

SEC 431 – Module 4 Assignment

Penetration Testing & Incident Response

Joshua Farias

Assignment Overview:

Target: **rwu.edu**

Conduct passive reconnaissance using theHarvester and Maltego.

Objectives:

1. Run 3 unique queries against the target using theHarvester
2. Select 5 elements resulting from theHarvester query to create a Maltego graph. The elements on this graph should show several Transformations. Tip: choose elements such as IP addresses and/or domain names that transform to useful information.
3. Write an executive summary on what you discovered. Please include a copy of the result from theHarvester query and Maltego graph in your report.
4. Determine what company RWU uses for its Internet Service Provider (ISP).
5. Determine what company RWU uses for a Learning Management System (LMS) - i.e. Bridges.

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Executive Summary

This report includes findings from theHarvester and Maltego after conducting passive reconnaissance on rwu.edu and affiliated subdomains and services. The passive reconnaissance assessment was conducted during the week of September 17th. All queries conducted using theHarvester were performed on the 19th through the 26th. All transformations on findings using Maltego were performed on the 21st through the 26th. A final report was completed on the 26th. Below is a summary of the top findings.

Passive reconnaissance conducted using theHarvester and Maltego determined that the company Roger Williams University uses for their learning management system (LMS) is Longsight. According to their website Longsight Incorporated hosts and provides support for the open-source learning management software Sakai within the Amazon cloud. The subdomain that Roger Williams University uses to host their LMS is bridges.rwu.edu, which has the following IP address: 54.88.75.202. Using the WhoIS database within Maltego to gather information regarding the IP address: 54.88.75.202, it was discovered that it belonged to Amazon which coincides with the information provided by Longsight's website and the findings.

Additional information provided by Maltego and theHarvester determined that Roger Williams University also uses at least three different internet service providers being Amazon, CNEHS, and LiquidWeb with several public IP ranges dedicated to differing services and subdomains relating to rwu.edu.

theHarvester Query 1:

theHarvester -d rwu.edu -l 50 -b ALL --shodan

Query Parameter and Options:

- [-d]: specify the domain
- [-l 50]: limit the number of results
- [-b ALL] specifies to use all open-source search engines
- --shodan: uses Shodan search

Results:

Emails found:

```
[*] Emails found: 4
-----
admit@rwu.edu
mediatech@rwu.edu
orientation@rwu.edu
username@rwu.edu
```

ASNs found:

```
[*] ASNS found: 3
-----
AS14618
AS16509
AS32244
```

Hosts found:

```
[*] Hosts found: 635
-----
*.rwu.edu
0-ailalink.aila.org.lawlib.rwu.edu
0-ailalink.aila.org.lawlib.rwu.edu:rwul.iii.com
0-ailalink.aila.org.lawlib.rwu.edu:rwul.iii.com.
0-almanacofthefederaljudiciary.com.lawlib.rwu.edu
0-almanacofthefederaljudiciary.com.lawlib.rwu.edu:rwul.iii.com
0-almanacofthefederaljudiciary.com.lawlib.rwu.edu:rwul.iii.com.
0-antitrust.bna.com.lawlib.rwu.edu
0-antitrust.bna.com.lawlib.rwu.edu:rwul.iii.com
0-antitrust.bna.com.lawlib.rwu.edu:rwul.iii.com.
0-apps.fastcase.com.lawlib.rwu.edu
0-apps.fastcase.com.lawlib.rwu.edu:rwul.iii.com
0-apps.fastcase.com.lawlib.rwu.edu:rwul.iii.com.
0-bankruptcylaw.bna.com.lawlib.rwu.edu
0-bankruptcylaw.bna.com.lawlib.rwu.edu:rwul.iii.com
0-bankruptcylaw.bna.com.lawlib.rwu.edu:rwul.iii.com.
0-checkpoint.riag.com.lawlib.rwu.edu
```

theHarvester Query 2:

`theHarvester -d bridges.rwu.edu -l 50 -b ALL --shodan`

Query Parameter and Options:

- [-d]: specify the domain
- [-l]: limit the number of results
- [-b] specifies search engines to be used
- --shodan: uses Shodan search

Results:

This query was used to limit the results to the subdomain bridges.rwu.edu to get information that is more specified towards bridges.rwu.edu.

The query discovered that the IP address associated with bridges.rwu.edu is 54.88.75.202

```
[*] IPs found: 1
54.88.75.202
```

Further results under hosts found that the subdomain bridges.rwu.edu is associated with various Amazon Web Services by Longsight such as Karma and nginxplus.

```
bridges.rwu.edu
bridges.rwu.edu:karma.aws.longsight.com
bridges.rwu.edu:nginxplus.aws.longsight.com
bridges.rwu.edu:rwu-prod.longsight.com
bridges.rwu.edu:rwu-prod.longsight.com.
bridges.rwu.edu:solid.aws.longsight.com
```

theHarvester Query 3:

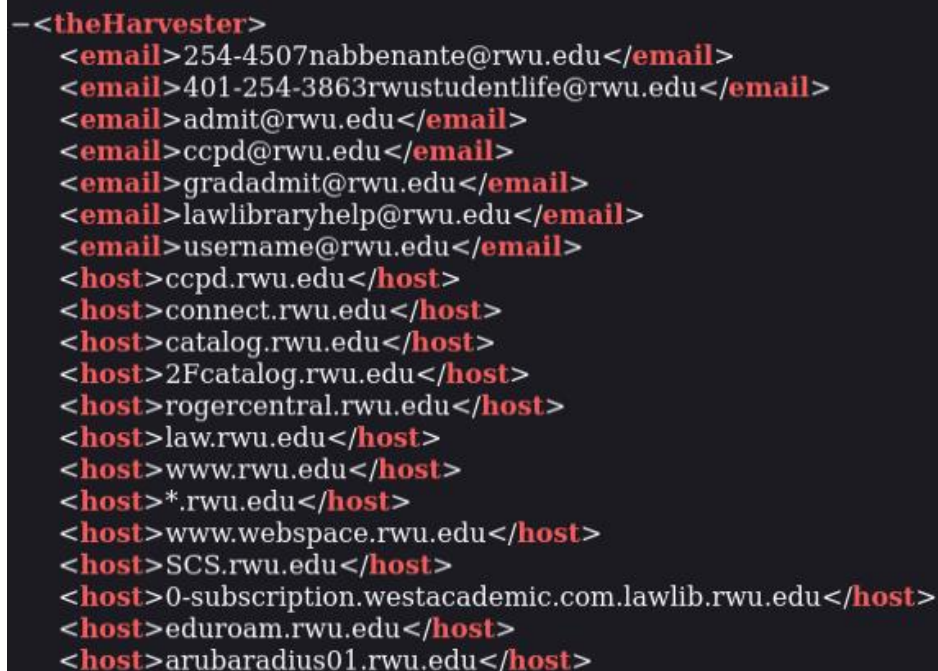
theHarvester -d rwu.edu -l 100 -b all --shodan -f results.html

Query Parameter and Options:

- [-d]: specify the domain
- [-l]: limit the number of results
- [-b]: specifies search engines to be used
- --shodan: uses shodan search
- [-f]: exports results into specified filename

Results:

I increased the limit from 50 to 100 with this theHarvester query and exported the results into an XML file. Below is a screenshot showing some of the results that were saved within the XML file.

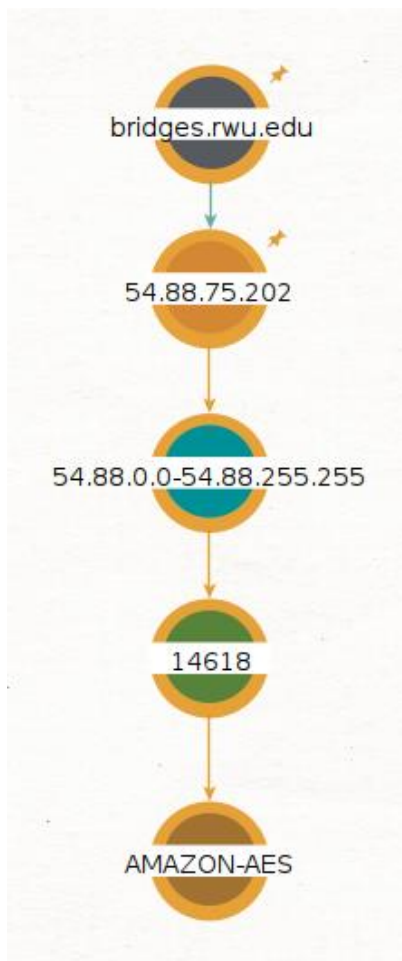


```
-<theHarvester>
  <email>254-4507nabbenante@rwu.edu</email>
  <email>401-254-3863rwustudentlife@rwu.edu</email>
  <email>admit@rwu.edu</email>
  <email>ccpd@rwu.edu</email>
  <email>gradadmit@rwu.edu</email>
  <email>lawlibraryhelp@rwu.edu</email>
  <email>username@rwu.edu</email>
  <host>ccpd.rwu.edu</host>
  <host>connect.rwu.edu</host>
  <host>catalog.rwu.edu</host>
  <host>2Fcatalog.rwu.edu</host>
  <host>rogercentral.rwu.edu</host>
  <host>law.rwu.edu</host>
  <host>www.rwu.edu</host>
  <host>*.rwu.edu</host>
  <host>www.webspace.rwu.edu</host>
  <host>SCS.rwu.edu</host>
  <host>0-subscription.westacademic.com.lawlib.rwu.edu</host>
  <host>eduroam.rwu.edu</host>
  <host>arubaradius01.rwu.edu</host>
```

Maltego Transformation 1:

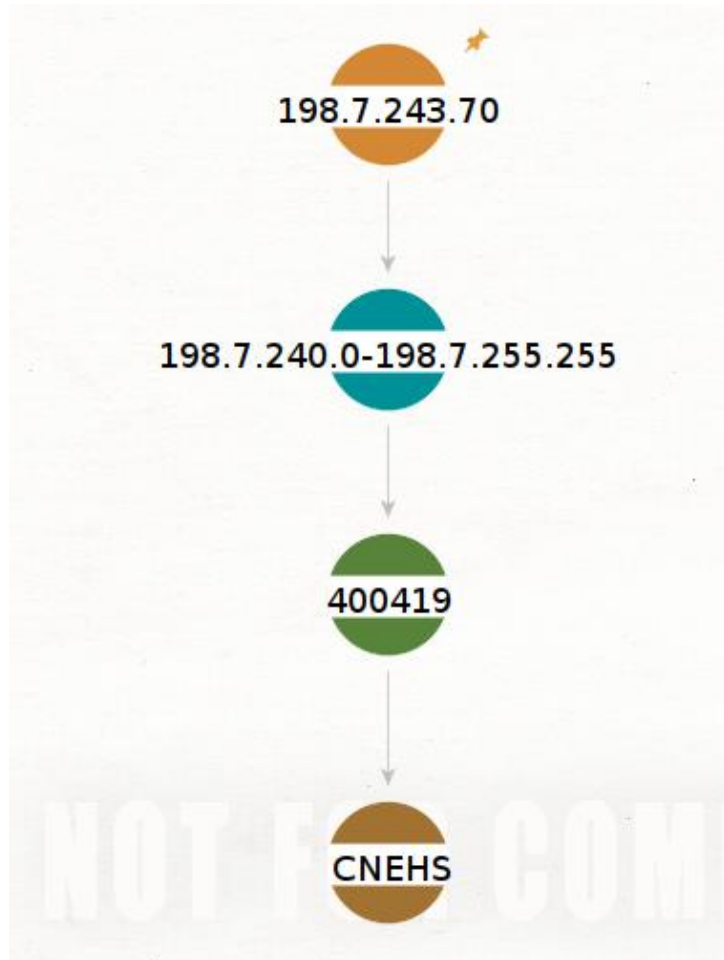
Below is the IP address associated with the subdomain bridges.rwu.edu (54.88.75.202) where Roger Williams LMS is hosted. Maltego transformations discovered that the IP address belongs to a class A public IP subnet range (54.88.0.0-54.88.255.255). The class A subnet range was then transformed into an Autonomous systems number (ASN) 14618 which belongs to Amazon. Given prior information discovered from theHarvester results, it can be assumed that Longsight is using Amazon to host their LMS software and is redistributing them to various universities and schools.

```
bridges.rwu.edu  
bridges.rwu.edu:karma.aws.longsight.com  
bridges.rwu.edu:nginxplus.aws.longsight.com  
bridges.rwu.edu:rwu-prod.longsight.com  
bridges.rwu.edu:rwu-prod.longsight.com.  
bridges.rwu.edu:solid.aws.longsight.com
```



Maltego Transformation 2:

Below is the IP address associated with various rwu.edu subdomains (admissions.rwu.edu, alumni.rwu.edu, athletics.rwu.edu etc.). The 198.7.243.X IP range stood out in the Harvester results as it was associated with most services and subdomains relating to rwu.edu. Maltego transformations determined that the ASNS is 400419 which belongs to CNEHS.

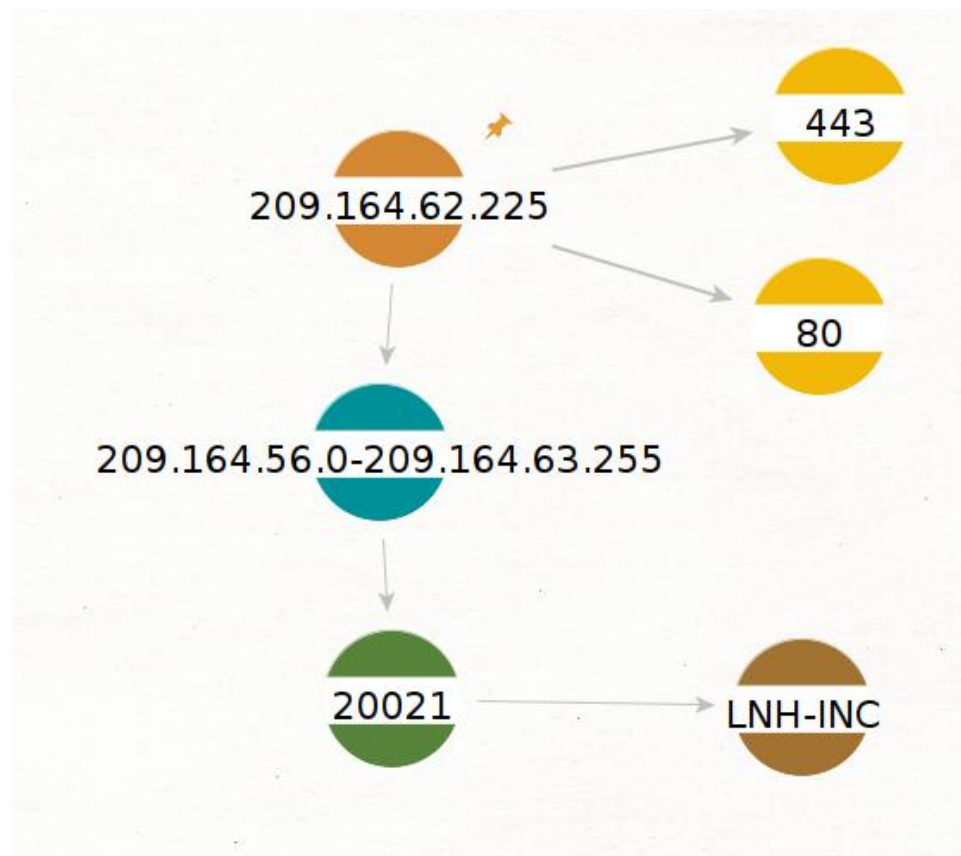


Maltego Transformation 3:

Out of all the results from theHarvester one of the IP addresses that stood out to me from the scanning was 209.164.62.225. It was the one of the only IP addresses within its own subnet to come up in the results that didn't have a domain name associated with it. Maltego transformations also determined that the ASNS was 20021 and belonged to the company LNH-INC which didn't come up in the original ASNS scanning results from theHarvester query. Additional transformations determined that the IP address has port 80 (HTTP) and port 443 (HTTPS) open indicating that it is potentially a webserver of some kind. Visiting the IP address in a web browser gave a HTTP Error 400.

Bad Request - Invalid Hostname

HTTP Error 400. The request hostname is invalid.



theHarvester Host Results:

[*] Hosts found: 635

*.rwu.edu
0-ailalink.aila.org.lawlib.rwu.edu
0-ailalink.aila.org.lawlib.rwu.edu:rwul.iii.com
0-ailalink.aila.org.lawlib.rwu.edu:rwul.iii.com.
0-almanacofthefederaljudiciary.com.lawlib.rwu.edu
0-almanacofthefederaljudiciary.com.lawlib.rwu.edu:rwul.iii.com
0-almanacofthefederaljudiciary.com.lawlib.rwu.edu:rwul.iii.com.
0-antitrust.bna.com.lawlib.rwu.edu
0-antitrust.bna.com.lawlib.rwu.edu:rwul.iii.com
0-antitrust.bna.com.lawlib.rwu.edu:rwul.iii.com.
0-apps.fastcase.com.lawlib.rwu.edu
0-apps.fastcase.com.lawlib.rwu.edu:rwul.iii.com
0-apps.fastcase.com.lawlib.rwu.edu:rwul.iii.com.
0-bankruptcylaw.bna.com.lawlib.rwu.edu
0-bankruptcylaw.bna.com.lawlib.rwu.edu:rwul.iii.com
0-bankruptcylaw.bna.com.lawlib.rwu.edu:rwul.iii.com.
0-checkpoint.riag.com.lawlib.rwu.edu
0-checkpoint.riag.com.lawlib.rwu.edu:rwul.iii.com
0-checkpoint.riag.com.lawlib.rwu.edu:rwul.iii.com.
0-chronicle.com.lawlib.rwu.edu
0-chronicle.com.lawlib.rwu.edu:rwul.iii.com
0-chronicle.com.lawlib.rwu.edu:rwul.iii.com.
0-cilp.nellco.org.lawlib.rwu.edu
0-cilp.nellco.org.lawlib.rwu.edu:rwul.iii.com
0-cilp.nellco.org.lawlib.rwu.edu:rwul.iii.com.
0-congressional.proquest.com.lawlib.rwu.edu
0-congressional.proquest.com.lawlib.rwu.edu:rwul.iii.com
0-congressional.proquest.com.lawlib.rwu.edu:rwul.iii.com.
0-corplawrc.bna.com.lawlib.rwu.edu
0-corplawrc.bna.com.lawlib.rwu.edu:rwul.iii.com
0-corplawrc.bna.com.lawlib.rwu.edu:rwul.iii.com.
0-ediscovery.bna.com.lawlib.rwu.edu
0-ediscovery.bna.com.lawlib.rwu.edu:rwul.iii.com
0-ediscovery.bna.com.lawlib.rwu.edu:rwul.iii.com.
0-english.oxforddictionaries.com.lawlib.rwu.edu
0-english.oxforddictionaries.com.lawlib.rwu.edu:rwul.iii.com
0-english.oxforddictionaries.com.lawlib.rwu.edu:rwul.iii.com.
0-esweb.bna.com.lawlib.rwu.edu
0-esweb.bna.com.lawlib.rwu.edu:rwul.iii.com
0-esweb.bna.com.lawlib.rwu.edu:rwul.iii.com.
0-find.galegroup.com.lawlib.rwu.edu
0-find.galegroup.com.lawlib.rwu.edu:rwul.iii.com
0-find.galegroup.com.lawlib.rwu.edu:rwul.iii.com.
0-foreignlawguide.com.lawlib.rwu.edu
0-foreignlawguide.com.lawlib.rwu.edu:rwul.iii.com
0-foreignlawguide.com.lawlib.rwu.edu:rwul.iii.com.
0-galenet.galegroup.com.lawlib.rwu.edu
0-galenet.galegroup.com.lawlib.rwu.edu:rwul.iii.com
0-galenet.galegroup.com.lawlib.rwu.edu:rwul.iii.com.
0-heinonline.org.lawlib.rwu.edu
0-heinonline.org.lawlib.rwu.edu:rwul.iii.com
0-heinonline.org.lawlib.rwu.edu:rwul.iii.com.
0-infotracc.galegroup.com.lawlib.rwu.edu

0-infotrac.galegroup.com.lawlib.rwu.edu:rwul.iii.com
 0-infotrac.galegroup.com.lawlib.rwu.edu:rwul.iii.com.
 0-intelliconnect.cch.com.lawlib.rwu.edu
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 0-intelliconnect.cch.com.lawlib.rwu.edu:rwul.iii.com.
 0-laborandemploymentlaw.bna.com.lawlib.rwu.edu
 0-laborandemploymentlaw.bna.com.lawlib.rwu.edu:rwul.iii.com
 0-laborandemploymentlaw.bna.com.lawlib.rwu.edu:rwul.iii.com.
 0-lawyersmanual.bna.com.lawlib.rwu.edu
 0-lawyersmanual.bna.com.lawlib.rwu.edu:rwul.iii.com
 0-lawyersmanual.bna.com.lawlib.rwu.edu:rwul.iii.com.
 0-muse.jhu.edu.lawlib.rwu.edu
 0-muse.jhu.edu.lawlib.rwu.edu:rwul.iii.com
 0-muse.jhu.edu.lawlib.rwu.edu:rwul.iii.com.
 0-nellco.secure.sociallaw.com.lawlib.rwu.edu
 0-nellco.secure.sociallaw.com.lawlib.rwu.edu:rwul.iii.com
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 0-news.bna.com.lawlib.rwu.edu
 0-news.bna.com.lawlib.rwu.edu:rwul.iii.com
 0-news.bna.com.lawlib.rwu.edu:rwul.iii.com.
 0-online.americanmaritimecases.com.lawlib.rwu.edu
 0-online.americanmaritimecases.com.lawlib.rwu.edu:rwul.iii.com
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 0-ovidsp.ovid.com.lawlib.rwu.edu:rwul.iii.com
 0-ovidsp.ovid.com.lawlib.rwu.edu:rwul.iii.com.
 0-premium.oxforddictionaries.com.lawlib.rwu.edu
 0-premium.oxforddictionaries.com.lawlib.rwu.edu:rwul.iii.com
 0-premium.oxforddictionaries.com.lawlib.rwu.edu:rwul.iii.com.
 0-prod03.mcr-inc.com.lawlib.rwu.edu
 0-prod03.mcr-inc.com.lawlib.rwu.edu:rwul.iii.com
 0-prod03.mcr-inc.com.lawlib.rwu.edu:rwul.iii.com.
 0-prod04.mcr-inc.com.lawlib.rwu.edu
 0-prod04.mcr-inc.com.lawlib.rwu.edu:rwul.iii.com
 0-prod04.mcr-inc.com.lawlib.rwu.edu:rwul.iii.com.
 0-rwu.law.overdrive.com.lawlib.rwu.edu
 0-rwu.law.overdrive.com.lawlib.rwu.edu:rwul.iii.com
 0-rwu.law.overdrive.com.lawlib.rwu.edu:rwul.iii.com.
 0-search.ebscohost.com.lawlib.rwu.edu
 0-search.ebscohost.com.lawlib.rwu.edu:rwul.iii.com
 0-search.ebscohost.com.lawlib.rwu.edu:rwul.iii.com.
 0-search.proquest.com.lawlib.rwu.edu
 0-search.proquest.com.lawlib.rwu.edu:rwul.iii.com
 0-search.proquest.com.lawlib.rwu.edu:rwul.iii.com.
 0-site.ebrary.com.lawlib.rwu.edu
 0-site.ebrary.com.lawlib.rwu.edu:rwul.iii.com
 0-site.ebrary.com.lawlib.rwu.edu:rwul.iii.com.
 0-subscription.westacademic.com.lawlib.rwu.edu
 0-subscription.westacademic.com.lawlib.rwu.edu:rwul.iii.com
 0-subscription.westacademic.com.lawlib.rwu.edu:rwul.iii.com.
 0-taxandaccounting.bna.com.lawlib.rwu.edu
 0-taxandaccounting.bna.com.lawlib.rwu.edu:rwul.iii.com
 0-taxandaccounting.bna.com.lawlib.rwu.edu:rwul.iii.com.
 0-treaties.un.org.lawlib.rwu.edu
 0-treaties.un.org.lawlib.rwu.edu:rwul.iii.com
 0-treaties.un.org.lawlib.rwu.edu:rwul.iii.com.
 0-vnweb.hwwilsonweb.com.lawlib.rwu.edu
 0-vnweb.hwwilsonweb.com.lawlib.rwu.edu:rwul.iii.com

0-vnweb.hwwilsonweb.com.lawlib.rwu.edu:rwul.iii.com.
0-web.ebscohost.com.lawlib.rwu.edu
0-web.ebscohost.com.lawlib.rwu.edu:rwul.iii.com
0-web.ebscohost.com.lawlib.rwu.edu:rwul.iii.com.
0-web.lexisnexis.com.lawlib.rwu.edu
0-web.lexisnexis.com.lawlib.rwu.edu:rwul.iii.com
0-web.lexisnexis.com.lawlib.rwu.edu:rwul.iii.com.
50th.rwu.edu
50th.rwu.edu:198.7.243.74
883wqri.rwu.edu
883wqri.rwu.edu:198.7.243.29
SCS.rwu.edu
academicaffairs.rwu.edu
academicaffairs.rwu.edu:198.7.243.70
accepted.rwu.edu
accepted.rwu.edu:198.7.243.70
adl.rwu.edu
adl.rwu.edu:198.7.243.70
admission.rwu.edu
admission.rwu.edu:198.7.243.70
alcoholedulogin.rwu.edu
alcoholedulogin.rwu.edu:198.7.243.22
alumni.rwu.edu
alumni.rwu.edu:198.7.243.70
alumni.rwu.edu:alt1.aspmx.l.google.com
alumni.rwu.edu:alt1.aspmx.l.google.com.
alumni.rwu.edu:alt2.aspmx.l.google.com
alumni.rwu.edu:alt2.aspmx.l.google.com.
alumni.rwu.edu:aspmx.l.google.com
alumni.rwu.edu:aspmx.l.google.com.
alumni.rwu.edu:aspmx2.googlemail.com
alumni.rwu.edu:aspmx2.googlemail.com.
alumni.rwu.edu:aspmx3.googlemail.com
alumni.rwu.edu:aspmx3.googlemail.com.
apreso.rwu.edu
apreso.rwu.edu:198.7.243.75
archive.rwu.edu
archive.rwu.edu:198.7.243.34
arubaradius01.rwu.edu
athletics.rwu.edu
athletics.rwu.edu:198.7.243.70
autodiscover.rwu.edu
autodiscover.rwu.edu:2603:1046:c01:88f::8
autodiscover.rwu.edu:2603:1046:c01:892::8
autodiscover.rwu.edu:2603:1046:c01:908::8
autodiscover.rwu.edu:2603:1046:c01:909::8
autodiscover.rwu.edu:autod.ms-acdc-autod.office.com
autodiscover.rwu.edu:autodiscover.outlook.com
autodiscover.rwu.edu:autodiscover.outlook.com.
barn25.rwu.edu
barn25.rwu.edu:198.7.243.70
bb7test.rwu.edu
bb7test.rwu.edu:198.7.243.241
bel.rwu.edu
bel.rwu.edu:198.7.244.68
bissel.rwu.edu
bissel.rwu.edu:198.7.244.155
blog.rwu.edu

blog.rwu.edu:198.7.243.32
blogs.rwu.edu
blogs.rwu.edu:198.7.243.85
bridges.rwu.edu
bridges.rwu.edu:karma.aws.longsight.com
bridges.rwu.edu:nginxplus.aws.longsight.com
bridges.rwu.edu:rwu-prod.longsight.com
bridges.rwu.edu:rwu-prod.longsight.com.
bridges.rwu.edu:solid.aws.longsight.com
bristolbargains.rwu.edu
bristolbargains.rwu.edu:198.7.243.70
bursar.rwu.edu
bursar.rwu.edu:198.7.243.70
careercenter.rwu.edu
careercenter.rwu.edu:198.7.243.70
catalog.rwu.edu
catalog.rwu.edu:acalog-production-dir-a5e6d42e834822a9.elb.us-east-1.amazonaws.com
catalog.rwu.edu:hera-d.aws.acalog.com
catalog.rwu.edu:rwu.catalog.acalog.com
catalog.rwu.edu:rwu.catalog.acalog.com.
ccpd.rwu.edu
ccpd.rwu.edu:RWU.HOSTING.GOUCONNECT.COM
ccpd.rwu.edu:UCTLB4-1848318007.us-east-1.elb.amazonaws.COM
ccpd.rwu.edu:UCTLB4-1848318007.us-east-1.elb.amazonaws.com
ccpd.rwu.edu:rwu.hosting.gouconnect.com
ccpd.rwu.edu:rwu.hosting.gouconnect.com.
ceed.rwu.edu
ceed.rwu.edu:198.7.243.70
celebration.rwu.edu
celebration.rwu.edu:70.32.94.92
cisalex.rwu.edu
cisalex.rwu.edu:198.7.244.86
cisclub.rwu.edu
cisclub.rwu.edu:198.7.244.77
cisflash.rwu.edu
cisflash.rwu.edu:198.7.244.78
cismax.rwu.edu
cismax.rwu.edu:198.7.244.87
cismet.rwu.edu
cismet.rwu.edu:198.7.244.73
cismonster.rwu.edu
cismonster.rwu.edu:198.7.244.79
cisweb.rwu.edu
cisweb.rwu.edu:198.7.244.67
civildiscourse.rwu.edu
civildiscourse.rwu.edu:198.7.243.74
clubs.rwu.edu
clubs.rwu.edu:198.7.243.27
collselfsrvprod.rwu.edu
collselfsrvprod.rwu.edu:198.7.243.244
commonsvie.rwu.edu
commonsvie.rwu.edu:198.7.243.73
conferences.rwu.edu
conferences.rwu.edu:198.7.243.70
connect.rwu.edu
connect.rwu.edu:cluster.technolutions.net
connect.rwu.edu:cluster.technolutions.net.
connectgrad.rwu.edu

connectgrad.rwu.edu:cluster.technolutions.net
connectgrad.rwu.edu:cluster.technolutions.net.
connectuc.rwu.edu
connectuc.rwu.edu:cluster.technolutions.net
connectuc.rwu.edu:cluster.technolutions.net.
correspondence.rwu.edu
correspondence.rwu.edu:198.7.243.77
correspondence.rwu.edu:correspondence.rwu.edu
correspondence.rwu.edu:correspondence.rwu.edu.
counselingcenter.rwu.edu
counselingcenter.rwu.edu:198.7.243.70
courseval.rwu.edu
courseval.rwu.edu:52.206.15.4
cpc.rwu.edu
cpc.rwu.edu:198.7.243.70
csalt.rwu.edu
csalt.rwu.edu:198.7.243.70
department.rwu.edu
department.rwu.edu:departments.rwu.edu
department.rwu.edu:departments.rwu.edu.
departments.rwu.edu
departments.rwu.edu:198.7.243.27
dept.rwu.edu
dept.rwu.edu:198.7.243.32
dev.rwu.edu
dev.rwu.edu:50.19.98.136
digitalcommons.rwu.edu
digitalcommons.rwu.edu:dcrrwu.bepress.com
digitalcommons.rwu.edu:dcrrwu.bepress.com.
digitalcommons.rwu.edu:mail.bepress.com
dining.rwu.edu
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 lawstudyrooms.rwu.edu:v2.libcal.com.

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