/updatexlrator/cache.log`

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4.1.1.2 Download log

If a cache miss occurs, the missing file will be downloaded from the source and added to the cache. The download log will be written to the file `/var/log/updatexlrator/download.log`

4.1.1.3 Checkup log

All manual or automatic source checkups of the cached files against the source will be logged. The source checkup log will be written to the file `/var/log/updatexlrator/checkup.log`

4.1.1.4 Debug logging (optional)

For troubleshooting purposes, a debug log may be enabled.

As long as the debug flag file `/var/ipcop/updatexlrator/debug` exists, an additional detailed log will be written to the file `/var/log/updatexlrator/download.log`

4.1.2 Number of accelerator processes

This selects the number of processes that will listen for download requests. The number of processes depends on the number of active clients, your bandwidth and your hardware performance.

The default of 5 processes is recommended for about 50 concurrent users. For 250 or more users, you should select a value of 25 accelerator processes.

Note: If you are running the URLfilter add-on and you have configured a higher number of filter processes than accelerator processes, the higher number of processes will be used for both.

4.1.3 Enable passive mode

This turns the Update Accelerator into a read-only mode. New updates will not be added to the cache, but already cached updates will be delivered from the cache.

Note: If the *Max. disk usage* threshold (see chapter 4.1.4) will be reached, the Update Accelerator automatically turns into passive mode.

4.1.4 Max. disk usage

This is the maximum disk space on the partition that will be allocated before the Update Accelerators turns into the passive mode. The default value is 75%.

Note: Unless you have assigned a dedicated partition or hard disk for the update cache, it is not recommended to increase this value.

Note: The threshold will be checked *before* a file will be cached. Depending on the size of the downloaded file, this value might be exceeded.

4.2 Performance options

These settings may lower the usage of hardware and network resources for weak machines or running under heavy network load.

Performance options

Lower CPU priority for downloads:

Max. external download rate (kBit/s):

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4.2.1 Lower CPU priority for downloads

This reduces the CPU utilization when requested files are downloaded the first time. This is recommended for low performance machines only.

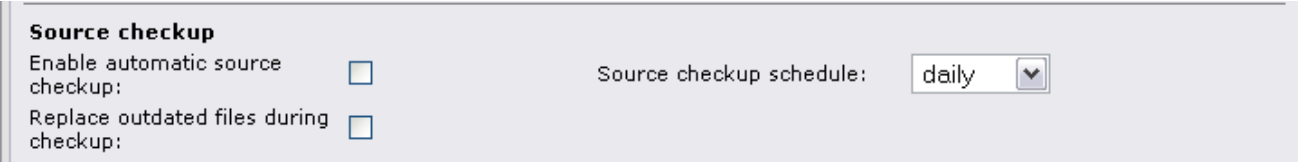
4.2.2 Max. external download rate

On a cache miss, the client request will be directed to the source and the Update Accelerator will download the requested file to the cache too. You may limit the bandwidth (in kBit/s) for this additional download process. This will save bandwidth for all first time downloads or file replacements on source checkups.

Note: This will not affect the speed for delivering cached files by the Update Accelerator to internal clients.

4.3 Source checkup

These settings will configure the automatic source checkup. Each file in the cache will be checked whether the time stamp and the file size will match the original download source.



Source checkup

Enable automatic source checkup: Source checkup schedule:

Replace outdated files during checkup:

Note: During normal operation, all files will be automatically checked before they will be delivered from the cache. If a cached file is out of date, the client request will be directed straight to the download source and the cached file will be replaced.

4.3.1 Enable automatic source checkup

This enables the automatic source checkup. The automatic source checkup will run at 03:00 AM.

Note: If the source checkup fails because no Internet connection could be established, all files will be marked as *Unknown* with a light gray status indicator.

4.3.2 Source checkup schedule

There are three possible schedules:

- daily
- weekly
- monthly

Note: To keep all cached files current, it is recommended to select the schedule *daily* but at least *weekly*.

4.3.3 Replace outdated files during checkup

This enables the replacement of outdated files during the checkup process. Newer files will be retrieved from the download source and added to the update cache.

Unless this option is enabled, the cached file will only be marked with a red status indicator as *Outdated* if a newer file is found during source checkup. If this option is enabled, the cached file will be updated and marked as *Up to date* with a green indicator.

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4.4 Action buttons

There are four action buttons at the bottom of the GUI page:

4.4.1 Save

This button writes the configuration, but does not restart the service.

4.4.2 Save and restart

This button writes the configuration and the Update Accelerator service will be restarted. Running download tasks are not affected by the service restart.

4.4.3 Statistics

This opens or closes the statistics GUI section. See chapter 6 at page 15 for more details.

4.4.4 Maintenance

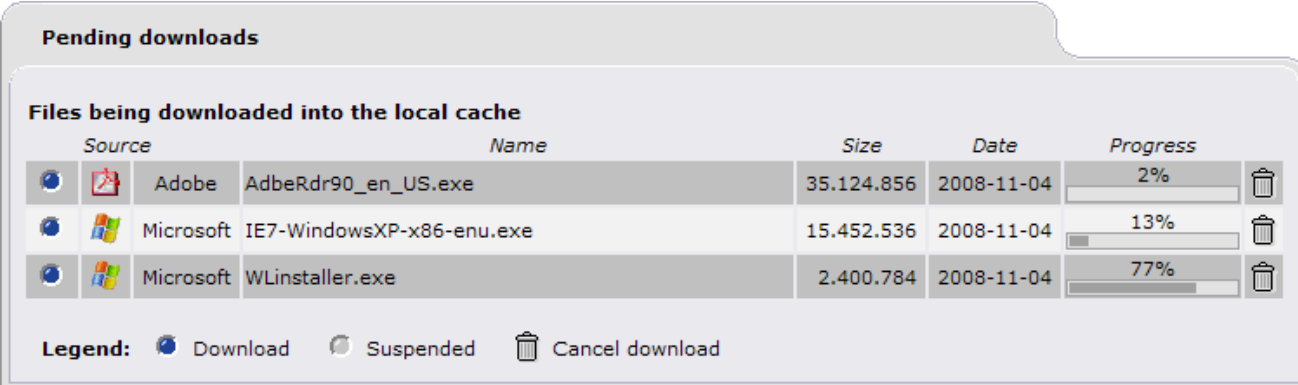
This opens or closes the maintenance GUI section. See chapter 7 at page 19 for more details.

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5 Download monitor










5.1 Monitoring active downloads




The Update Accelerator GUI main page shows you all current downloads and their progress at a glance. You also may cancel active downloads from here.



Pending downloads

Files being downloaded into the local cache

Source	Name	Size	Date	Progress	
  Adobe	AdbeRdr90_en_US.exe	35.124.856	2008-11-04	2%	
  Microsoft	IE7-WindowsXP-x86-enu.exe	15.452.536	2008-11-04	13%	
  Microsoft	Wlinstaller.exe	2.400.784	2008-11-04	77%	

Legend:  Download  Suspended  Cancel download

Note: This information is static. Reload the GUI page to get updated details about the download progress.

5.1.1 Blue – Download

Active downloads will be marked by blue indicator.

5.1.2 Gray - Suspended

If there are – for whatever reasons - suspended downloads, they will be continued when the Update Accelerator service will be restarted. Suspended downloads will be marked by a gray indicator.

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6 Cache statistics

The button *Statistics >>* extends the Update Accelerator GUI with some statistical information about the Update Accelerator cache.

Cache statistics

Disk usage

Cache directory	Size	Used	Free	Percentage
[/home/httpd/html/updatecache]	7.9G	4.6G	3.0G	61%

Summary

Total files in cache:	440	Total cache size (bytes):	2.400.480.968
Cache efficiency index:	0.8	Total data delivered from cache (bytes):	90.926.618.878

Statistics by source

Source	Files	Cache size (bytes)	Data from cache (bytes)				
Adobe	3	48.645.784	0	3	0	0	0
Avast	137	19.194.967	2.828.399	97	39	1	0
Microsoft	300	2.332.640.217	90.923.790.479	300	0	0	0

Legend: Up to date No source Out of date Unknown

If the cache contains no objects, a *Local cache is empty* message will be shown instead of the cache statistics.

6.1 Disk usage

After a fresh installation, the Update Accelerator cache is empty and will use the directory `/home/httpd/html/updatecache` as a repository to store the cached files.

Explicit warning: For security reasons, you should not modify the absolute cache directory location or even move the cache directory to any other existing partition (e.g. `/var/log/`). If necessary, you should extend the hard disk space instead. For more details about additional partitions, refer to chapter 10 starting at page 27.

By default, the cache directory resides on the `/dev/root` partition which also contains files from the IPCop root file system. For this reason a significant disk usage will be shown even though the update cache is still empty:

Cache statistics

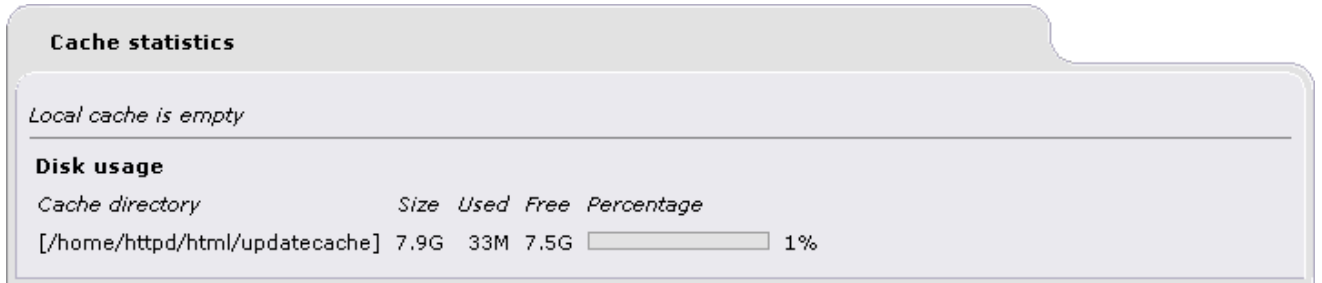
Local cache is empty

Disk usage

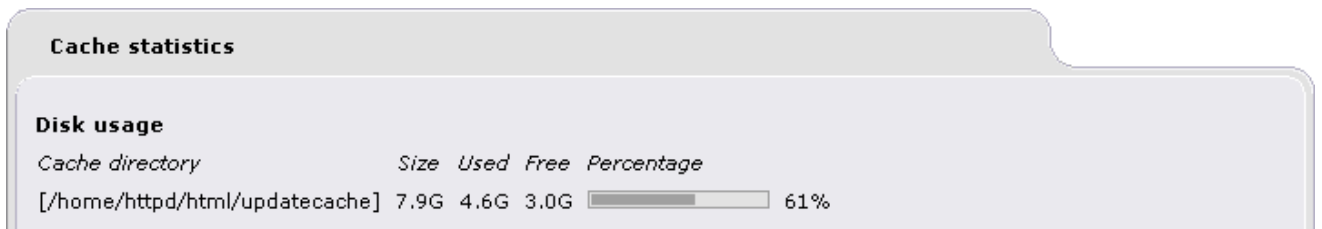
Cache directory	Size	Used	Free	Percentage
[/home/httpd/html/updatecache]	586M	222M	358M	39%

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If you are using a dedicated partition for the cache directory, the disk usage will reflect the cache usage. While the cache is empty, the usage will be about 1% or less:



After caching some files, the usage may look like this:



The current disk usage may also be checked by selecting the *System Status* item from the *Status* menu.

6.2 Summary

This will give you a short update cache overview for all download sources.

Summary			
Total files in cache:	440	Total cache size (bytes):	2.400.480.968
Cache efficiency index:	0.8	Total data delivered from cache (bytes):	90.926.618.878

6.2.1 Total files in cache

This is the number of objects in the cache.

6.2.2 Cache efficiency index

The cache efficiency index is an indicator to measure the efficiency of the cache. This index is the result of the number of requests per file.

The index of 1.0 indicates the breakeven point. In theory, at index 1.0 each downloaded file has been delivered once from the cache

A value worse than 1.0 indicates an inefficient cache. The Update Accelerator has downloaded more files from the source than delivering files from the cache.

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A value better than 1.0 is the evidence that you are really saving bandwidth and increasing the speed for downloading updates. The higher the index, so much better the cache efficiency. To reach an index better than 1.0, you should have at least 3 clients which are requesting the same files.

6.2.3 Total cache size

This is the total size of the cached files in bytes.

6.2.4 Total data delivered from cache

This is the addition of the size of all files which have ever been delivered from the cache.

Note: As some updates will be delivered using some kind of delta compression technologies, you should not take this value seriously.

6.3 Statistics by source

This will give you a more detailed status overview by source:

Statistics by source									
Source	Files	Cache size (bytes)	Data from cache (bytes)						
Adobe	3	48.645.784	0	3	0	0	0		
Avast	137	19.194.967	2.828.399	97	39	1	0		
Microsoft	300	2.332.640.217	90.923.790.479	300	0	0	0		

Legend: Up to date No source Out of date Unknown

6.3.1 Source

The download source will be listed by icon and by name. Only sources with cached objects will be shown.

6.3.2 Files

This is the number of objects in the cache.

6.3.3 Cache size

This is the total size of all cached files in bytes.

6.3.4 Data from cache

This is the addition of the size of all files which have ever been delivered from the cache.

Note: As some updates will be partially delivered using some kind of delta compression technologies, you should not take this value too seriously.

6.3.5 Status

The cache status will distinguish four different conditions for each object: green, yellow, red and gray.

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6.3.5.1 Green – up to date

The last source checkup for this object was successful. The file size and the time stamp are correct.

6.3.5.2 Yellow – no source

The last source checkup for this object returned an error. The target site was contacted successfully, but the file did not exist.

6.3.5.3 Red – out of date

The last source checkup for this object returned an error. The file exists on the original source, but has a different size or a different timestamp. This file needs an update.

6.3.5.4 Gray - unknown

The last source checkup for this object returned an unknown error. The checkup process was unable to contact the download source.

Note: If all objects in cache will be indicated as unknown, so make sure your Internet connection is up and rerun the source checkup. See chapter 8 at page 25 for more details about a manual source checkup.

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7 Cache maintenance

The button *Maintenance* >> extends the Update Accelerator GUI with the detailed maintenance interface and gives you access to all cached files.

Cache maintenance

Disk usage

Cache directory: `/home/httpd/html/updatecache` Size Used Free Percentage: 7.9G 4.5G 3.1G 60%

all files ... not accessed since: one month marked as: [No source] marked as: [Out of date]

Current files in local cache

Name	Size	Date	Last cache access	Last source checkup
windows6.0-kb936782-x86-express *.cab	41.207	2007-08-07	2007-08-16	2007-08-18
windows6.0-kb936782-x86 *.psf	90.671.431	2007-08-07	2007-08-16	2007-08-18
windows6.0-kb937143-x86-express *.cab	260.596	2007-08-07	2007-08-16	2007-08-18
windows6.0-kb937143-x86 *.psf	61.616.876	2007-08-07	2007-08-16	2007-08-18
windows6.0-kb938123-x86-express *.cab	642.541	2007-08-07	2007-08-16	2007-08-18
windows6.0-kb938123-x86 *.psf	12.641.935	2007-08-07	2007-08-16	2007-08-18
windows6.0-kb938127-x86-express *.cab	23.731	2007-08-07	2007-08-16	2007-08-18
windows6.0-kb938127-x86 *.psf	668.766	2007-08-07	2007-08-16	2007-08-18

Legend: Last cache access Last source checkup Remove from cache

Status: Up to date No source Out of date
 Download Unknown

Source: Adobe Apple Avast Linux
 Microsoft Symantec Trend Micro Other

If the cache contains no objects, a *Local cache is empty* message will be shown instead of the cache contents.

7.1 Disk usage

After a fresh installation, the Update Accelerator cache is empty and will use the directory `/home/httpd/html/updatecache` as a repository to store the cached files.

Explicit warning: For security reasons, you should not modify the absolute cache directory location or even move the cache directory to any other existing partition (e.g. `/var/log/`). If necessary, you should extend the hard disk space instead. For more details about additional partitions, refer to chapter 10 starting at page 27.

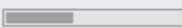
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By default, the cache directory resides on the `/dev/root` partition which also contains files from the IPCop root file system. For this reason a significant disk usage will be shown even though the update cache is still empty:

Cache maintenance

Local cache is empty

Disk usage

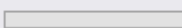
Cache directory	Size	Used	Free	Percentage
[/home/httpd/html/updatecache]	586M	222M	358M	 39%

If you are using a dedicated partition for the cache directory, the disk usage will reflect the cache usage. While the cache is empty, the usage will be about 1% or less:

Cache maintenance

Local cache is empty


Disk usage

Cache directory	Size	Used	Free	Percentage
[/home/httpd/html/updatecache]	7.9G	33M	7.5G	 1%

After caching some files, the usage may look like this:

Cache maintenance

Disk usage

Cache directory	Size	Used	Free	Percentage
[/home/httpd/html/updatecache]	7.9G	4.6G	3.0G	 61%



The current disk usage may also be checked by selecting the *System Status* item from the *Status* menu.

7.2 Purge all files ...

This section gives you the ability to delete files from the update cache.

all files ...

not accessed since

marked as  [No source] marked as  [Out of date]

You can purge files from the cache that will meet the following criteria:

not accessed since <time range>

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This will remove all files from the update cache which have not been accessed from any client since

- one week
- one month (default)
- three months
- six months
- one year

marked as yellow [No source]

This will remove all files from cache where the original source file is missing.

marked as red [Not verified / Out of date]

This will remove all files from cache where the original source file is different.

7.3 Cache contents

After caching some files the update cache may look like this:

Current files in local cache

	Name	Size	Date			
	windows6.0-kb936782-x86-express *.cab	41.207	2007-08-07	2007-08-16	2007-08-18	
	windows6.0-kb936782-x86 *.psf	90.671.431	2007-08-07	2007-08-16	2007-08-18	
	windows6.0-kb937143-x86-express *.cab	260.596	2007-08-07	2007-08-16	2007-08-18	
	windows6.0-kb937143-x86 *.psf	61.616.876	2007-08-07	2007-08-16	2007-08-18	
	windows6.0-kb938123-x86-express *.cab	642.541	2007-08-07	2007-08-16	2007-08-18	
	windows6.0-kb938123-x86 *.psf	12.641.935	2007-08-07	2007-08-16	2007-08-18	
	windows6.0-kb938127-x86-express *.cab	23.731	2007-08-07	2007-08-16	2007-08-18	
	windows6.0-kb938127-x86 *.psf	668.766	2007-08-07	2007-08-16	2007-08-18	

Legend: Last cache access Last source checkup Remove from cache

Status: Up to date No source Out of date
 Download Unknown

Source: Adobe Apple Avast Linux
 Microsoft Symantec Trend Micro Other

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7.4 Local cache database information

Each entry gives you detailed information about the cached file:

Current files in local cache

1	2	3 Name	4 Size	5 Date	6	7	8
		windowsxp-kb887472-x86-enu *.psf	4.611.824	2005-02-07	2008-05-24	2008-05-25	

Legend: Last cache access Last source checkup Remove from cache

Status: Up to date No source Out of date
 Download Unknown

Source: Adobe Apple Avast Linux
 Microsoft Symantec Trend Micro Other

7.4.1 Status [1]

The status indicator will distinguish five different conditions: green, yellow, red, blue and gray. This column will show an indicator for each file.

7.4.1.1 Green: Up to date

	Name	Size	Date			
	ie7-windowsxp-kb933566-x86-enu *.psf	27.358.754	2007-06-05	2007-08-05	2008-05-25	

The cached file matches the original source file.

7.4.1.2 Yellow: No source

	Name	Size	Date			
	netfx3_kb928416_v3.0_x86 *.exe	23.975.280	2007-01-16	2007-07-08	2008-05-25	

The last source checkup for this file returned an error. The target site was contacted successfully, but the file did not exist.

7.4.1.3 Red: Not verified / Out of date

	Name	Size	Date			
	windowsmedia9-kb917734-x86-enu *.exe	2.303.312	2006-06-02	2007-07-08	2008-05-25	

The last source checkup for this file returned an error. The file exists on the original source, but has a different size or a different timestamp. This file needs an update.

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7.4.1.4 Blue: Downloading

Name	Size	Date			
windowsxp-kb936357-x86-express-enu *.cab	102.664	2007-06-29	n/a	n/a	

These files are currently downloaded by the Update Accelerator.

Note: These files are always shown on top of the list.

7.4.1.5 Gray: Unknown

Name	Size	Date			
windowsxp-kb932168-x86-deu *.psf	1.219.978	2007-03-31	2007-08-05	2008-05-25	

The last source checkup for this file returned an unknown error. The checkup process was unable to contact the download source.

7.4.2 Source [2]

This icon shows the download source.

7.4.3 Name [3]

This column shows the name of the cached file. Long filenames may be shortened to minimize the table width.

Note: The full name including the cache path will be shown when you move the mouse cursor over the filename:

Name	Size	Date			
netfx3-kb928416-v3.0-x86-enu *.exe	11.853.632	2007-01-27	2007-07-08	2008-05-25	
netfx30-kb932471-x86-enu *.exe	11.853.632	2007-01-27	2007-07-08	2008-05-25	
netfx3 kb928416 v3.0 x86 *.exe	23.975.280	2007-01-16	2007-07-08	2008-05-25	

Note: You can simply download the cached file to your computer by clicking the file name.

7.4.4 Size [4]

This column shows the file size in bytes.

7.4.5 Date [5]

This is the creation date of the original file.

Note: This is the original timestamp and not the date when this file was added to the cache.

7.4.6 Last cache access [6]

This is the last date when this file was requested by a client and delivered from the cache.

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7.4.7 Last source checkup [7]

This is the last date when the cached file was checked against the original source file.

7.4.8 Remove from cache [8]

The file in the current line will be deleted from the update cache by clicking the corresponding trashcan icon.

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8 Manual source checkup

In addition to the automatic source checkup (see chapter 4.3) the admin may run a manual source checkup.

8.1 Read-only source checkup

The option *Replace outdated files during checkup* (see chapter 4.3.3) must be disabled.

Login as root on the console or via SSH. Run the command

```
/var/ipcop/updatexlrator/bin/checkup
```

Now all cached files will be checked against the original source file:

```
/home/httpd/html/updatecache/microsoft/073fed2a-7aad-cbbc-ac56-f5c8dfc3125e/windows-kb890830-v1.32-delta_77b56306a1b36abb6730b94201bc9ae40ffdb465.exe
HTTP result: 200 OK
Source size: 957912
Cached size: 957912
Source time: 1186510849
Cached time: 1186510849
Status: Ok
```

8.2 Read-write source checkup

The option *Replace outdated files during checkup* (see chapter 4.3.3) must be enabled.

Login as root on the console or via SSH. Run the command

```
/var/ipcop/updatexlrator/bin/checkup
```

Now all cached files will be checked against the original source file. If necessary, outdated files will be replaced by the newer source file:

```
/home/httpd/html/updatecache/microsoft/669a8d45-dac4-dc8b-1ea6-2f09228c64d9/windows6.0-kb933579-x86-express_3fc2542f369e53aa1ac22729197e2242791a4acd.cab
HTTP result: 200 OK
Source size: 27103
Cached size: 27103
Source time: 1183152306
Cached time: 1177847100
Status: Outdated
Retrieving file from source: 27103 bytes
Download finished with code: 0
```

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9 Offline cache preloading

You can copy the update cache from one IPCop to another. This could be useful to prepare machines for branch offices with a low bandwidth Internet connection.

To copy all files in one pass directly from one IPCop to another, you can use the command line tool `scp`.

Note: SCP requires a SSH client binary installed on the source IPCop. You will find the SSH client at Tom Eichstaedt's IPCop binary add-on website: <http://www.ipadd.de/binary.html>

Note: SSH access must be enabled at the target IPCop.

Steps to duplicate the update cache: *(For this example we are assuming the target IPCop uses the IP address 192.168.1.2)*

Step 1: Install the Update Accelerator add-on on the target system.

Step 2: Log in to the source IPCop and copy the directory `/home/httpd/html/updatecache` including all files and subdirectories to the target IPCop.

To do this, run the command:

```
scp -P 222 -rp /home/httpd/html/updatecache 192.168.1.2:/home/httpd/html
```

```
root@ipcop:~ # scp -P 222 -rp /home/httpd/html/updatecache 192.168.1.2:/home/httpd/html/
The authenticity of host '[192.168.1.2]:222 ([192.168.1.2]:222)' can't be established.
RSA key fingerprint is 14:3e:12:a2:71:07:be:12:68:7a:e7:d6:4f:66:1a:63.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '[192.168.1.2]:222' (RSA) to the list of known hosts.
root@192.168.1.2's password: 
```

Confirm that you will trust the target system by typing `yes` and enter the root password for the target system. The copy process will start now.

Step 3: Run the install script once more on the target system to correct file permissions and ownerships.

Now you are done, the target system has exactly the same update cache as the source system.

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10 Extending hard disk space for the cache

The update cache will use the directory `/home/httpd/html/updatecache` to store the cached files on the local hard disk. This directory is located on the `/dev/root` partition, which in some cases may have not enough space left for all requested files to be added to the cache.

There are different options to extend the hard disk space for the update cache, with different advantages and disadvantages.

Adding a second hard disk

- The cache will not be affected when performing a new, fresh install of IPCop.
- Requires additional hardware.

Modifying the existing partitions

- The cache will be deleted when performing a new, fresh install of IPCop.
- Doesn't require additional hardware.
- Resizing existing partitions is not recommended for unexperienced users.
- It's highly recommended to create a full backup before performing this operation.

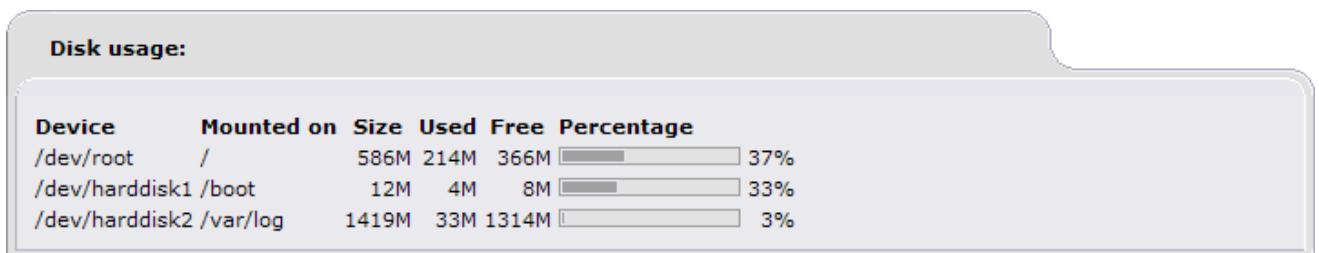
10.1 Adding a second hard disk

This example will explain how to add a second hard disk to your IPCop. For this example, we're assuming the built-in hard disk is about 2GB and we want add a second, dedicated 10GB hard disk drive for the cache.

Step 1: Install the hard disk drive. For this example, we will configure this hard disk as the second hard disk connected to the primary IDE controller (device `/dev/hdb` or physical drive D:).

Step 2: Check the current hard disk configuration:

IPCop Web GUI: (Status / System Status / Disk Usage)



Command shell:

```
root@ipcop:~ # df -h
Filesystem      Size  Used Avail Use% Mounted on
rootfs          586M  214M  366M  37% /
/dev/root       586M  214M  366M  37% /
/dev/harddisk1  12M   3.8M  7.7M  33% /boot
/dev/harddisk2 1.4G   33M  1.3G   3% /var/log
root@ipcop:~ #
```

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Step 3: Create a new partition. Run the command

```
fdisk /dev/hdb
```

to create a new primary partition on the second hard disk:

```
root@ipcop:~ # fdisk /dev/hdb

The number of cylinders for this disk is set to 1305.
There is nothing wrong with that, but this is larger than 1024,
and could in certain setups cause problems with:
1) software that runs at boot time (e.g., old versions of LILO)
2) booting and partitioning software from other OSs
   (e.g., DOS FDISK, OS/2 FDISK)

Command (m for help): n
Command action
   e   extended
   p   primary partition (1-4)
p
Partition number (1-4): 1
First cylinder (1-1305, default 1): 
Using default value 1
Last cylinder or +size or +sizeM or +sizeK (1-1305, default 1305): 
Using default value 1305

Command (m for help): w
The partition table has been altered!

Calling ioctl() to re-read partition table.
Syncing disks.
root@ipcop:~ #
```

This will use the entire hard disk for the new partition.

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Step 4: Once the partition has been created, it needs to be formatted using the ext3 filesystem.

Run the command

```
mkfs.ext3 /dev/hdb1
```

to format the new partition on the second hard disk:

```
root@ipcop:~ # mkfs.ext3 /dev/hdb1
mke2fs 1.35 (28-Feb-2004)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
1310720 inodes, 2620595 blocks
131029 blocks (5.00%) reserved for the super user
First data block=0
80 block groups
32768 blocks per group, 32768 fragments per group
16384 inodes per group
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632

Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

This filesystem will be automatically checked every 26 mounts or
180 days, whichever comes first.  Use tune2fs -c or -i to override.
root@ipcop:~ #
```

Step 5: Now you'll have to edit the file `/etc/fstab` for mounting the partition on every system boot.

Add the line

```
/dev/hdb1 /home/httpd/html/updatecache ext3 nodev,nosuid,noatime 1 2
```

to the end of the file `/etc/fstab`

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Step 6: Mount the new partition and check the new hard disk configuration.

Run the command

```
mount /dev/hdb1
```

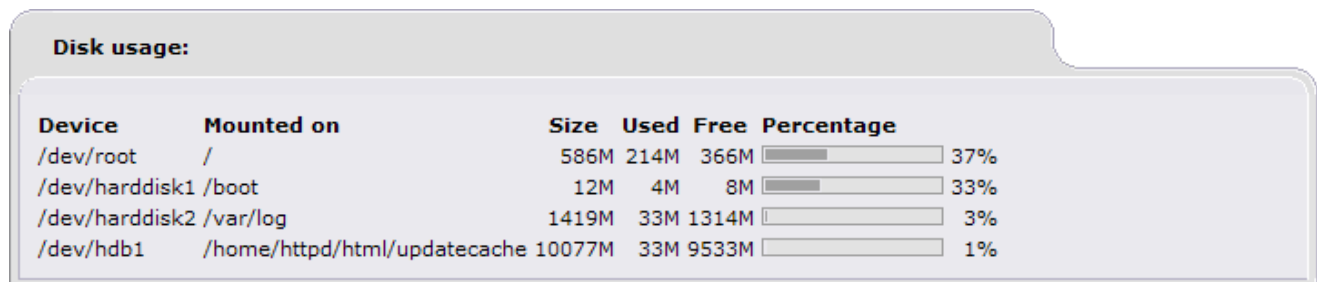
to mount the new partition and check whether it has been mounted correctly.

```
root@ipcop:~ # mount /dev/hdb1
root@ipcop:~ # df -h
Filesystem      Size  Used Avail Use% Mounted on
rootfs          586M  214M  366M  37% /
/dev/root       586M  214M  366M  37% /
/dev/harddisk1  12M   3.8M  7.7M  33% /boot
/dev/harddisk2  1.4G   33M  1.3G   3% /var/log
/dev/hdb1       9.9G   33M  9.4G   1% /home/httpd/html/updatecache
root@ipcop:~ #
```

You can do this by running the command

```
df -h
```

as shown above or by the IPCop web GUI:



Step 7: Run the Update Accelerator installation script once again to prepare the update cache directory (see chapter 3.3 step 5).

Congratulations, now you have additional 10GB hard disk space for your update cache!

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10.2 Modifying the existing partitions

You can use various third party software products to modify the existing partitions, as IPCop doesn't allow you to select the partition size during setup.

This software can be used to resize the partitions and create a new partition on your existing hard disk:

- AddPartition tool for IPCop by Simon Schmitz: http://sischmitz.de/addpart_en.html
-
- Symantec Partition Magic 8.0: <http://www.symantec.com> (formerly known as PowerQuest)

Note: These tools will require at least intermediate system skills and are not recommended for unexperienced users. Please refer to the respective product documentation for more details.