MUTE

Malware URL Tracking and Exchange

:-x

Costin Raiu – Kaspersky

Jong Purisima – GFI

Nick Bilogorskiy – Facebook

Philipp Wolf – Avira

Tony Lee – Microsoft

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Agenda

- Non-technical stuff
- Technical stuff
- Followed by non-technical stuff
- Live demo = 10 min of your lunch break

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History

vb 2009 GENEVA

Hey, how about URL Sharing?

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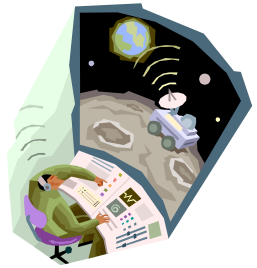
Charter



- Mission:
  - is to minimize the exposure of end users from computing threats through timely tracking and exchanging of URLs (malicious, grey & clean).
- Objectives:
  - Share quality URLs faster
  - Simplify the exchange process
  - Combine all data for better reporting

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Organization

- Communication Medium
  - Discussion List
  - Exchange List (or system)
  - Board List
- Members
  - 17 members, 11 companies
- Advisory Board
  - Founding members

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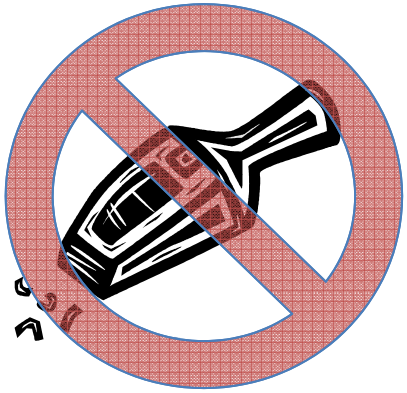
Sharing Principles



- NO Leechers!
- Main metrics:
  - Share often (Frequency)
  - Share only the “good” stuff (Quality)
  - Share as many as you can (Quantity)
- No re-share
- No re-sell

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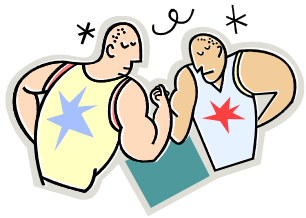
URL Sharing Challenges



- URL Time-To-Live (TTL) is short and critical.
- Costly to set-up exchange
  - Set-up outgoing servers
  - Different formats for incoming shares

    (Email, FTP, HTTPS, hxxp, h__p, etc)
  - Set-up incoming shares' access and parsers
- Managing new relationships (!=File-based shares)

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Files vs URLs

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Why Centralization?

- All the information in one place
  - Easy one-time fetch
  - Single interface
  - Larger set of statistics
- No need for a participant to setup and host a server.
- Why not?

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Centralization Challenges

Non-Technical	Technical
Who will build and maintain the system?	Requirements and Features
Who will host the system?	Architecture and Infrastructure
Who will pay for Server/System/Bandwidth Costs?	Development Language to use
“I don’t share with everyone”	Development/Maintenance effort
“I share differently depending on the sharing partner”	Testing
“No one should have all that control”	Release Lifecycle

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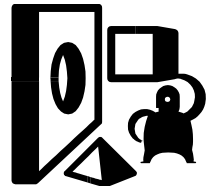
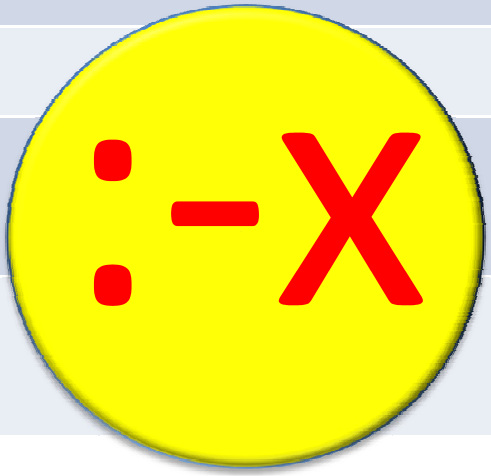
Addressing the Non-Technical



Non-Technical	Solution
Who will build and maintain the system?	Shared by each member
Who will host the system?	3rd Party or neutral group
Who will pay for Server/System/Bandwidth Costs?	Shared by each member
“I don’t share with everyone”	
“I share differently depending on the sharing partner”	
“No one should have all that control”	



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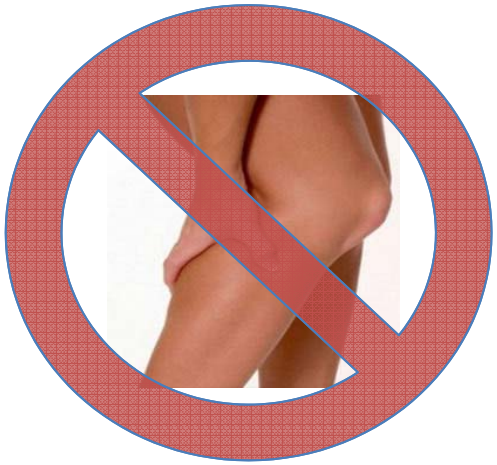
Solve the Technical issues first 

CARO2010 HELSINKI



- Avira offered their Web Dev guys for dev
- Use Open Source so can still be hosted and maintained by other members in the future, if necessary.

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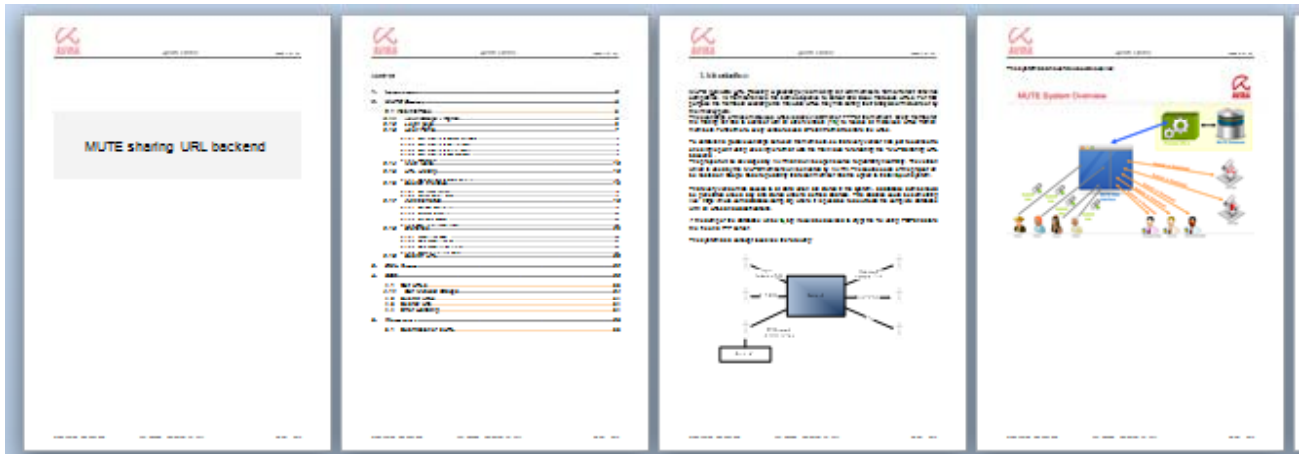
Requirements



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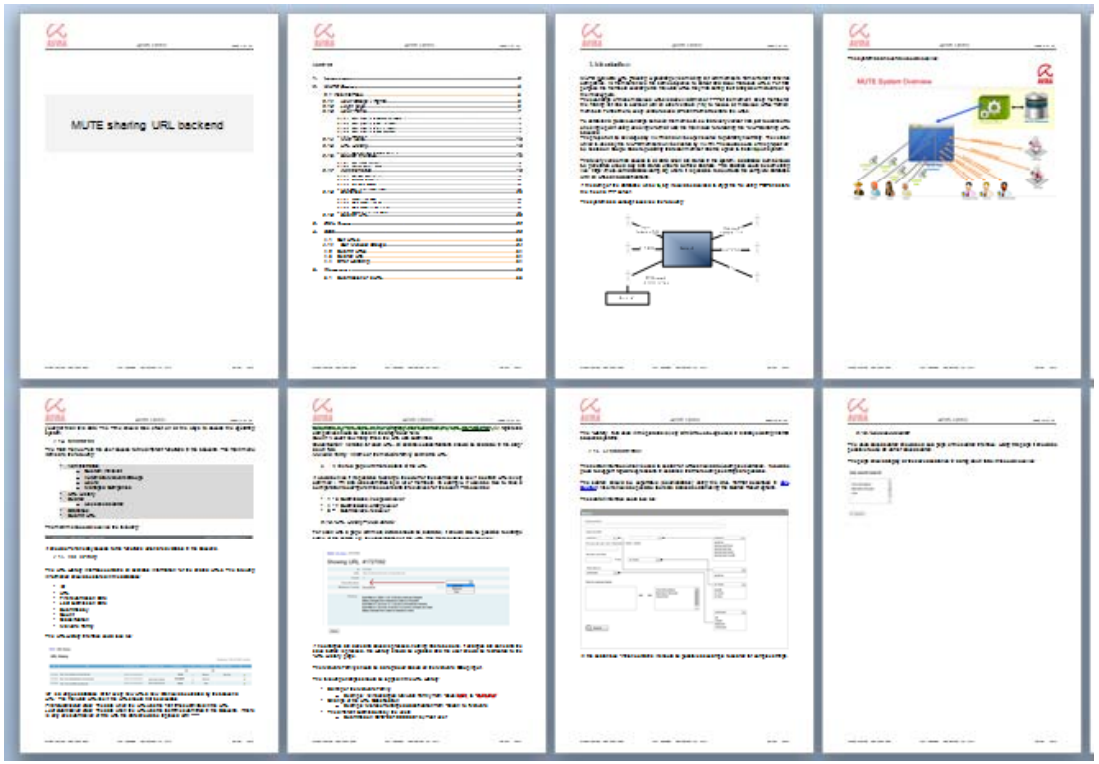
Requirements V0.2



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+

KASPERSKY lab

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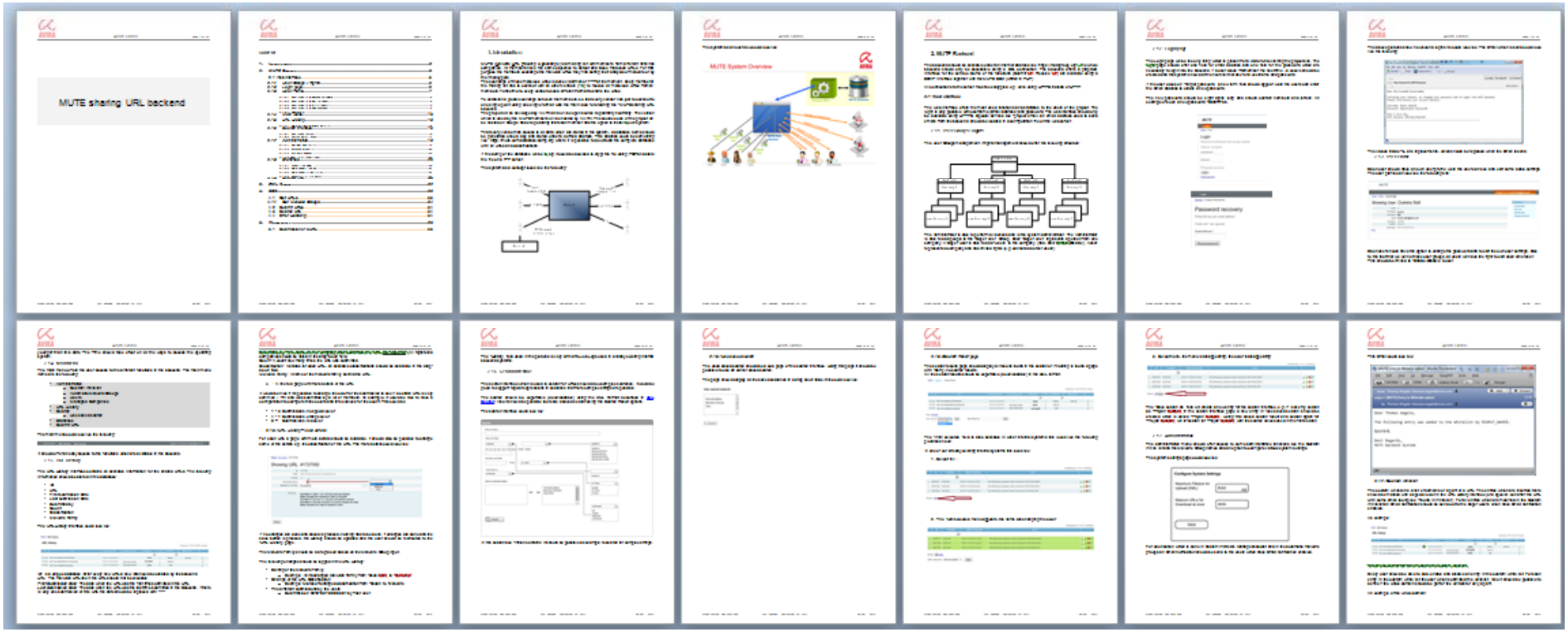
Requirements V0.7



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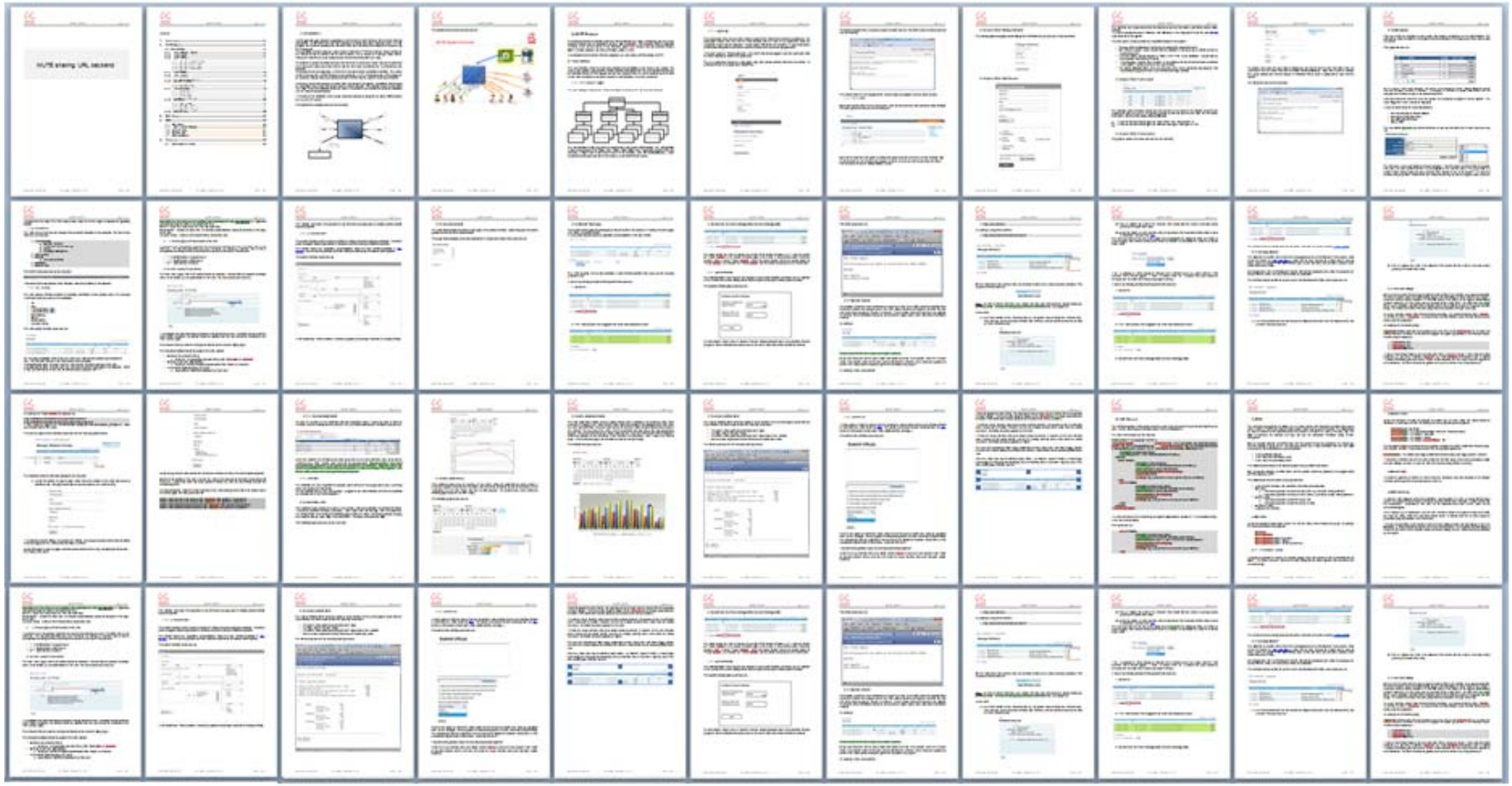
Requirements final(ly)



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Development

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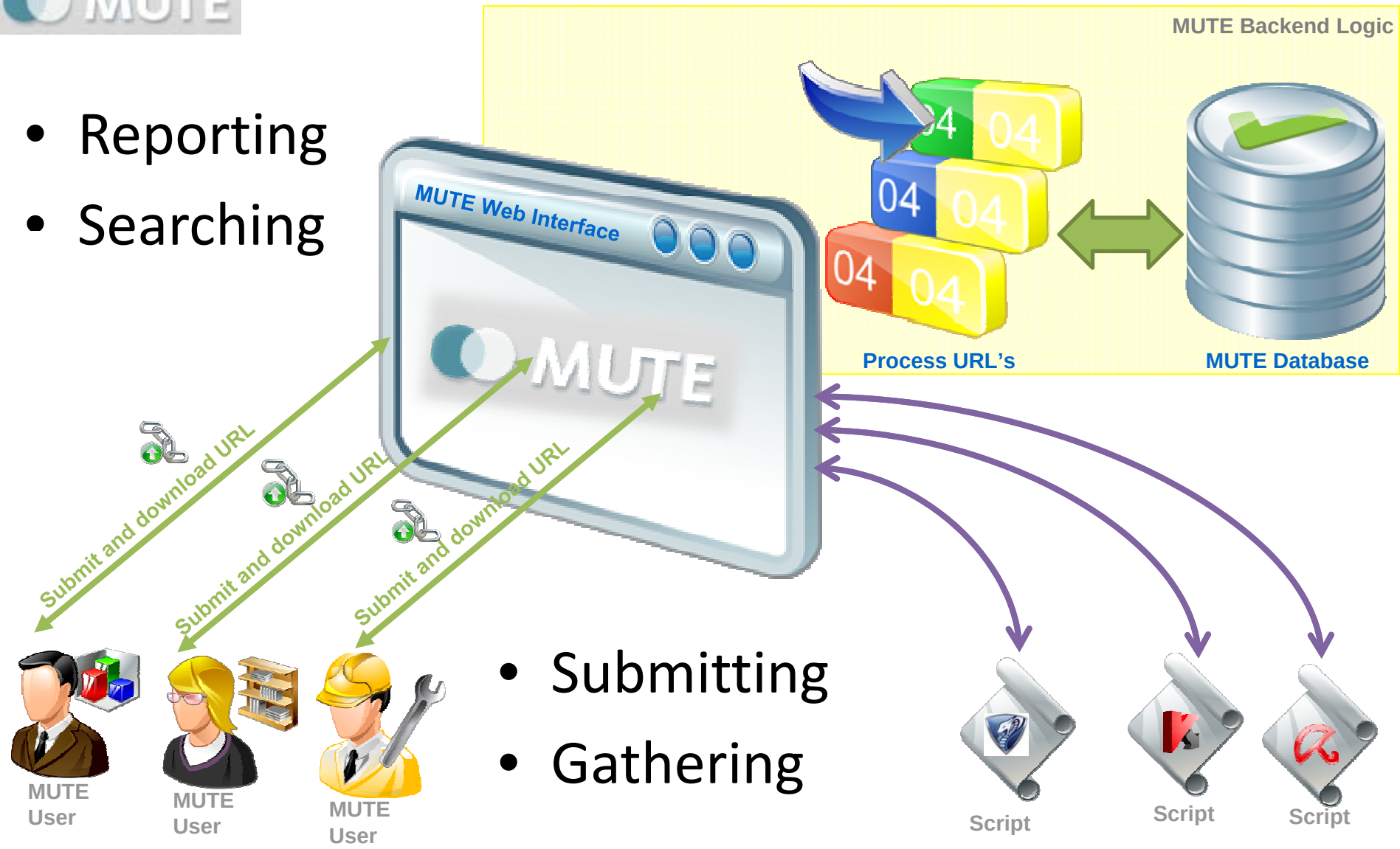
- Reporting
- Searching



- Submitting
- Gathering

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Submit URLs: using web interface

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Submit URLs | Search | Statistics | Administration | My Profile | Logout

Submit URL(s)

New Submission | My Submissions | All Submissions

Enter URL(s)

```
http://tendeki.tk/c99.txt??
http://bjminmao.com/images/facebook-pic000934519.exe
http://pastebin.com/raw.php?i=6CK5RBQW
http://hackforums.ru/bot.exe
http://tendeki.tk/rfiid.txt
http://tendeki.tk/sprd.txt
http://which-solar.co.uk/wp-content/themes/twentyten/izle.exe
```

Maximum number of lines is 50.000

Or upload a file with URLs

Durchsuchen...

Maximum file size is 8M. Maximum number of lines is 50.000

Classification

Malware

Malware Family

AUTO

Submit

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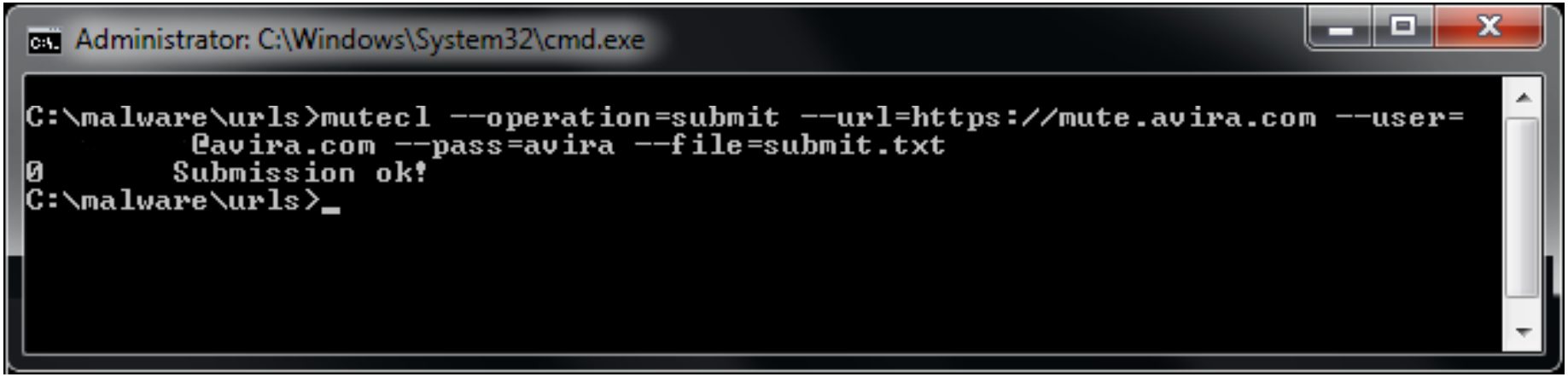
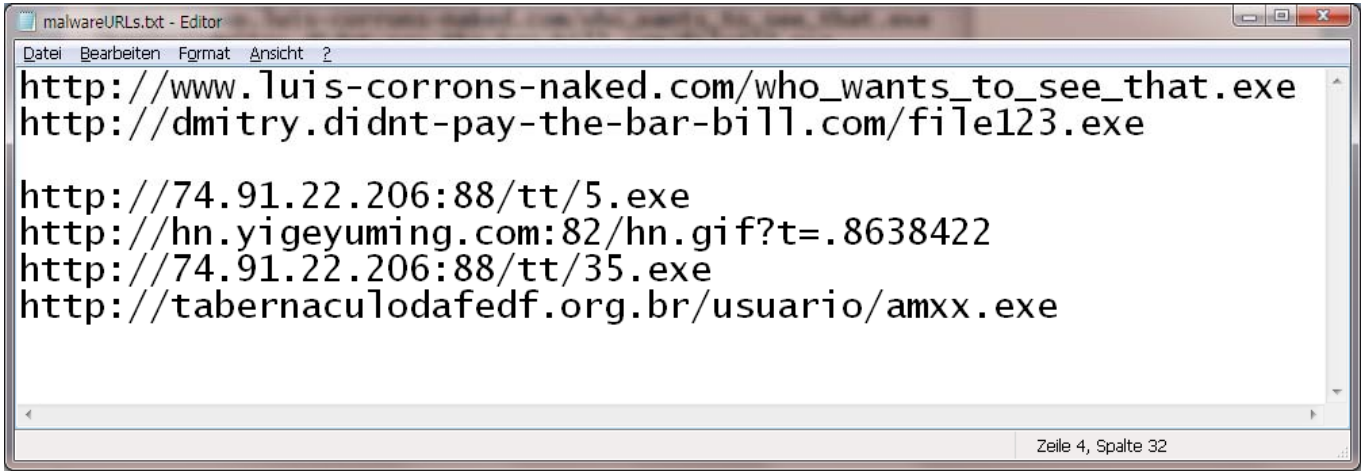
Submit URLs: using API





C client

API available for all languages

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Review your submission(s)

Showing URL Submission #47

New Submission | My Submissions | All Submissions

Submission Details

Submitted By	
Status	Done
Filename	form_input
Filesize	25.44 KB
Time Submitted	2011-07-07 09:29:45
Time Processed	2011-07-07 09:29:47 (in 1.7024s)
Classification	malware
Malware Family	automatic

⇐ Back to list

Submission Log

Displaying 21-40 of 509 result(s).

Id	Url	Status	New
279643	http://vwyjkeaqcfhdj.cz.cc/games/2fdp.php?f=43	ok	✔
279644	http://beautyxvidseff.tk/new/animal-porn-movie.avi.exe	ok	✔
279645	http://freesexpornonew.info/7/video/porno-rolik7.avi.exe	ok	-
279646	http://beautyxvidseff.tk/new/dog-doing-girl.avi.exe	ok	-
279647	http://bestdvddownload.com/New-Video-Addon.40563.exe	ok	✔
279648	http://bestdvddownload.com /SOTI.Pocket.Controller.Pro.6.0...	ok	✔
279649	http://eileen-shark-1.co.tv/counter1/574a353789f /lastrger...	ok	-
279650	http://bghhdjjedfwdsfg.cz.cc /forum.php?tp=ba2f32cb3a6cd876	ok	✔
279651	http://freesexpornonew.info/1/video/porno-rolik1.avi.exe	ok	-
------	http://freesexpornonew.info/2/video/porno-		

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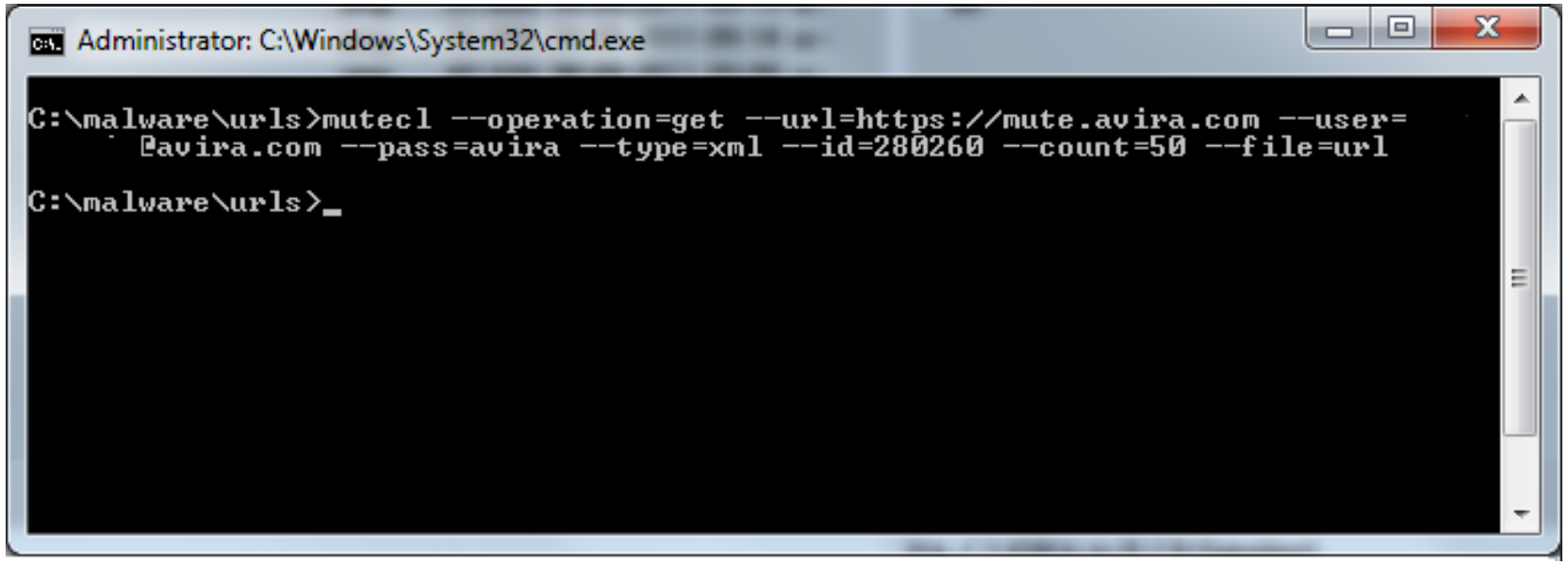
Download URLs: using API



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```
<?xml version="1.0" encoding="UTF-8"?>
- <urls>
  - <url id="3494">
      <company>Avira</company>
      <last_time>2011-04-27 15:45:33</last_time>
      <count>1</count>
      <classification/>
      <whitelisted>0</whitelisted>
      <malwarefamily/>
      <urlstring>http://nvranch-alpacas.com/.yf4wq/?getexe=d.exe</urlstring>
    </url>
  - <url id="4337">
      <company>Avira</company>
      <last_time>2011-04-27 15:45:36</last_time>
      <count>1</count>
      <classification/>
      <whitelisted>0</whitelisted>
      <malwarefamily/>
      <urlstring>http://www.afadjapo.org/.8u4yf52/?getexe=aolblog.exe</urlstring>
    </url>
```

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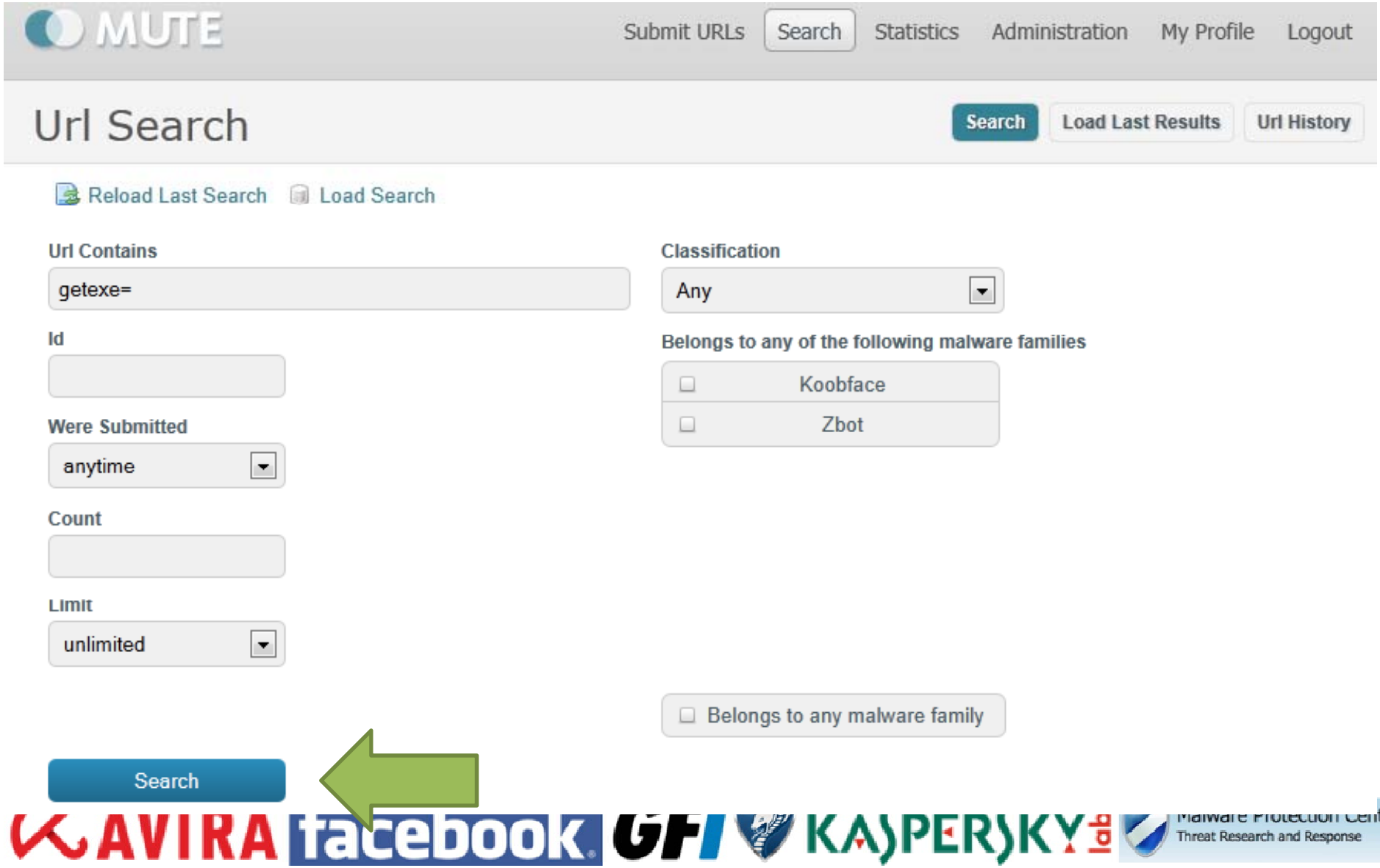
Search for URLs



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Search for URLs

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Submit URLs | Search | Statistics | Administration | My Profile | Logout

Search results:

Search | Load Last Results | Url History

Back to search | New search | Save search

Displaying 1-5 of 953 result(s). 5 items

Id	Url	Last Submitted	Submitted by	Count	Classification	Malware Family
3494	http://nvranch-alpacas.com/.yf4wq /?getexe=d.exe	2011-04-27 15:45:33	Avira	1		
4337	http://www.afadjapo.org/.8u4yf52 /?getexe=aolblog.exe	2011-04-27 15:45:36	Avira	1		
5831	http://www.longting.nl/.rqtsoj1 /?getexe=v2captcha21.exe	2011-04-27 15:45:41	Avira	1		
5832	http://vakre-hjem.com/.t2ac /?getexe=loader.exe	2011-04-27 15:45:41	Avira	1		
5833	http://www.longting.nl/.rqtsoj1 /?getexe=manyblogs.exe	2011-04-27 15:45:41	Avira	1		

Select: all none Selected 5 across page. Click here to select all 953! Go to page: < Previous 1 2 3 4 5 6 7 8 9 10 Next >

With selected: choose action Go!

choose action
download xml
download csv

download your search result in XML

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View History for each URL

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Submit URLs | Search | Statistics | Administration | My Profile | Logout

Showing URL #153172

Edit URL classification and malware family

URL Details

Id	153172
Url	hxxp://symposium.israimplant.com /.sys.php?getexe=fcblog.3.exe
Md5	3187595EBC9CF721F2F77195C128B068
First Submitted	2011-09-29 15:15:00
Last Submitted	2011-09-29 15:15:00
Count	1
Classification	Malware
Malware Family	*Koobface*
Submitted by	Avira

History

2011-09-29 16:28:27 Updated by Avira: added "malware" Classification, added "Koobface" Malware Family

2011-09-29 16:28:22 Updated by Avira: removed Classification

2011-09-29 16:28:19 Updated by Avira: Classification from "malware" to "clean", removed Malware Family

2011-09-29 16:28:16 Updated by Avira: Malware Family from "Koobface" to "Zbot"

2011-09-29 16:28:12 Updated by Avira: added "malware" Classification, added "Koobface" Malware Family

2011-09-29 15:15:00 Submitted by Avira

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Whitelist

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Submit URLs | Search | Statistics | Administration | My Profile | Logout

Manage Whitelist Entries

Users | Companies | Lists | Malware Families

Switch to Blacklist | Add a new entry

Displaying 1-3 of 3 result(s). 25 items

Id	Url	Comment
2	avira.com/	AVIRA Antivirus
4	microsoft.com/	Microsoft
5	google.de/	Google Search Engine

Select: all none

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Whitelist

```
<?xml version="1.0" encoding="UTF-8"?>
<urls>
    <url id="5">
        <company>Avira</company>
        <last_time>2011-04-27 13:02:46</last_time>
        <count>1</count>
        <classification/>
        <whitelisted>1</whitelisted>
        <malwarefamily/>
        <urlstring>http://www.avira.com</urlstring>
    </url>
</urls>
```

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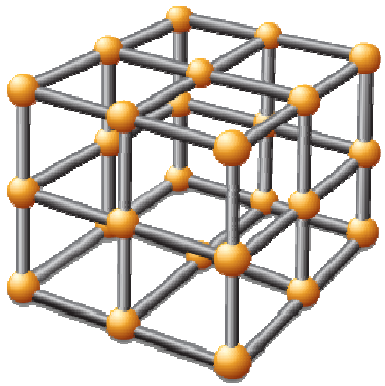
Malware Families



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Submit URLs | Search | Statistics | Administration | My Profile | Logout

Manage Malware Families

Users | Companies | Lists | Malware Families

RegEx

Add a new malware family

Displaying 1-2 of 2 result(s).

Id	Family Name	Automatic	URL Pattern	Enabled
1	Koobface	✔	/.sys/?getexe=	✔
2	Zbot	✔	.bot.exe	✔

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```
<?xml version="1.0" encoding="UTF-8"?>
- <urls>
  - <url id="4337">
      <company>Avira</company>
      <last_time>2011-04-27 15:45:36</last_time>
      <count>1</count>
      <classification/>
      <whitelisted>0</whitelisted>
      <malwarefamily/>
      <urlstring>http://www.afadjapo.org/.8u4yf52/?getexe=aolblog.exe</urlstring>
    </url>
  - <url id="5831">
      <company>Avira</company>
      <last_time>2011-04-27 15:45:41</last_time>
      <count>1</count>
      <classification/>
      <whitelisted>0</whitelisted>
      <malwarefamily>Koobface</malwarefamily>
      <urlstring>http://www.longting.nl/.rqtsoj1/?getexe=v2captcha21.exe</urlstring>
    </url>
</urls>
```

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Statistics

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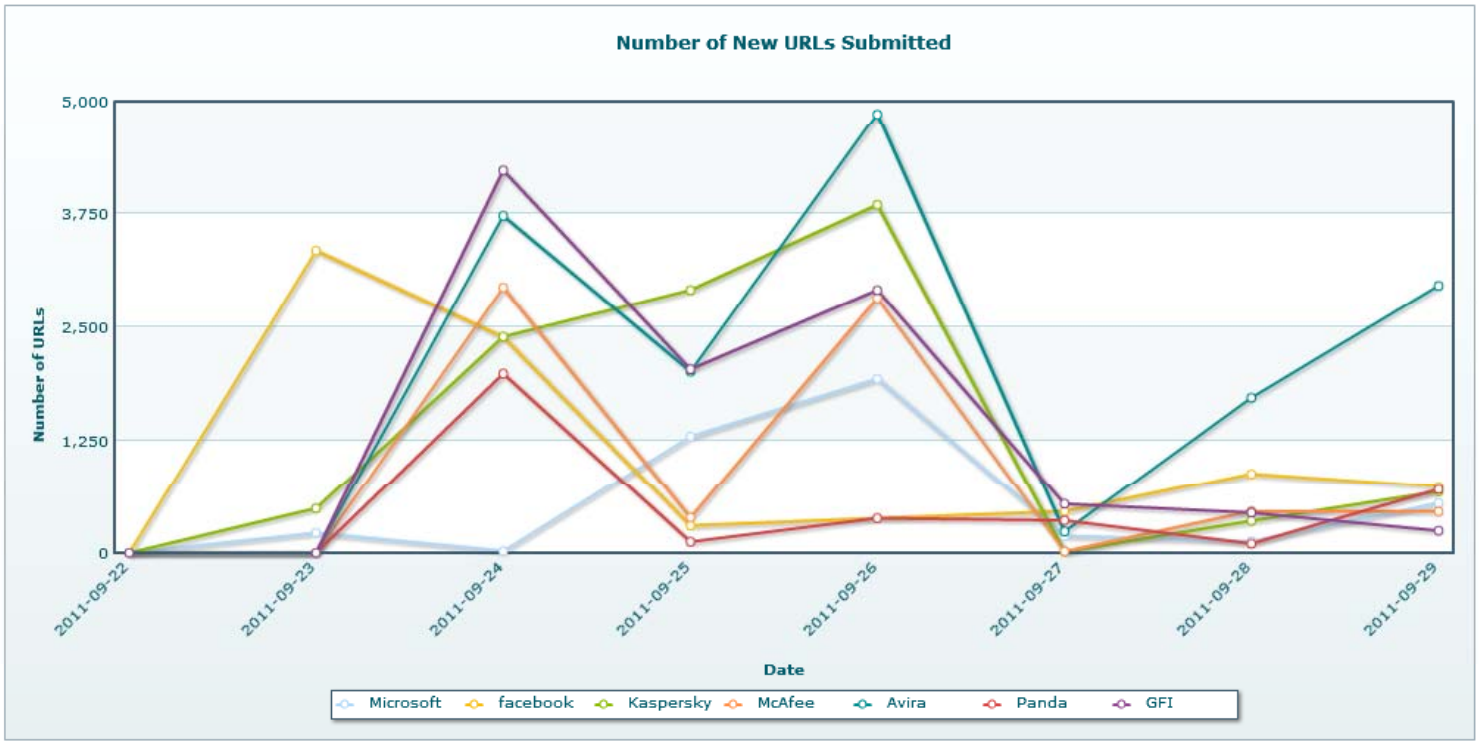
Submit URLs | Search | Statistics | Administration | My Profile | Logout

Url Statistics

Statistic Type: New Urls Per Company | **Group By**: Day | **Filter Providers**: all | **Start Date**: 2011-09-22 | **End Date**: 2011-09-29 | Generate

yesterday last 7 days last 30 days



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Future Considerations

- Mute System
  - Auto Monitoring – kicks out bad users.
  - Get out of Beta – Launching MUTE
- Organization
  - Prepare for a bigger membership
  - Board needs to be refreshed regularly

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Questions?

Malware URL Tracking and Exchange

One Beer – One Answer

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END

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Backup-Memberships

- Founders as initial members
- Added a few more for the discussion list
- Individual Membership
- Affiliations can be declared
- Must be nominated by a member
- Member nomination, Zero ‘NO’ vote to get in
- Expenses are shared by all members equally

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