WEDNESDAY, SEPTEMBER 18, 2019

The 2019 DevOps Developer RoadMap - Your Guide to become DevOps Engineer

DevOps is really hot at the moment and most of my friends, colleagues and senior developers I know are working hard to become a DevOps engineer and project themselves as DevOps champion in their organization. While I truly understand the benefit of DevOps, which is directly linked to improved software development and deployment, from my limited experience I can say that it's not an easy job. It's very difficult to choose the right path in mind of so many tools and practices. Many of my readers also ask me this question is how to become a DevOps engineer, which tools should I learn? which practices should I follow? does learning Maven and Jenkins must for a DevOps guy? **how about Docker and Kubernetes?** Does infrastructure automation part of DevOps? should I learn Chef, Puppet, or Ansible are just some of those questions which keep coming to me.

I have tried hard to answer those with my minimal experience but I couldn't jot down in the manner which is simply awesome and reusable but not to worry, today I am going to share with you an awesome resource which will help you to become the DevOps Engineer you always wanted to be, the **2019 DevOps RoadMap**.

I was casually surfing through internet yesterday when I come across this excellent GitHub page by Kamranahmedse, which shows a couple of useful roadmaps to become a front-end developer, back-end developer, a full-stack web developer and last but not the least, the DevOps Engineer.

This RoadMap is awesome in any sense as it not only highly what is the role of a DevOps engineer but also tells which tool you need to learn to cover that area. On top of that, it's really visually appealing with nice colors, so you can just take a printout and stick in your desk for easier reference.

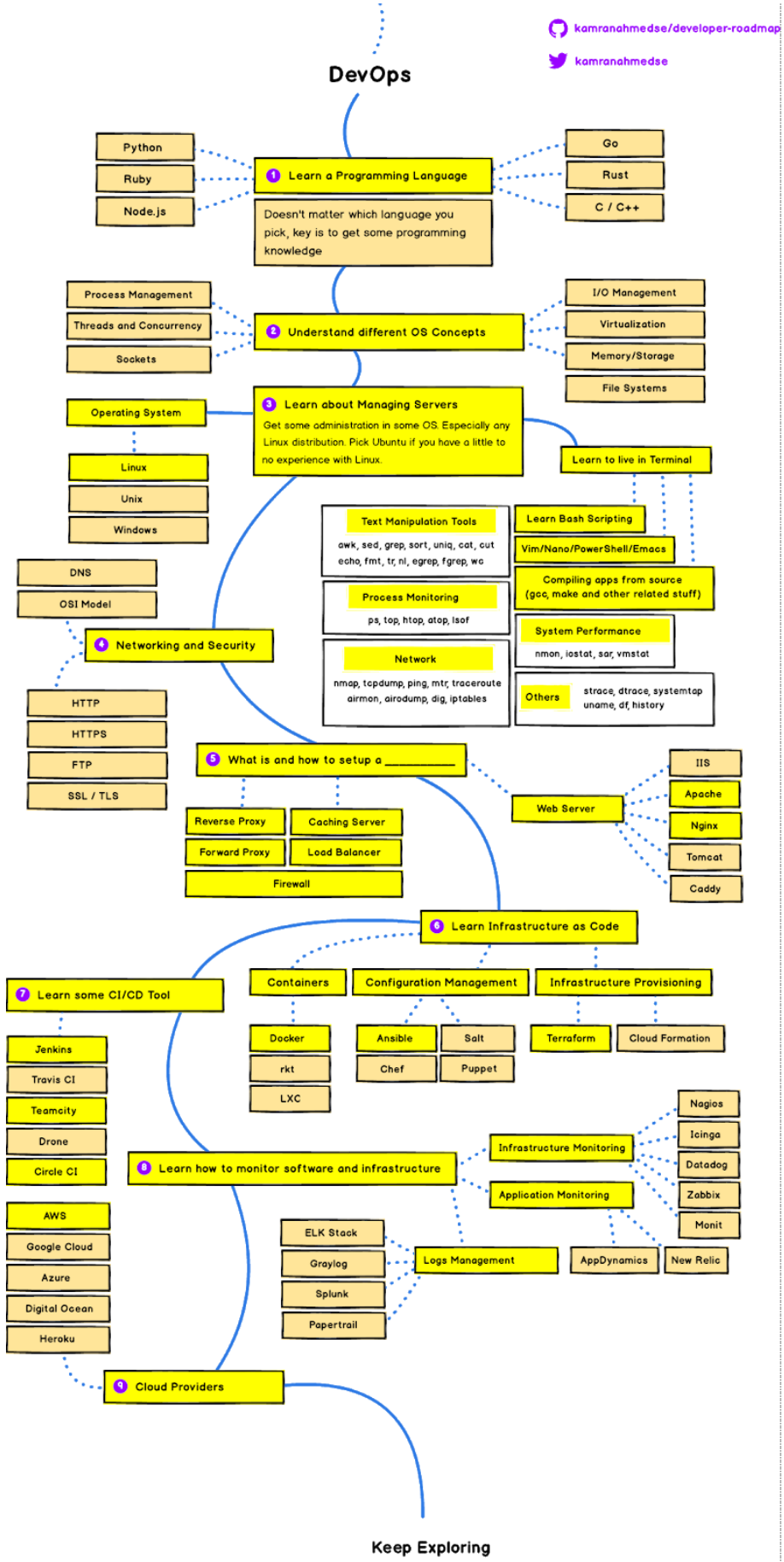
In order to complete the roadmap, I have also shared some useful online courses so that you can learn and improve the tool or area you want.

The 2019 DevOps RoadMap for Developers

Anyway is the 2019 DevOps RoadMap I am talking about:

Interview Questions

- core java interview question (169)
- Coding Interview Question (72)
- data structure and algorithm (70)
- interview questions (48)
- object oriented programming (31)
- SQL Interview Questions (30)
- design patterns (30)
- thread interview questions (30)



Now, let's go through the RoadMap step by step and find out how can we learn the essential skills require to become a DevOps guru in 2019:

1. Learn a Programming Language

Obviously and I assume you guys definitely know one of the three main programming language i.e. Java, Python, or JavaScript. If you didn't, don't worry you can take a look at below courses to learn your choice of language, though I strongly suggest you to learn at least one of these three major general purpose programming language.

If you want to learn Java then The Complete Java MasterClass is a great course, which is also recently updated for Java 10.

If you want to learn Python, then The Complete Python BootCamp is my favorite resource, which will teach you Python 3, the most popular version of Python.

And, if you want to learn JavaScript then you should not look beyond Mosh Hamdani's JavaScript Basics for Beginners course on Udemy.

If you need more choices and don't mind learning from free resources then you can always take a look at my list of free Java, Python, and JavaScript courses.

2. Understand different OS concepts

This is where the Ops part coming in, earlier it was solely supported guys and sysadmin people who were responsible for knowing about OS and hardware, but with DevOps, now developer also needs to know them. You at least need to know about Process Management, Threads and Concurrency, Sockets, I/O Management, Virtualization, Memory storage and File systems as suggested in the roadmap.

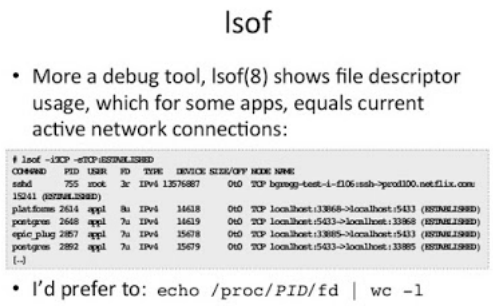
Since most of us work in Linux, I suggest you go through the Linux Administration BootCamp course on Udemy to learn and understand Linux OS better.

If you need more choices and you don't mind learning from freely available resources then you can also take a look at this list of free Linux courses.

3. Learn to Live in terminal

For a DevOps guy, it's important to have a good command in command line, particularly if he is working in Linux. Knowing some Linux shell like Bash, or Ksh and tools like find, grep, awk, sed, lsof, and networking commands like `nslookup` and `netstat` is mandatory.

If you feel you need to refresh these commands and tools then you should join the Linux Command Line Interface (CLI) Fundamentals course on Pluralsight.



It's a good refresher for both beginner and experienced Linux users. You will need a Pluralsight membership to access the course which cost around $29 per month or $299 per year but it's worth it.

Pluralsight is like developer's Netflix, it has more than 6000 high-quality courses on latest technology which means you can learn anything and anywhere. I mostly learn while travelling and commuting.

Btw, If you need more choices and want to become master on shell scripting, you can also take a look at my list of best courses to learn shell scripting.

4. Networking and Security

Gone are the days of isolation, in today's world, everything is connected to everything which makes networking and security very important. In order to become a good DevOps engineer, you must know about basic networking and security concepts like DNS, OSI Model, HTTP, HTTPS, FTP, SSL, TLS etc. In order to refresh this concept, you can take a look at this course on Pluralsight.

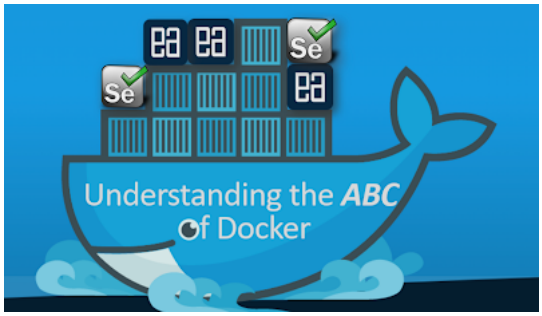
5. What is and how to setup

As a DevOps champion, you should know what is set up in your machine and how you can set that up, only that you can think about automating it. In general, a DevOps engineer should know how to set up a Web Server like IIS, Apache, and Tomcat. He should also know about Caching Server, Load balancer, Reverse Proxy, and Firewall etc.

6. Learn Infrastructure as code

This is probably the most important thing for a DevOps engineer and this is a very vast area as well. As a DevOps engineer, you should know about containers like Docker and Kubernetes, Configuration management tools like `Ansible`, `Chef`, `Salt`, and `Puppet`, Infrastructure Provisionings like Terraform and Cloud formation. Here are some of my recommended courses to learn these tools.

If you want to learn Docker then the Docker Mastery: The Complete Toolset From a Docker Captain course on Udemy is the best course to start with. It provides comprehensive coverage of all the tools a DevOps engineer will need.



If you want to learn Kubernetes then I suggest you join the Learn DevOps: The Complete Kubernetes course. This will teach you how to build, deploy, and manage Kubernetes.

And, if you want to learn Chef then there is no better course then Chef Fundamentals: A Recipe for Automating Infrastructure on Udemy. Probably the best course to learn Chef at this moment.

If you need more choices on Docker, you can explore this list of 10 essential courses for DevOps Engineer.

7. Learn some Continuous Integration and Delivery (CI/CD) tools

This is another very important thing for DevOps gurus and champion, i.e. to set up a pipeline for continuous integration and delivery. There are a lot of tools in the CI/CD area e.g. Jenkins,

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► July (26)
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► May (18)
► April (11)
► March (5)
► February (1)
► January (6)

► 2018 (40)
► 2017 (774)
► 2016 (109)

References

1. Oracle's Java Tech Network
2. jQuery Documentation
3. Microsoft SQL Server Documentation
4. Java SE 8 API Documentation
5. Spring Documentation
6. Oracle's JAva Certification
7. Spring Security 5 Documentation

Pages

Privacy Policy

TeamCity, Drone etc.

But, I strongly recommend learning at least Jenkins, as it's most widely used and probably the most mature CI/CD tool in the market. If you don't know Jenkins then this course is best to start with.

If you want to learn Jenkins, then there is no better course than the classic Master Jenkins CI For DevOps and Developers on Udemy. It's simply the best course and I have also learned most of my Jenkins skill from this course.

Btw, if you need more choices and don't mind learning from free resources then you can also check my list of 6 free Jenkins and Maven courses for Java developers.

8. Learn to monitor software and infrastructure

Apart from setup and deployment, monitoring is another important aspect of DevOps and that's why it's important for a DevOps engineer to learn about Infrastructure and application monitoring.

There are a lot of tools in this space e.g. Nagios, Icing, Datadog, Zabbix, Monit, AppDynanic, New Relic etc. You can choose some of them depending upon which one is used in your company like AppDynamic and Nagios.

9. Learn about Cloud Provides

Cloud is the next big thing and sooner or later you have to move your application to the cloud, hence it's important for a DevOps engineer to at least know about some of the popular Cloud Providers and their basics.

While AWS is clearly the leader in the cloud it's not alone, Google Cloud and Azure are slowly catching up and then we have some other players like Heroku, Cloud Foundry, and Digital Ocean.

To start with I strongly suggest to join the classic AWS Serverless APIs & Apps - A Complete Introduction course in Udemy, which is simply the best.

Btw, if you need more choices and don't mind learning from free resources then you can also check my list of free AWS courses for developers and DevOps guys.

Closing Notes

Thanks for reading this article so far … Good luck on your DevOps journey! It's certainly not going to be easy, but by following this roadmap and guide, you are one step closer to becoming a DevOps engineer.

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All the best for your DevOps Journey !!

By javin paul at September 18, 2019

Labels: best of javarevisited , courses , DevOps , online resources

5 comments :

William Leeson said...

This really is in which the Ops component arriving, previously it had been exclusively backed men as well as sysadmin individuals who had been accountable for understanding regarding OPERATING SYSTEM as well as equipment, however along with DevOps, right now creator must also Redirect Http to Https understand all of them.

December 13, 2018 at 7:08 AM

William Leeson said...

Great nice.

December 13, 2018 at 7:39 AM

Unknown said...

Really awesome article and flowchart. I know there's a ton of other tools and tooling categories out there and new ones emerging, like orchestration/cluster management with tools like Kubernetes and Nomad. Is that stuff more of an extra bonus would you say? Service discovery + service mesh and secrets management are two others that might be useful.

April 4, 2019 at 7:53 AM

Anonymous said...

It's really great article but I am bit confused that it's about making someone as DevOps Engineer or a multitasking Labor. Will all that a person can keep remembered?

May 26, 2019 at 10:04 AM

javin paul said...

DevOps is a very important role and mostly senior developer who has good knowledge of business, domain, architecture, infrastructure and tools play that role

May 26, 2019 at 6:26 PM

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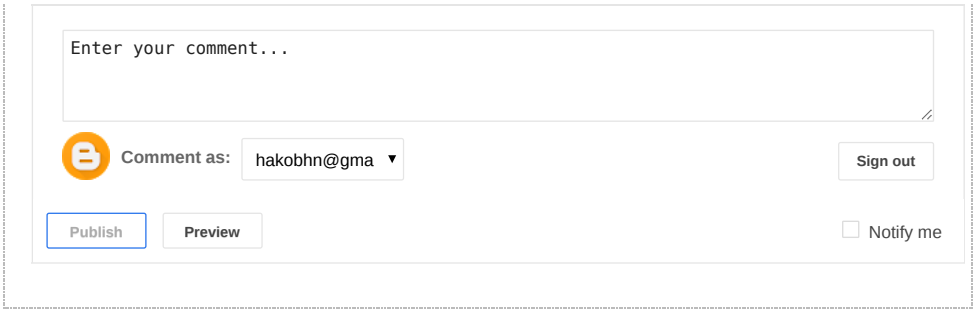

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