ZABBIX 5.4

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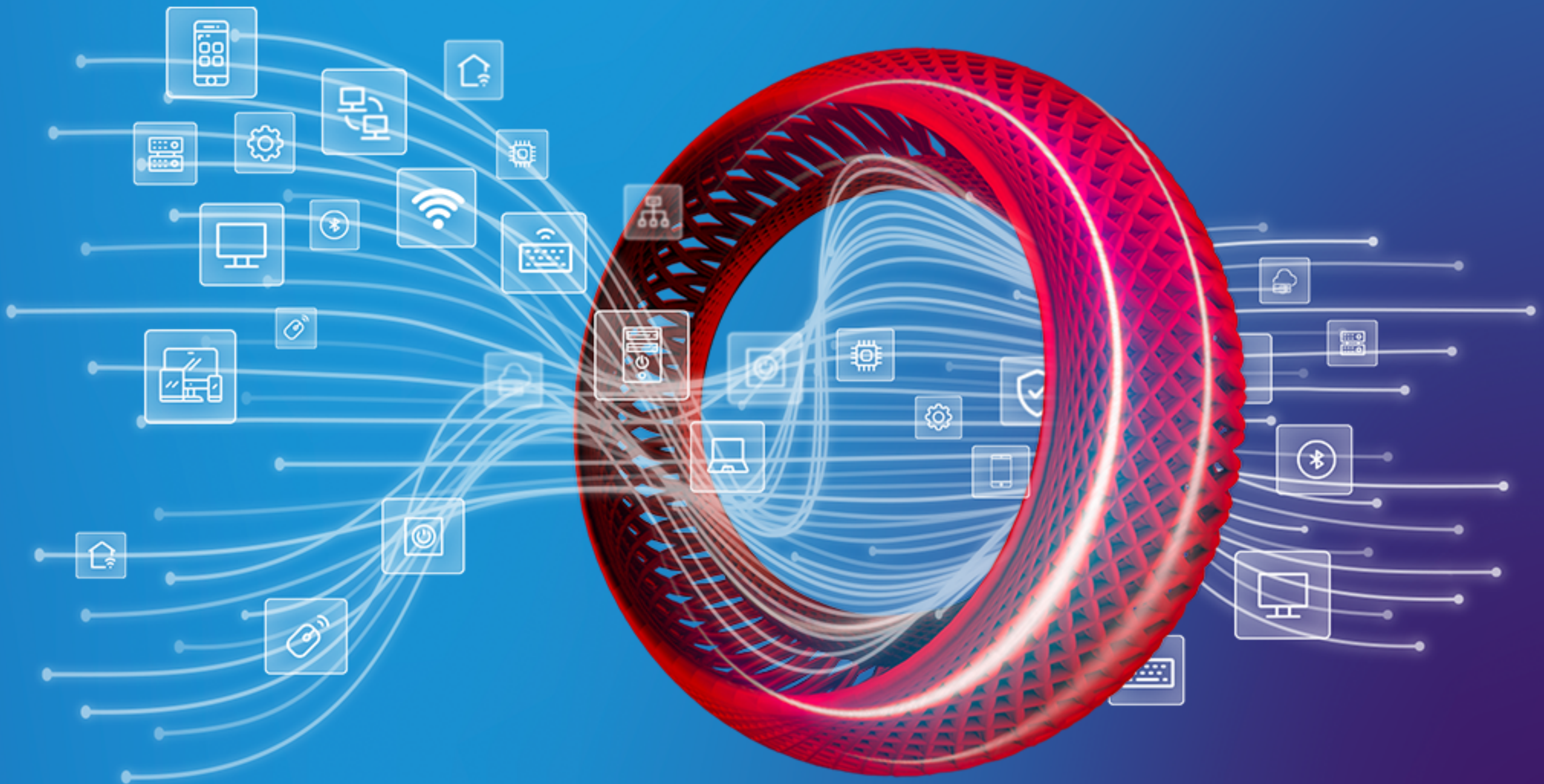


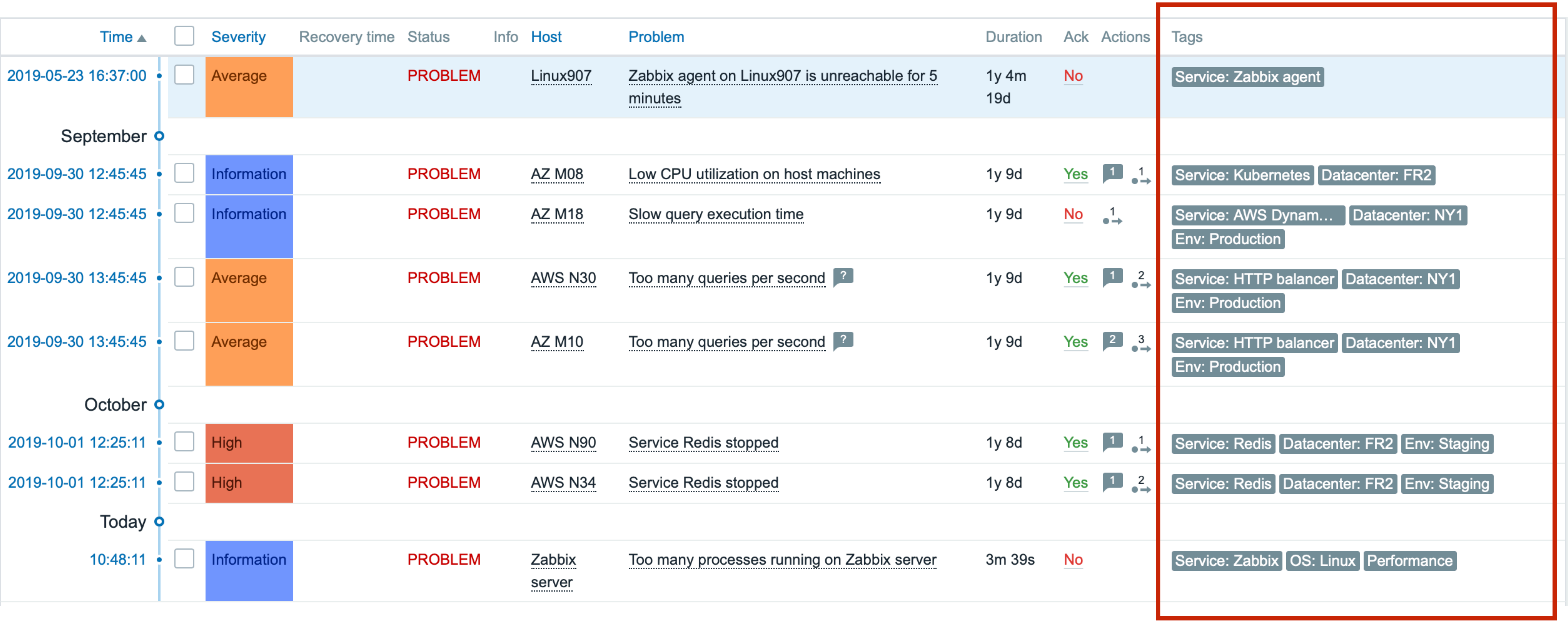
zabbix

Zabbix is an Universal Open Source enterprise-level monitoring solution

Tags for Everything

TAGS

- DONE: Supported for templates, hosts, host prototypes, triggers
- Zabbix 5.4: Item applications will be replaced by tags



Time ▲	☐	Severity	Recovery time	Status	Info	Host	Problem	Duration	Ack	Actions	Tags
2019-05-23 16:37:00	☐	Average		PROBLEM		Linux907	Zabbix agent on Linux907 is unreachable for 5 minutes	1y 4m 19d	No		Service: Zabbix agent
September											
2019-09-30 12:45:45	☐	Information		PROBLEM		AZ M08	Low CPU utilization on host machines	1y 9d	Yes	1 1	Service: Kubernetes Datacenter: FR2
2019-09-30 12:45:45	☐	Information		PROBLEM		AZ M18	Slow query execution time	1y 9d	No	1	Service: AWS Dynam... Datacenter: NY1 Env: Production
2019-09-30 13:45:45	☐	Average		PROBLEM		AWS N30	Too many queries per second ?	1y 9d	Yes	1 2	Service: HTTP balancer Datacenter: NY1 Env: Production
2019-09-30 13:45:45	☐	Average		PROBLEM		AZ M10	Too many queries per second ?	1y 9d	Yes	2 3	Service: HTTP balancer Datacenter: NY1 Env: Production
October											
2019-10-01 12:25:11	☐	High		PROBLEM		AWS N90	Service Redis stopped	1y 8d	Yes	1 1	Service: Redis Datacenter: FR2 Env: Staging
2019-10-01 12:25:11	☐	High		PROBLEM		AWS N34	Service Redis stopped	1y 8d	Yes	1 2	Service: Redis Datacenter: FR2 Env: Staging
Today											
10:48:11	☐	Information		PROBLEM		Zabbix server	Too many processes running on Zabbix server	3m 39s	No		Service: Zabbix OS: Linux Performance

Unified syntax for everything

EXISTING LIMITATIONS

- Different syntax for trigger expressions, calculated and aggregated items
- Certain calculations cannot be done
    - min(item1, item2)
    - min(item1, yesterday)
- Aggregation is limited to host groups, no support of tags
    - avg(all “Response time” having tag=“Service:API”)>1
    - sum(/host/vfs.fs.size[*,free])<1T
- Better aggregation will enable great level of automation for monitoring of clusters, cloud services, K8S, etc

CURRENT SYNTAX

```
{host:key.func(params)}=0
```

NEW SYNTAX

```
func(/host/key, params)
func(/host1/key1, /host2/key2)
func(/host/key[abc,*], params)
func(/host/key?[tag="Service:DB"], period, params)
```

TRIGGER EXPRESSIONS

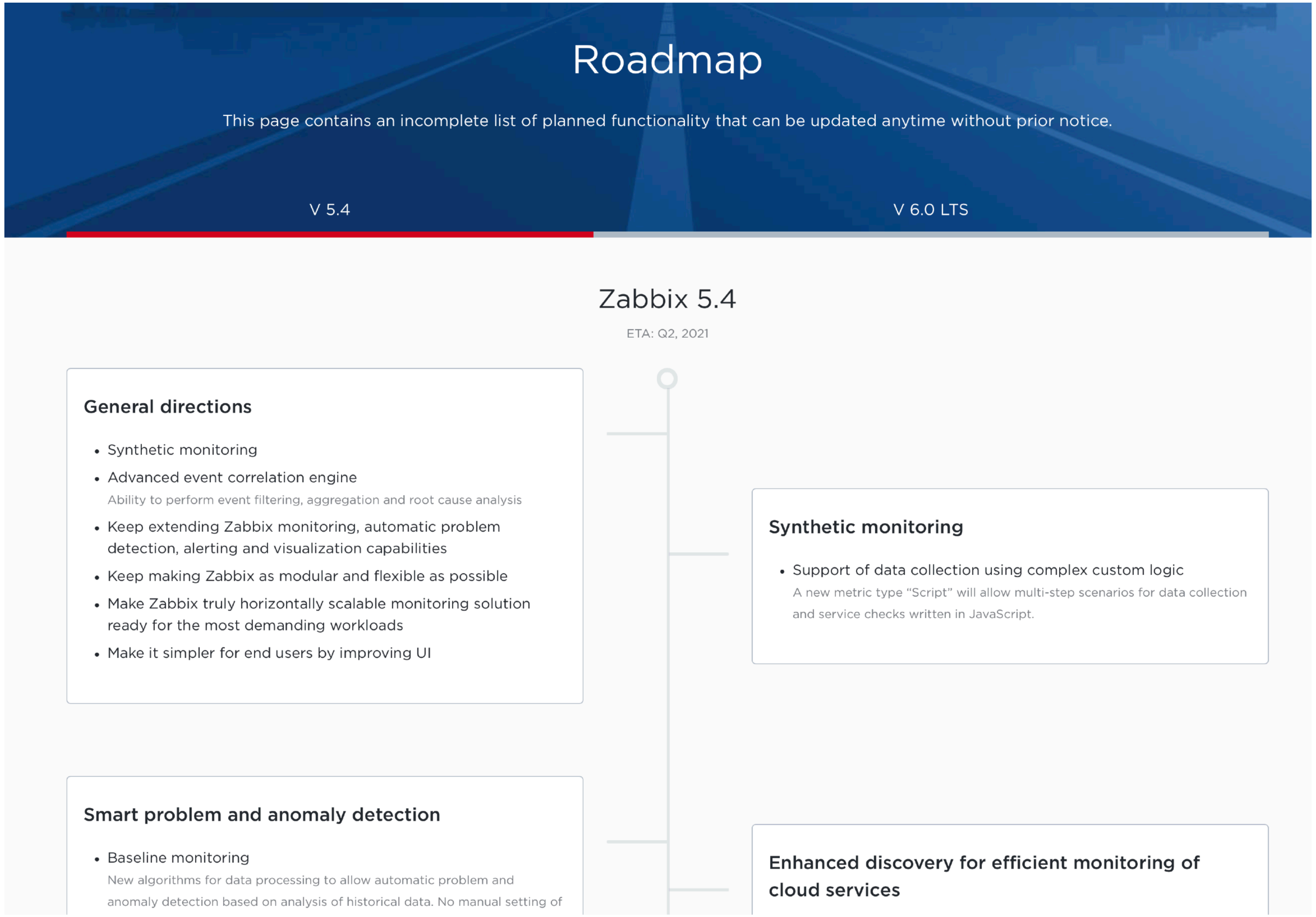
Current syntax	New syntax
{host:key.func(params)}=0	func(/host/key, period, params)
{host:key.min(#3)}>0 and {host:key.max(1h)}>100	min(/host/key,3)>0 and max(/host/key,1h)>100
{host:key.last()}>0	last(/host/key)>0
{host:key.prev()}>0	last(/host/key,2)
{host:vfs.fs.size[/,pfree].last()}<10	last(/host/vfs.fs.size[/,pfree])<10
{host:vfs.fs.size["/var/log",pfree].last()}<10	last(/host/vfs.fs.size["/var/log",pfree])<10
{host:key.min(1h, 24h)}<10	min(/host/key, 1h:now-24h)<10
{host:key.trendavg(1M, now/M)} > 1.2*{host:key.trendavg(1M, now/M-1y)}	trendavg(/host/key,1M:now/M) > 1.2*trendavg(/host/key,1M:now/M-1y)
N/A: Aggregate function with parameters as expressions	min(min(/host/key,1h), min(/host/key2,1h), 25)
N/A: Aggregate function with many parameters of various types, another example	min(min(/host/key,1h), avg(/host/key2,1h), 25)
N/A: Using expressions as parameters	min(min(/host/key,1h), avg(/host/key2,1h)*100, 25)
N/A: Calculate func() of multiple data sources or expressions	min(min(/host1/key1, 1h),min(/host2/key2,1h))

N/A: Absolute time periods	min(/host/key, 1d:now/d+1d)
	min(/host/key, 1d:now/d) or trendmin(/host/key,1d:now/d)

CALCULATED AND AGGREGATED ITEMS

	Current syntax	New syntax
Calculated items	func(host:key, 30m)	func(/host/key, 30m)
	func1(host1:key1, 30m, param) + func1(host2:key2, 30m, param)	func1(/host1/key1, 30m, param) + func1(/host2/key2, 30m, param)
	100*last("vfs.fs.size[/,free]/last("vfs.fs.size[/,total]")	100*last(//vfs.fs.size[/,free]) / last(//vfs.fs.size[/,total])
	avg("Zabbix Server:zabbix[wcache,values]",600)	avg(/Zabbix Server/zabbix[wcache,values], 10m)
	last("net.if.in[eth0,bytes]")+last("net.if.out[eth0,bytes]")	last(//net.if.in[eth0,bytes])+last(//net.if.out[eth0,bytes])
	N/A: Calculate aggregate function using filter	sum(/host/vfs.fs.size[*,free], 10m)
	N/A: Complex filters for data sources	sum(/*/vfs.fs.size[*,free]?[tag=“Service" or tag="Importance:High") and (group="Production" or group="Preproduction"])
	N/A: Absolute time periods for trend functions	trendavg(/host/key,1M:now/M) > 1.2*trendavg(/host/key,1M:now/M-1y)
Aggregate items	grpmin["Servers",qps,avg,5m]	min(avg_foreach(/*/qps?[grpoup=“Servers"], 5m))
	grpsum["MySQL Servers","vfs.fs.size[/,total]",last]	sum(last_foreach(/*/qps?[group="MySQL Servers"]))
	grpavg[["Servers A","Servers B"],system.cpu.load,last]	avg(last_foreach(/*/qps?[group="Servers A" or group="Servers B"]))

ZABBIX ROADMAP



Roadmap

This page contains an incomplete list of planned functionality that can be updated anytime without prior notice.

Zabbix 5.4

ETA: Q2, 2021

General directions

- Synthetic monitoring
- Advanced event correlation engine
  Ability to perform event filtering, aggregation and root cause analysis
- Keep extending Zabbix monitoring, automatic problem detection, alerting and visualization capabilities
- Keep making Zabbix as modular and flexible as possible
- Make Zabbix truly horizontally scalable monitoring solution ready for the most demanding workloads
- Make it simpler for end users by improving UI

Synthetic monitoring

- Support of data collection using complex custom logic
  A new metric type "Script" will allow multi-step scenarios for data collection and service checks written in JavaScript.

Smart problem and anomaly detection

- Baseline monitoring
  New algorithms for data processing to allow automatic problem and anomaly detection based on analysis of historical data. No manual setting of

Enhanced discovery for efficient monitoring of cloud services

https://www.zabbix.com/roadmap

ZABBIX

Thank you!