ZABBIX 6.0 WORKSHOP WEEK

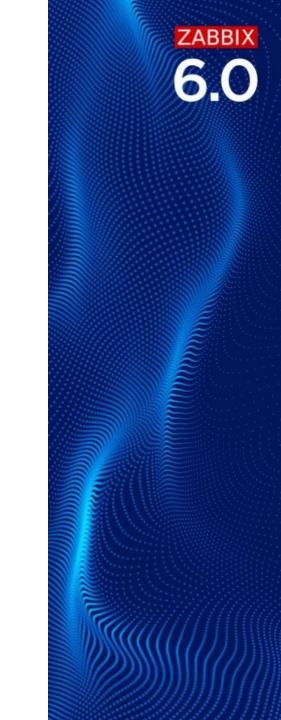
DEPLOYING BUSINESS SERVICE MONITORING WITH ROOT CAUSE ANALYSIS



WHAT IS BUSINESS SERVICE MONITORING?

Business service monitoring provides you with a possibility to monitor your infrastructure from the business perspective

- ⊘ Display busines structure using the IT infrastructure
- ⊘ Calculate SLA and SLO of various services
- ⊘ Show availability of services in use or provided
- ⊘ Discover root causes of business impacts
- ⊘ Identify the weakest spots

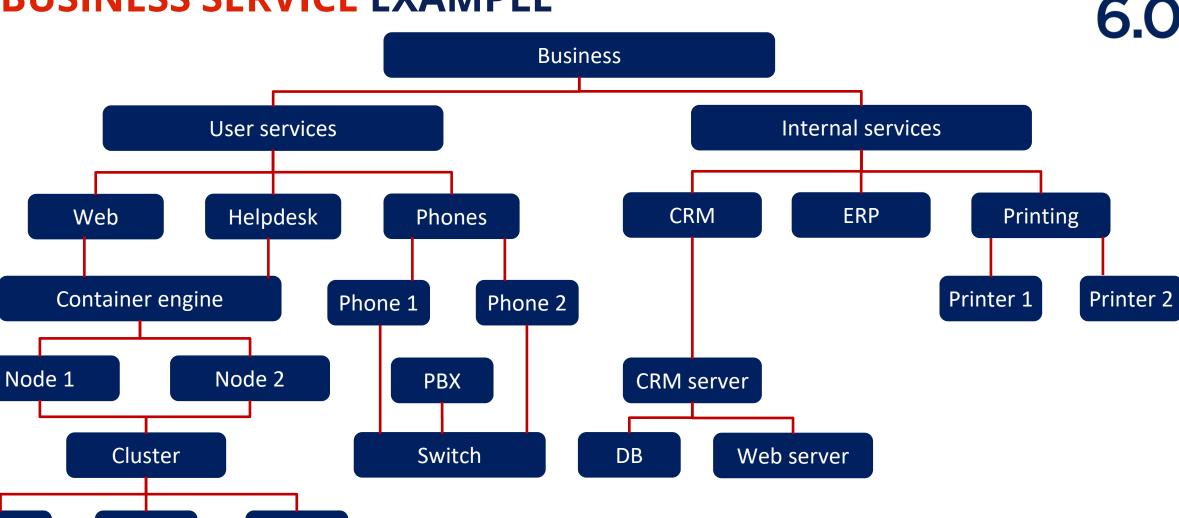


BUSINESS SERVICE EXAMPLE

Pod 3

Pod 2

Pod 1



ZABBIX

BUSINESS SERVICE EXAMPLE IN ZABBIX

Which can be direct and informative:

Name	Status	Root cause	Created at	Tags
Monitoring 3	Warning	Zabbix server node 2 is down	2022-02-18	zabbix
Workshop 2	Information	participant-03 not attending	2022-02-18	workshop
				_

Or give you full view:

Parent services	Name	Status	Root cause	Created at	Tags
Monitoring	Database	ОК		2022-02-18	zabbix: database
Monitoring	Frontend	ОК		2022-02-18	zabbix: frontend
Workshop	Host attendance	ОК		2022-02-18	attendance: hosts
	Monitoring 3	Warning	Zabbix server node 2 is down	2022-02-18	zabbix
Participant attendance	Participant 01	ОК		2022-02-18	attendance: participant
Participant attendance	Participant 02	ОК		2022-02-18	attendance: participant
Participant attendance	Participant 03	Warning	participant-03 not attending	2022-02-18	attendance: participant
	Workshop 2	Information	participant-03 not attending	2022-02-18	workshop
Zabbix server HA	Zabbix server node 1	ОК		2022-02-18	zabbix server: node 1
Zabbix server HA	Zabbix server node 2	Warning	Zabbix server node 2 is down	2022-02-18	zabbix server: node 2

BUSINESS SERVICE EXAMPLE IN ZABBIX

And produce a thorough report on your bussiness objectives:

Monitoring						<u>نه</u>	VM cluster						
Day	SLO	SLI	Uptime	Downtime	Error budget	Excluded downtimes	Day	SLO	SLI	Uptime	Downtime	Error budget	Excluded downtimes
2022-02-22	100%	N/A	0	0	0		2022-02-20	99.9%	N/A	0	0	0	
2022-02-21	100%	N/A	0	0	0		2022-02-19	99.9%	N/A	0	0	0	
2022-02-20	100%	100	12h 50m 50s	0	0		2022-02-18	99.9%	61.9421	4h 45m 14s	2h 55m 15s	-2h 54m 58s	
2022-02-19	100%	100	1d	0	0								
2022-02-18	100%	100	11h 1m 29s	0	0								
Developmen	t enviro	nmen	t				Frontend						
			2-18	2-19	2-20	Day	SLO	SLI U	Iptime	Downtime	Error budget	Excluded downtimes	
Service			SLO	2022-02-18	2022-02-19	2022-02-20	2022-02-20	100%	100 1	2h 50m 50s	0	0	
							2022-02-19	100%	100 1	d	0	0	
Database			100%	100	100		2022-02-18	100%	100 1	0h 53m 6s	0	0	
Frontend	1.0		100%	100	100		2022-02-17	100%	N/A 0		0	0	
Zabbix server H	1A		100%	58.471	7 100		2022-02-16	100%	N/A 0		0	0	
						Displaying 3 of 3 found	2022-02-15	100%	N/A 0		0	0	

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CONFIGURING BUSINESS SERVICE MONITORING WITH **ROOT CAUSE ANALYSIS**



all our microphones are muted ask your questions in Q&A, not in the Chat

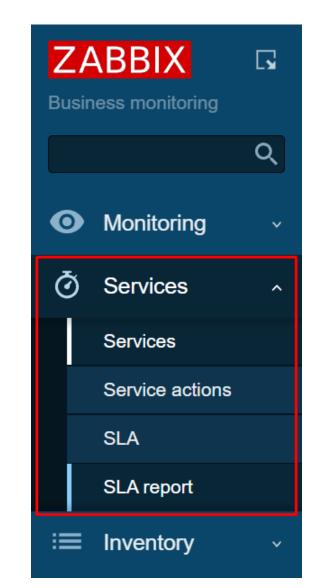
- use Chat for discussion, networking or applauses

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WHERE TO START BUSINESS SERVICE MONITORING?

A new separate Services menu section is now available:

- ⊘ Services your service tree configuration
- ⊘ Service actions defining actions for services
- SLA − configuring the SLA calculation
- SLA report − viewing the produced reports



WHERE TO START BUSINESS SERVICE MONITORING?

Permissions to services, can be also configured separately, allowing you to create separate roles to manage service monitoring:

	Access to services	
Read-write access to services	None All Service list	
	Workshop 🗙	Select
	type here to search	
Read-write access to services with tag	attendance participants	
Read-only access to services	None All Service list	

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CREATING SERVICES



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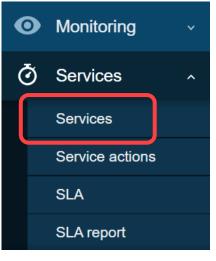
We start by making sure we have some hosts, if not we can create some, i.e.:

Name ▲	Items	Triggers	Graphs	Discovery	Web	Interface	Proxy	Templates	Status	Availability
Database server	Items 48	Triggers 11	Graphs 6	Discovery 3	Web	database.server:10050		MySQL by Zabbix agent	Enabled	ZBX
Frontend Server	Items 28	Triggers 5	Graphs 5	Discovery 1	Web	web.server:10050		Apache by HTTP	Enabled	ZBX
Zabbix server node 1	Items 130	Triggers 71	Graphs 25	Discovery 4	Web	127.0.0.1:10050		Linux by Zabbix agent, Zabbix server health	Enabled	ZBX
Zabbix server node 2	Items 130	Triggers 71	Graphs 25	Discovery 4	Web	localhost:10050		Linux by Zabbix agent, Zabbix server health	Enabled	ZBX
) selected Enable Disa	able Expo	rt 🗸 Mas	s update	Delete						

Since Business service monitoring is based on tags, make sure to add some unique tags, preferrably on the trigger level:

Name ▲	Host IPMI	Tags 1 Macros Inventory Encryption	Value mapping
Database server	Name zabbix	Value database	Action Remove
Frontend Server	Name zabbix	Value frontend	Action Remove
Zabbix server node 1	Name zabbix	Value HA node 1	Action Remove
	Name	Value HA node 2	Action Remove
Zabbix server node 2	Add		

Now we go to the Services, to proceed with the setup:



And enable editing mode in upper right part of the screen:



First create a parent service that will represent it as a whole, in this example this will be infrastructure monitoring. Since it is our parent service, it won't require problems tags and its status will be based on child services:

New service		×	Service Tags 1	Child services		
Service Tags 1 Child s	services		Tags	Name	Value	Action
				zabbix	monitoring	Remove
* Name	Infrastructure monitoring			Add		
Parent services	type here to search	Select				
Problem tags	Name Operation Value Action					Add Cancel
	Add		Put wo w	ill still add some ta	ags, to mark the ser	vico itsolf
* Sort order (0->999)	0		DUL WE W		igs, to mark the ser	vice itself
Status calculation rule	Most critical of child services		Additional ru	le		×
Description			Set statu	s to High 🗸		
			Condit	tion If at least N% of child ser	vices have Status status or abov	∕e ∨
				N 50 %		
l (Advanced configuration		Sta	atus Warning 🗸		
	Add	Cancel			Up	date Cancel
				And some advar	nced configuration	

Now, let's create some child services, by clicking on the parent service name and then clicking on Create service button:

Parent services	Name	Status	Root cause	Created at	Tags
	Infrastructure monitoring	ок		2022-02-22	zabbix: monitoring
0 selected Mass update Delete					

Following the now standard path



This, time most of them will have problem tags, since we already created hosts, representing real servers. Remember problem tags must match tags on the problem events:

New serv	ice						×	New serv	/ice							×
Service	Tags 1	Child se	ervices					Service	Tags 1	Child s	services					
	* N	ame	Frontend						1 *	Name	Database]
	Parent serv		Infrastructure monitoring 🗙			Select		Parent ser	rvices	Infrastructure monitoring × type here to search				Select		
	Problem	tags	Name	Operation	Value	Action	- 1		Problem	n tags	Name	Operatio		Value	Action	
			zabbix	Equals	✓ frontend	Remove					zabbix	Equals	~	database	Remov	e
			Add								Add					
Service							×	New serv	ice							×
Service	Tags 1	Child se	ervices					Service	Tags 1	Child s	services					
	Tags	Name		Value		Actio	on		Tags	Name)	\	/alue		Ac	tion
		zabbi	x	fronter	nd	Rem	nove			zabb	pix		databas	se	Re	emove
		Add					- 1			Add						
						_										
					Upda e Clone	e Delete	Cancel								Add	Cancel
							_									

Use the clone button to speed up the process

As a last service we will Zabbix server cluster with two nodes as child services, which will have some additional rules:

New service		×	×
Service Tags 1 Child	services		
* Name	Zabbix cluster		
Parent services	Infrastructure monitoring × type here to search	Select	
Problem tags	Name Operation Value Action Add		
* Sort order (0->999)	0		
Status calculation rule	Most critical of child services \checkmark		
Description			New additional rule
			Set status to Disaster V
	//		Condition If at least N child services have Status status or above V
Created at	2022-02-22		N 2
l	Advanced configuration		Status Warning ~
	Add	Cancel	Add Cancel

And then we can add each HA node to newly created Zabbix cluster:

Service						×	Service									×
Service	Tags 1	Child s	services				Service	Tags 1 C	Child s	services						
	*	Name	Zabbix server node 1					* Na	ame	Zabbix server node 2						
	Parent ser		Zabbix cluster 🗙			Select		Parent servi		Zabbix cluster ×						Select
	Problen		type here to search	-K	A = 6 = =			Problem t	L	Name	Operati	on	Value		Action	
	TTODIET	i tays	Name Ope zabbix Equ		Action Remove	2				zabbix	Equals	; v	HA node 2		Remove	
			Add							Add						
Service						×	Service									×
Service	Tags 1	Child s	ervices				Service	Tags 1 (Child s	services						
	Tags	Name		Value	Acti	on		Tags	Name	е		Value			Acti	on
		zabb	ix server	node 1	Ren	nove			zabb	bix server		node 2			Ren	nove
		Add							Add							
				Update	Clone Delete	Cancel							Update	Clone	Delete	Cancel

In the end overall structure will look like this:

Parent services	Name	Status	Root cause	Created at	Tags
Infrastructure monitoring	Database	ок		2022-02-22	zabbix: database
Infrastructure monitoring	Frontend	ОК		2022-02-22	zabbix: frontend
	Infrastructure monitoring 3	ок		2022-02-22	zabbix: monitoring
Infrastructure monitoring	Zabbix cluster 2	ОК		2022-02-22	zabbix: server
Zabbix cluster	Zabbix server node 1	ОК		2022-02-22	zabbix server: node 1
Zabbix cluster	Zabbix server node 2	ОК		2022-02-22	zabbix server: node 2
0 selected Mass update Delete					

And now if the triggers on the host with appropriate tags will fire, we will immediately see this on the service page

CREATING SERVICE – CONFIGURATION UPDATE

Configuration can be updated by service manager process once a minute by default:

Option: ServiceManagerSyncFrequency
How often Zabbix will synchronize configuration of a service manager (in seconds).
#
Mandatory: no
Range: 1-3600
Default:
ServiceManagerSyncFrequency=60

But can be updated manually by executing:

zabbix_server -R service_cache_reload
Runtime control command was forwarded successfully

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CREATING SLA REPORTS



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CREATING SLA REPORTS

Now we will need to go to Services – SLA Report section and click on **Create SLA** button in the upper right corner:

New SLA				
SLA Excluded dov	vntimes			
* Name	Monitoring report			
* SLO	100 %			
Reporting period	Daily Weekly Month	ly Quarterly	Annually	
Time zone	(UTC+02:00) Europe/Riga		\sim	
Schedule	24x7 Custom			
* Effective date	2022-02-21	===		
* Service tags	Name	Operation	Value	Action
	zabbix	Equals ~	frontend	Remove
	zabbix	Equals ~	database	Remove
	zabbix	Equals ~	server	Remove
	zabbix	Equals ~	monitoring	Remove
	Add			
Description				
				Add Cance

Here we can create a report by specifying the service tags of our interest and use schedule to specify when the service should be available

Only the SLAs related to services accessible to the user will be displayed (as read-only, unless Manage SLA is enabled for the user role).

CREATING SLA – EXCLUDED DOWNTIMES

The Excluded downtimes tab allows to specify downtimes that are excluded from the SLA calculation:

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LA Excluded dowr	lumes 3			
Excluded downtimes	Start time	Duration	Name	Action
	2022-02-21 00:00	1h	Maintenance	Edit Remove
	2022-02-21 00:00	4h	This weeks calibrations	Edit Remove
	2022-02-21 00:00	1h	Updating the servers	Edit Remove
	Add			

Which can be very helpful when a planned or urgent maintenance took place and shouldn't affect the SLA

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VIEWING SLA REPORTS



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REVIEWING SLA REPORTS

SLA Report menu allows to review SLA reports, based on the criteria selected in the filter:

		SLA	Monitoring report 🗙	Select	From Y	YYY-MM-DD		
		Service	type here to search	Select	То ү	YYY-MM-DD		
				Apply Reset				
			.02-21		-02-22		2022-02-23	
Service 🔺	SLO		2022-		2022-		2022-	
Database	100%		100		100		100	
Frontend	100%		100		100		100	
Infrastructure monitoring	100%		100		100		100	
Zabbix cluster	100%		100		100		100	
								Displaying 4 of 4 found

While clicking on the service name, provides a detailed report on the service

		SLA M	lonitoring report 🗙	Sele	From	YYYY-MM-DD		
		Service	abbix cluster 🗙	Sele	ect To	YYYY-MM-DD		
				Apply	:			
Day	SLO	SLI	Uptime	Downtime	Error budge	et	Excluded downtimes	
2022-02-23	100%	100	39m 44s	0	25s			
2022-02-22	100%	100	0	0	0			
2022-02-21	100%	100	0	0	0			

REVIEWING SLA REPORTS

After the SLA was configured, it will be also visibe on the services page, by clicking on the service name and info box:

All services / Hos	sting								
Hosting									
Parent services:									
Status:	ОК								
SLA:	Hosting SLA: 97.4382								
Tags:	zabbix	Reporting period	SLO	SLI	Uptime	Downtime	Error budget	×	
Name		2022-02-21	100%	97.4382	4h 21m 11s	6m 52s	-6m 52s		
Database			OK						
Frontend			ОК						
Load balancer noo	Load balancer nodes 2 OK								



SLA REPORTS - WIDGETS

- SLA − SLA to reflect in report.
- Service specific service if needed
- Show periods how many periods will be displayed in the widget, 20 by default, 100 per widget.
- From Select the beginning date for the report.
- To Select the end date for the report.

Add widget		
Туре	SLA report 🗸	Show header 🗸
Name	Current hosting agreement uptime	
Refresh interval	Default (No refresh) 🗸 🗸	
* SLA	Hosting SLA 🗙	Select
Service	type here to search	Select
Show periods	20	
From	2022-02-21	
То	YYYY-MM-DD	
		Add Cancel

Relative dates are supported: now, now/d, now/w-1w etc; supported date modifiers: d, w, M, y.

SLA REPORTS - WIDGETS

SLA reports also can be added to the dashboard, simplifying creation of the business overview dashboard

Monitoring					Ŭ			* …	VM cluster								* •
Day	SLO	SLI	Uptime	Downtime	Error budget	Excluded downtimes			Day	SLO	S	SLI U	Jptime	Downtime	Error budget	Excluded downtimes	
2022-02-22	100%	N/A	0	0	0				2022-02-20	99.9%	1	00 9	h	0	0		
2022-02-21	100%	100	4h 31m 49s	0	0				2022-02-19	99.9%	1	00 9	h	0	0		
2022-02-20	100%	100	1d	0	0			(2022-02-18	99.9%	6	61.9421 4	lh 45m 14s	2h 55m 15s	-2h 54m 58s		
2022-02-19	100%	100	23h	0	0	2022-02-19 15:00 Pla	anned restart: 1h										
2022-02-18	100%	100	11h 1m 29s	0	0												
					-0			(5								
Developme	nt enviror	nment						* …	Frontend								*
					2-18	2-10	2-20		Day	SLO	SLI	Uptime	Downtime	Error budget	Excluded downtin	mes	
					2022-02-18	2022-02-19	2022-02-20		2022-02-21	100%	100	4h 31m 49s	0	0			
Service				SLO				_	2022-02-20	100%	100	1d	0	0			
Database				100%	100	100	100	_	2022-02-19	100%	100	23h	0	0	2022-02-19 15:0	0 Planned restart: 1h	
Frontend				100%	100	100	100		2022-02-18	100%	100	10h 53m 6s	0	0			
Hosting				100%	48.2384	100	98.8657		2022-02-17	100%	N/A	0	0	0			
Load balancer	nodes			100%	58.4717	100	98.8657		2022-02-16	100%	N/A	0	0	0			
							Displaying 4 of	f 4 found									

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CREATING A SERVICE ACTION

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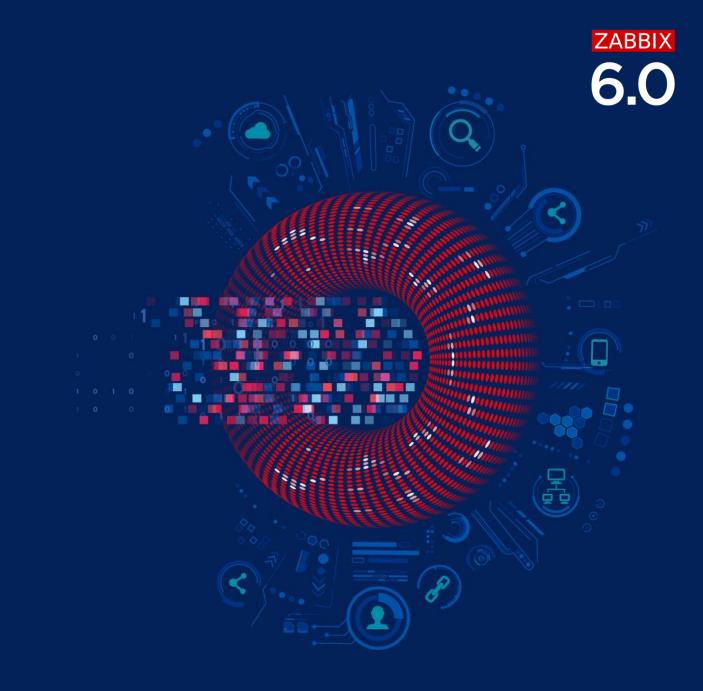
SERVICES - ACTIONS

- ⊘ Service actions react only on the service-related events
- ⊘ Support escalations, including notifications and command execution

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New condit	ion		×
Туре	Service 🗸		
Operator	Service		
	Service name		
* Services	Service tag name		Select
	Service tag value	Action Operations 3	
		* Default operation step duration	1h
-		Operations	Steps Details Start in Duration Action 1 Send message to user groups: Web administrators via all media Immediately Default Edit Remove
			2 Send message to user groups: Management via all media 01:00:00 Default Edit Remove
			Add
		Recovery operations	Details Action
			Notify all involved Edit Remove
			Add
		Update operations	Details Action
			Prov.





DOWNLOAD & GET STARTED IN 10 MINUTES



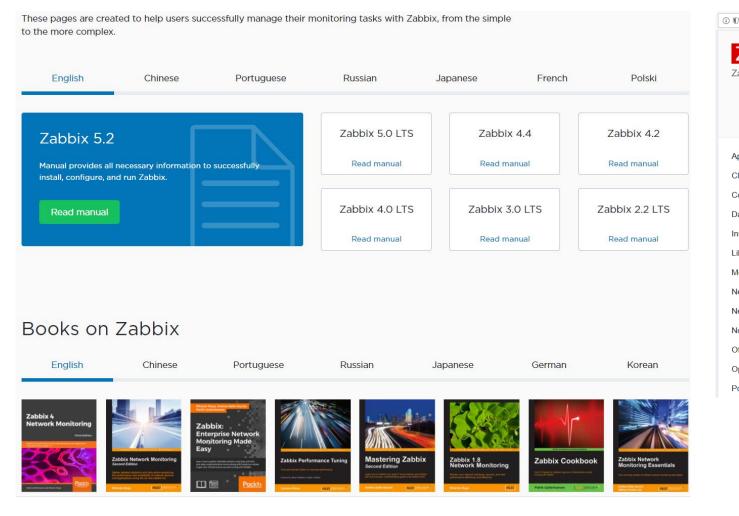
Ochoose your platform for Zabbix server

				<u></u>
ZABBIX VERSION	OS DISTRIBUTION	OS VERSION	DATABASE 🖉	WEB SERVER
5.2	Red Hat Enterprise Linux	8	MySQL	Apache
5.0 LTS	CentOS	7	PostgreSQL	NGINX
4.0 LTS	Oracle Linux	6		
3.0 LTS	Ubuntu			
	Debian			
	SUSE Linux Enterprise	_		
	Server			
	Raspbian			

- ⊘ Install and configure Zabbix server
- ⊘ Configure Zabbix frontend
- Start using Zabbix

KEEN TO LEARN MORE ABOUT ZABBIX?

START WITH ZABBIX DOCUMENTATION



🛛 🔒 https://share.zabbix.com/most-rated		
Z Share Zabbix templates, modules & mor	e Search Advanced Search	
Applications	Directory: Most Rated L	istings
Cloud		
Cooling (A/C)		
Databases	Zabbix-in-Telegram 🖪	opular 🚖 🚖 🚖 🚖
nstallers	0.1	in Telegram. Features Graphs based and group chats Channels support Sa
ibraries	Category: Notifications	
Monitoring Equipment	Type Alert Script	Vendor Others
Network Appliances		
Network Devices	Grafana-Zabbix Popular	
Notifications		bbix to Grafana metric dashboard (gra
Official Templates		ds examples at Grafana-Zabbix Live d
Operating Systems	Category: Applications	
Power (UPS)	Type Integration	Vendor Others

WEBINARS

- Pay attention torecorded webinarsin zabbix.com
- More advancedtopics are coveredthere

Zabbix perforance tuning: 100k of checks per second on a single server	Migration to the latest release	Value pre-processing
Arturs Lontons Technical Support Engineer, Zabbix	Arturs Lontons Technical Support Engineer, Zabbix	Arturs Lontons Technical Support Engineer, Zabbix
31 min. Watch now English	31 min. Watch now English	22 min. Watch now English
Communicating with Zabbix using API: create your first integration	What's new in Zabbix 5.2	Extended out of the box monitoring with Zabbix Agent 2
Renats Valiahmetovs Technical Support Engineer, Zabbix	Alexei Vladishev Founder & CEO, Zabbix	Arturs Lontons Technical Support Engineer, Zabbix
60 min. Watch now English	65 min. Watch now English	30 min. Watch now English
Implementing advanced LLD logic with LLD overrides	H5 Network – Zabbix integration live demo on the real network	Lift and shift your Zabbix to Oracle Cloud with MySQL Database Service
Arturs Lontons Technical Support Engineer, Zabbix	Frédéric Guillois President, H5 Network	Vittorio Cioe Sr. Solution Engineer, MySQL
67 min. Watch now English	27 min. Watch now English	47 min. Watch now English

ZABBIX SERVICES

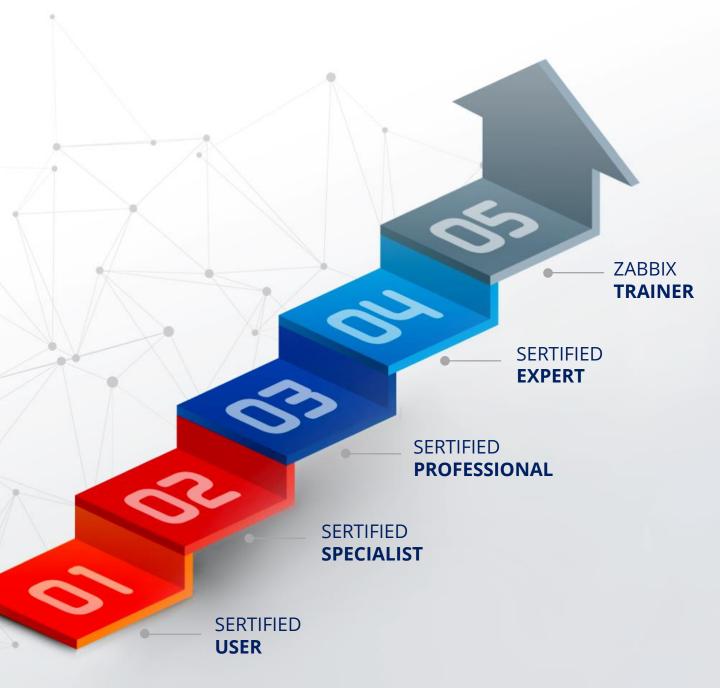


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ZABBIX TRAINING

Level 1	Level 2	Level 3	Level 4
Zabbix Certified User	Zabbix Certified Specialist	Zabbix Certified Professional	Zabbix Certified Expert
Use Zabbix frontend to view information. Know potential of Zabbix	Setup & configure Zabbix in SMBs or configure Zabbix in large companies	Manage big, distributed, highly loaded installations in large companies	Design & maintain highly efficient & loaded setups with expertise in API, HA/DR, and DB partitioning
1 day	5 days	3 days	5 days
Requirements None	Requirements Advanced computer literacy	Requirements Zabbix Certified Specialist exam or attendance certificate	Requirements Zabbix Certified Professional exam
Price in EUR Price in USD	Price in EUR Price in USD	Price in EUR Price in USD	Price in EUR Price in USD
€ 550	€ 1,950	€ 1,850	€ 3,250
Price does not include VAT	Price does not include VAT	Price does not include VAT	Price does not include VAT
Apply for course	Apply for course	Apply for course	Apply for course
Program description	Program description	Program description	Program description

If you are certain of your knowledge, **ZCU**, **ZCS** and **ZCP** exams can be purchased separately. More info: <u>zabbix.com/training</u>

ZABBIX EXTRA TRAINING

Automation and Integration with Zabbix API The course is designed to provide a detailed and in-depth study of Zabbix API functionality - like import host groups, generate reports, or integrate with other systems.	<section-header></section-header>	<section-header>Advanced Zabbix Security Administration The course will cover how to protect Zabbix internal communications and secure sensitive information like user credentials or encryption keys.</section-header>	<section-header>Advanced Problem and Anomaly Detection with Zabbix The course is fully dedicated to problem detection, from creating simple triggers to using new long-term analytics functions.</section-header>
Requirements No requirements	Requirements No requirements	Requirements No requirements	Requirements No requirements
Price in EUR Price in USD	Price in EUR Price in USD	Price in EUR Price in USD	Price in EUR Price in USD
€ 490	€ 490	€ 490	€ 490
Price does not include VAT	Price does not include VAT	Price does not include VAT	Price does not include VAT
Apply for course	Apply for course	Apply for course	Apply for course
Program description	Program description	Program description	Program description

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ZABBIX PARTNERS NETWORK

- *Zabbix partners network supports professional services in many local langauges*
- Zabbix has more than 200 partners all around the world

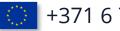


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To request a quote or additional info, please contact ZABBIX sales team via phone or email:

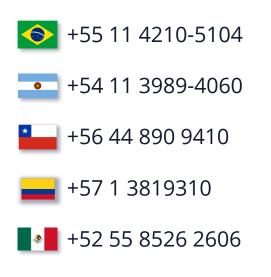


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QUESTIONS?





THANK YOU!

