

Resources for Microservices and Business Domain Solutions for the Cloud Architect / Microservices Architect

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Whole Solutions for Microservices	Streams / Queues / Message brokers	Package Management / Build tools	Agile Sprint Planning / Bug Trackers	Storage of Packages / Deployments	CI / CD	Utilities
Spring Cloud	Apache Kafka	Java:	Jira	Artifactory	Jenkins	POSTMAN
Apache Zookeeper	RabbitMQ	Maven	Gitlab	Nexus	TravisCI	Charles Proxy
CloudFoundry (PaaS oriented to app deployment)	Spring Cloud Stream	Gradle	Bugzilla	Azure Artifact	Azure DevOps	Kitematic
JHipster	NServiceBus	Ant		Amazon S3	Azure Pipelines	DockStation
Heroku (PaaS)	Masstransport	Python:		Maven	GitLab	Docker Desktop Client
	Mosquitto RabbitMQ	pip		Artifactory	GoCD	
	Amazon Simple Notification Service (SNS)	Php:		DockerHub	Jenkins X	

	Amazon Simple Queue Service (Amazon SQS)	Composer			Spinnaker	
	ActiveMQ	Docker:			CircleCI	
	NATS	Docker composer			Amazon CodeDeploy	

Cloud Design (Infrastructure as Code)	Virtualization pieces	Log collectors / aggregators and management	Tracers / Requests Data visualization	Data Serialization / Messages definition	Databases	In Memory Engines / Read Caches
Terraform	Kubernetes	Log stash	Zipkin	Apache Avro	MySQL	MySQL Memory Engine
Amazon Cloud Formation	Docker	Elastic Search	(microservices calls, including internals)	Proto Buf	Mariadb	Redis
	Docker from Amazon, Google, Azure	Kibana (plugin for elastic)	AppDynamics	Thrift	Postgree	Memcached
	Mesos	Papertrail	DataDog	gRPC	MongoDB	Amazon ElastiCache
	LXD	Graylog			Cassandra	
	OpenStack	Splunk			Amazon DynamoDb	
	Proxmox	Sumo Logic			Amazon RDS	
	VMs & Hypervisors	Fluentd			Oracle	
	Vagrant	Logspout Docker Container			Clickhouse (columnar)	
	VirtualBox	AWS CloudTrail (records AWS API calls)			InfluxDB (time series)	
	VMWare				MemSQL	
	KVM				Hadoop Hive	
	QEMU				Azure TableSpace	
	Xen					

Shared Filesystems	Load Balancers	Reverse Proxies	Web Servers with cache support	Server Health Monitor	API Gateways	Service Discovery
NFS	Nginx	Squid	Nginx Varnish	Zabbix	Kong	Eureka Consul
Amazon S3 (eventual consistency)	Ribbon (for Client side Load Balancer)	Nginx		Nagios	Mulesoft	
Quobyte	(Consider Ip failover for supporting several LBs)	Apache		Prometheus	Netflix's Zuul	
Ceph		Traefik		Collectd	Azure Application Gateway	
Glusterd		Varnish		New relic agent	KrakenD	
Hadoop Distributed File System (HDFS)				Amazon CloudWatch	Amazon API Gateway	
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Not shared, but with interesting features for Docker, like copy-on-write, which saves tons of space. You can have NFS on top:				Monitor.us Monitis		
ZFS (also has compression)				Datadog		
BTRFS				Azure AKS monitor (for Kubernetes)		
				Splunk		
				Graphite		

				Grafana		
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Documents	Books	Key concepts	FrontEnd	Serverless	Design flows	Composers
<p>The 12 Factor App http://12factor.net http://www.reactive-manifesto.org</p>	<p>Site Reliability Engineering, by google</p> <p>The Site Reliability Workbook, by google</p> <p>AWS Certified Architect Official Study Guide</p> <p>Building Microservices by Sam Newman, O'Reilly</p> <p>Hands-on Full Stack Development with Spring Boot 2.0 and React, Ed: Packt</p> <p>Docker Up & Running, shipping reliable containers in production, by Sean P.Kane & Karl Matthias, Ed. O'Reilly</p> <p>Continuous Delivery with Docker and Jenkins, by Rafal Leszko, Ed. Packt</p>	<p>Business Domain</p> <p>SRE</p> <p>DevOps</p> <p>API</p> <p>How big is the Team?</p> <p>Correlation ID</p> <p>Eventual consistency</p> <p>Event subscription</p> <p>Client side load balancing</p> <p>OAuth2</p> <p>PEP (Policy Enforcement Point)</p> <p>Immutable Images</p> <p>Canary deployment</p>	<p>AngularJS</p> <p>View.js</p> <p>Bootstrap</p> <p>jQuery</p>	<p>AWS Lambda</p>	<p>JDL-Studio</p> <p>JHipster Domain language</p> <p>draw.io</p> <p>Microsoft Visio</p>	<p>PHP Composer</p> <p>Docker Shipyard</p> <p>Docker Composer</p> <p>Docker compose UI</p>

	<p>Kubernetes Handbook</p> <p>DevOps on the Microsoft Stack by Wouter de Kort</p> <p>Building Microservices Applications on Microsoft Azure, Apress</p> <p>Spring Services in Action by John Carnell, Manning</p> <p>Effective Java, by Joshua Bloch (google)</p>					
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Provisioning	Run Tasks	Agents / Data Collectors	Correlation ID injectors	CDNs	Web Servers	Server Data Visualization
Idempotent: Chef Puppet Salt Juju Agentless/Stateless: Ansible (many modules are idempotent)	RunDeck	Telegraf	Spring Cloud Sleuth	Akamai Amazon CloudFront	Apache lighthttp NGinx Varnish Java: Apache Tomcat ServletExec Weblogic	Grafana Splunk Graphite

Unit Testing	Integration Testing / Functional Testing / A/B Testing / Behavior-Driven	Email delivery	Security	IDEs for Development	API Development Frameworks	Git Repository
Java: JUnit Php:	Selenium Apache JMeter	Amazon Simple Email Service (SES)	AWS Web Application Firewall (WAF)	Java: IntelliJ Netbeans	Java: Spring Boot PHP:	Github GitLab

PHPUnit	BDD: BeHat			PHP: PHPStorm	Laravel	BitBucket
Python py.test	Cucumber			Python: PyCharm	Symphony	Heroku (with free account to deploy your own applications)
	FitNesse			.NET: Visual Studio Code	Catalonia Framework	
	JBehave				NET: NET Core	
	Capbara					

Certificates:

<https://letsencrypt.org/es/>

cheapssl

Query lang:

<https://graphql.org/learn/>

Validation:

<https://json-schema.org/>

<https://www.jsonschemavalidator.net/>

Specification:

<https://jsonapi.org/>

Aggregation stats:

statsD, rsyslog

Tutorials:

<https://www.digitalocean.com/community/tutorials>

[Spring Boot tutorial https://www.youtube.com/watch?v=vtPkZShrvXQ](https://www.youtube.com/watch?v=vtPkZShrvXQ)

Tip: The most layers of Software you add, more possibilities are of introducing single point of failure SPOF.
And you have to monitor more Servers, for example, the RabbitMQs, that they don't get without Free Space on disk.

Tip: you can use Compression to your Storage Logs with ZFS

Tip: Is important to routing internal API endpoints through internal API Gateway calls only from other Microservices. So is not possible to call from outside.