

# NGINX Unit

Application Server from NGINX Inc.



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Age: 36

Company: NFQ Technologies

Position: Software Engineer



# nginx.conf

September 6-8, 2017  
Portland, Oregon

NGINX Inc. announces new product  
called “NGINX Unit”.

Hype goes all around  
the Internet!

On September 7th everyone talk about  
NGINX Unit.

Actually, everyone is guessing what is  
that and what it does.

But now hype is gone and more details  
are revealed.

Now: September 18, 2017

NGINX Unit is an Application Server.



But what is Application Server?

# Wikipedia: Application Server

An application server is a software framework that provides both facilities to create web applications and a server environment to run them.

Application Server Frameworks contain a comprehensive service layer model. An application server acts as a set of components accessible to the software developer through an API defined by the platform itself. ... Many application servers target much more than just Web page generation: they implement services like clustering, fail-over, and load-balancing, so developers can focus on implementing the business logic.

[https://en.wikipedia.org/wiki/Application\\_server](https://en.wikipedia.org/wiki/Application_server)

# Service Architecture: Application Server

An application server is a component-based product that resides in the middle-tier of a server centric architecture. It provides middleware services for security and state maintenance, along with data access and persistence.

[http://www.service-architecture.com/articles/application-servers/application\\_server\\_definition.html](http://www.service-architecture.com/articles/application-servers/application_server_definition.html)

# NGINX: Application Server

An application server's fundamental job is to provide its clients with access to what is commonly called business logic, which generates dynamic content; that is, it's code that transforms data to provide the specialized functionality offered by a business, service, or application.

<https://www.nginx.com/resources/glossary/application-server-vs-web-server/>

Looks like a buzzword!

# Known PHP Application Servers

[Zend Server](#)

[appserver.io](#)

Now we have new kid on the block.

NGINX Unit



# NGINX Unit

NGINX Unit is a new, lightweight, open source application server built to meet the demands of today's dynamic and distributed applications. Deploy configuration changes with no service disruptions. Run code in multiple languages. Build the foundation of your service mesh.

<https://www.nginx.com/products/nginx-unit/>

NGINX Unit provides consistent HTTP stack across applications regardless the language and platform that your are using for application.

But it is in Beta stage for now...

# NGINX Unit Key Features

# Multi-language support

Full support for Go, PHP, and Python.

Java, Node.js and Ruby support coming soon.

Run multiple applications written in different languages on the same server.

Use multiple versions of a language simultaneously on the same server.

# Programmable

Comprehensive REST API-driven configuration.

JSON-based configuration.

Graceful application and configuration updates.

Seamless zero-downtime deployment changes.

Dynamic application processes management (coming soon).

# Service mesh

Integrated network stack for fast service-to-service communication.

Offload network configuration from application code to NGINX Unit.

SSL/TLS and HTTP/2 support coming soon.

# Technical Details



# System

Linux 2.6 or later

FreeBSD 9 or later

MacOS X

Solaris 11

# Architectures

i386

amd64

powerpc

arm

# Application Programming Languages

Python 2.6, 2.7, 3

PHP 5, 7

Go 1.6 or later

JavaScript/Node.js (coming soon)

Java (coming soon)

Ruby (coming soon)

# How Application Code Executed

Python 2.6, 2.7, 3: Must use WSGI.

PHP 5, 7: Embedded PHP

Go 1.6 or later: Must use “unit” package instead of “http”

# Installation

Precompiled binaries for Unit are available for CentOS 7 and Ubuntu 16.04 LTS.

Comes with System Default PHP, Go and Python.

For Ubuntu 16.04 LTS: PHP 7.0, Python 2.7 and Go 1.6

Compile from source.

Use whatever version you can according to supported by NGINX Unit.

# Connecting for Configuration

Unix socket

TCP Socket

Security is your concern for now. There is a work around in NGINX Unit manual.

Let see how JSON config looks!

# Applications

```
{
  "applications": {
    "blogs": {
      "type": "php",
      "workers": 20,
      "root": "/www/blogs/scripts",
      "index": "index.php"
    }
  }
}
```



# Listeners

```
{  
  "listeners": {  
    "*:8300": {  
      "application": "blogs"  
    }  
  }  
}
```

Every time you update configuration  
NGINX Unit gracefully does the job.

But enough talking, it's  
DEMO time!

Show us phpinfo();

Show us GO example!

Show us Python example!

NGINX in front as Reverse Proxy.

Possible use cases



Unify integration stack for applications  
written in different languages.

Deploy new version into different folder  
and do version switch using JSON REST  
API.

Deploy new version into different folder,  
test it and do version switch using JSON  
REST API.

Different parts of Website or API join into  
one endpoint with NGINX in front.

Multiple versions of PHP/Python/Go  
language run on the same server on  
different ports.

The bigger picture.

# NGINX Unit

Lead NGINX developers work over NGINX Unit, including Igor Sysoev.

NGINX Unit is part of NGINX application platform.

Should become stable somewhere in 2018.

NGINX Controller (part of Platform) should be available as beta in 2018.

As much as I found out Platform should be stable in 2 years.

The buzz.



# Project on GitHub

Watch: 68

Stars: 1021

Forks: 47

Issues: 17 open, 17 closed

Pull requests: 2 open, 17 closed

Now: September 18, 2017

# Reddit

Topics are started on the same day as NGINX Unit is introduced.

Some are excited about JSON REST API.

Some are excited about graceful reconfiguration.

Some are excited about multilanguage and multiversion support.

Some are sceptical.

# Hacker News

Nice big thread <https://news.ycombinator.com/item?id=15189949>

Some people see benefits from JSON REST API.

Some say that this is nothing.

# Хабрахабр

Introduction article from ITSumma

<https://habrahabr.ru/company/itsumma/blog/337346/>

Mostly positive comments.

Some are excited about multilanguage and multiversion support.

Answers from one of NGINX Inc employees.

# Links & References

<https://github.com/nginx/unit>

<https://www.nginx.com/products/nginx-unit/>

<https://www.nginx.com/blog/introducing-nginx-application-platform/>

<http://unit.nginx.org/>

<https://www.nginx.com/blog/>

<https://www.youtube.com/channel/UCy6gt7XvGJ3AGpSon2pS4nQ>

<https://habrahabr.ru/company/itsumma/blog/337346/>

[https://www.reddit.com/r/programming/comments/6ym3n8/nginx\\_unit/](https://www.reddit.com/r/programming/comments/6ym3n8/nginx_unit/)

[https://www.reddit.com/r/PHP/comments/6ylkqb/nginx\\_unit\\_a\\_new\\_programmable\\_lightweight/](https://www.reddit.com/r/PHP/comments/6ylkqb/nginx_unit_a_new_programmable_lightweight/)

[https://www.reddit.com/r/programming/comments/6ym07p/introducing\\_the\\_nginx\\_application\\_platform\\_with/](https://www.reddit.com/r/programming/comments/6ym07p/introducing_the_nginx_application_platform_with/)

# NGINX Unit - Discussion



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