Kunyu(坤舆)

#0x00 介绍

工具介绍

Kunyu (坤舆)，名字取自 <坤舆万国全图> ，测绘实际上是一个地理信息相关的专业学科，针对海里的、陆地的、天上的地理信息进行盘点。同样应用于网络空间，发现未知、脆弱的资产也是如此，更像是一张网络空间地图，用来全面描述和展示网络空间资产、网络空间各要素及要素之间关系，以及网络空间和现实空间的映射关系。所以我认为“坤舆”还是比较贴合的。

Kunyu(坤舆)，旨在让企业资产收集更高效，使更多安全相关从业者了解、使用网络空间测绘技术。

应用场景

对于 kunyu 的使用，应用场景可以有很多，例如：

- 企业内遗忘的，孤立的资产进行识别并加入安全管理。
- 企业外部暴露资产进行快速排查，统计。
- 红蓝对抗相关需求使用，对捕获IP进行批量搜索。
- 批量收集脆弱资产(0day) 影响内的设备、终端。
- 新型网络犯罪涉案站点信息进行快速收集，合并，进行更高效的研判、分析。
- 对互联网上受相关漏洞影响的脆弱资产，进行统计、复现。
- .....

0x01 安装

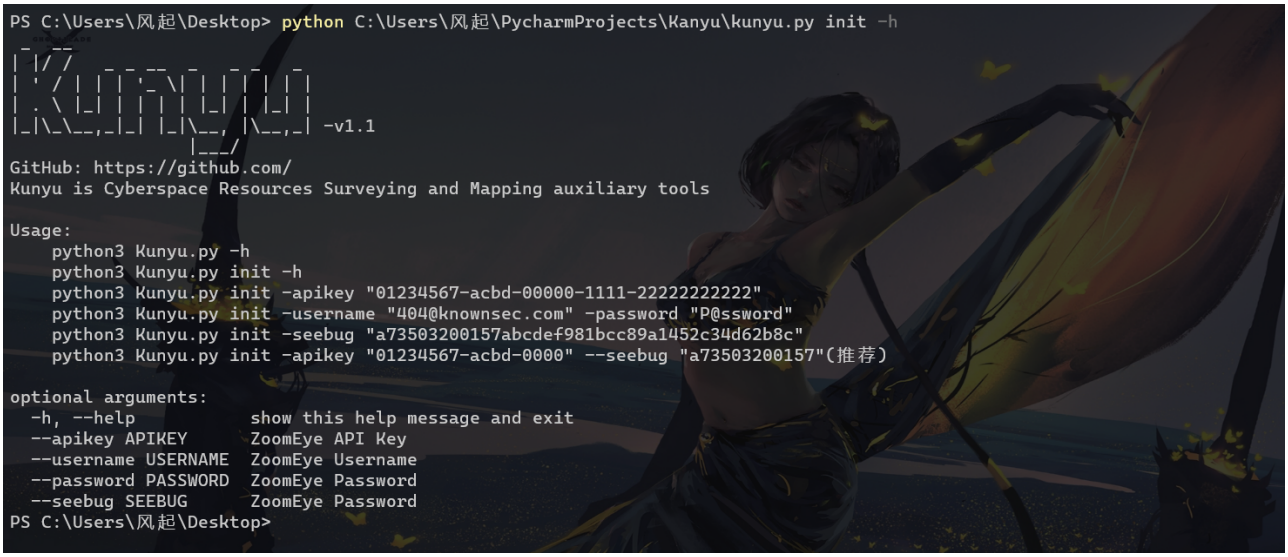
需要Python3以上的支持

```
git clone https://github.com/wikiZ/Kunyu.git
tar -xvf Kunyu.tar
cd Kunyu
pip3 install -r requirements.txt
python3 kunyu.py
```

0x02 配置说明

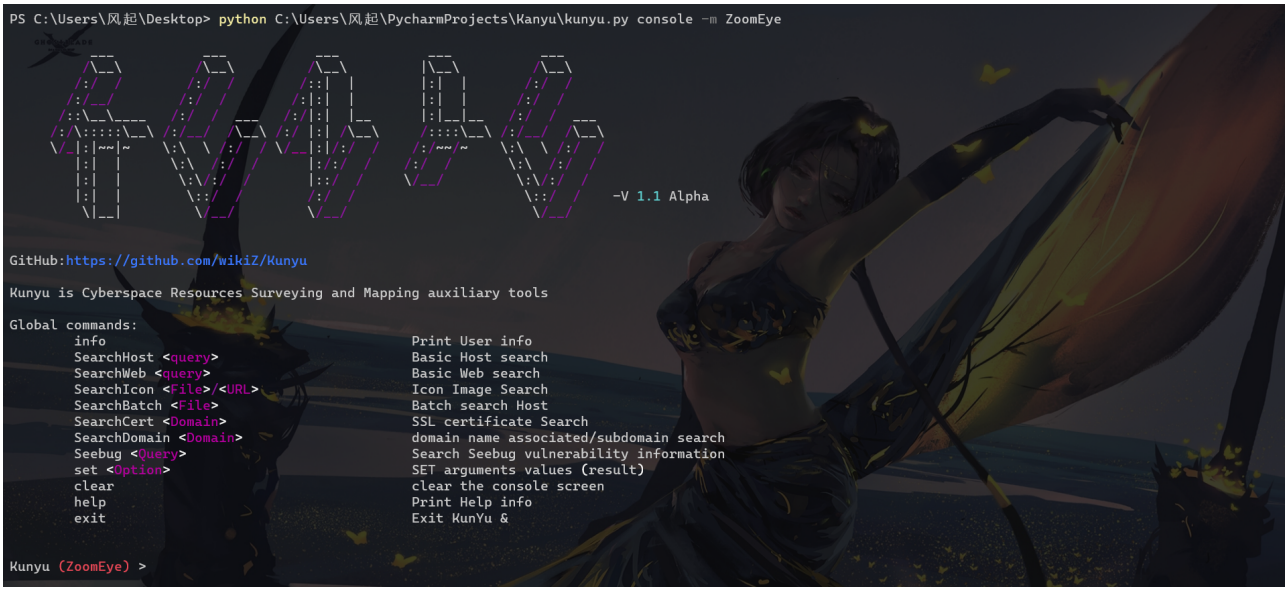
在第一次运行程序时通过输入以下命令进行初始化操作，提供了其他登录方式，但是推荐使用API的方式，因为用户名/密码登录需要额外做一次请求，所以理论上API的方式会更加高效(Seebug API选填，但是不填写无法使用Seebug相关命令)。

```
python3 Kunyu.py init -apikey your <zoomeye key> --seebug <your
seebug key>
```



0x03 工具使用

```
python Kunyu.py console -m module <ZoomEye>
```



ZoomEye

```
Global commands:
        info                                    Print User info
        SearchHost <query>                      Basic Host search
        SearchWeb <query>                       Basic Web search
        SearchIcon <File>/<URL>                 Icon Image Search
        SearchBatch <File>                      Batch search Host
        SearchCert <Domain>                     SSL certificate
Search
        SearchDomain <Domain>                   domain name
associated/subdomain search
        Seebug <Query>                          Search Seebug
vulnerability information
        set <Option>                            SET arguments
values (result)
        clear                                   clear the console
screen
        help                                    Print Help info
        exit                                    Exit KunYu &
```

OPTIONS

```
ZoomEye:
    page <Number> 查询返回页数(默认查询一页，每页20条数据)
    dtype <0/1>   查询关联域名/子域名(设置0为查询关联域名，反之为子域名)
```

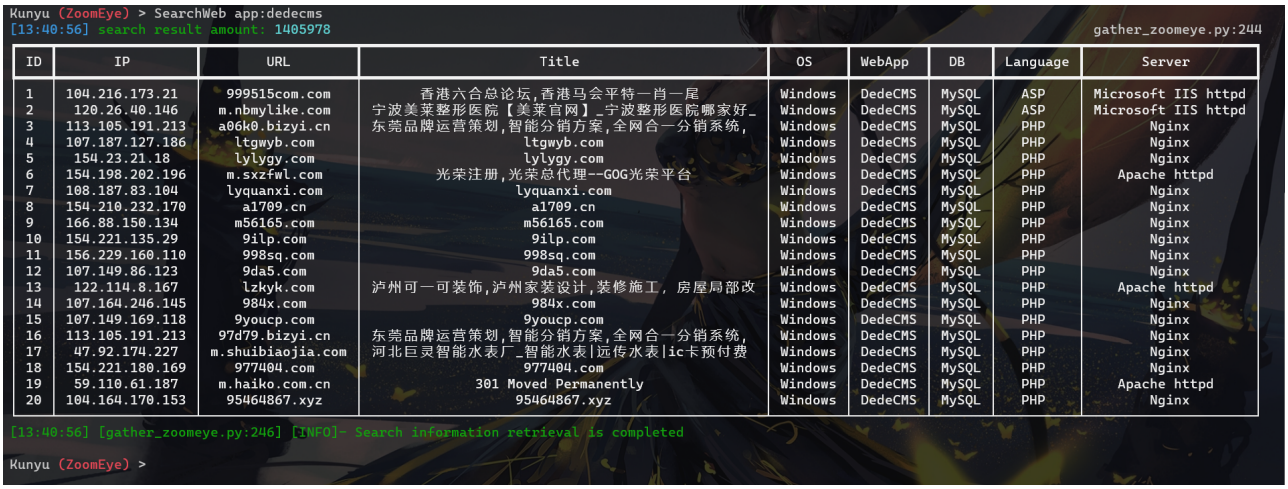
使用案例

这里我们使用 *ZoomEye* 进行演示，因为相比较而言功能更加全面。

HOST 主机搜索

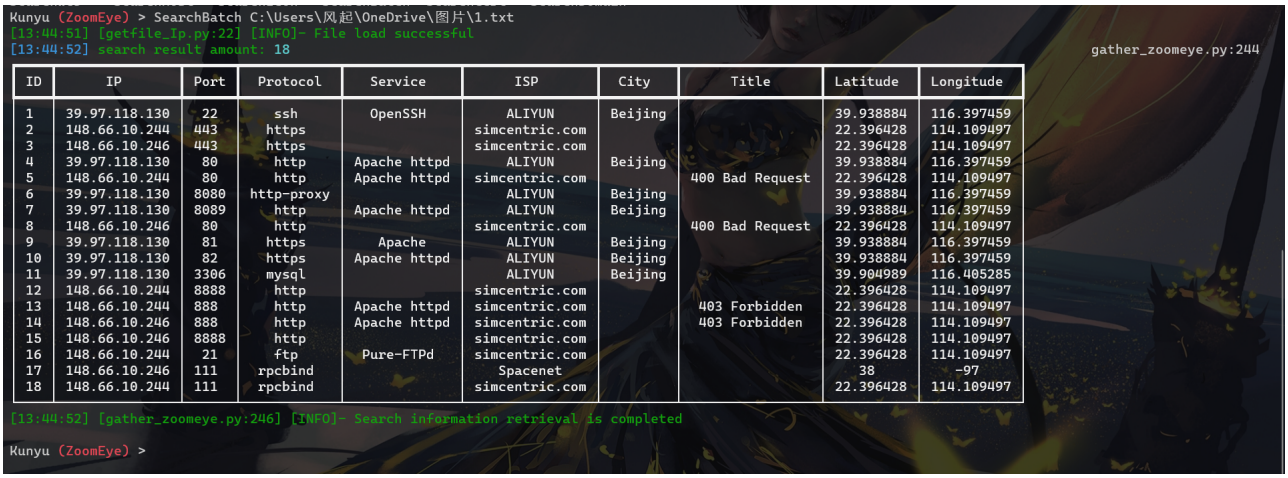
ID	IP	Port	Protocol	Service	ISP	City	Title	Latitude	Longitude
1	39.97.118.130	22	ssh	OpenSSH	ALIYUN	Beijing		39.938884	116.397459
2	39.97.118.130	80	http	Apache httpd	ALIYUN	Beijing		39.938884	116.397459
3	39.97.118.130	8080	http-proxy		ALIYUN	Beijing		39.938884	116.397459
4	39.97.118.130	8089	http	Apache httpd	ALIYUN	Beijing		39.938884	116.397459
5	39.97.118.130	81	https	Apache	ALIYUN	Beijing		39.938884	116.397459
6	39.97.118.130	82	https	Apache httpd	ALIYUN	Beijing		39.938884	116.397459
7	39.97.118.130	3306	mysql		ALIYUN	Beijing		39.904989	116.405285

Web 主机搜索



ID	IP	URL	Title	OS	WebApp	DB	Language	Server
1	104.216.173.21	999515com.com	香港六合总论坛,香港马会平特一肖一尾	Windows	DedeCMS	MySQL	ASP	Microsoft IIS httpd
2	120.26.40.146	m.nbmylike.com	宁波美莱整形医院【美莱官网】_宁波整形医院哪家好_	Windows	DedeCMS	MySQL	ASP	Microsoft IIS httpd
3	113.105.191.213	a06k0.bizyi.cn	东莞品牌运营策划,智能分销方案,全网合一分销系统,	Windows	DedeCMS	MySQL	PHP	Nginx
4	107.187.127.186	ltgwyb.com	ltgwyb.com	Windows	DedeCMS	MySQL	PHP	Nginx
5	154.23.21.18	lylygy.com	lylygy.com	Windows	DedeCMS	MySQL	PHP	Nginx
6	154.198.202.196	m.sxzfwl.com	光荣注册,光荣总代理--GOG光荣平台	Windows	DedeCMS	MySQL	PHP	Apache httpd
7	108.187.83.104	lyquanxi.com	lyquanxi.com	Windows	DedeCMS	MySQL	PHP	Nginx
8	154.210.232.170	a1709.cn	a1709.cn	Windows	DedeCMS	MySQL	PHP	Nginx
9	166.88.150.134	m56165.com	m56165.com	Windows	DedeCMS	MySQL	PHP	Nginx
10	154.221.135.29	9ilp.com	9ilp.com	Windows	DedeCMS	MySQL	PHP	Nginx
11	156.229.160.110	998sq.com	998sq.com	Windows	DedeCMS	MySQL	PHP	Nginx
12	107.149.86.123	9da5.com	9da5.com	Windows	DedeCMS	MySQL	PHP	Nginx
13	122.114.8.167	lzkyk.com	泸州可一可装饰,泸州家装设计,装修施工，房屋局部改	Windows	DedeCMS	MySQL	PHP	Apache httpd
14	107.164.246.145	984x.com	984x.com	Windows	DedeCMS	MySQL	PHP	Nginx
15	107.149.169.118	9youcp.com	9youcp.com	Windows	DedeCMS	MySQL	PHP	Nginx
16	113.105.191.213	97d79.bizyi.cn	东莞品牌运营策划,智能分销方案,全网合一分销系统,	Windows	DedeCMS	MySQL	PHP	Nginx
17	47.92.174.227	m.shuibiaojia.com	河北巨灵智能水表厂_智能水表|远传水表|ic卡预付费	Windows	DedeCMS	MySQL	PHP	Nginx
18	154.221.180.169	977404.com	977404.com	Windows	DedeCMS	MySQL	PHP	Nginx
19	59.110.61.187	m.haiko.com.cn	301 Moved Permanently	Windows	DedeCMS	MySQL	PHP	Apache httpd
20	104.164.170.153	95464867.xyz	95464867.xyz	Windows	DedeCMS	MySQL	PHP	Nginx

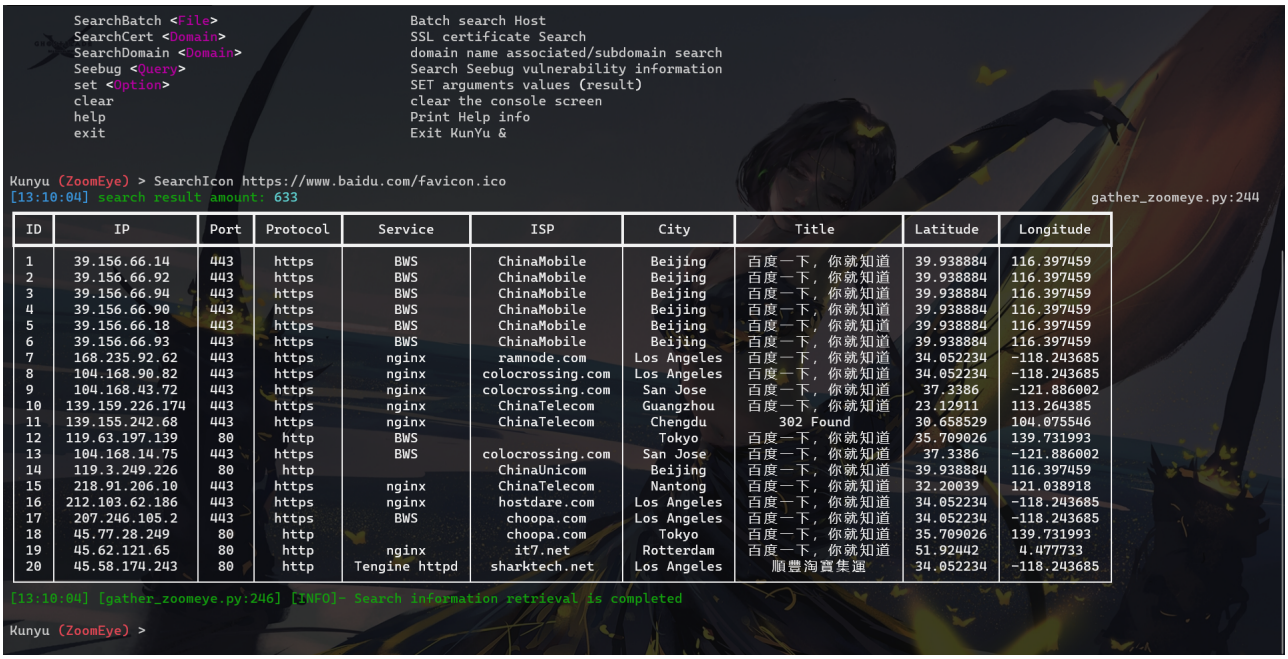
批量 IP 搜索



ID	IP	Port	Protocol	Service	ISP	City	Title	Latitude	Longitude
1	39.97.118.130	22	ssh	OpenSSH	ALIYUN	Beijing		39.938884	116.397459
2	148.66.10.244	443	https		simcentric.com			22.396428	114.109497
3	148.66.10.246	443	https		simcentric.com			22.396428	114.109497
4	39.97.118.130	80	http	Apache httpd	ALIYUN	Beijing		39.938884	116.397459
5	148.66.10.244	80	http	Apache httpd	simcentric.com		400 Bad Request	22.396428	114.109497
6	39.97.118.130	8080	http-proxy		ALIYUN	Beijing		39.938884	116.397459
7	39.97.118.130	8089	http	Apache httpd	ALIYUN	Beijing		39.938884	116.397459
8	148.66.10.246	80	http		simcentric.com		400 Bad Request	22.396428	114.109497
9	39.97.118.130	81	https	Apache	ALIYUN	Beijing		39.938884	116.397459
10	39.97.118.130	82	https	Apache httpd	ALIYUN	Beijing		39.938884	116.397459
11	39.97.118.130	3306	mysql		ALIYUN	Beijing		39.904989	116.405285
12	148.66.10.244	8888	http		simcentric.com			22.396428	114.109497
13	148.66.10.244	888	http	Apache httpd	simcentric.com		403 Forbidden	22.396428	114.109497
14	148.66.10.246	888	http	Apache httpd	simcentric.com		403 Forbidden	22.396428	114.109497
15	148.66.10.246	8888	http		simcentric.com			22.396428	114.109497
16	148.66.10.244	21	ftp	Pure-FTPd	simcentric.com			22.396428	114.109497
17	148.66.10.246	111	rpcbind		Spacenet			38	-97
18	148.66.10.244	111	rpcbind		simcentric.com			22.396428	114.109497

Icon 搜索

在搜集企业资产时，我们可以使用这样的方式进行检索相同 ico 图标资产，在关联相关企业资产时，通常会有不错的效果。但是需要注意的是如果某些站点也使用这个 ico 图标，可能会关联出无关资产(但是无聊用别人 ico 图标的人总归是少数吧)。支持url或本地文件的方式搜索。



ID	IP	Port	Protocol	Service	ISP	City	Title	Latitude	Longitude
1	39.156.66.14	443	https	BWS	ChinaMobile	Beijing	百度一下，你就知道	39.938884	116.397459
2	39.156.66.92	443	https	BWS	ChinaMobile	Beijing	百度一下，你就知道	39.938884	116.397459
3	39.156.66.94	443	https	BWS	ChinaMobile	Beijing	百度一下，你就知道	39.938884	116.397459
4	39.156.66.90	443	https	BWS	ChinaMobile	Beijing	百度一下，你就知道	39.938884	116.397459
5	39.156.66.18	443	https	BWS	ChinaMobile	Beijing	百度一下，你就知道	39.938884	116.397459
6	39.156.66.93	443	https	BWS	ChinaMobile	Beijing	百度一下，你就知道	39.938884	116.397459
7	168.235.92.62	443	https	nginx	ramnode.com	Los Angeles	百度一下，你就知道	34.052234	-118.243685
8	104.168.90.82	443	https	nginx	colocrossing.com	Los Angeles	百度一下，你就知道	34.052234	-118.243685
9	104.168.43.72	443	https	nginx	colocrossing.com	San Jose	百度一下，你就知道	37.3386	-121.886002
10	139.159.226.174	443	https	nginx	ChinaTelecom	Guangzhou	百度一下，你就知道	23.12911	113.264385
11	139.155.242.68	443	https	nginx	ChinaTelecom	Chengdu	302 Found	30.658529	104.075546
12	119.63.197.139	80	http	BWS		Tokyo	百度一下，你就知道	35.709026	139.731993
13	104.168.14.75	443	https	BWS	colocrossing.com	San Jose	百度一下，你就知道	37.3386	-121.886002
14	119.3.249.226	80	http		ChinaUnicom	Beijing	百度一下，你就知道	39.938884	116.397459
15	218.91.206.10	443	https	nginx	ChinaTelecom	Nantong	百度一下，你就知道	32.20039	121.038918
16	212.103.62.186	443	https	nginx	hostdare.com	Los Angeles	百度一下，你就知道	34.052234	-118.243685
17	207.246.105.2	443	https	BWS	choopa.com	Los Angeles	百度一下，你就知道	34.052234	-118.243685
18	45.77.28.249	80	http		choopa.com	Tokyo	百度一下，你就知道	35.709026	139.731993
19	45.62.121.65	80	http	nginx	it7.net	Rotterdam	百度一下，你就知道	51.92442	4.477733
20	45.58.174.243	80	http	Tengine httpd	sharktech.net	Los Angeles	順豐淘寶集運	34.052234	-118.243685

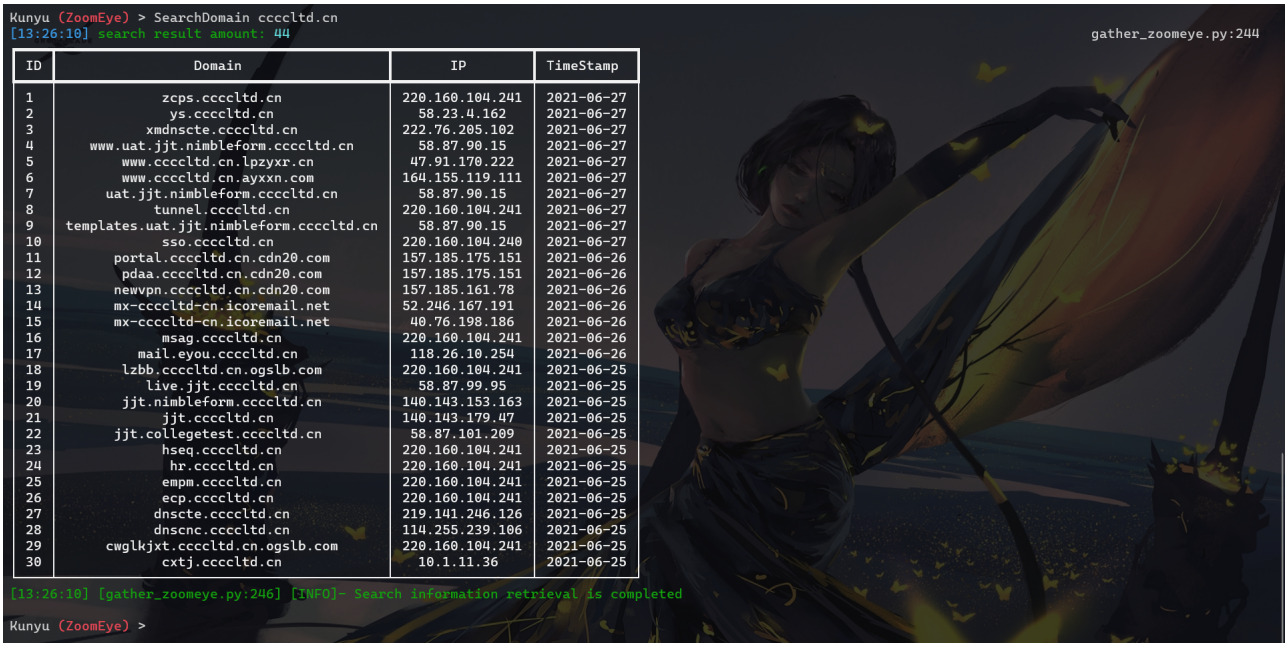
SSL证书搜索

通过 SSL 证书的序列号进行查询，这样关联出来的资产较为精准，能搜索出使用相同证书的服务。碰到https站点时，可以通过这样的方式。

ID	IP	Port	Protocol	Service	ISP	City	Title	Latitude	Longitude
1	218.85.125.72	443	https	nginx	ChinaTelecom	Xiamen	中交邮件系统	24.602301	118.011002
2	218.85.125.80	443	https	Apache httpd	ChinaTelecom	Xiamen	302 Found	24.602301	118.011002
3	162.14.2.130	443	https	nginx	ChinaTelecom	Beijing	交建通	39.938884	116.397459
4	58.23.4.165	993	imap	Coremail mail	ChinaUnicom	Xiamen		24.602301	118.011002
5	39.96.8.8	443	https	Apache httpd	ALIYUN	Beijing	404 Not Found	39.938884	116.397459
6	18.156.25.109	443	https	Apache httpd	amazon.com	Frankfurt		50.11208	8.68341
7	62.234.4.195	443	https	nginx	ChinaTelecom	Beijing	专家库用户PC端	39.938884	116.397459
8	58.23.4.165	443	https		ChinaUnicom	Xiamen		24.602301	118.011002
9	59.110.144.216	443	https	HAProxy http proxy	ALIYUN	Beijing		39.938884	116.397459
10	140.143.120.184	443	https	nginx	ChinaTelecom	Beijing	惠创新创新平台	39.938884	116.397459
11	220.160.104.243	443	https	nginx	ChinaTelecom	Xiamen	中交邮件系统	24.602301	118.011002
12	220.160.104.241	443	https	Apache httpd	ChinaTelecom	Xiamen	302 Found	24.602301	118.011002
13	220.160.104.240	443	https	Apache httpd	ChinaTelecom	Xiamen	302 Found	24.602301	118.011002
14	114.255.239.249	443	https	Apache httpd	ChinaUnicom	Beijing	Error Page	39.938884	116.397459
15	58.87.87.152	443	https	nginx	ChinaTelecom	Beijing	交建通	39.938884	116.397459
16	122.155.237.91	443	https	Apache httpd	cattelecom.com			15.391327	100.974161
17	58.23.4.161	443	https	Apache httpd	ChinaUnicom	Xiamen	中交门户登录页面	24.602301	118.011002
18	220.242.160.123	443	https	Apache httpd	wangsu.com			37.553674	126.991138
19	183.220.199.189	443	https	Apache httpd	ChinaMobile	Chengdu		30.658529	104.075546
20	58.23.4.136	443	https	Apache httpd	ChinaUnicom	Xiamen	中交注销页面	24.602301	118.011002

关联域名/子域名搜索

对关联域名以及子域名进行搜索，默认查询关联域名，可以通过设置 dtype 参数设置两种模式。



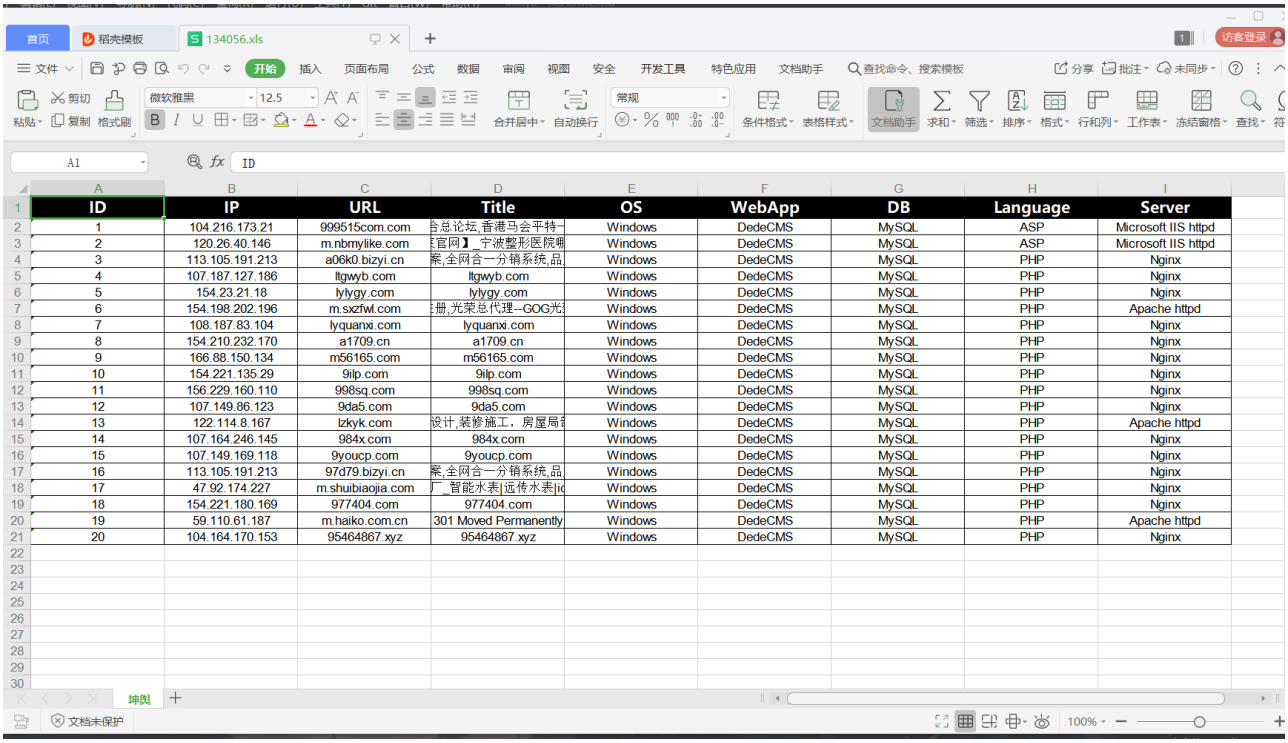
ID	Domain	IP	TimeStamp
1	zcps.cccltd.cn	220.160.104.241	2021-06-27
2	ys.cccltd.cn	58.23.4.162	2021-06-27
3	xmdnscte.cccltd.cn	222.76.205.102	2021-06-27
4	www.uat.jjt.nimbleform.cccltd.cn	58.87.90.15	2021-06-27
5	www.cccltd.cn.lpzyxr.cn	47.91.170.222	2021-06-27
6	www.cccltd.cn.ayxxn.com	164.155.119.111	2021-06-27
7	uat.jjt.nimbleform.cccltd.cn	58.87.90.15	2021-06-27
8	tunnel.cccltd.cn	220.160.104.241	2021-06-27
9	templates.uat.jjt.nimbleform.cccltd.cn	58.87.90.15	2021-06-27
10	sso.cccltd.cn	220.160.104.240	2021-06-27
11	portal.cccltd.cn.cdn20.com	157.185.175.151	2021-06-26
12	pdaa.cccltd.cn.cdn20.com	157.185.175.151	2021-06-26
13	newvpn.cccltd.cn.cdn20.com	157.185.161.78	2021-06-26
14	mx-cccltd-cn.icoremail.net	52.246.167.191	2021-06-26
15	mx-cccltd-cn.icoremail.net	40.76.198.186	2021-06-26
16	msag.cccltd.cn	220.160.104.241	2021-06-26
17	mail.eyou.cccltd.cn	118.26.10.254	2021-06-26
18	lzbb.cccltd.cn.ogslb.com	220.160.104.241	2021-06-25
19	live.jjt.cccltd.cn	58.87.99.95	2021-06-25
20	jjt.nimbleform.cccltd.cn	140.143.153.163	2021-06-25
21	jjt.cccltd.cn	140.143.179.47	2021-06-25
22	jjt.collegetest.cccltd.cn	58.87.101.209	2021-06-25
23	hseq.cccltd.cn	220.160.104.241	2021-06-25
24	hr.cccltd.cn	220.160.104.241	2021-06-25
25	empm.cccltd.cn	220.160.104.241	2021-06-25
26	ecp.cccltd.cn	220.160.104.241	2021-06-25
27	dnscte.cccltd.cn	219.141.246.126	2021-06-25
28	dnscnc.cccltd.cn	114.255.239.106	2021-06-25
29	cwglkjxt.cccltd.cn.ogslb.com	220.160.104.241	2021-06-25
30	cxtj.cccltd.cn	10.1.11.36	2021-06-25

Seebug漏洞查询

这里就比较简单了，通过输入想要查找的框架、设备等信息，查询历史相关漏洞，这里后期会进行改进，升级。

数据结果

大家可能好奇查询的数据呢？都保存在项目下 OUTPUT 目录里啦，根据时间戳创建目录，单次启动的所有查询结果都在一个目录下。



ID	IP	URL	Title	OS	WebApp	DB	Language	Server
1	104.216.173.21	999515com.com	台总论坛,香港马会平特一	Windows	DedeCMS	MySQL	ASP	Microsoft IIS httpd
2	120.26.40.146	m.nbmylike.com	【官网】_宁波整形医院哪	Windows	DedeCMS	MySQL	ASP	Microsoft IIS httpd
3	113.105.191.213	a06k0.bizyi.cn	案,全网合一分销系统,品	Windows	DedeCMS	MySQL	PHP	Nginx
4	107.187.127.186	ltgwyb.com	ltgwyb.com	Windows	DedeCMS	MySQL	PHP	Nginx
5	154.23.21.18	lylygy.com	lylygy.com	Windows	DedeCMS	MySQL	PHP	Nginx
6	154.198.202.196	m.sxzfwl.com	注册,光荣总代理--GOG光	Windows	DedeCMS	MySQL	PHP	Apache httpd
7	108.187.83.104	lyquanxi.com	lyquanxi.com	Windows	DedeCMS	MySQL	PHP	Nginx
8	154.210.232.170	a1709.cn	a1709.cn	Windows	DedeCMS	MySQL	PHP	Nginx
9	166.88.150.134	m56165.com	m56165.com	Windows	DedeCMS	MySQL	PHP	Nginx
10	154.221.135.29	9ilp.com	9ilp.com	Windows	DedeCMS	MySQL	PHP	Nginx
11	156.229.160.110	998sq.com	998sq.com	Windows	DedeCMS	MySQL	PHP	Nginx
12	107.149.86.123	9da5.com	9da5.com	Windows	DedeCMS	MySQL	PHP	Nginx
13	122.114.8.167	lzkyk.com	设计,装修施工，房屋局	Windows	DedeCMS	MySQL	PHP	Apache httpd
14	107.164.246.145	984x.com	984x.com	Windows	DedeCMS	MySQL	PHP	Nginx
15	107.149.169.118	9youcp.com	9youcp.com	Windows	DedeCMS	MySQL	PHP	Nginx
16	113.105.191.213	97d79.bizyi.cn	案,全网合一分销系统,品	Windows	DedeCMS	MySQL	PHP	Nginx
17	47.92.174.227	m.shuibiaojia.com	厂_智能水表|远传水表|ic	Windows	DedeCMS	MySQL	PHP	Nginx
18	154.221.180.169	977404.com	977404.com	Windows	DedeCMS	MySQL	PHP	Nginx
19	59.110.61.187	m.haiko.com.cn	301 Moved Permanently	Windows	DedeCMS	MySQL	PHP	Apache httpd
20	104.164.170.153	95464867.xyz	95464867.xyz	Windows	DedeCMS	MySQL	PHP	Nginx

后记

其实还有很多的思路，但是作为 Alpha 版本先这样，后期会不断进行完善的，希望 Kunyu (坤舆)能够让更多安全从业者所知，谢谢各位的支持。

工具框架有参考昆仑镜、Pocsuite3，都是非常棒的作品。

感谢 Knowsec 404 Team 的全体小伙伴。