Graphs

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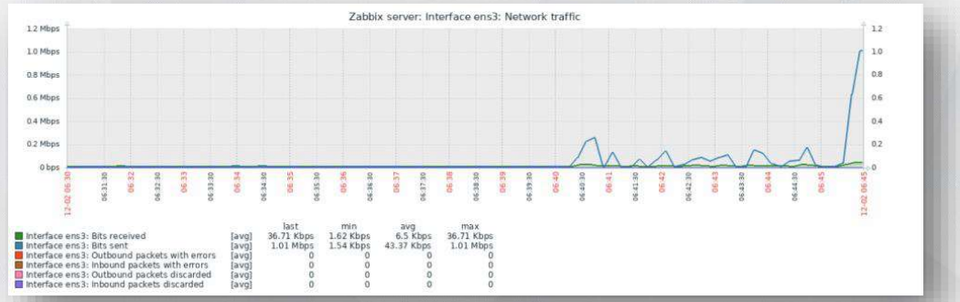
GRAPHS OVERVIEW

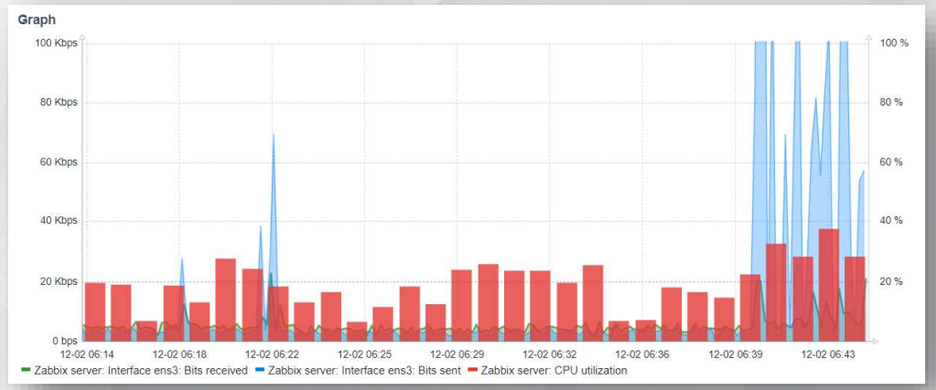
Graphs provide an easy way to look deep into history and compare data:

- Create visual representation of data instead of viewing plain numbers
- Trace when a problem has started
- Compare different metrics on a single graph to correlate problems

Zabbix provides users with:

- Built-in simple graphs of single item data
- Ad-hoc graphs to quickly compare several items
- Complex customized graphs
- Modern customizable vector graphs.





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Simple graphs can be displayed on the fly for any numerical metric:

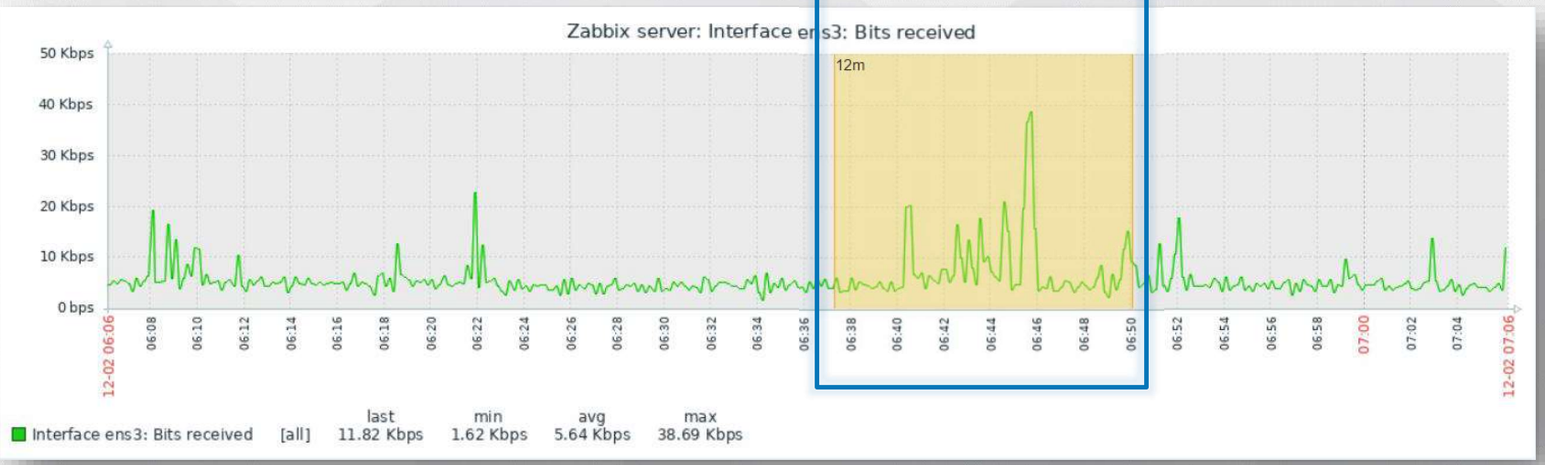
- Accessible from the Monitoring > Latest data frontend section
  - ✓ Simply click on the Graph link for the respective item to open the graph
  - ✓ It is possible to zoom in by selecting time period with a mouse

Graph links

Host ▲	Name	Int...	His...	Tre...	Type	Last check	Last value	Change	Tags	Info
Zabbix server	Interface ens3: Bits rece... net.if.in["ens3"]	10s	90d	365d	Zabbix ...	2021-12-02 06:...	9.25 Kbps	-5.93 Kbps	Application: Interface ...	Graph
Zabbix server	Interface ens3: Bits sent net.if.out["ens3"]	10s	90d	365d	Zabbix ...	2021-12-02 06:...	32.78 Kbps	-8.46 Kbps	Application: Interface ...	Graph

Displaying 2 of 2 found

Zoom in



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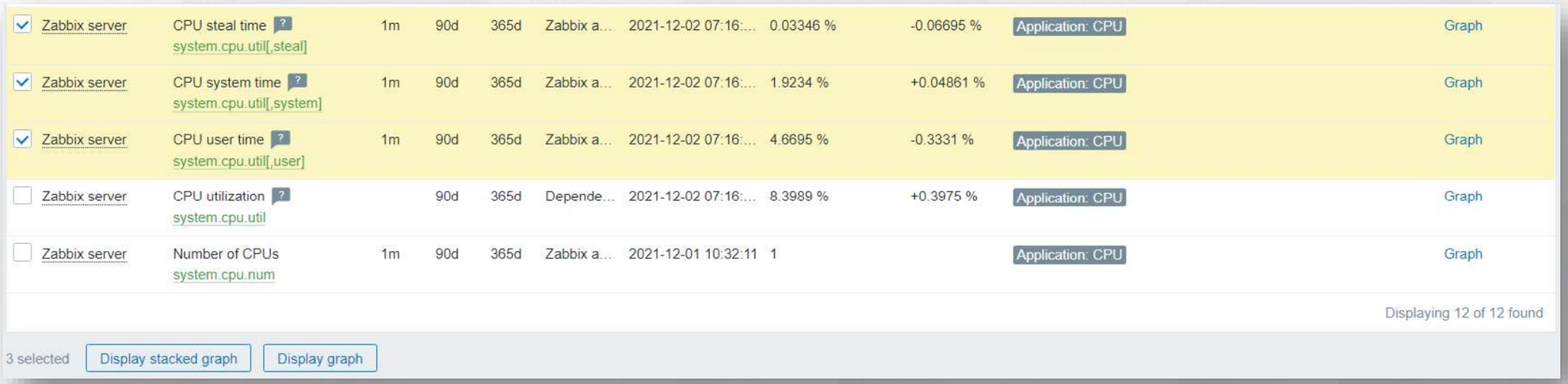
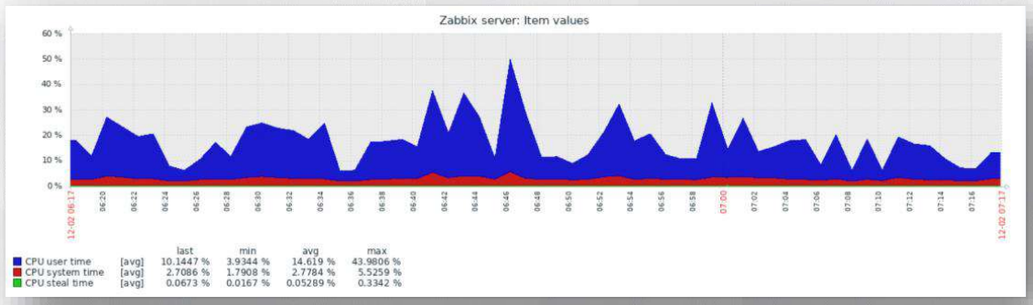
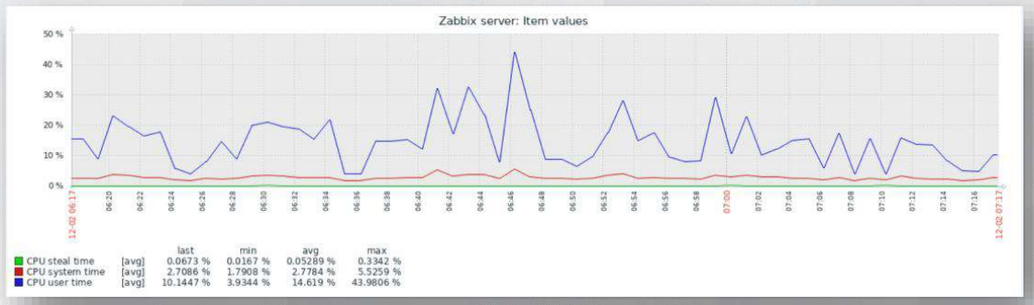
ON DEMAND GRAPHS

It is possible to display graphs from multiple items on demand:

- Select multiple items by using checkboxes
- Press **Display stacked graph** or **Display graph** at the bottom of the page







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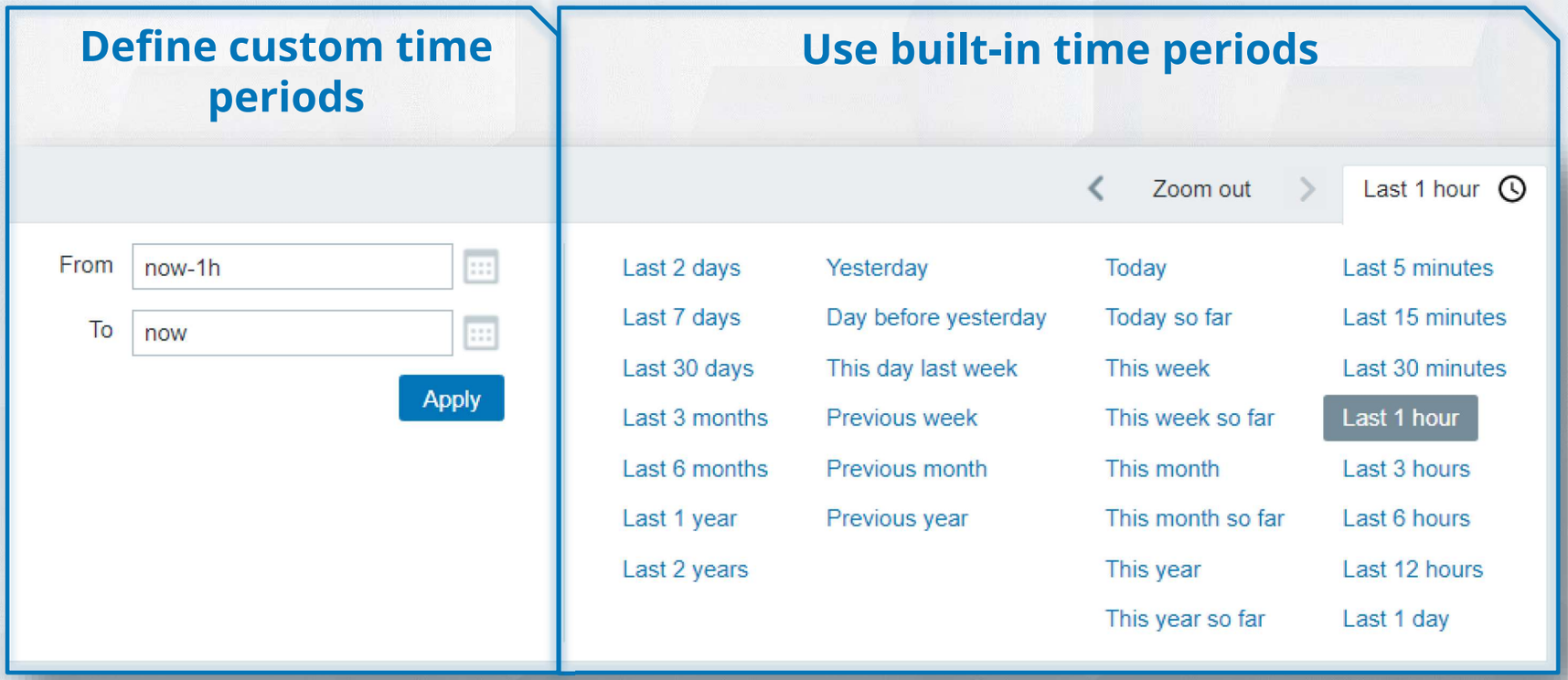
All graphs have time period selector:

- Allows to select common required periods with a single mouse click
- The From/To fields display the selected period using:
  - ✓ Absolute time syntax in yyyy-MM-dd hh:mm:ss format: 2022-01-16 06:41:39
  - ✓ Relative time syntax from current time: now-1d, now-1w, now-1d-2h+5m



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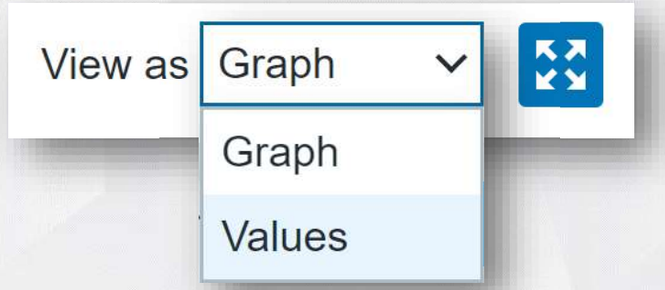
Graph views has possibility to switch to raw value view

- Choose graph or values view
- Values view can be displayed also as a plain text



Timestamp	CPU steal time	CPU system time	CPU user time
2021-12-02 07:24:22			5.3186
2021-12-02 07:24:21		1.823	
2021-12-02 07:24:20	0.06691		
2021-12-02 07:23:22			15.4991
2021-12-02 07:23:21		2.4745	
2021-12-02 07:23:20	0.03343		
2021-12-02 07:22:22			15.3846
2021-12-02 07:22:21		2.5427	
2021-12-02 07:22:20	0.03345		
2021-12-02 07:21:22			17.9539
2021-12-02 07:21:21		2.9913	
2021-12-02 07:21:20	0.03342		
2021-12-02 07:20:22			25.4758
2021-12-02 07:20:21		4.0741	
2021-12-02 07:20:20	0.1002		

Zabbix server: 3 items

```
2021-12-02 07:23:22 1638447802 15.4991 "Zabbix server: CPU user time"
2021-12-02 07:23:21 1638447801 2.4745 "Zabbix server: CPU system time"
2021-12-02 07:23:20 1638447800 0.03343 "Zabbix server: CPU steal time"
2021-12-02 07:22:22 1638447742 15.3846 "Zabbix server: CPU user time"
2021-12-02 07:22:21 1638447741 2.5427 "Zabbix server: CPU system time"
2021-12-02 07:22:20 1638447740 0.03345 "Zabbix server: CPU steal time"
2021-12-02 07:21:22 1638447682 17.9539 "Zabbix server: CPU user time"
2021-12-02 07:21:21 1638447681 2.9913 "Zabbix server: CPU system time"
2021-12-02 07:21:20 1638447680 0.03342 "Zabbix server: CPU steal time"
2021-12-02 07:20:22 1638447622 25.4758 "Zabbix server: CPU user time"
2021-12-02 07:20:21 1638447621 4.0741 "Zabbix server: CPU system time"
2021-12-02 07:20:20 1638447620 0.1002 "Zabbix server: CPU steal time"
2021-12-02 07:19:22 1638447562 8.2022 "Zabbix server: CPU user time"
2021-12-02 07:19:21 1638447561 2.359 "Zabbix server: CPU system time"
2021-12-02 07:19:20 1638447560 0.03345 "Zabbix server: CPU steal time"
2021-12-02 07:18:22 1638447502 16.767 "Zabbix server: CPU user time"
2021-12-02 07:18:21 1638447501 2.3909 "Zabbix server: CPU system time"
2021-12-02 07:18:20 1638447500 0.03345 "Zabbix server: CPU steal time"
2021-12-02 07:17:22 1638447442 10.1447 "Zabbix server: CPU user time"
2021-12-02 07:17:21 1638447441 2.7086 "Zabbix server: CPU system time"
2021-12-02 07:17:20 1638447440 0.0673 "Zabbix server: CPU steal time"
2021-12-02 07:16:22 1638447382 4.6695 "Zabbix server: CPU user time"
2021-12-02 07:16:21 1638447381 1.9234 "Zabbix server: CPU system time"
2021-12-02 07:16:20 1638447380 0.03346 "Zabbix server: CPU steal time"
2021-12-02 07:15:22 1638447322 5.0025 "Zabbix server: CPU user time"
```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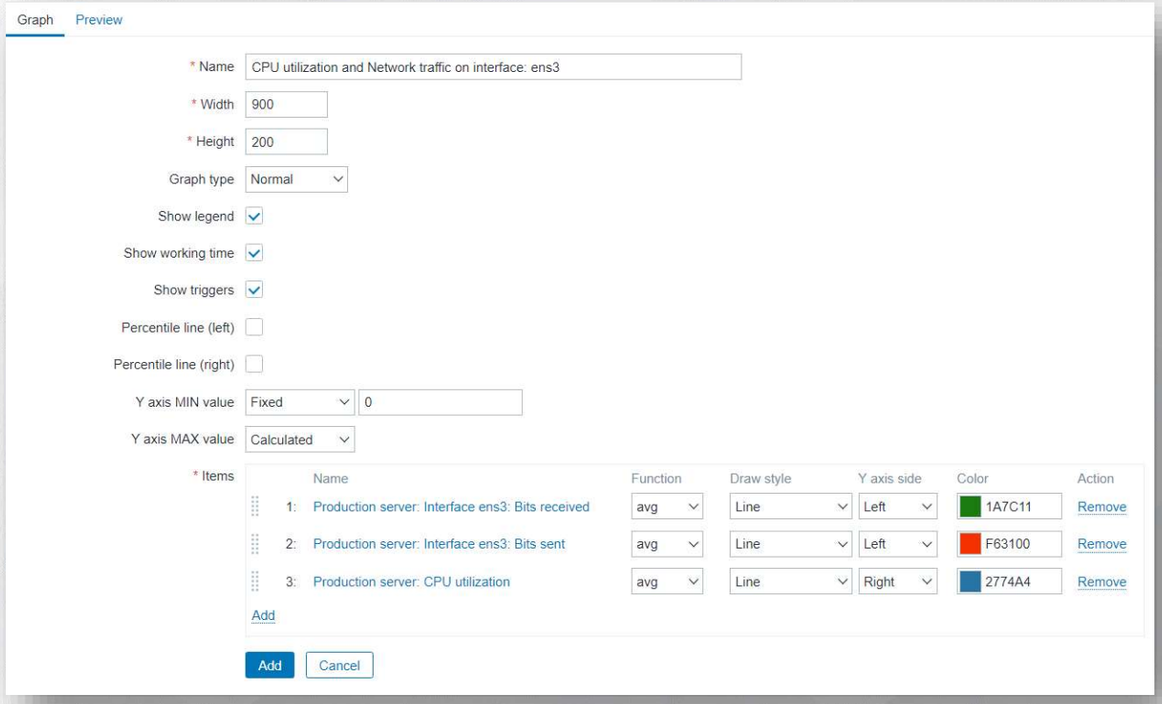
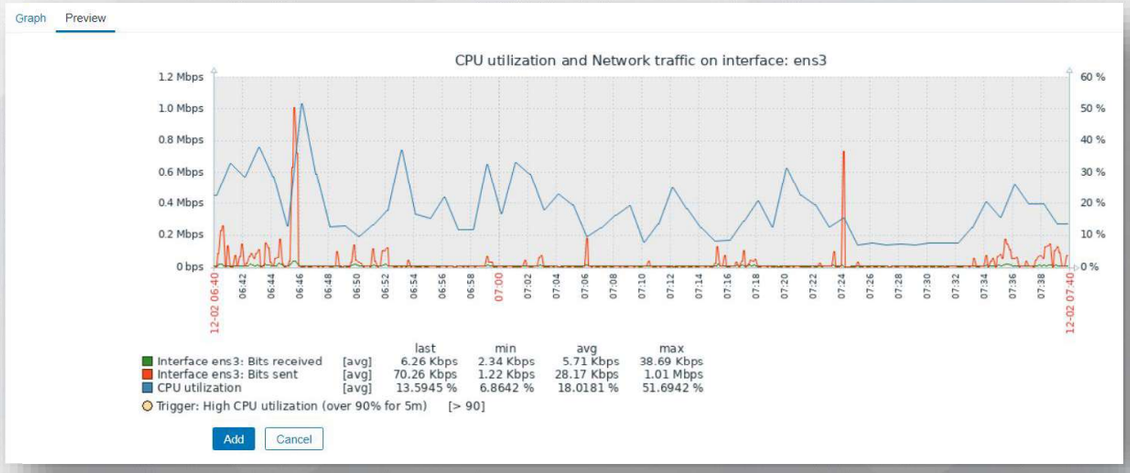
Custom graphs are configured manually on a host or template

- Normal, Stacked, Pie or Exploded graph formats are available
- Graphs allows to save predefined options (dimension, scale, line colors etc.)
  - ✓ Different Y axis sides can be used for different metrics
  - ✓ When designing a graph on a host quick preview is available





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DYNAMIC GRAPH NAMES

Dynamic graph names can be created by using Expression macros

- Expression macros are supported in this field
- Only last, min, max and avg functions may be used with time as parameter

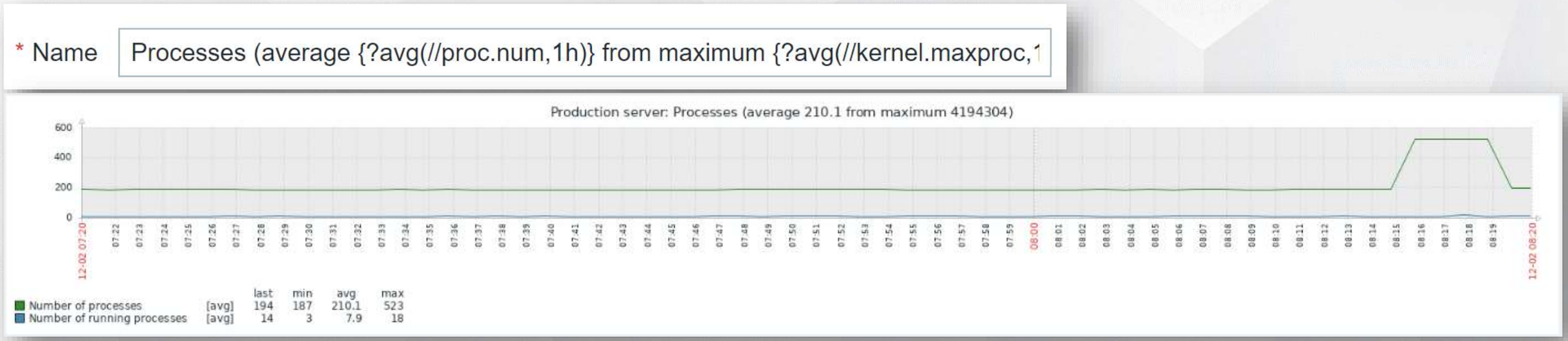
  {?function(/host/key,time period)} {?avg(/Production server/system.cpu.load,1h)}

- {HOST.HOST<1-9>} macros are supported for usage within this macro

  {?function(/{HOST.HOST}/key,time period)}

- Current host may be skipped

  {?function(//key,time period)} {?avg(//system.cpu.load,1h)}



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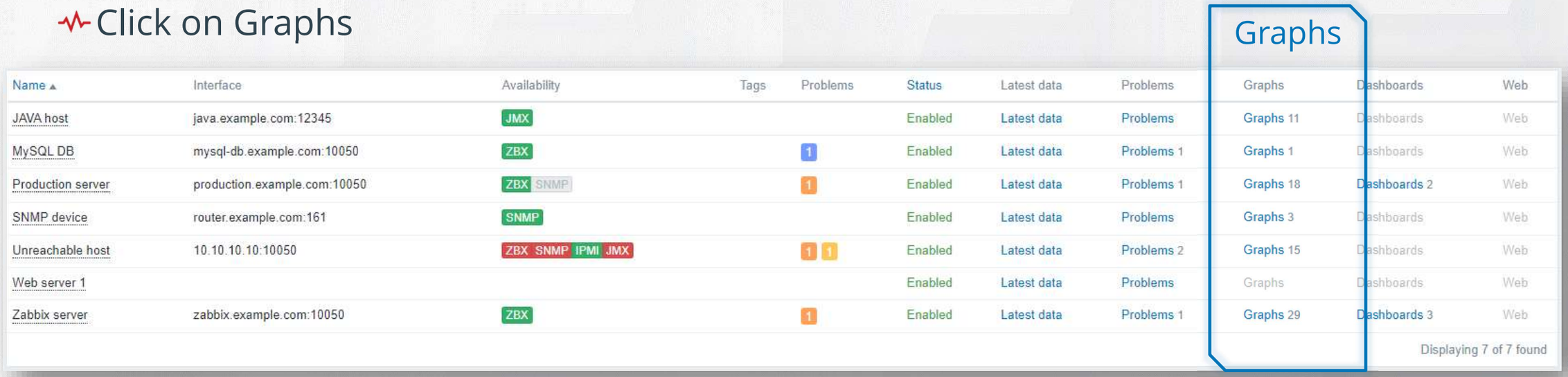
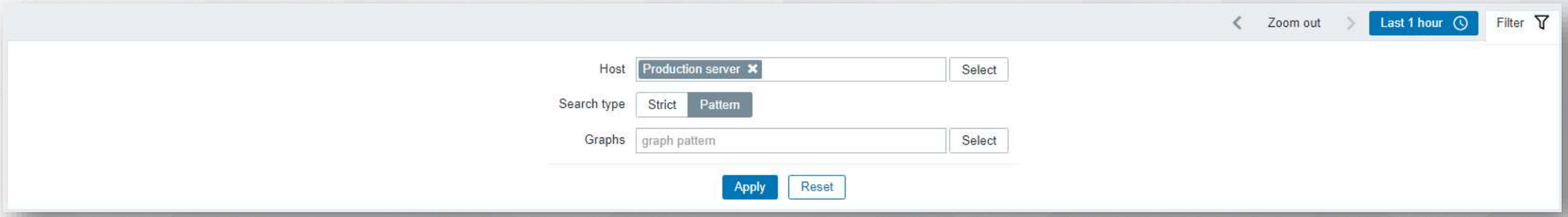
Custom graphs can be accessed from Monitoring -> Hosts

- Click on Graphs



- Display all graphs for host or use Filter



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PRACTICAL SETUP

1) On The Template Basic
   - ✓ Create a new graph for Network traffic and CPU load
   - ✓ Add incoming and outgoing traffic on the left Y axis
   - ✓ Add CPU load on the right Y axis

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