

Article

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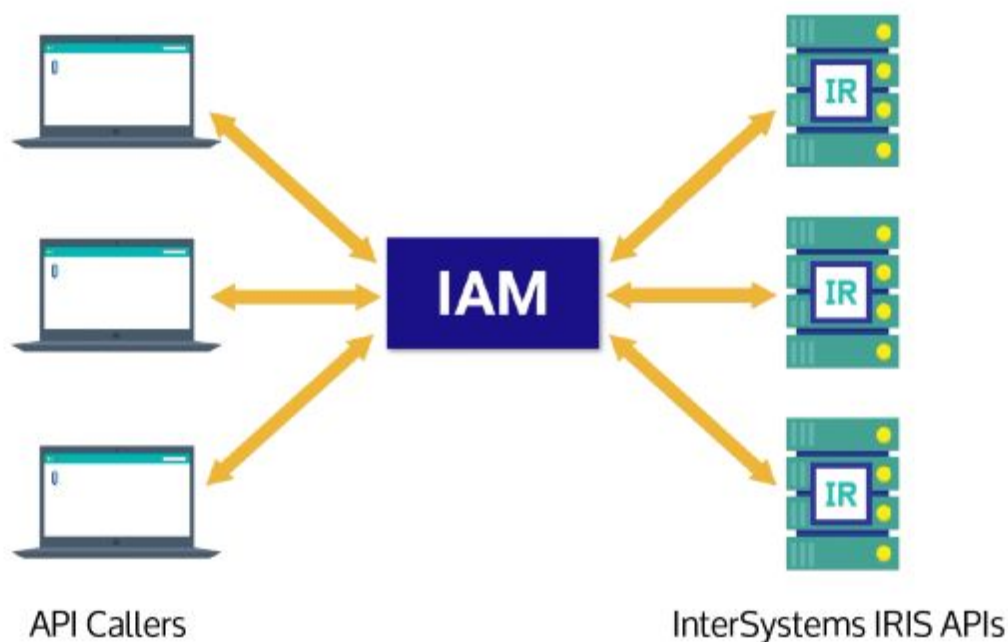
## Walk through of deploying InterSystems API Manager (IAM) on AWS EC2

In this article, I am trying to walk through my deploying step of IAM on my EC2(ubuntu).

### What is IAM?

IAM is InterSystems API Manager  
you may reference to the link below to get more idea about IAM

[https://docs.intersystems.com/components/csp/docbook/Doc.View.cls?KEY=PAGEapimgr\\_](https://docs.intersystems.com/components/csp/docbook/Doc.View.cls?KEY=PAGEapimgr_)



### Before deploying IAM

Check the license of your API host

← → ↻

Not secure | 18.143.xx.xx:52773/csp/sys/UtilHome.csp

InterSystems™

IRIS Data Platform

Management Portal

Server a6b5182f1c9a Namespace %SYS [Switch](#) User [kate](#) Licensed To Sales Engineers\_Adv.Server\_IAM Instance IRIS

Welcome, kate

View:

Home

Health

Analytics

Interoperability

System Operation

System Explorer

System Administration


Configuration > License Key ⓘ

Security > License Servers ⓘ

Licensing >

Encryption >

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**Management Portal**

**Server** a6b5182f1c9a **Namespace** %SYS **User** kate **Licensed To** Sales Engineers\_Adv.Server\_IAM **Instance** IRIS

[System](#) > [Licensing](#) > [License Key](#)

# License Key

[Print](#)[Activate New Key](#)

**Current license key information for this system:**

License Capacity	InterSystems IRIS for Health Advanced Server 2022.1, Server:128, Core Capacity, Container(Ubuntu-x64)
Customer Name	Sales Engineers_Adv.Server_IAM
Order Number	5
Expiration Date	11/30/2023
Authorization Key	8526500000000000 Product=Server License Type=Core Capacity Server=Multi Platform=Container(Ubuntu-x64) License Units=0 Licensed Cores=128 Authorized Cores=128 Extended Features= - Interoperability - Analytics Run - Analytics Analyzer - Analytics Architect - NLP - Sharding - IntegratedML - InterSystems IRIS - API Management Non-Production


← Not yet expire

← Have API Managemant feature

Enable the User IAM

← → ↻ ⚠ Not secure | 18.143.XX.XX:52773/csp/sys/%25CSP.Portal.Home.zen?\$NAMESPACE=%25SYS

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Management Portal

Server a6b5182f1c9a Namespace %SYS [Switch](#) User [kate](#) Licensed To Sales Engineers\_Adv.Server\_IAM Instance IRI

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Welcome, kate

View:  

 Home	Configuration > <b>Users</b> ⓘ
 Health	<b>Security</b> > Roles ⓘ
 Analytics	Licensing > Resources ⓘ
 Interoperability	Encryption > Services ⓘ
 System Operation	Applications >
 System Explorer	SSL/TLS Configurations ⓘ
 System Administration	X.509 Credentials ⓘ
	OAuth 2.0 >
	Managed File Transfer Connections ⓘ
	System Security >
	Auditing >
	Security Advisor ⓘ
	Mobile Phone ⓘ
	Public Key Infrastructure ⓘ

← → ↻ ⚠ Not secure | 18.143.XX.XX :52773/csp/sys/sec/%25CSP.UI.Portal.Users.zen?\$NAMESPACE=%25SYS

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 Management Portal

Server a6b5182f1c9a    Namespace %SYS    User kate    Licensed To Sales Engineers\_Adv.Server\_IAM    Instance IRIS

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System > Security Management > Users

## Users

[Create New User](#)

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The following is a list of user definitions:

Filter:    Page size: 0    Max rows: 1000    Results: 13    Page: 1 of 1

Name	Full Name	Enabled	Namespace	Routine	Type	
<a href="#">Admin</a>	System Administrator	Yes			Password user	<a href="#">Delete</a> <a href="#">Profile</a>
<a href="#">CSPSystem</a>	Web Gateway user	Yes			Password user	<a href="#">Delete</a> <a href="#">Profile</a>
<a href="#">HS_Services</a>	HealthShare Services (Internal use - not for login)	No			Password user	<a href="#">Delete</a> <a href="#">Profile</a>
<b>IAM</b>	User for /api/iam Web Application	<b>Yes</b>			Password user	<a href="#">Delete</a> <a href="#">Profile</a>
<a href="#">SuperUser</a>	System Super user	Yes			Password user	<a href="#">Delete</a> <a href="#">Profile</a>
<a href="#">UnknownUser</a>	Unauthenticated user	Yes			Password user	- <a href="#">Profile</a>
<a href="#">Ensemble</a>	Interoperability Manager (Internal use - not for login)	Yes			Password user	<a href="#">Delete</a> <a href="#">Profile</a>
<a href="#">PUBLIC</a>	(Internal use - not for login)	No			Password user	- <a href="#">Profile</a>
<a href="#">SYSTEM</a>	SQL System Manager	Yes			Password user	- <a href="#">Profile</a>

## Deploy IAM

### Reference

<https://community.intersystems.com/post/introducing-intersystems-api-manager>

Download the image from the following link

<https://wrc.intersystems.com/wrc/coDistGen.csp>

I downloaded the following version to my pc

InterSystems Components										
Please contact InterSystems Support if the kit you are looking for is not present. <a href="#">Click here</a> to return to the main distribution page.										
Components										
Name	Product	Version	Maint	Build	Os	Arch	File Type	Size (Mb)	Download ...	Checksum (Md5)
InterSystems Kubernetes Operator	IRIS	3.3	0	120	Unix	x64	tar.gz	29		cc1bda96b3194bf29cfed255e8d93a5d
InterSystems Kubernetes Operator	IRIS	3.1	0	112	Unix	x64	tar.gz	24		41a7ba8fcb03b7009d4303a7f124ad4
InterSystems API Manager (IAM)	IRIS	3.0.2.0	4			64 bit	md5sum.txt	0		
InterSystems API Manager (IAM)	IRIS	3.0.2.0	4			64 bit	tar.gz	180		30b53f208cea9076c296628bd5df8ca6
InterSystems API Manager (IAM)	IRIS	3.0.2.0	4			ARM 64	md5sum.txt	0		
InterSystems API Manager (IAM)	IRIS	3.0.2.0	4			ARM 64	tar.gz	177		250f9b11de5b16eba500d590297ea1ad

Upload the image to my EC2

I use the command scp to upload the image to my cloud

```
PS C:\Users\k[redacted]\Documents\kateStudy2022\AWSEC2> scp.exe -i .\Kate[redacted].pem .\IAM-3.0.2.0-4.tar.gz ubuntu@18.141.[redacted]:/home/ubuntu/fromSCP
The authenticity of host '18.141.[redacted] (18.141.[redacted])' can't be established.
ECDSA key fingerprint is SHA256:Ve432COVEiO+3665/Nz/CX2wA2pvQ+CMLJimgbaO/yg.
Are you sure you want to continue connecting (yes/no/[fingerprint])?
Warning: Permanently added '18.141.[redacted]' (ECDSA) to the list of known hosts.
IAM-3.0.2.0-4.tar.gz 100% 180MB 514.9KB/s 05:58
```

Make sure docker and docker compose are installed

If not, please reference to the following link

<https://docs.docker.com/engine/install/ubuntu/>

Untar the image file

tar zxvf IAM-3.0.2.0-4.tar.gz

```
ubuntu@ip-172-31-[redacted]:~$ docker compose version
Docker Compose version v2.16.0
ubuntu@ip-172-31-[redacted]:~$ mkdir iris
ubuntu@ip-172-31-[redacted]:~$ cd iris/
ubuntu@ip-172-31-[redacted]:~/iris$ scp ../fromSCP/IAM-3.0.2.0-4.tar.gz ./
ubuntu@ip-172-31-[redacted]:~/iris$ tar zxvf IAM-3.0.2.0-4.tar.gz
IAM/
IAM/scripts/
IAM/scripts/iam-upgrade-db/
IAM/scripts/iam-upgrade-db/scripts/
IAM/scripts/iam-upgrade-db/scripts/docker-upgrade
IAM/scripts/iam-upgrade-db/scripts/docker-compose.yml
IAM/scripts/iam-upgrade-db/scripts/Dockerfile
IAM/scripts/iam-upgrade-db/README.md
IAM/scripts/iam-setup.sh
IAM/scripts/iam-test.sh
IAM/scripts/docker-compose.yml
IAM/readme.txt
IAM/EULA.pdf
IAM/iam image.tar
ubuntu@ip-172-31-[redacted]:~/iris$ cd IAM/
ubuntu@ip-172-31-[redacted]:~/iris/IAM$ ls
EULA.pdf  iam image.tar  readme.txt  scripts
ubuntu@ip-172-31-[redacted]:~/iris/IAM$
```

make sure docker compose is there

copy the image to my current directory

Untar the image

change the directory to IAM and list the items inside

Load the image into docker

sudo docker load -i iamimage.tar

```
ubuntu@ip-172-31-100-100:~/iris$ cd IAM/
ubuntu@ip-172-31-100-100:~/iris/IAM$ ls
EULA.pdf iam_image.tar readme.txt scripts
ubuntu@ip-172-31-100-100:~/iris/IAM$ sudo docker load -i iam_image.tar
ded7a220bb05: Loading layer [=====>] 7.338MB/7.338MB
eaf02a0b2219: Loading layer [=====>] 85.36MB/85.36MB
73d2e8a6efbf: Loading layer [=====>] 388.3MB/388.3MB
29f4f1e5112c: Loading layer [=====>] 3.584kB/3.584kB
0a2c0faeff92: Loading layer [=====>] 201.2kB/201.2kB
8449ee4c1302: Loading layer [=====>] 356.4kB/356.4kB
fa649321bf1d: Loading layer [=====>] 13.31kB/13.31kB
1c4494e2042c: Loading layer [=====>] 20.99kB/20.99kB
77c4729e56c3: Loading layer [=====>] 12.8kB/12.8kB
eca871f802da: Loading layer [=====>] 4.096kB/4.096kB
Loaded image: intersystems/iam:3.0.2.0-4
ubuntu@ip-172-31-100-100:~/iris/IAM$
```

load the image into docker

Name of the loaded image  
We will use this later

## Run the iam-setup.sh

source ./iam-setup.sh

```
ubuntu@ip-172-31-23-81:~/iris/IAM$ cd scripts
ubuntu@ip-172-31-23-81:~/iris/IAM/scripts$ ls
docker-compose.yml iam-setup.sh iam-test.sh iam-upgrade-db
ubuntu@ip-172-31-23-81:~/iris/IAM/scripts$ source ./iam-setup.sh
Welcome to the InterSystems IRIS and InterSystems API Manager (IAM) setup script.
This script sets the ISC_IRIS_URL environment variable that is used by the IAM container to get the IAM license key from InterSystems IRIS.
Enter the full image repository, name and tag for your IAM docker image:
intersystems/iam:3.0.2.0-4
Enter the IP address for your InterSystems IRIS instance. The IP address has to be accessible from within the IAM container, therefore, do not use "localhost" or "127.0.0.1".
Instead use the IP address of your local machine. If IRIS is running in a container, use the IP address of the host environment, not the IP address of the IRIS container.
18.143.XX.XX
Enter the web service port for your InterSystems IRIS instance:
52773
Enter the password for the IAM user for your InterSystems IRIS instance:
Re-enter your password:
If local policy requires that HTTPS be used for communication, please provide the full path to your CA Certificate file now. Otherwise hit "Return":
If your InterSystems IRIS instance is only accessible via its CSPConfigName URL prefix, please provide the prefix with a trailing slash (/) now. Otherwise hit "Return":
Your inputs are:
Full image repository, name and tag for your IAM docker image: IAM
IP address for your InterSystems IRIS instance: 18.143.XX.XX
Web service port for your InterSystems IRIS instance: 52773
CA Certificate for HTTPS:
CSPConfigName URL prefix:
Would you like to continue with these inputs (y/n)?
y
Setting IAM license using your inputs...
Successfully got IAM license!
The ISC_IRIS_URL environment variable was set to: IAM:*****@18.143.XX.XX:52773/ap/iam/license
WARNING: The environment variable is set for this shell only!
To start the services, run the following command in the scripts directory: docker compose up -d
To stop the services, run the following command in the scripts directory: docker compose down
URL for the IAM Manager portal: http://localhost:8002
ubuntu@ip-172-31-23-81:~/iris/IAM/scripts$
```

change the directory to scripts

run the iam-setup.sh by using the command source

loaded image name, from previous step

API Server IP

web service port of the API server

no input in my case

no input in my case

command to create/remove the container


## Edit the file : docker-compose.yml

In order to let us visit the IAM UI from the environment outside the EC2, replace the localhost by the EC2 public address in the parameter KONGPORTALGUIHOST and KONGADMININGUIURL

vi docker-compose.yml

```
iam:
  image: intersystems/iam:3.0.2.0-4
  depends_on:
    - db
  environment:
    KONG_ADMIN_ACCESS_LOG: /dev/stdout
    KONG_ADMIN_ERROR_LOG: /dev/stderr
    KONG_ADMIN_LISTEN: '0.0.0.0:8001'
    KONG_ANONYMOUS_REPORTS: 'off'
    KONG_CASSANDRA_CONTACT_POINTS: db
    KONG_DATABASE: postgres
    KONG_PG_DATABASE: ${KONG_PG_DATABASE:-iam}
    KONG_PG_HOST: db
    KONG_PG_PASSWORD: ${KONG_PG_PASSWORD:-iam}
    KONG_PG_USER: ${KONG_PG_USER:-iam}
    KONG_PROXY_ACCESS_LOG: /dev/stdout
    KONG_PROXY_ERROR_LOG: /dev/stderr
    KONG_PORTAL: 'on'
    KONG_PORTAL_GUI_PROTOCOL: http
    KONG_PORTAL_GUI_HOST: 'yourEC2publicAddress:8003'
    KONG_ADMIN_GUI_URL: 'http://yourEC2publicAddress:8002'
```

Update the address to your EC2 public Address (for visit the UI from outside)



Start the container

`sudo docker compose up -d`

```
ubuntu@ip-172-31-23-81:~/iris/IAM/scripts$ sudo docker compose up -d
[*] Running 14/14
H db Pulled
H e9995326b091 Pull complete
H a0cb03f17886 Pull complete
H bb26f7e78134 Pull complete
H c8e073b7ae91 Pull complete
H 99b5b1679915 Pull complete
H 55c520fc03c5 Pull complete
H d0ac84d6672c Pull complete
H 4effb95d5849 Pull complete
H f1605d32a2b6 Pull complete
H 45587aaa5f27 Pull complete
H 27c45a07ef3f Pull complete
H 2b6113fb2a7b Pull complete
H 144293d36fee Pull complete
[*] Running 5/5
H Network scripts_default Created
H Volume "scripts_pgdata14" Created
H Container scripts-db-1 Started
H Container scripts-iam-migrations-1 Started
H Container scripts-iam-1 Started
ubuntu@ip-172-31-23-81:~/iris/IAM/scripts$ sudo do
do do docker
do-release-upgrade docker-init docker-proxy dockererd dockerd-rootless-setuptool.sh domainname dosfsck
ubuntu@ip-172-31-23-81:~/iris/IAM/scripts$ sudo docker ps -a
CONTAINER ID   IMAGE                                COMMAND                                  CREATED        STATUS        PORTS
21faec0a8803   intersystems/iam:3.0.2.0-4          "/docker-entrypoint..." 42 seconds ago Up 30 seconds (healthy) 0.0.0.0:8000-8004->8000-8004/tcp, :::8000-8004->8000-8004/tcp
e01d88f2e081   intersystems/iam:3.0.2.0-4          "/docker-entrypoint..." 42 seconds ago Exited (0) 25 seconds ago
075f95645051   postgres:14.5                      "docker-entrypoint.s..." 42 seconds ago Up 40 seconds (healthy) 5432/tcp
```

Start the container

Check the status of the containers status

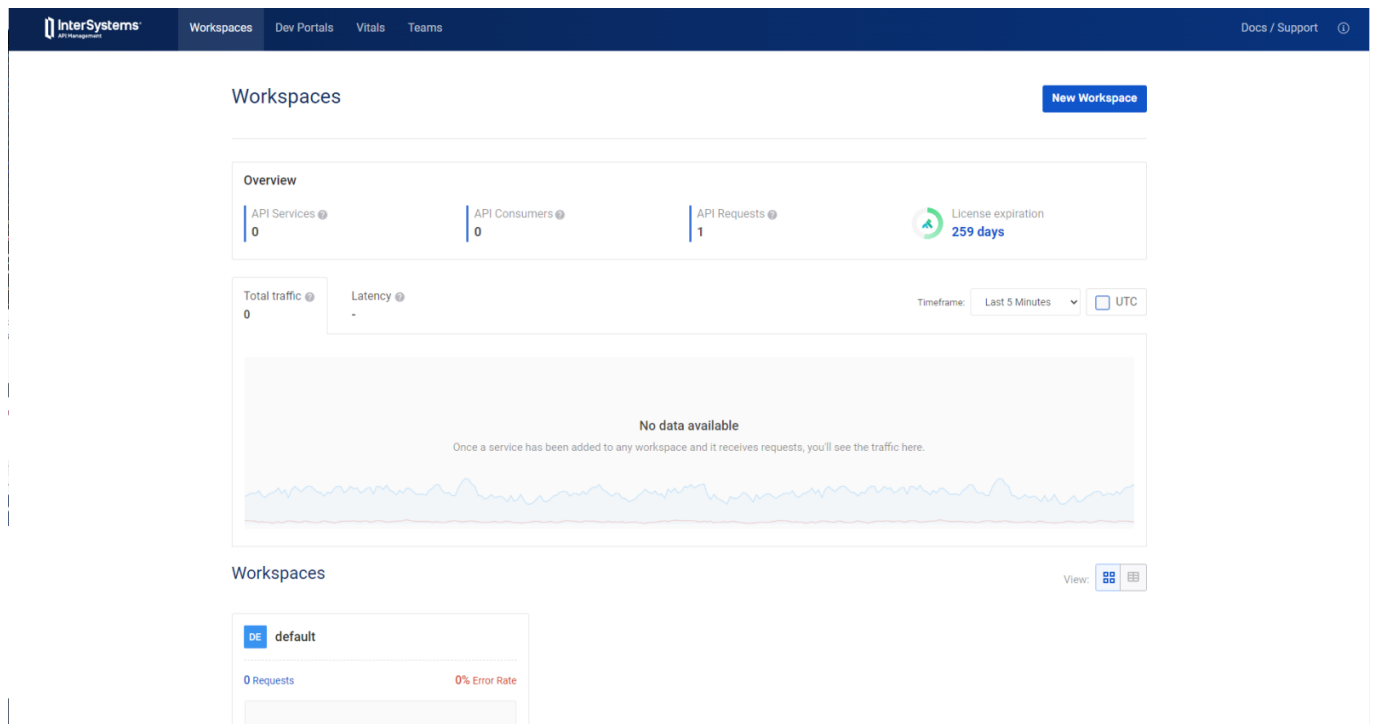
these two should be running

Check the IAM UI

You can access the UI of the IAM by the following link

<http://yourEC2publicAddress:8002/overview>





[#AWS](#) [#Cloud](#) [#InterSystems API Manager \(IAM\)](#) [#InterSystems IRIS](#) [#InterSystems IRIS for Health](#)

Source

URL: <https://community.intersystems.com/post/walk-through-deploying-intersystems-api-manager-iam-aws-ec2>