360° мониторинг с PRTG

PAESSLER
THE NETWORK MONITORING COMPANY

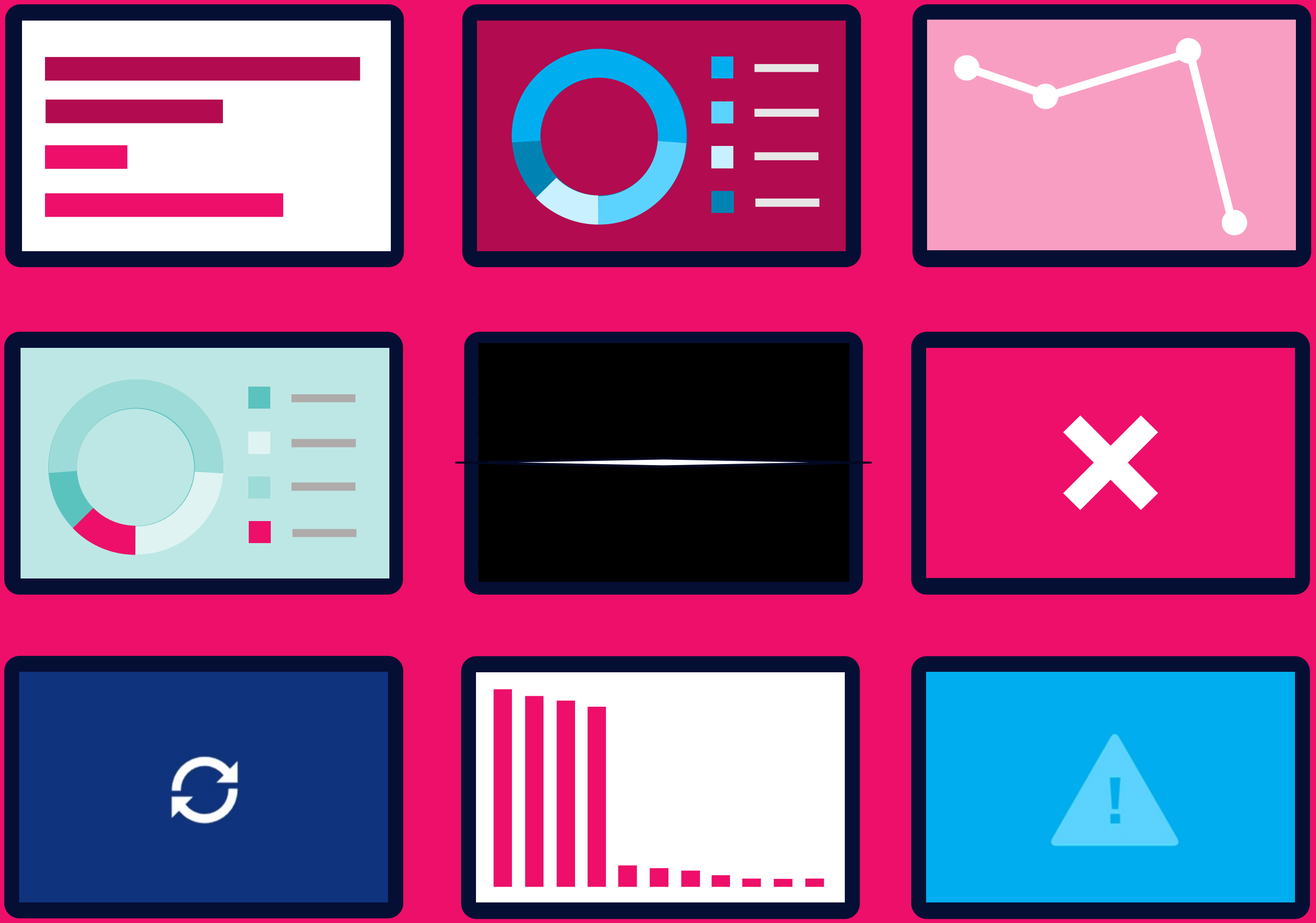
Программа

- Для чего нужен мониторинг
- Преимущества PRTG, архитектура и обзор решения
- О компании Paessler

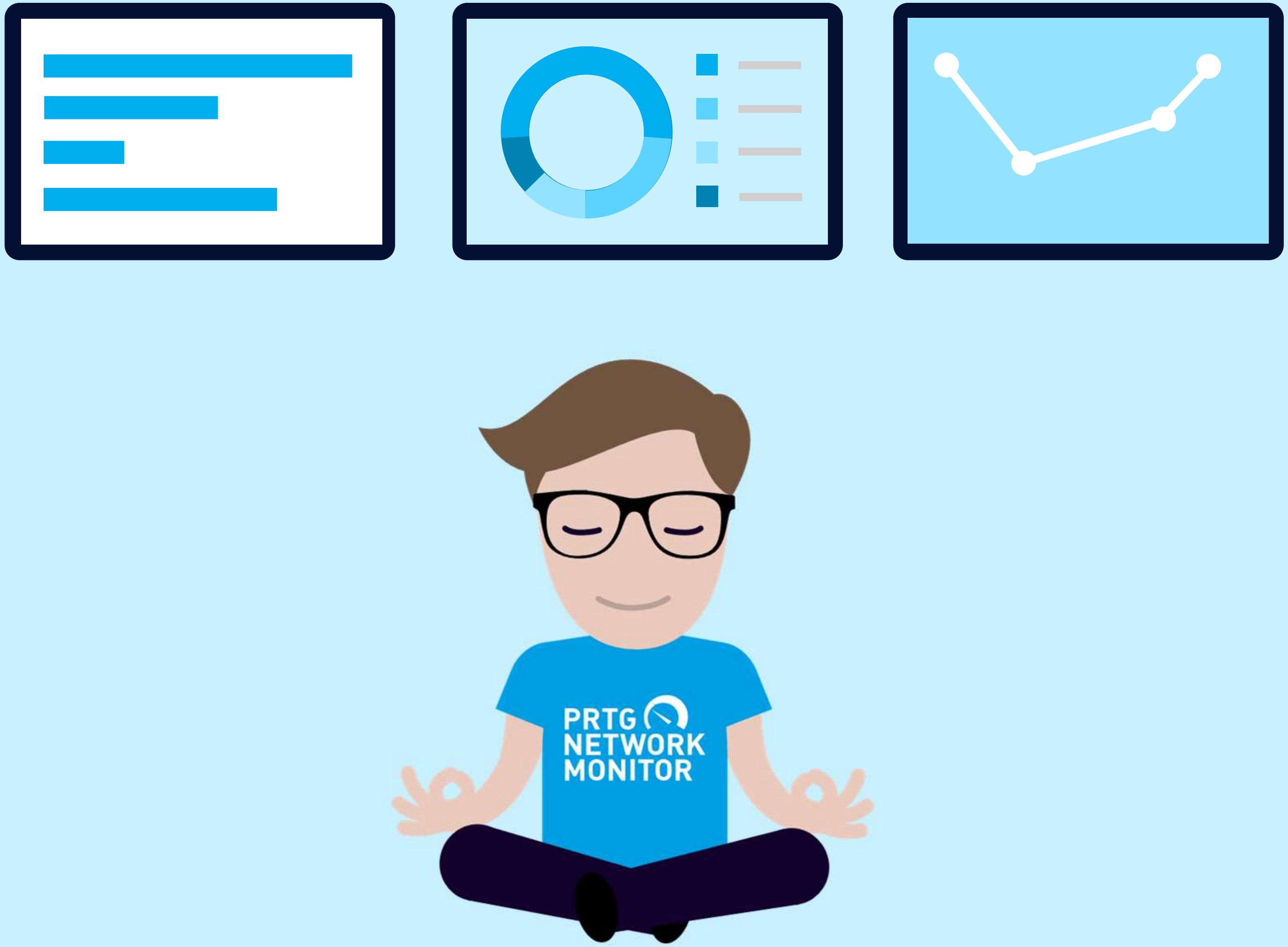
Сделайте ваш день проще!

В наши дни всё вокруг связно.

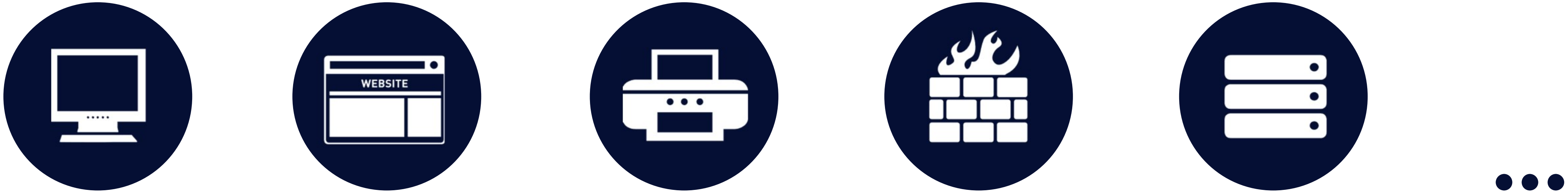
Вы должны быть на шаг впереди.



Вы должны быть на шаг впереди.


PRTG
NETWORK
MONITOR

Раньше мониторинг требовал множества действий



МОНИТОРИНГ 1Й СИСТЕМЫ

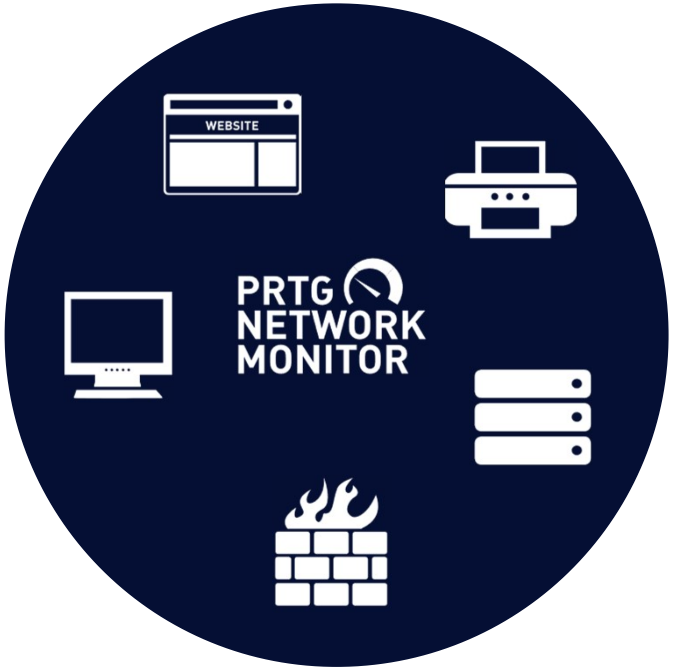
МОНИТОРИНГ 2Й СИСТЕМЫ

МОНИТОРИНГ 3Й СИСТЕМЫ

МОНИТОРИНГ 4Й СИСТЕМЫ

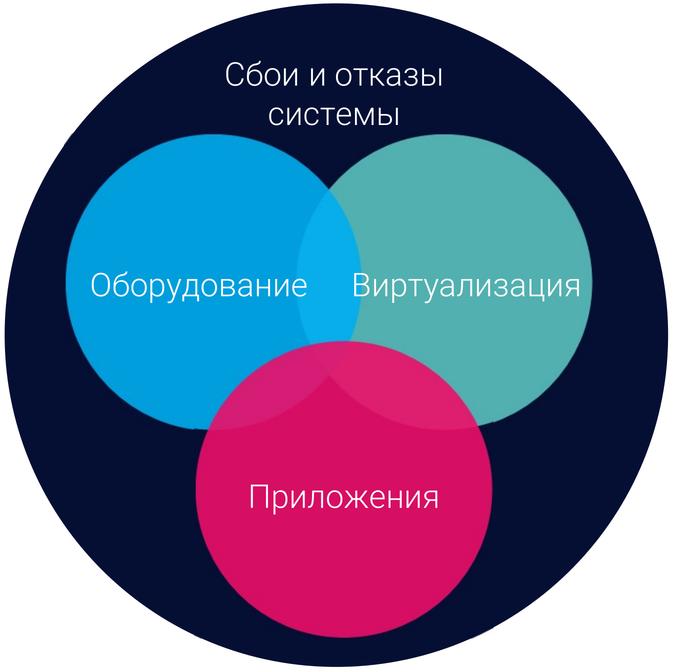
МОНИТОРИНГ 5Й СИСТЕМЫ

Раньше мониторинг требовал множества действий


WEBSITE
PRTG NETWORK MONITOR

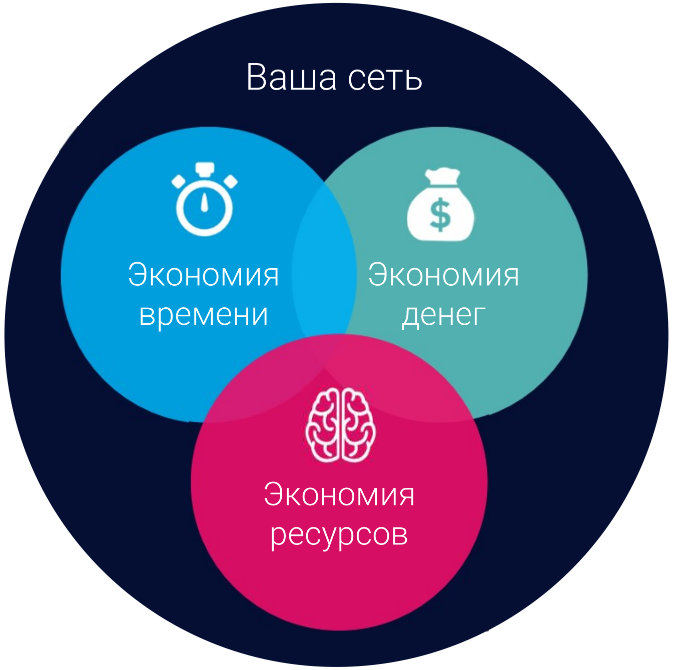
КОНТРОЛЬ ВСЕХ ЭЛЕМЕНТОВ ВАШЕЙ ИТ-ИНФРАСТРУКТУРЫ

Управляйте вашей сетью


Сбои и отказы системы
Оборудование
Виртуализация
Приложения

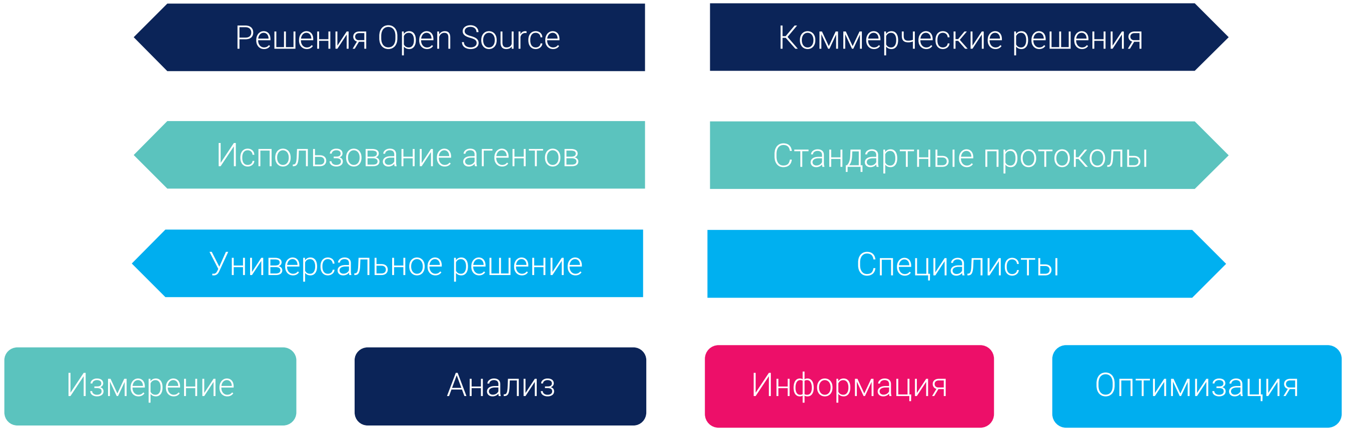
- ● Централизованный контроль
- ● Упрощённый процесс
- ● On-premise или облачная версия
- ● Оптимизация

Управляйте вашей сетью


Ваша сеть
Экономия времени
Экономия денег
Экономия ресурсов

- Предупреждение сбоев
- Оповещение об отказах
- Оптимизация сети
- Рост качества услуг

Наше определение понятия мониторинг



Решения Open Source	Коммерческие решения
Использование агентов	Стандартные протоколы
Универсальное решение	Специалисты

Измерение | Анализ | Информация | Оптимизация

Наше определение понятия мониторинг

Коммерческое решение

Стандартные протоколы

Универсальное решение

Измерение

Анализ

Информация

Оптимизация

5 основных критериев выбора

- Простота обслуживания
- Широта применения
- Гибкость настроек
- Система уведомлений
- Бюджет

PAESSLER
THE NETWORK MONITORING COMPANY
PRTG NETWORK MONITOR
SIMPLIFY YOUR DAY WITH PRTG
Monitor your entire IT infrastructure with PRTG Network Monitor. You have full insight into your network and its performance, to ensure that all business critical components of your IT infrastructure are running smoothly, with 100% uptime.
vmware
FUJITSU
NetApp
www.paessler.com
PAESSLER
PRTG NETWORK MONITOR

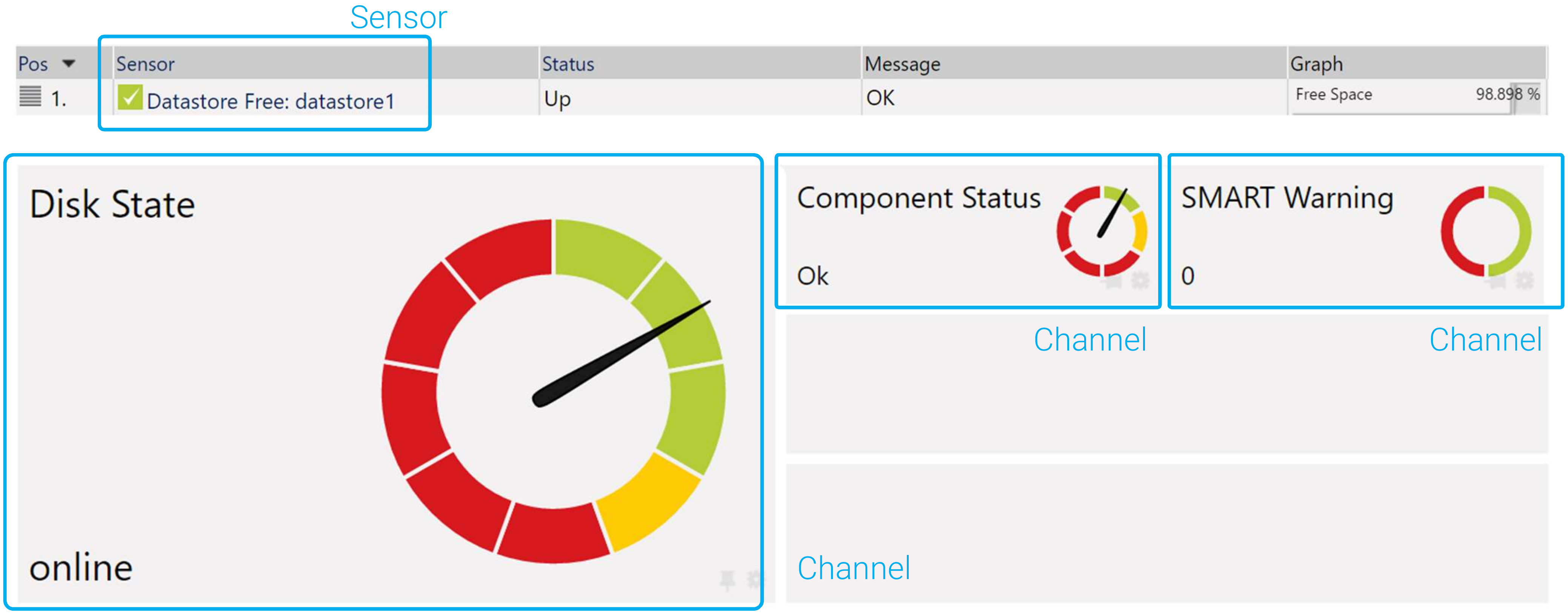
PRTG – легкость в использовании

- Только одна программа установки
- SmartSetup и авто-обнаружение
- Множество интерфейсов
- Подробная документация, база знаний
- Мощная система уведомлений

Сенсор

Сенсор?

Physical Disc Sensor



Sensor

Pos	Sensor	Status	Message	Graph
1.	✓ Datastore Free: datastore1	Up	OK	Free Space 98.898 %

Disk State
online

Component Status
Ok

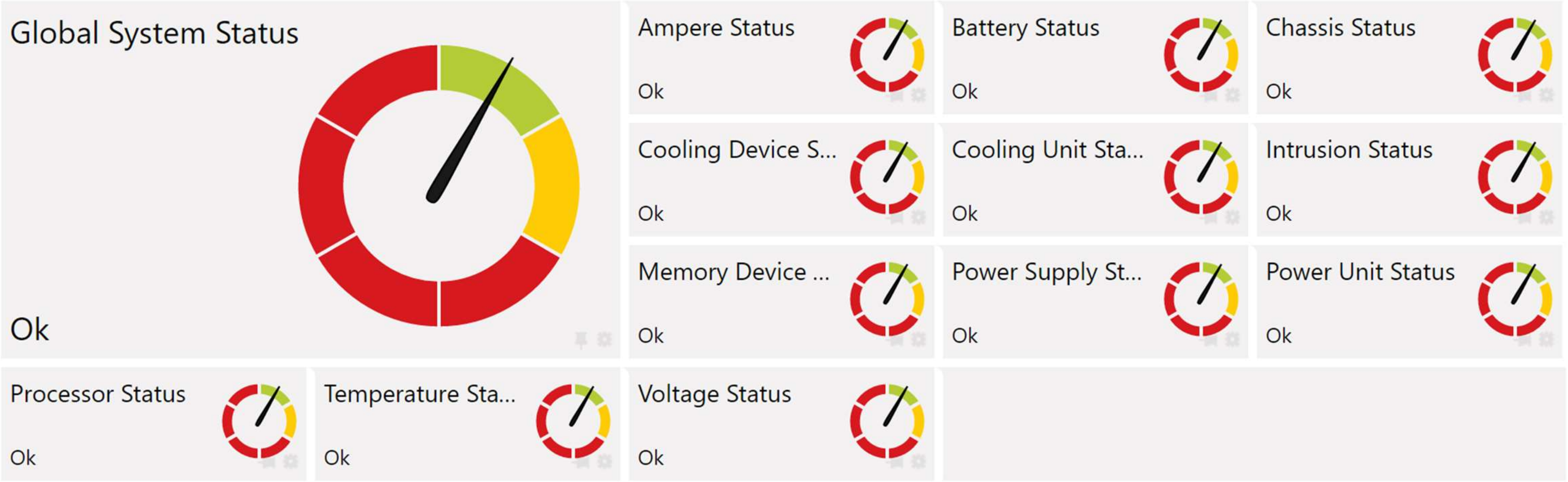
SMART Warning
0

Channel

Channel

Channel

Dell System Status



Global System Status
Ok

Ampere Status
Ok

Battery Status
Ok

Chassis Status
Ok

Cooling Device S...
Ok

Cooling Unit Sta...
Ok

Intrusion Status
Ok

Memory Device ...
Ok

Power Supply St...
Ok

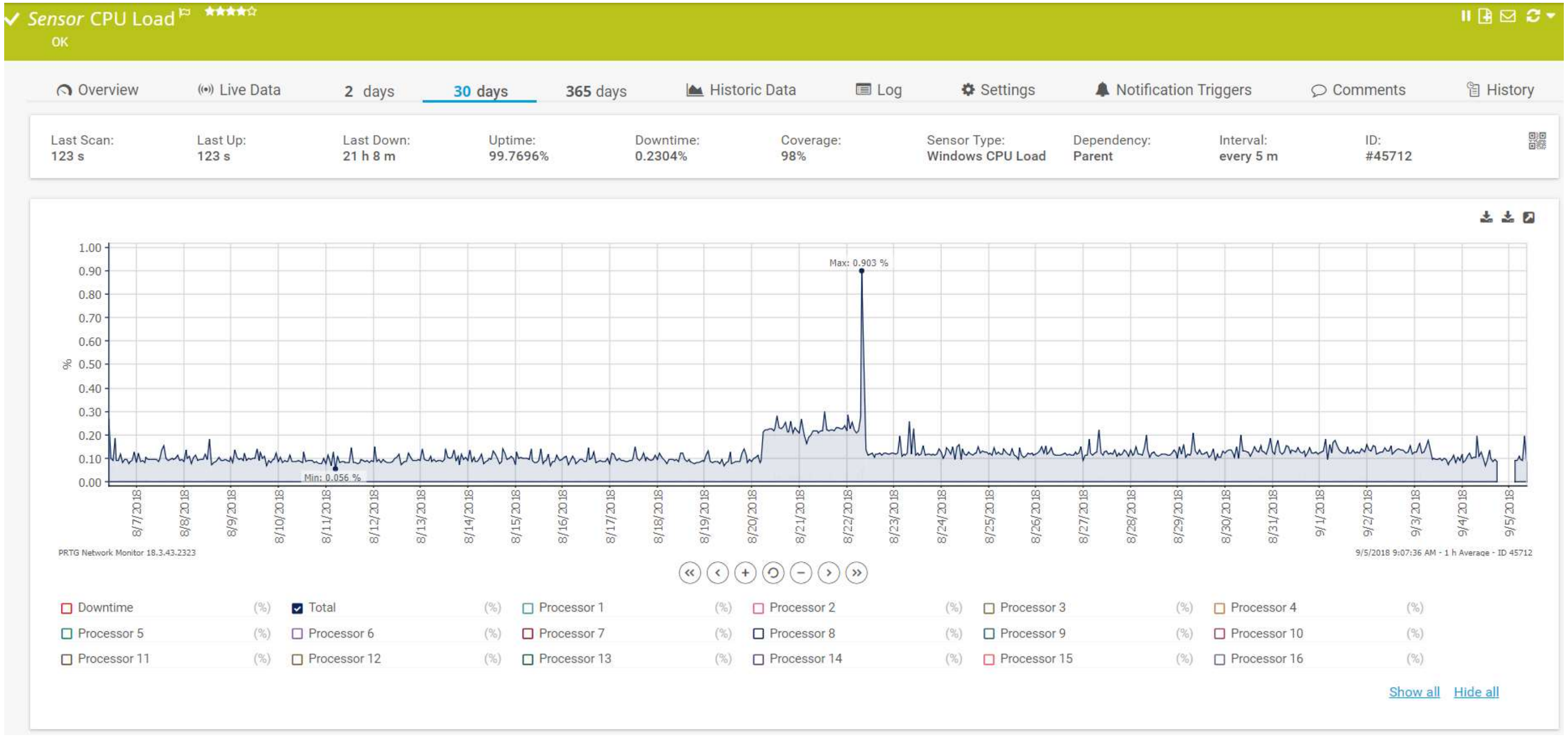
Power Unit Status
Ok

Processor Status
Ok

Temperature Sta...
Ok

Voltage Status
Ok

Исторические данные



Sensor CPU Load
OK

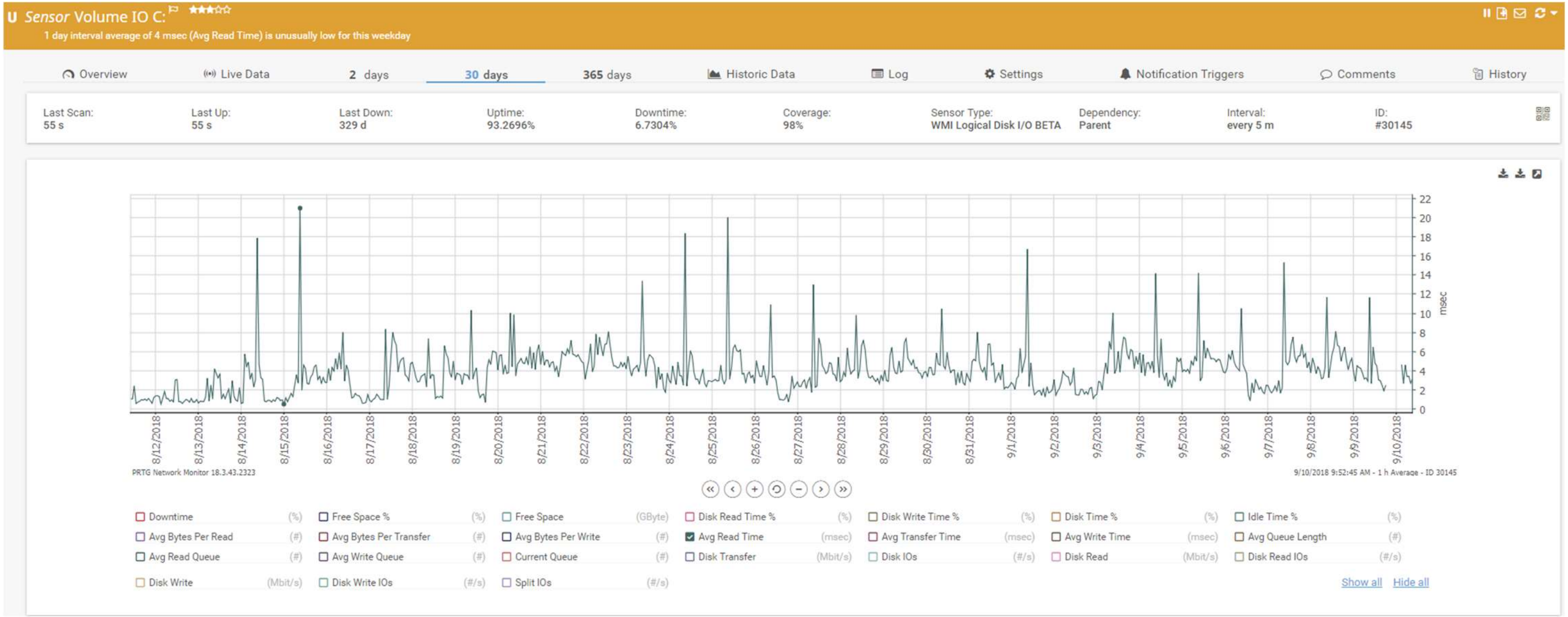
Last Scan: 123 s
Last Up: 123 s
Last Down: 21 h 8 m
Uptime: 99.7696%
Downtime: 0.2304%
Coverage: 98%
Sensor Type: Windows CPU Load
Dependency: Parent
Interval: every 5 m
ID: #45712

PRTG Network Monitor 18.3.43.2323

9/5/2018 9:07:36 AM - 1 h Average - ID 45712

Overview
Live Data
2 days
30 days
365 days
Historic Data
Log
Settings
Notification Triggers
Comments
History
Max: 0.903 %
Min: 0.056 %
%
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
8/7/2018
8/8/2018
8/9/2018
8/10/2018
8/11/2018
8/12/2018
8/13/2018
8/14/2018
8/15/2018
8/16/2018
8/17/2018
8/18/2018
8/19/2018
8/20/2018
8/21/2018
8/22/2018
8/23/2018
8/24/2018
8/25/2018
8/26/2018
8/27/2018
8/28/2018
8/29/2018
8/30/2018
8/31/2018
9/1/2018
9/2/2018
9/3/2018
9/4/2018
9/5/2018
☐ Downtime (%)
☑ Total (%)
☐ Processor 1 (%)
☐ Processor 2 (%)
☐ Processor 3 (%)
☐ Processor 4 (%)
☐ Processor 5 (%)
☐ Processor 6 (%)
☐ Processor 7 (%)
☐ Processor 8 (%)
☐ Processor 9 (%)
☐ Processor 10 (%)
☐ Processor 11 (%)
☐ Processor 12 (%)
☐ Processor 13 (%)
☐ Processor 14 (%)
☐ Processor 15 (%)
☐ Processor 16 (%)
Show all
Hide all

Нестандартная ситуация


Overview
Live Data
2 days
30 days
365 days
Historic Data
Log
Settings
Notification Triggers
Comments
History
22
20
18
16
14
12
10
8
6
4
2
0
msec
8/12/2018
8/13/2018
8/14/2018
8/15/2018
8/16/2018
8/17/2018
8/18/2018
8/19/2018
8/20/2018
8/21/2018
8/22/2018
8/23/2018
8/24/2018
8/25/2018
8/26/2018
8/27/2018
8/28/2018
8/29/2018
8/30/2018
8/31/2018
9/1/2018
9/2/2018
9/3/2018
9/4/2018
9/5/2018
9/6/2018
9/7/2018
9/8/2018
9/9/2018
9/10/2018
Show all
Hide all

U *Sensor* Volume IO C: ★★★☆☆

1 day interval average of 4 msec (Avg Read Time) is unusually low for this weekday

Last Scan: 55 s
Last Up: 55 s
Last Down: 329 d
Uptime: 93.2696%
Downtime: 6.7304%
Coverage: 98%
Sensor Type: WMI Logical Disk I/O BETA
Dependency: Parent
Interval: every 5 m
ID: #30145

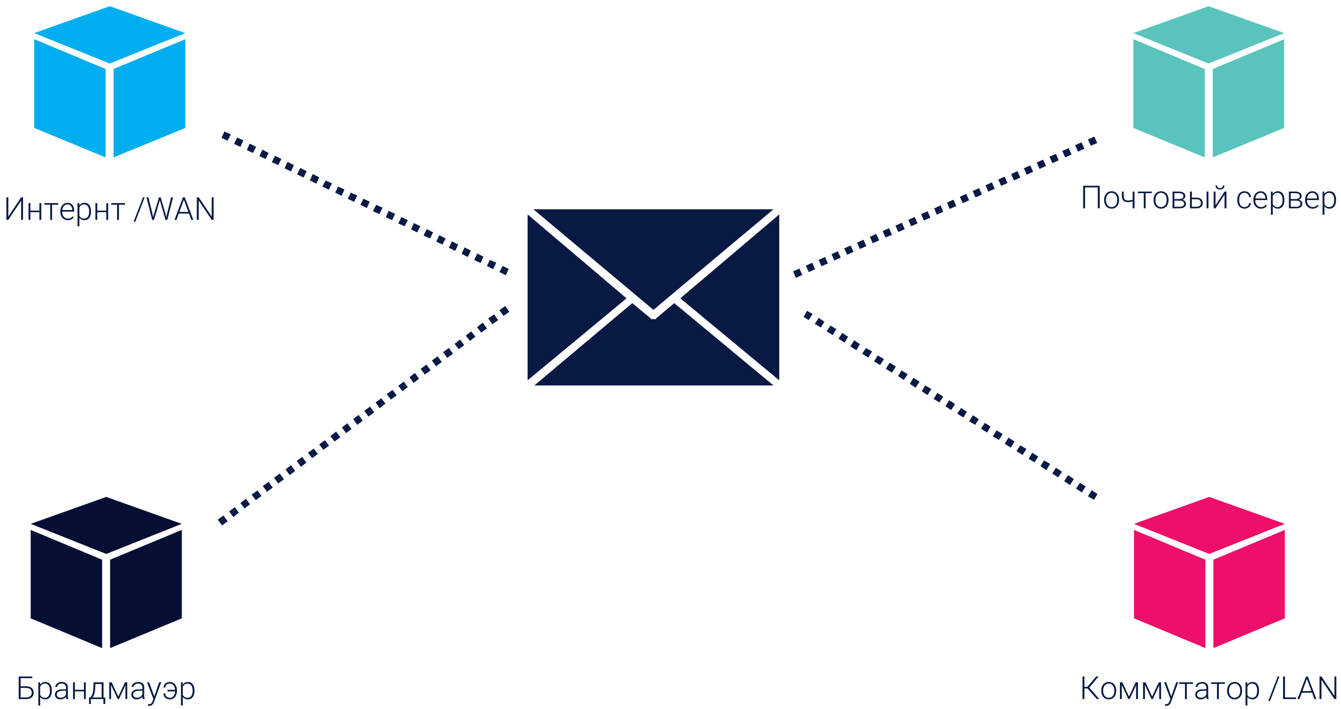
PRTG Network Monitor 18.3.43.2323

9/10/2018 9:52:45 AM - 1 h Average - ID 30145

☐ Downtime (%)
☐ Avg Bytes Per Read (#)
☐ Avg Read Queue (#)
☐ Disk Write (Mbit/s)
☐ Free Space % (%)
☐ Avg Bytes Per Transfer (#)
☐ Avg Write Queue (#)
☐ Disk Write IOs (#/s)
☐ Free Space (GByte)
☐ Avg Bytes Per Write (#)
☐ Current Queue (#)
☐ Split IOs (#/s)
☐ Disk Read Time % (%)
☑ Avg Read Time (msec)
☐ Disk Transfer (Mbit/s)
☐ Disk Write Time % (%)
☐ Avg Transfer Time (msec)
☐ Disk IOs (#/s)
☐ Disk Time % (%)
☐ Avg Write Time (msec)
☐ Disk Read (Mbit/s)
☐ Idle Time % (%)
☐ Avg Queue Length (#)
☐ Disk Read IOs (#/s)

Бизнесс-процессы

Работает ли ваше почтовое приложение?

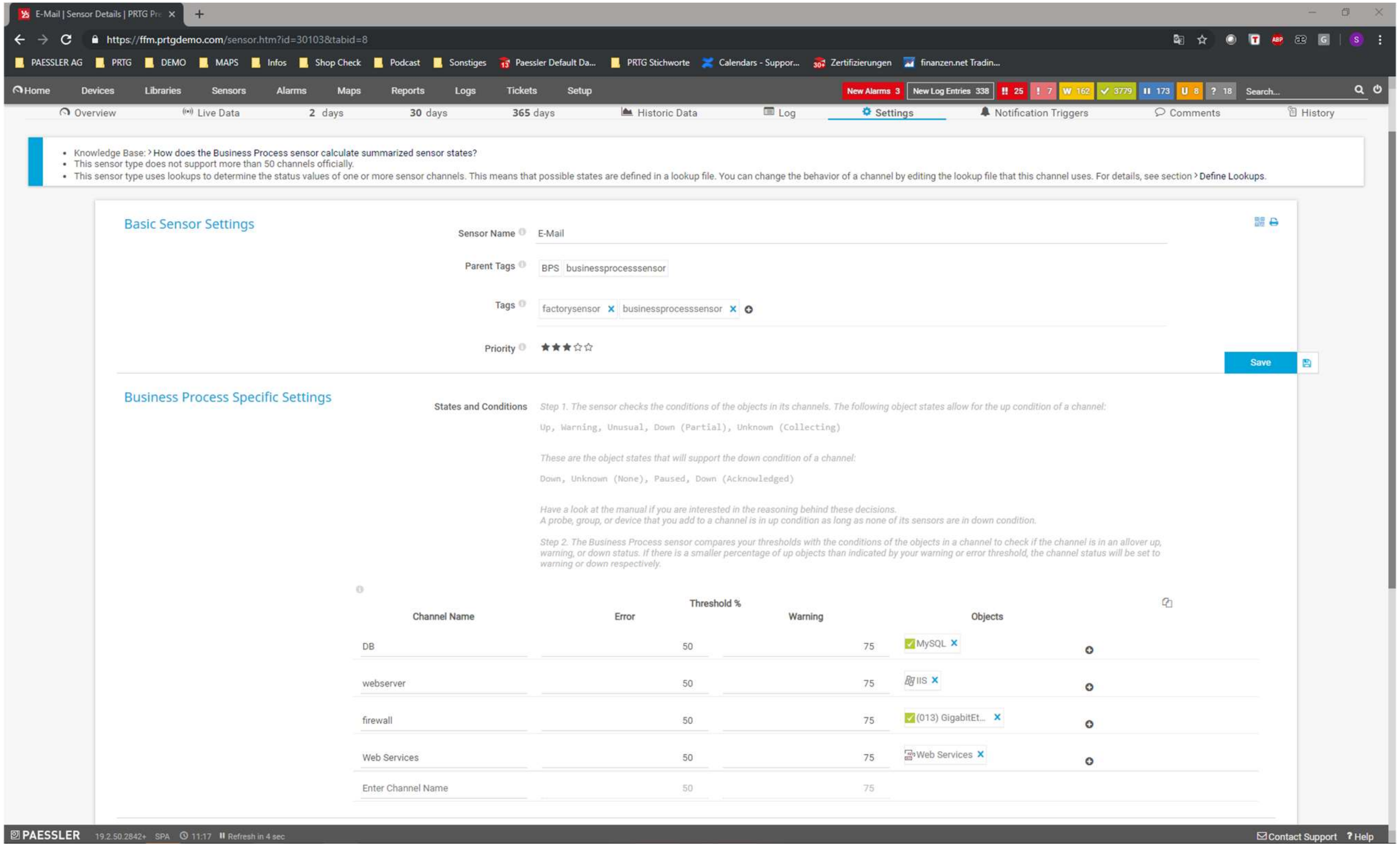


Интернт /WAN

Почтовый сервер

Брандмауэр

Коммутатор /LAN



E-Mail | Sensor Details | PRTG Pr
https://ffm.prtgdemo.com/sensor.htm?id=30103&tabid=8
PAESSLER AG
PRTG
DEMO
MAPS
Infos
Shop Check
Podcast
Sonstiges
Paessler Default Da...
PRTG Stichworte
Calendars - Suppor...
Zertifizierungen
finanzen.net Tradin...
Home
Devices
Libraries
Sensors
Alarms
Maps
Reports
Logs
Tickets
Setup
New Alarms 3
New Log Entries 338
‼ 25
! 7
W 162
✓ 3779
II 173
U 8
? 18
Search...
Overview
Live Data
2 days
30 days
365 days
Historic Data
Log
Settings
Notification Triggers
Comments
History
Save
PAESSLER
19.2.50.2842+ SPA 11:17 Refresh in 4 sec
Contact Support
? Help

- Knowledge Base: › How does the Business Process sensor calculate summarized sensor states?
- This sensor type does not support more than 50 channels officially.
- This sensor type uses lookups to determine the status values of one or more sensor channels. This means that possible states are defined in a lookup file. You can change the behavior of a channel by editing the lookup file that this channel uses. For details, see section › Define Lookups.

Basic Sensor Settings

Sensor Name E-Mail

Parent Tags BPS businessprocesssensor

Tags factorysensor × businessprocesssensor ×

Priority ★★★☆☆

Business Process Specific Settings

States and Conditions

Step 1. The sensor checks the conditions of the objects in its channels. The following object states allow for the up condition of a channel:

`Up, Warning, Unusual, Down (Partial), Unknown (Collecting)`

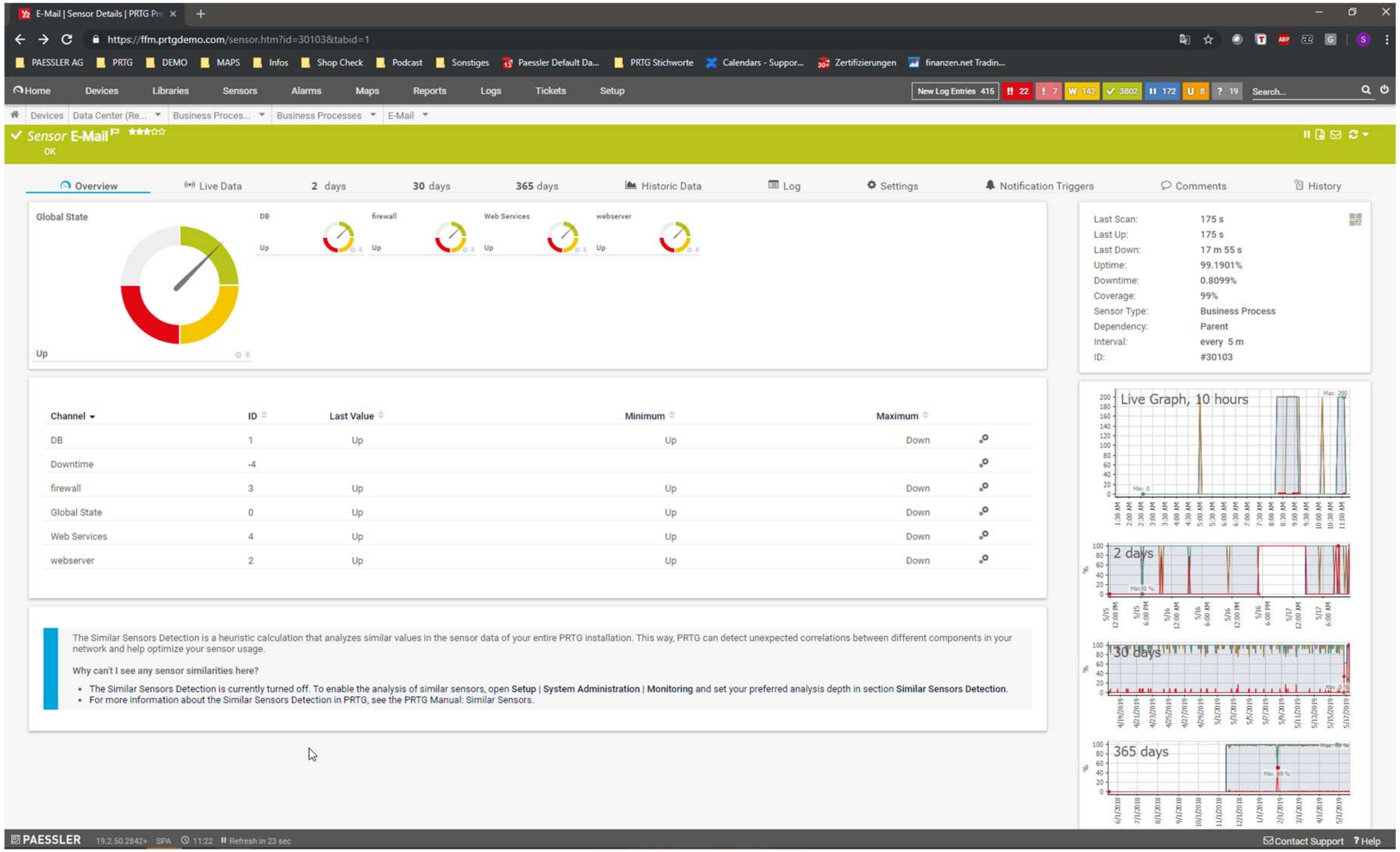
These are the object states that will support the down condition of a channel:

`Down, Unknown (None), Paused, Down (Acknowledged)`

Have a look at the manual if you are interested in the reasoning behind these decisions.
A probe, group, or device that you add to a channel is in up condition as long as none of its sensors are in down condition.

Step 2. The Business Process sensor compares your thresholds with the conditions of the objects in a channel to check if the channel is in an allover up, warning, or down status. If there is a smaller percentage of up objects than indicated by your warning or error threshold, the channel status will be set to warning or down respectively.

	Threshold %		
Channel Name	Error	Warning	Objects
DB	50	75	MySQL ×
webserver	50	75	IIS ×
firewall	50	75	(013) GigabitEt... ×
Web Services	50	75	Web Services ×
Enter Channel Name	50	75	


E-Mail | Sensor Details | PRTG Pr
https://ffm.prtgdemo.com/sensor.htm?id=30103&tabid=1
PAESSLER AG
PRTG
DEMO
MAPS
Infos
Shop Check
Podcast
Sonstiges
Paessler Default Da...
PRTG Stichworte
Calendars - Suppor...
Zertifizierungen
finanzen.net Tradin...
Home
Devices
Libraries
Sensors
Alarms
Maps
Reports
Logs
Tickets
Setup
New Log Entries 415
22
7
W 142
3802
172
U 8
? 19
Search...
Devices
Data Center (Re...
Business Proces...
Business Processes
E-Mail
Overview
Live Data
2 days
30 days
365 days
Historic Data
Log
Settings
Notification Triggers
Comments
History
Global State
Up
DB
Up
firewall
Up
Web Services
Up
webserver
Up
Live Graph, 10 hours
2 days
30 days
365 days
PAESSLER
19.2.50.2842+
SPA
11:22
Refresh in 23 sec
Contact Support
? Help

✓ *Sensor* **E-Mail**
OK

Last Scan: 175 s
Last Up: 175 s
Last Down: 17 m 55 s
Uptime: 99.1901%
Downtime: 0.8099%
Coverage: 99%
Sensor Type: Business Process
Dependency: Parent
Interval: every 5 m
ID: #30103

Channel	ID	Last Value	Minimum	Maximum
DB	1	Up	Up	Down
Downtime	-4			
firewall	3	Up	Up	Down
Global State	0	Up	Up	Down
Web Services	4	Up	Up	Down
webserver	2	Up	Up	Down

The Similar Sensors Detection is a heuristic calculation that analyzes similar values in the sensor data of your entire PRTG installation. This way, PRTG can detect unexpected correlations between different components in your network and help optimize your sensor usage.

Why can't I see any sensor similarities here?

- The Similar Sensors Detection is currently turned off. To enable the analysis of similar sensors, open **Setup** | **System Administration** | **Monitoring** and set your preferred analysis depth in section **Similar Sensors Detection**.
- For more information about the Similar Sensors Detection in PRTG, see the PRTG Manual: Similar Sensors.

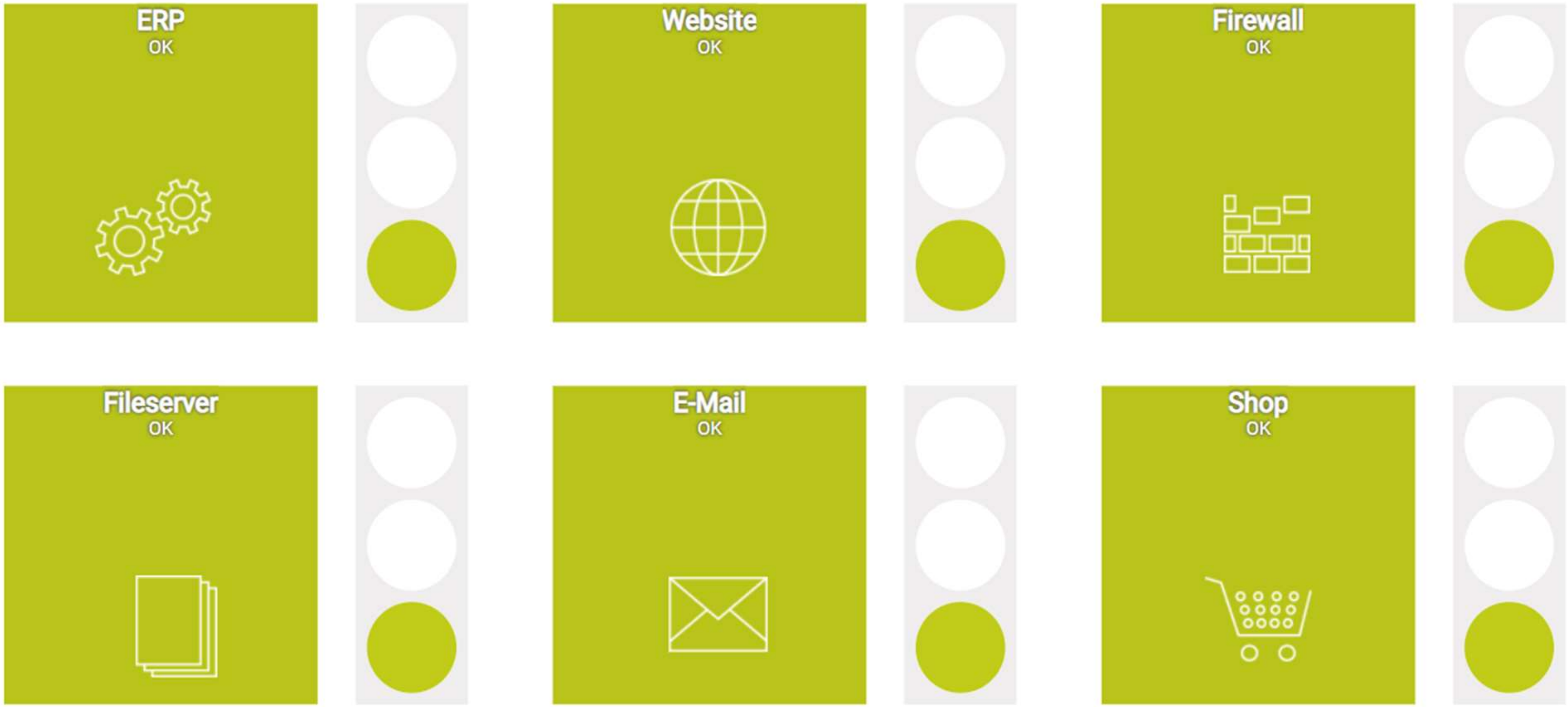
Карта процессов бизнесса

DE Diese Map zeigt den Status zu 6 verschiedenen Unternehmensprozessen, abstrahiert von den darunterliegenden Einzelkomponenten (z.B. Switche, Datenbanken, Internetverbindung, Performance).

Natürlich ist es auch in einer solchen Map möglich dem Kunden/Mitarbeiter weitere Services, z.B. Verkehrsdaten, zur Verfügung zu stellen.

EN This map shows the status of 6 different business processes summarized of their detailed compontents (e.g. switches, databases, connectivity, performance).

Of course you also can use this map for providing further services to your employee/customer, e.g. traffic data around your headquarter.



Карта процессов бизнесса

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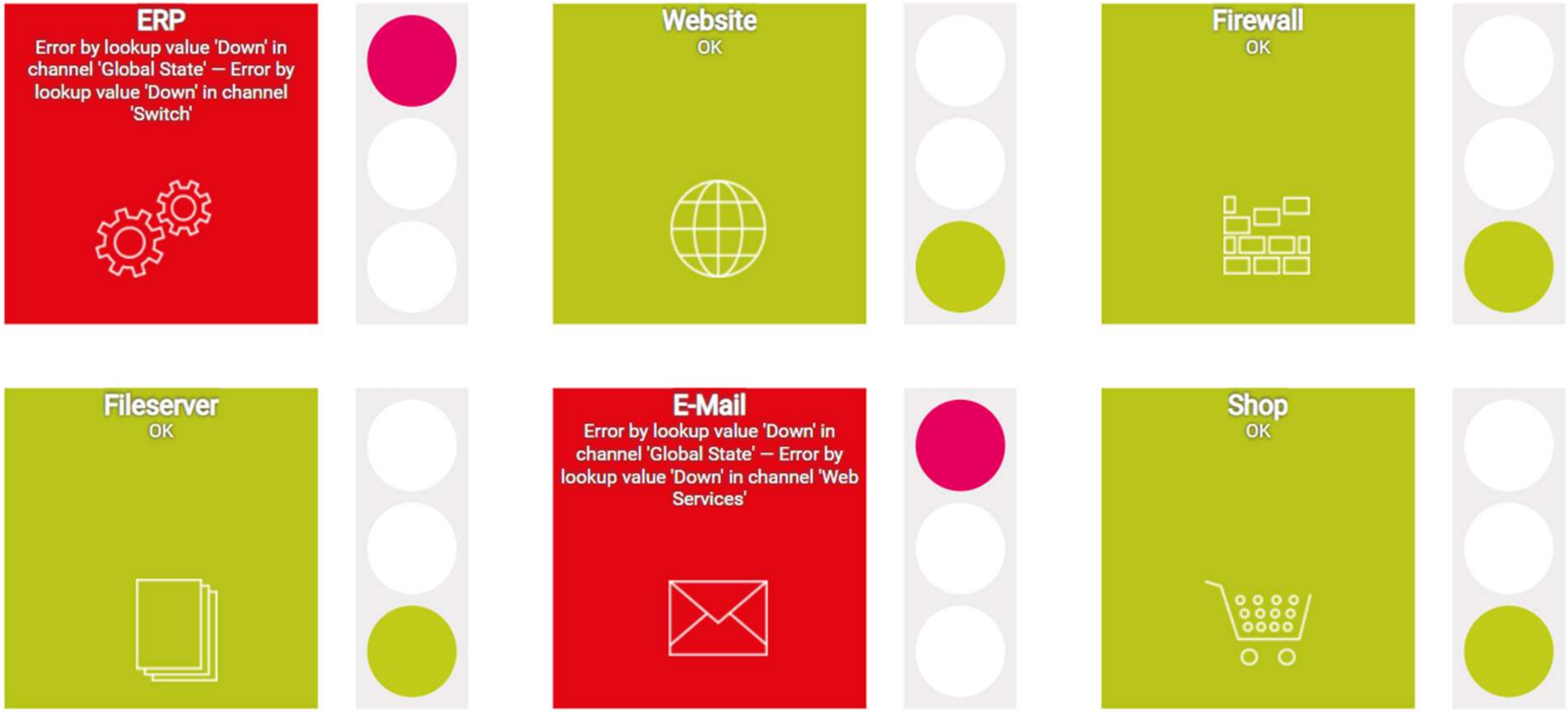


ERP
Error by lookup value 'Down' in channel 'Global State' — Error by lookup value 'Down' in channel 'Switch'

Website
OK

Firewall
OK

Fileserver
OK

E-Mail
Error by lookup value 'Down' in channel 'Global State' — Error by lookup value 'Down' in channel 'Web Services'

Shop
OK

Alert

Уведомления

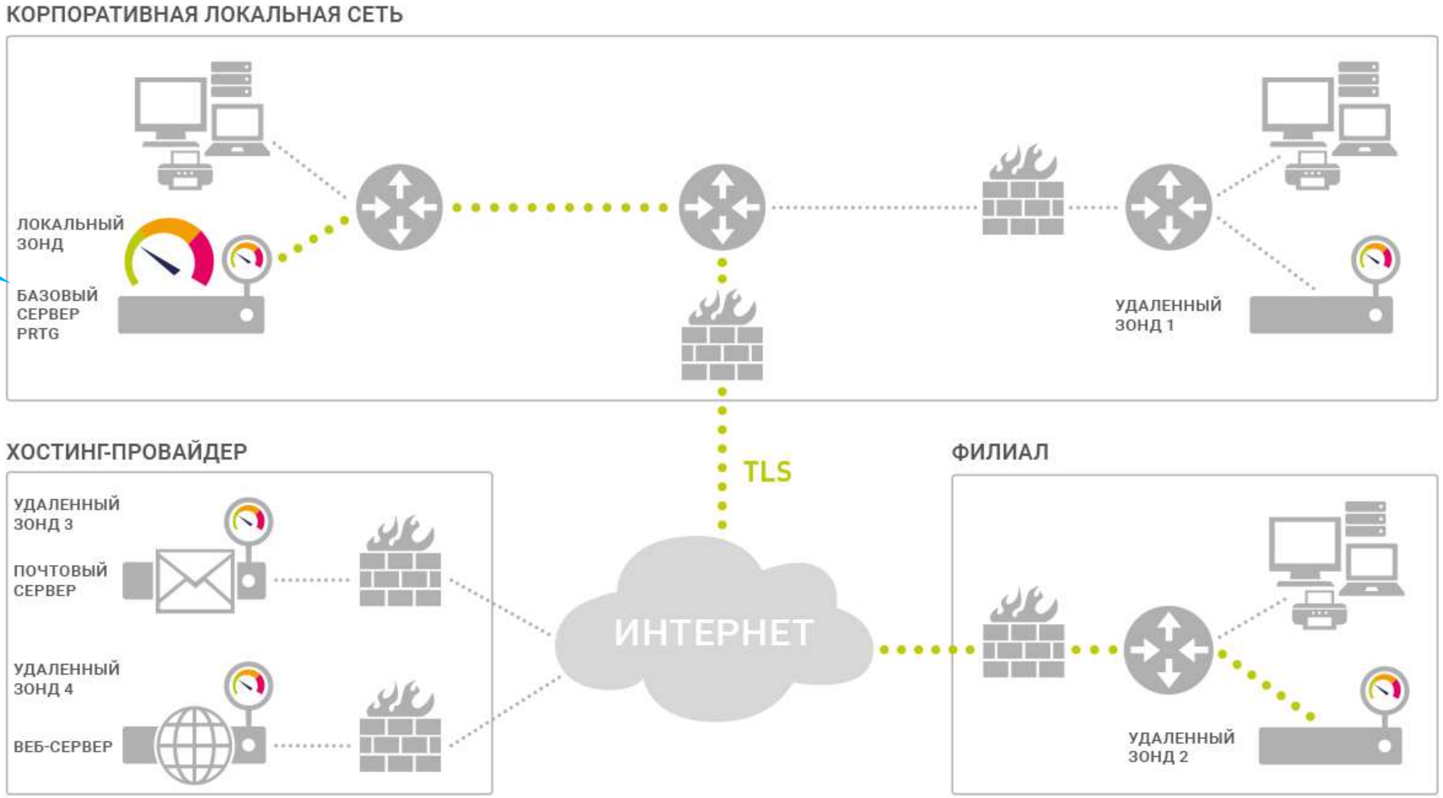
- @ E-mail
- Push notification
- SMS
- Add Entry to Event Log
- Syslog Message
- SNMP Trap
- Execute a Program .exe

- :// Execute HTTP Action
- Slack Message
- Microsoft Teams Message
- Amazon SNS
- Assign Ticket
- Execute Script
- Sound Alarm

Обзор решения PRTG

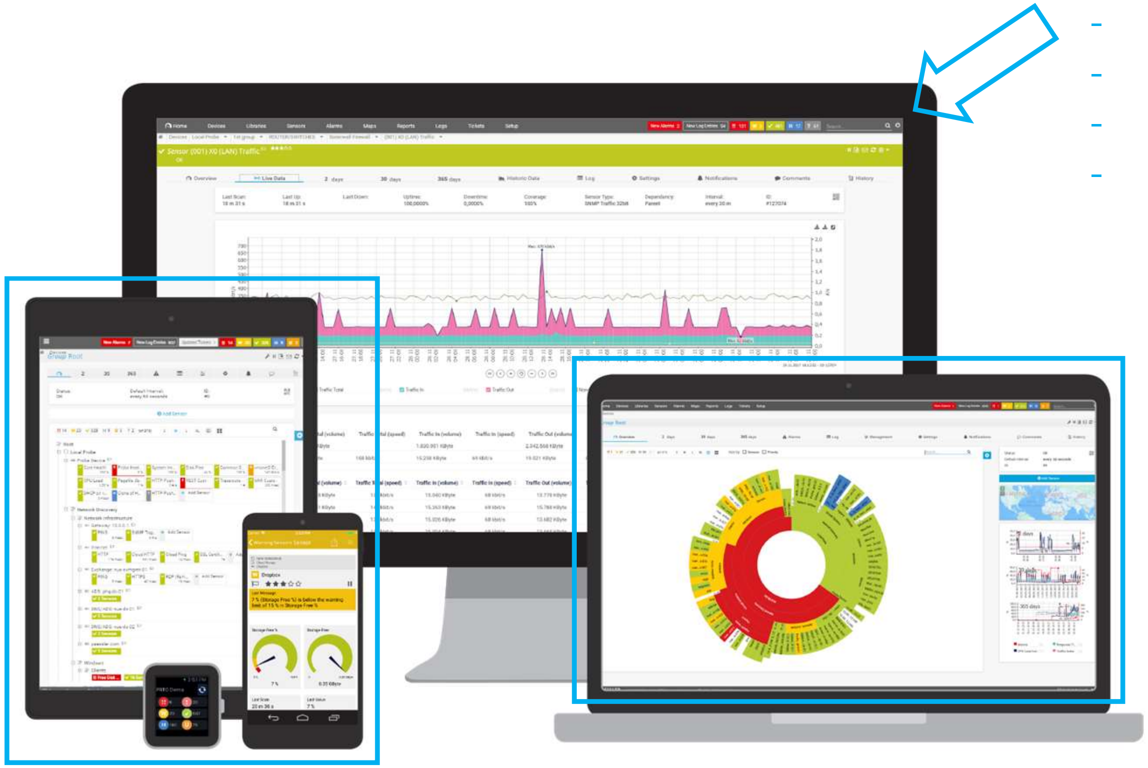
Архитектура PRTG

Базовый сервер и локальный зонд


КОРПОРАТИВНАЯ ЛОКАЛЬНАЯ СЕТЬ
ЛОКАЛЬНЫЙ ЗОНД
БАЗОВЫЙ СЕРВЕР PRTG
УДАЛЕННЫЙ ЗОНД 1
TLS
ХОСТИНГ-ПРОВАЙДЕР
УДАЛЕННЫЙ ЗОНД 3
ПОЧТОВЫЙ СЕРВЕР
УДАЛЕННЫЙ ЗОНД 4
ВЕБ-СЕРВЕР
ИНТЕРНЕТ
ФИЛИАЛ
УДАЛЕННЫЙ ЗОНД 2

PRTG NETWORK MONITOR

Выбор пользовательского интерфейса



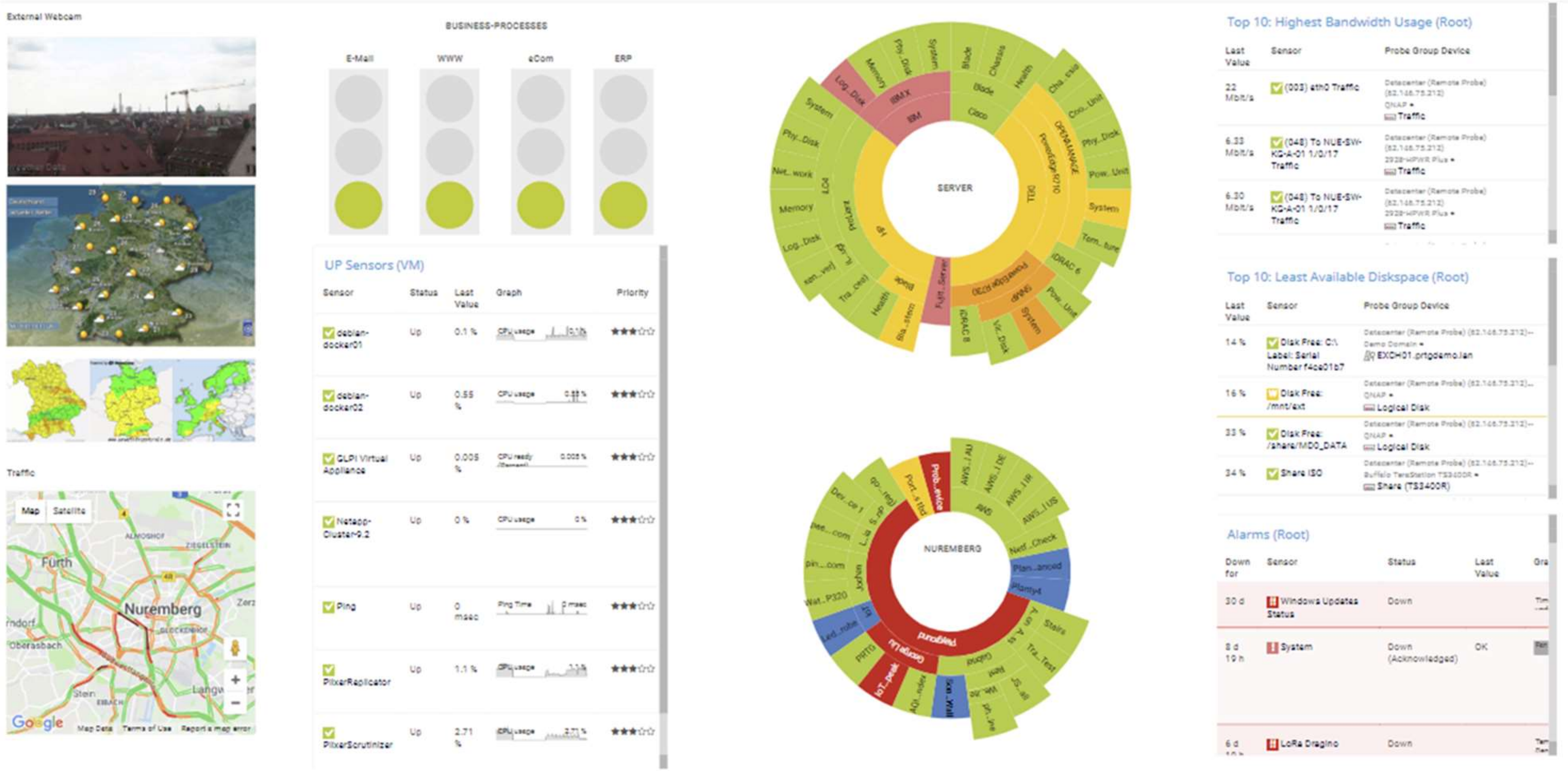
AJAX веб-интерфейс
- Google Chrom
- Microsoft Edge
- Internet Explorer
- Mozilla Firefox

iOS
Android
+ часы
+ бесплатно

Client:
Windows
MacOS

Дашборды

Dashboard Oneview



UP Sensors (VM)

Sensor	Status	Last Value	Graph	Priority
☑ debian-docker01	Up	0.1 %	CPU usage 0.1 %	★★★☆☆
☑ debian-docker02	Up	0.55 %	CPU usage 0.55 %	★★★☆☆
☑ GLPI Virtual Appliance	Up	0.005 %	CPU ready (Percent) 0.005 %	★★★☆☆
☑ Netapp-Cluster-9.2	Up	0 %	CPU usage 0 %	★★★☆☆
☑ Ping	Up	0 msec	Ping Time 0 msec	★★★☆☆
☑ PlixerReplicator	Up	1.1 %	CPU usage 1.1 %	★★★☆☆
☑ PlixerScrutinizer	Up	2.71 %	CPU usage 2.71 %	★★★☆☆

Top 10: Highest Bandwidth Usage (Root)

Last Value	Sensor	Probe Group Device
22 Mbit/s	☑ (003) eth0 Traffic	Datacenter (Remote Probe) (82.146.75.212) QNAP • Traffic
6.33 Mbit/s	☑ (048) To NUE-SW-KG-A-01 1/0/17 Traffic	Datacenter (Remote Probe) (82.146.75.212) 2928-HPWR Plus • Traffic
6.30 Mbit/s	☑ (048) To NUE-SW-KG-A-01 1/0/17 Traffic	Datacenter (Remote Probe) (82.146.75.212) 2928-HPWR Plus • Traffic

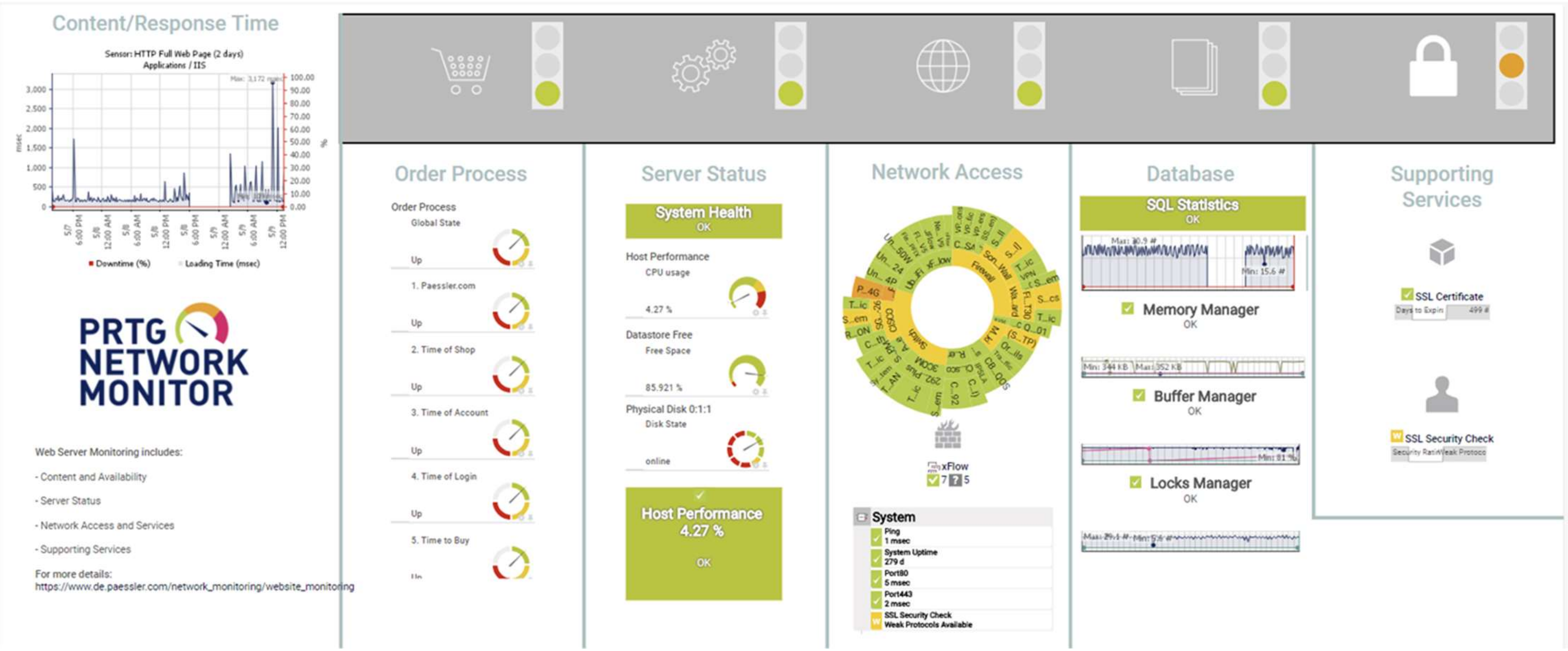
Top 10: Least Available Diskspace (Root)

Last Value	Sensor	Probe Group Device
14 %	☑ Disk Free: C:\ Label: Serial Number f4ce01b7	Datacenter (Remote Probe) (82.146.75.212)-- Demo Domain • EXCH01.prtgdemo.lan
16 %	Disk Free: /mnt/ext	Datacenter (Remote Probe) (82.146.75.212)-- QNAP • Logical Disk
33 %	☑ Disk Free: /share/MD0_DATA	Datacenter (Remote Probe) (82.146.75.212)-- QNAP • Logical Disk
34 %	☑ Share ISO	Datacenter (Remote Probe) (82.146.75.212)-- Buffalo TeraStation TS3400R • Share (TS3400R)

Alarms (Root)

Down for	Sensor	Status	Last Value	Gra
30 d	Windows Updates Status	Down		
8 d 19 h	System	Down (Acknowledged)	OK	
6 d	LoRa Dragino	Down		

Карта Вебсервера

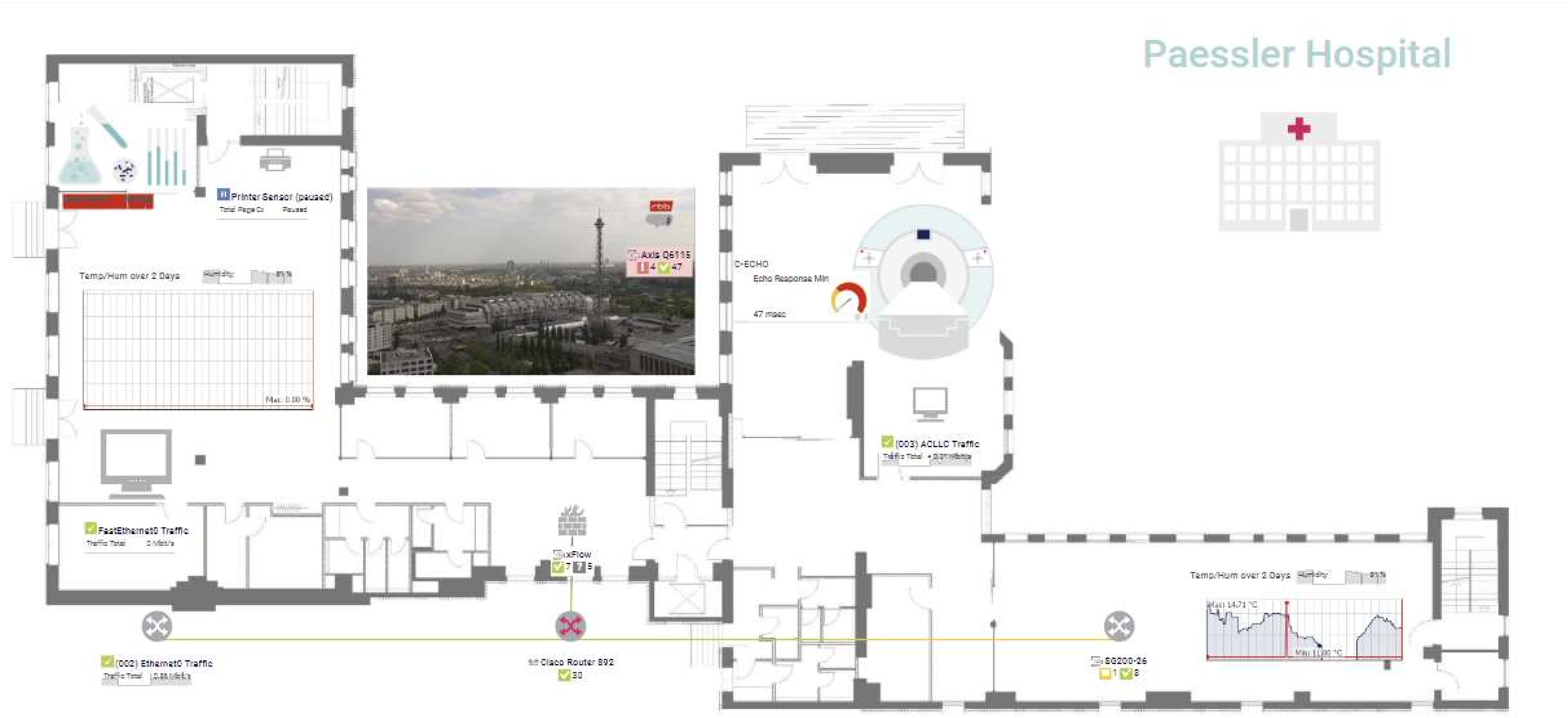

Content/Response Time
Sensor: HTTP Full Web Page (2 days)
Applications / IIS
msec
%
Downtime (%)
Loading Time (msec)
PRTG NETWORK MONITOR
Order Process
Order Process
Global State
Up
1. Paessler.com
Up
2. Time of Shop
Up
3. Time of Account
Up
4. Time of Login
Up
5. Time to Buy
Server Status
System Health
OK
Host Performance
CPU usage
4.27 %
Datastore Free
Free Space
85.921 %
Physical Disk 0:1:1
Disk State
online
Host Performance
4.27 %
OK
Network Access
xFlow
7 ? 5
System
Ping
1 msec
System Uptime
279 d
Port80
5 msec
Port443
2 msec
SSL Security Check
Weak Protocols Available
Database
SQL Statistics
OK
Memory Manager
OK
Buffer Manager
OK
Locks Manager
OK
Supporting Services
SSL Certificate
Days to Expiry
499 #
SSL Security Check
Security Rating Weak Protocols

Web Server Monitoring includes:

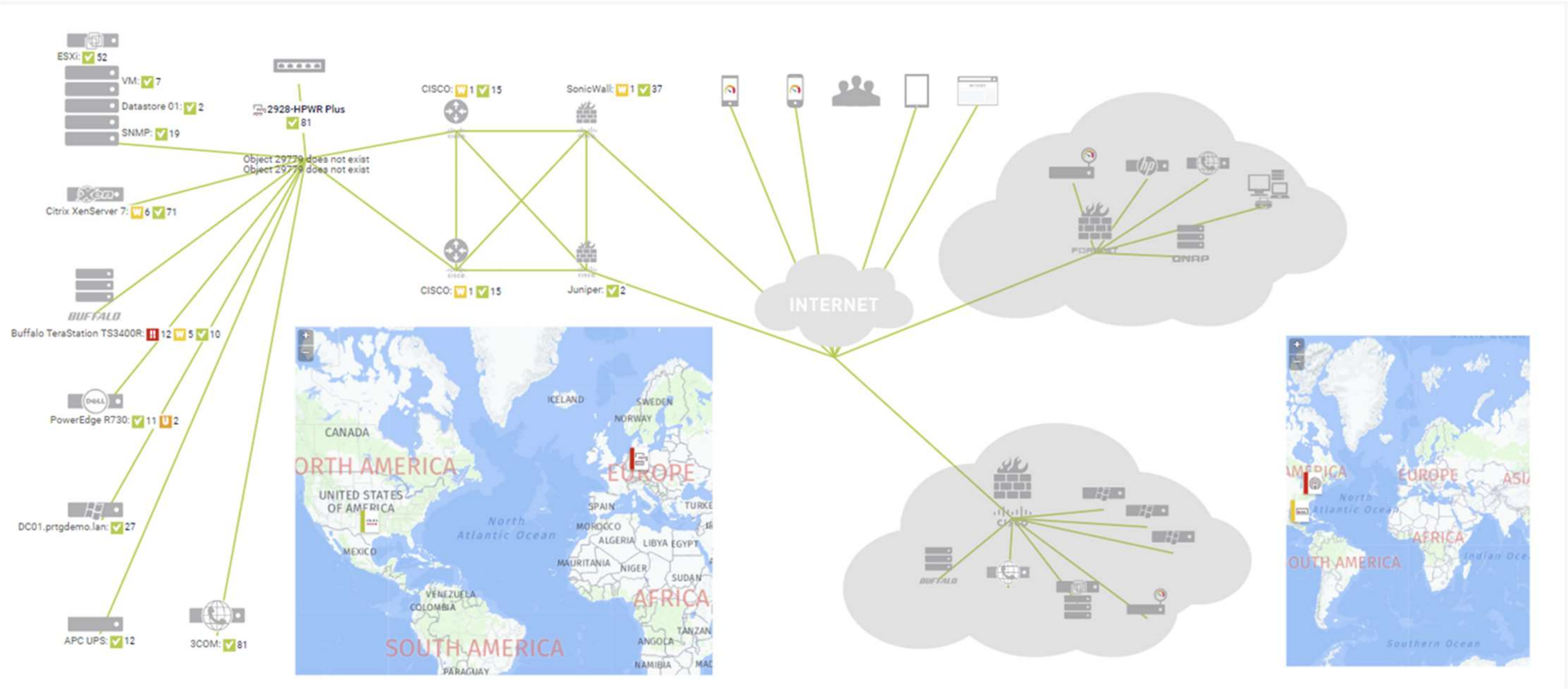
- Content and Availability
- Server Status
- Network Access and Services
- Supporting Services

For more details:
https://www.de.paessler.com/network_monitoring/website_monitoring

Map floor plan


Paessler Hospital
Printer Sensor (paused)
Total Page Co
Paused
Temp/Hum over 2 Days
Humidity
Max: 0.00 %
Axis Q6115
4
47
C-ECHO
Echo Response Min
47 msec
(003) ACLLC Traffic
Traffic Total
FastEthernet0 Traffic
Traffic Total
0 Mbit/s
xFlow
7
7
5
(002) Ethernet0 Traffic
Traffic Total
Cisco Router 892
30
SG200-26
1
8
Temp/Hum over 2 Days
Humidity
Max: 14.71 °C
Min: 11.00 °C

Network map incl. branchoffice


ESXi: ✓ 52
VM: ✓ 7
Datastore 01: ✓ 2
SNMP: ✓ 19
2928-HPWR Plus
✓ 81
Object 29779 does not exist
Object 29779 does not exist
CISCO: 1 ✓ 15
SonicWall: 1 ✓ 37
Citrix XenServer 7: 6 ✓ 71
BUFFALO
Buffalo TeraStation TS3400R: 12 5 ✓ 10
CISCO: 1 ✓ 15
Juniper: ✓ 2
INTERNET
FORTINET
QNAP
PowerEdge R730: ✓ 11 2
DC01.prtgdemo.lan: ✓ 27
APC UPS: ✓ 12
3COM: ✓ 81
ICELAND
SWEDEN
NORWAY
CANADA
NORTH AMERICA
EUROPE
UNITED STATES OF AMERICA
SPAIN
TURKEY
North Atlantic Ocean
MOROCCO
ALGERIA
LIBYA
EGYPT
MEXICO
MAURITANIA
NIGER
SUDAN
VENEZUELA
COLOMBIA
AFRICA
TANZANIA
SOUTH AMERICA
ANGOLA
NAMIBIA
PARAGUAY
BUFFALO
AMERICA
EUROPE
ASIA
North Atlantic Ocean
AFRICA
SOUTH AMERICA
Indian Ocean
Southern Ocean

Коротко о Paessler AG

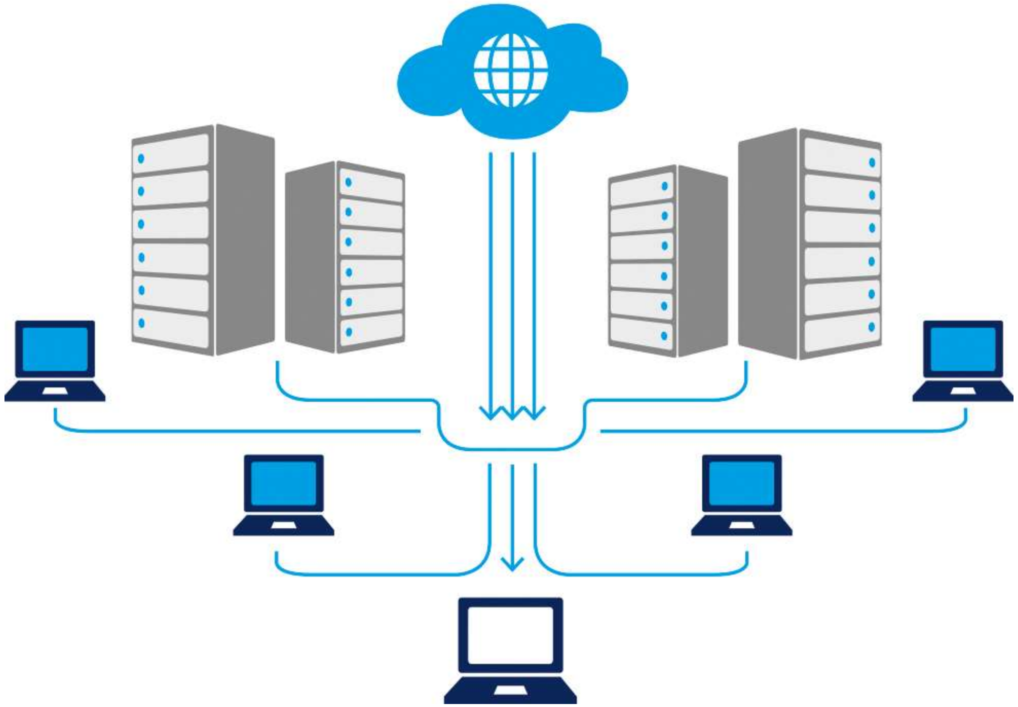
- Штаб-квартира в Нюрнберге, Германия
- Основана в 1997 г.
- Более 250 сотрудников (и их число растет...) из 30 разных стран
- Частное владение и финансирование
- Свыше 200 000 установок по всему миру

Deloitte.
Technology Fast50

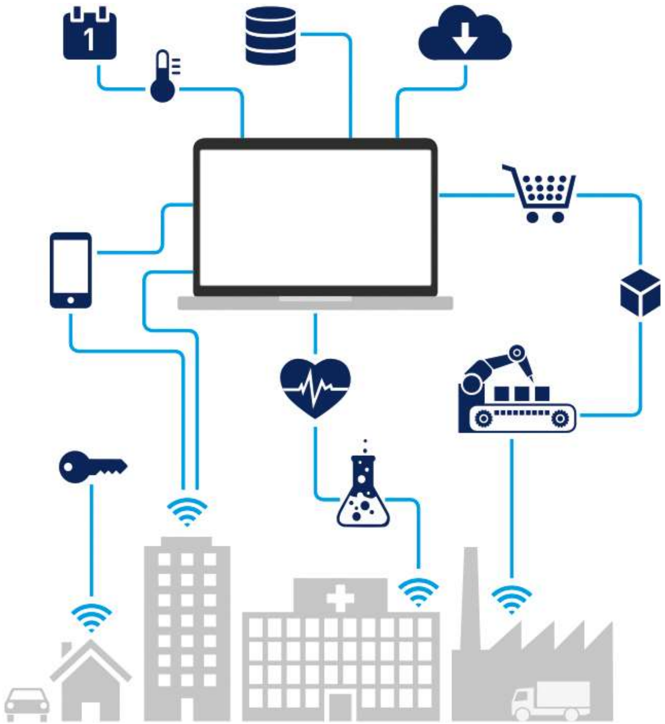
CRN
CHANNELWEB.CO.UK
THE CHANNEL
AWARDS
2015
WINNER

NETWORK computing
AWARDS 2016
WINNER
NETWORK MANAGEMENT
PRODUCT OF THE YEAR

Наша миссия

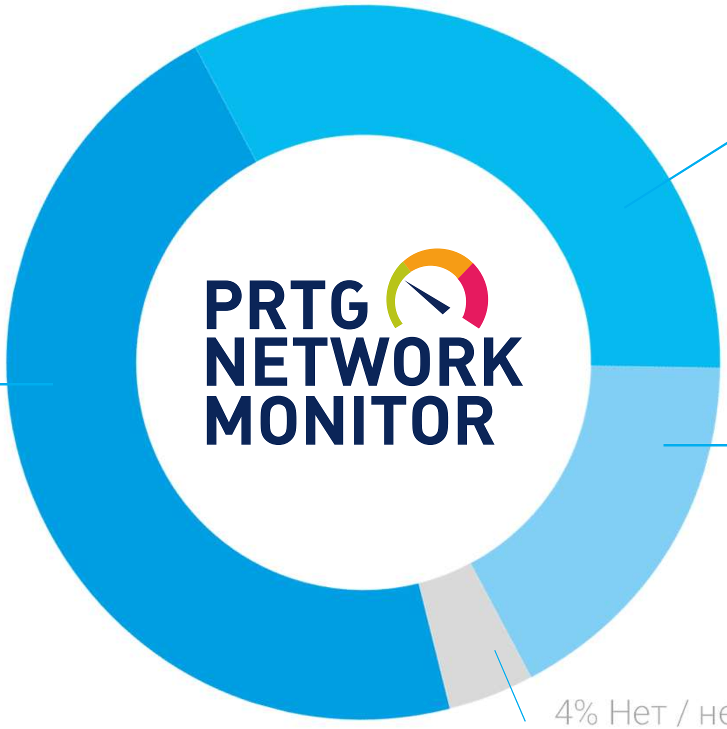


IT инфраструктура



IoT инфраструктура

У нас нет клиентов.
У нас есть поклонники.



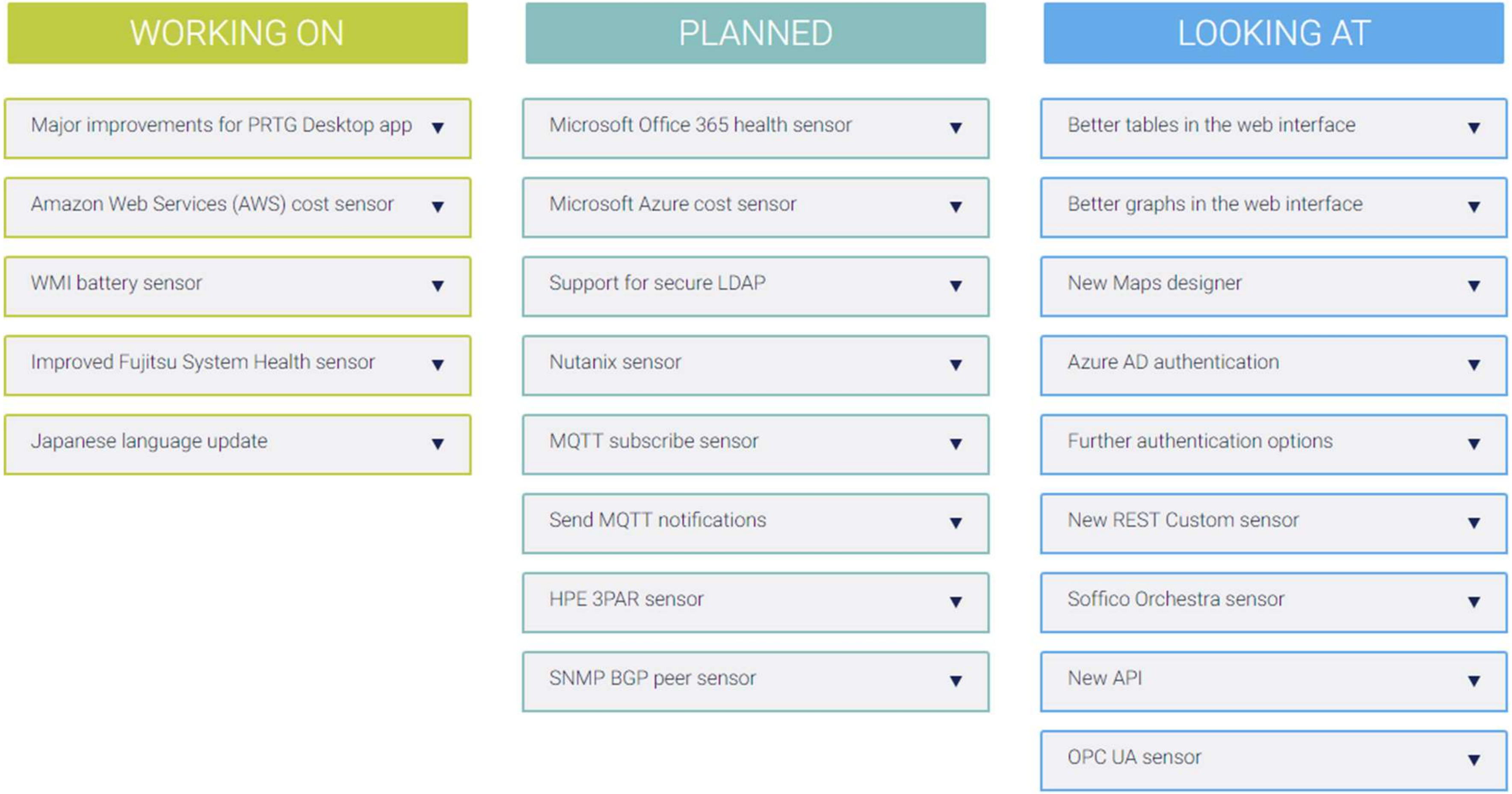
46% Да, я уже рекомендовал PRTG!

33% Да, Определенно!

17% Да, очень вероятно

4% Нет / не знаю

Roadmap



WORKING ON

- Major improvements for PRTG Desktop app ▼
- Amazon Web Services (AWS) cost sensor ▼
- WMI battery sensor ▼
- Improved Fujitsu System Health sensor ▼
- Japanese language update ▼

PLANNED

- Microsoft Office 365 health sensor ▼
- Microsoft Azure cost sensor ▼
- Support for secure LDAP ▼
- Nutanix sensor ▼
- MQTT subscribe sensor ▼
- Send MQTT notifications ▼
- HPE 3PAR sensor ▼
- SNMP BGP peer sensor ▼

LOOKING AT

- Better tables in the web interface ▼
- Better graphs in the web interface ▼
- New Maps designer ▼
- Azure AD authentication ▼
- Further authentication options ▼
- New REST Custom sensor ▼
- Soffico Orchestra sensor ▼
- New API ▼
- OPC UA sensor ▼

Мониторинг с PRTG: решение, которое мониторит всё. ВСЁ.

CLOUD
FLOWS
BANDWIDTH
ENVIRONMENT
TRAFFIC
DATABASE
UPTIME
REST API
WMI
DISK USAGE
MEMORY USAGE
SQL
PING
SSH
SNMP

Спасибо! Вопросы?

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PAESSLER
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