

# IXP Manager Workshop

28th Euro-IX Forum  
April 24th 2016  
Luxembourg



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**Installing / Upgrading to IXP Manager v4**

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# Prologue

This slide deck was originally presented by Barry O'Donovan at the 28th Euro-IX Forum IXP Manager Workshop in Luxembourg.

***These are not installation / upgrade instructions. Those will be official published in due course. The purpose of this presentation was to give attendees an idea of what's involved and how things are progressing.***



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## Disclaimer

- These are DRAFT!
  - But they do work - INEX, LONAP
- Would like volunteers to polish the documentation
- Not a five minute process :-(
  - Completely technology change!
- Requires PHP7
  - Officially recommended platform is Ubuntu LTS 16.04
  - Could not find official word on Redhat/CentOS/FreeBSD support
- v3 will be moved to security fix only
- We'll look at Vagrant, installation & upgrade here

Vagrant



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## Vagrant

1. Install Vagrant ( <http://www.vagrantup.com/> )
2. Install VirtualBox ( <http://www.virtualbox.org/> )
3. Clone IXP Manager, check out v4 and install dependancies:

```
git clone https://github.com/inex/IXP-Manager.git ixpmanager  
cd ixpmanager  
git checkout v4
```

4. Start-up Vagrant: `vagrant up`
5. Goto: <http://localhost:8088/>

<https://ixp-manager.readthedocs.org/en/latest/dev/vagrant.html>

Install



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## Installation

- <https://ixp-manager.readthedocs.org/en/latest/install.html>
  - or - see the Vagrant bootstrap.sh file in the IXP Manager root directory
- Install dependancies (from bootstrap.sh for Ubuntu 15.10):  

```
apt-get install -y apache2 php7.0 php7.0-intl  
php7.0-mysql php-rrd php7.0-cgi php7.0-cli  
php7.0-snmp php7.0-curl php7.0-mcrypt php-memcached  
libapache2-mod-php7.0 mysql-server mysql-client  
php-mysql joe memcached snmp nodejs nodejs-legacy  
npm build-essential php7.0-mbstring php7.0-xml
```



## Composer / Bower

- Composer: dependancy manager for PHP ( [packagist.org](http://packagist.org) )
  - <https://getcomposer.org/download/>

```
php -r "readfile('https://getcomposer.org/installer');" > composer-setup.php
php -r XXX-HASH-CHECK-REMOVED-FOR-BREVITY-XXX
php composer-setup.php
php -r "unlink('composer-setup.php');"
```

- Bower: A package manager for the web
  - <http://bower.io/>

```
npm install -g bower
```





## Get the Code

```
git clone https://github.com/inex/IXP-Manager.git ixp
cd ixp
git checkout v4      (v4 will become master
soon)
```



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## Database

```
$ mysql -u root -p
```

```
CREATE DATABASE `ixp`
```

```
CHARACTER SET = 'utf8mb4' COLLATE = 'utf8mb4_unicode_ci';
```

```
GRANT ALL ON `ixp`.* TO `ixp`@`localhost`
```

```
IDENTIFIED BY 'password';
```

```
FLUSH PRIVILEGES;
```



## A Word On Configuration

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- v3 used application/configs/application.ini
  - Because v4 still uses Zend, this is still required
  - Prior to the official release of v4, we'll have this auto generated from the v4 configuration files
- v4 uses Laravel's configuration structure under config/
- There are two types of configuration files:
  - xxx.php - these are version controlled in Git and should not be locally edited. Anything that needs to be set in these is done via phpdotenv
  - xxx.php.dist - these files need to be cp'd without the .dist and updated by you



## A Word On Configuration

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- See:
  - <https://github.com/vlucas/phpdotenv>
  - <https://laravel.com/docs/5.2/configuration>
- So, to configure:
  - `cp .env.example .env` and edit
  - `foreach config/xxx.php.dist:`
    - `cp config/xxx.php.dist config/xxx.php` and edit
- *Again, prior to release or sometime after, we'll try and make this easier.*
- *Remember bootstrap.sh has working versions that you can look at!*



# A Word On Configuration phpdotenv (.env) and its relation to config/\*.php

- .env:

```
DB_PASSWORD=password
```

- config/database.php

```
mysql => [  
    ...  
    'password' => env('DB_PASSWORD', ''),  
],
```

- If there's a config value you need set, and it hasn't been '.env'd', just poke us!



## Database Configuration

- Add the following to .env:  
DB\_HOST=localhost  
DB\_DATABASE=ixp  
DB\_USERNAME=ixp  
DB\_PASSWORD=password



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## Get the Code

```
git clone https://github.com/inex/IXP-Manager.git ixp
```

```
cd ixp
```

```
git checkout v4      (v4 will become master soon)
```

```
composer update
```

```
bower update
```

```
php artisan key:generate
```



## Database Configuration

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- Add the following to .env:

```
DB_HOST=localhost
```

```
DB_DATABASE=ixp
```

```
DB_USERNAME=ixp
```

```
DB_PASSWORD=password
```

- And create the schema:

```
php artisan doctrine:schema:create
```





## Rapid v3 Configuration

```
cp public/.htaccess.dist public/.htaccess
cp application/configs/application.ini.vagrant
  application/configs/application.ini
  (edit database settings and rename [vagrant] to [production])
cp bin/fixtures.php.dist bin/fixtures.php
  (edit as appropriate)
php bin/fixtures.php
```



# Fontend Working?


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```
php -S localhost:9000 -t public
```

```
=> http://localhost:9000
```

VAGRANT IXP Manager Support About Login

## Login to IXP Manager



Username

Password

For help, please contact [VAGRANT Operations](#).

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Upgrade



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## Upgrade from v3 to v4

- <https://ixp-manager.readthedocs.org/en/latest/upgrade-from-v3.html>
- Target will be v4.2 when tagged
- No in place upgrade - install in parallel and switch over
- Backup first!



## Duplicate the Database

```
mysql -u root -pXXX -e 'CREATE DATABASE ixp4;'
```

```
mysqldump -u root -pXXX ixp3
```

```
| mysql -u root -pXXX ixp4
```

```
mysql -u root -pXXX -e
```

```
'GRANT ALL ON ixp4.* TO `ixp`@`localhost`  
IDENTIFIED BY "ixp";'
```



## Similar Process to Installation

```
git clone https://github.com/inex/IXP-Manager.git ixp4
cd ixp4
git checkout v4      (v4 will become master soon)
```

- Add the following to .env:

```
DB_HOST=localhost
```

```
DB_DATABASE=ixp4
```

```
DB_USERNAME=ixp
```

```
DB_PASSWORD=ixp
```



## Similar Process to Installation

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```
composer update
```

```
bower update
```

```
php artisan key:generate
```

```
cp config/identity.php.dist config/identity.php
```

```
vim config/identity.php
```

```
cp $OLDIXP3/application/configs/application.ini  
$NEWIXP4/application/configs
```

*And edit as per:*

*<https://ixp-manager.readthedocs.org/en/latest/upgrade-from-v3.html>*



## Update the Database Schema

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- Doctrine2 can analyse the current schema against the expected schema:

```
php artisan doctrine:schema:update --sql
```

- And then update with:

```
php artisan doctrine:schema:update -commit
```

- We'll publish the expected output of `--sql` with the documentation





## Filesystem Permissions and Putting it Live

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- File system permissions need to be:

```
chown -R www-data: var/ storage/ bootstrap/cache
```

- You can point a new Apache alias / virtual host at IXP4 for testing and then you can switchover from IXP3 from Apache.
- All IXP3 functionality (bar graphing) will work as expected.
- There are graphing migration steps available.

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