Enterprise Monitoring and Dashboard System Facility for StarTrX Platform

Feature List

FALCON
ENTERPRISE MONITORING & DASHBOARD FACILITY

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FALCON – AN OVERVIEW OF FEATURES

StarTrX Falcon is a powerful and affordable enterprise-level real-time monitoring system to gather and analyse events from servers, virtual machines, cloud and network devices enabling the user to quickly detect, diagnose, and resolve problems and service outages.

Falcon offers its users the perfect balance of simplicity and depth. Being able to monitor your StarTrX enterprise network is all dependent on your perspective. StarTrX Falcon technology delivers a comprehensive view of the connected network.

This paper will examine key features like dashboards, configurability, alerts, protocol support, auto-discovery, and plugins. The aim is to take a peek at what StarTrX Falcon has to offer as it delivers better overall monitoring experience.

Feature Category	Falcon
Dashboard and User Interface	The Falcon dashboard is high-quality and can be customized and offers a cleaner and custom experience.
Configuration	Falcon allows you to change your configurations through a web-based interface.
Visualization	Falcon has its own premium graphs available out-of-the-box.
Web Interface	Convenient to deploy. Falcon allows you to configure your monitoring environment through the use of a modern user interface.
Auto discovery	Monitoring large environments could be a nightmare without automation. Falcon provides several ways of automating the management of such StarTrX environments. Devices and elements of devices, such as file systems and network interfaces, batch & online processes, can be added and removed automatically as they come and leave a StarTrX environment.
Protocol Support	Offers support for HTTP, FTP, SMTP, SNMP, POP3, and SSH.
Alerts and Notifications	Alerts and notifications are offered out-of-the-box. One can opt to receive Alerts through email and SMS. Falcon also allows one to customize messages and to determine an escalation chain.

Feature Category	Falcon
Monitoring Templates	Falcon offers templates for FTP, HTTP, HTTPS, IMAP, LDAP, MySQL, NNTP, SMTP, SSH, POP and Telnet. Falcon also offers templates for monitoring of appliances (firewall, switch, router etc) as well as various OSes (Linux, Windows, AIX, OpenBSD, Solaris, Mac OSX)
Cross-Platform	Extensive customization capabilities of Falcon allow to integrate it in any environment on StarTrX
Notification	Falcon allows not only to collect, store and analyse information about monitored environment, but also to inform responsible personnel about occurred incidents through a variety of notification methods: • e-mail • SMS • Jabber further notifications can be scripted and customized (depending on the context) examples: (Skype, instant messaging, voice, etc.)
Escalation	Powerful escalation module supports building of complicated workflows to assist delivering only relevant alert information to responsible personnel at the right time.
Data Repository	• Falcon offers great performance and can be scaled to very large environments. • Data is gathered using various methods, including Falcon native agents and agentless options: • SNMPv1, SNMPv2, SNMPv3, IPMI, WMI, trappers, SSH, Telnet, web checks.
Dynamic network discovery and mapping	Automatically discover and map devices, performance metrics, link utilization, and wireless coverage.
Hardware health monitoring	Monitor, alert, and report on key device metrics, including temperature, fan speed, and power supply.
Customizable performance and availability reports	Schedule and generate custom network performance reports with one of over 100 out-of-the box templates.

Feature Category	Falcon
Agent-based Deployment - distributed mode (1:N connections)	Falcon provides an agent for various supported platforms, Linux, UNIX and Windows, and collect data such as CPU, memory, disk and network interface usage from a device. Due to its small footprint, the agent can be run on devices with limited resources.
Agentless Deployment	While an agent-based deployment offers great features on most platforms, in some cases it is not possible to install it. For these cases, some agentless monitoring methods are provided by the Falcon server.
On-behalf deployment - concentrated mode (1:1 connections)	On-behalf deployment is utilizing so called Falcon Proxy. The main benefit of proxies in terms of performance is that the load is redistributed from your Falcon server to proxies A Falcon proxy is the ideal solution if you have numerous hosts with multiple slow items that are affecting the performance of the server simply because processes are spending most of the time simply waiting for a response. A proxy can collect information from all hosts using its internal processes and then send raw historical data to the server. The time needed to connect and receive the host response will be on the proxy site, and the server performance will not be affected at all. A proxy just sends raw values to the server, and the server itself does not have to connect to the host to get the data Proxies also come with a separate database. It can store the data if you have network communication issues between the Falcon server and the proxy.
High Availability (HA)	In a large environment, especially if you need to guarantee that all your servers are up and running, it is of vital importance to have a reliable Falcon infrastructure. The monitoring system and Falcon infrastructure should survive any possible disaster and guarantee business continuity. Falcon infrastructure consist of three-tier setup, Falcon GUI, Falcon Server and Database. Multiple nodes can be setup and configured for every tier to achieve a high availability and reliable Falcon infrastructure. The nodes will switch automatically if the current resource dies or connections fail.

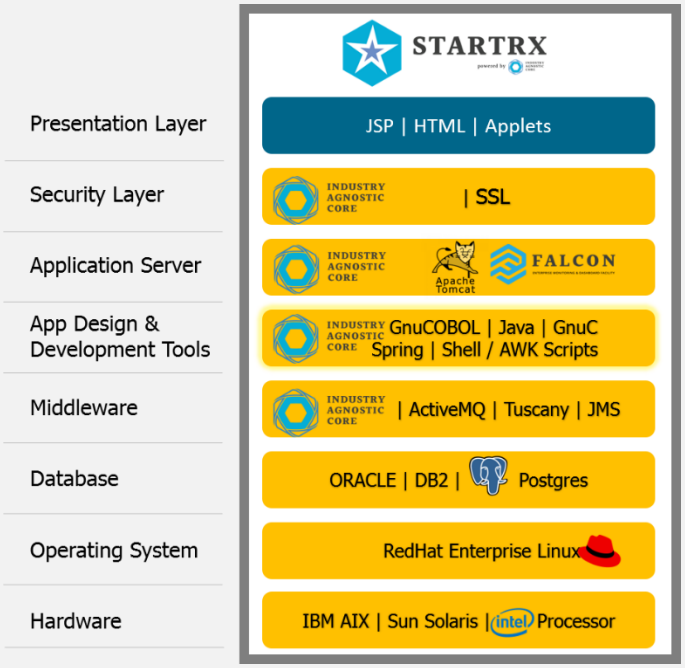
STARTRX TECHNOLOGY STACK & FALCON

Falcon Server is a perpetual subsystem of StarTrX platform that performs monitoring, interacts with Falcon agents, calculates triggers, sends notifications and acts as a central repository of events/data.

The server is the central repository in which all configuration, statistical and operational data is stored, and it is the entity in Falcon that will actively alert administrators when problems arise in any of the StarTrX monitored sub-systems.

Falcon Agent is native software module deployed on monitoring targets to actively monitor local resources and applications (storage drives, memory, processor statistics, network, file systems, etc).

The agent gathers operational information locally and reports data to Falcon server for further processing. Falcon agents are extremely efficient because of use of native system calls for gathering information.

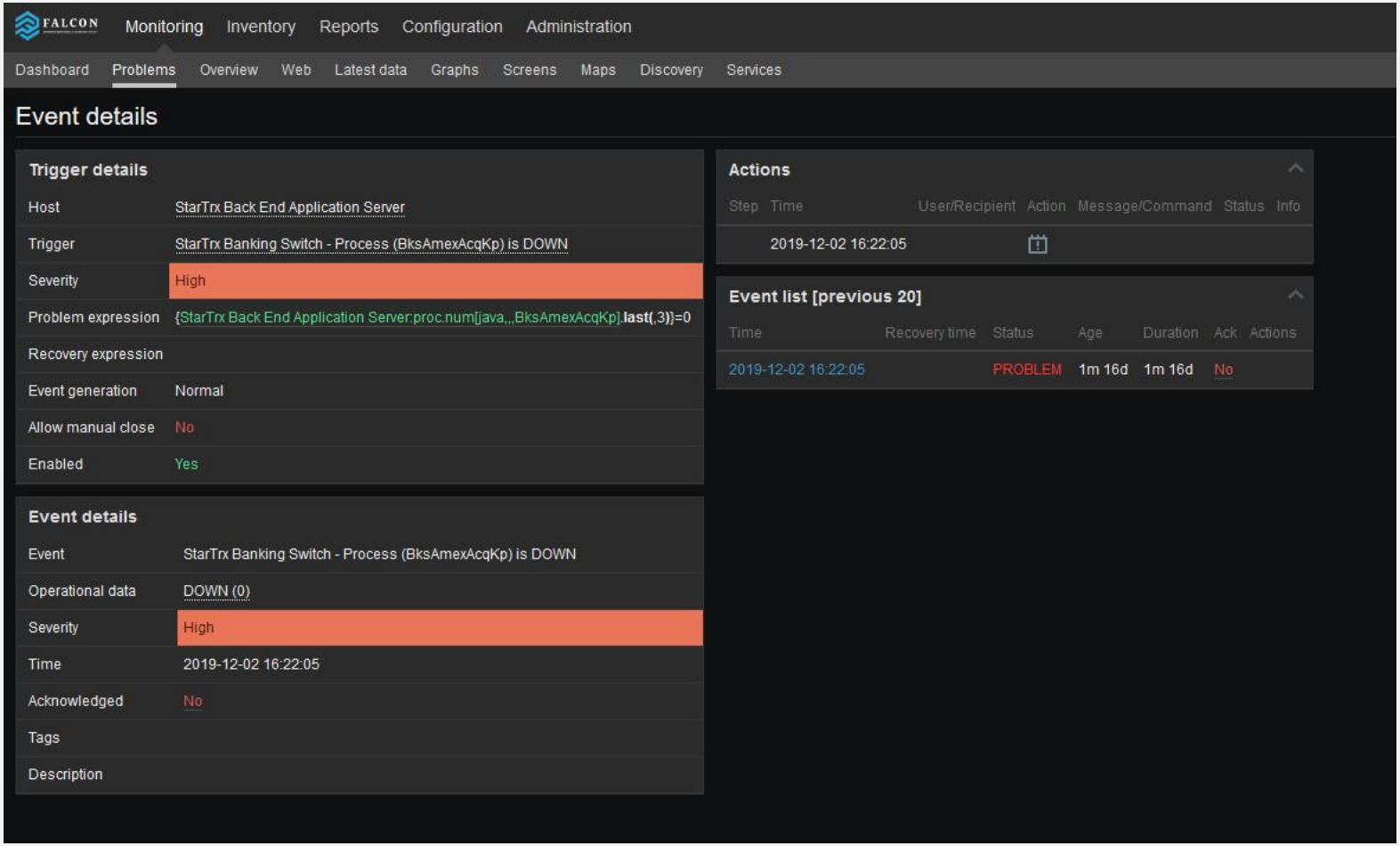


DASHBOARD AND USER INTERFACE

Crucially Falcon's user interface means the dashboard. The dashboard is going to be where you spend most of your time, so it is important that you have the ability to monitor your network effectively.

Falcon's dashboard maintains a very high-quality appearance. The user interface is crisp and the color-coded displays come out of the screen well-defined. The Falcon **dashboard is completely customisable**. it offers you a more personalized experience. For example, you can have tables detailing host and system statuses on the front page so that you know immediately if there are any problems.

In terms of overall user experience, usability and design, Falcon has a distinct advantage. The mix of modernity and a customizable design makes for a truly personalized monitoring experience. Overall very satisfying to use.



CONFIGURATION

Configuration is an important area to structuring the monitoring experience. Falcon has a massive advantage in this respect because you can **change configurations via the web-based interface**. Falcon configurator is well suited based on how easy it is to create configurations.

VISUALIZATION

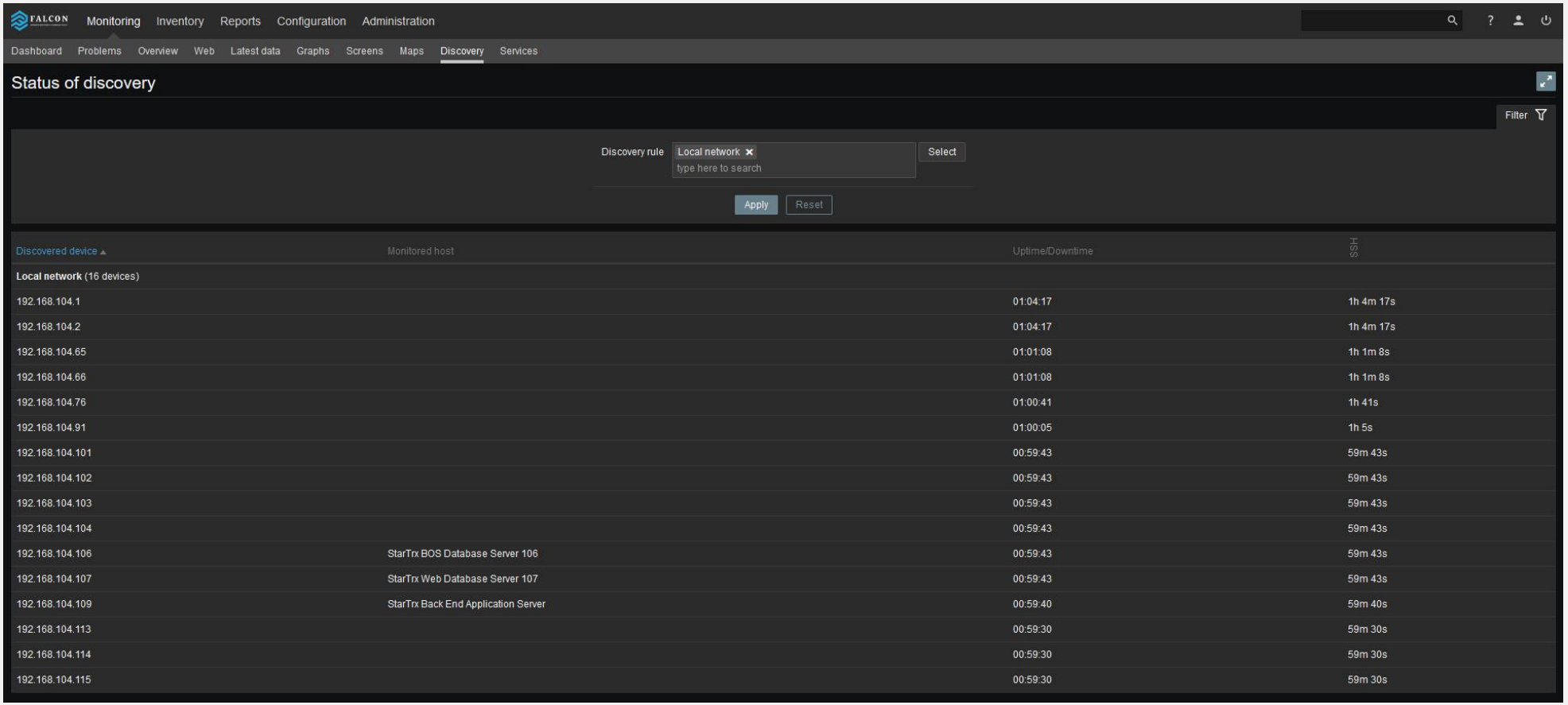
One of the features that all the best network monitoring tools have in common is **visualization**. Programs that display your network data in graphs and charts that are easy to read are undoubtedly the most popular. Being able to refer to a graph to view trends on your network is key to understanding what's going on under the hood. O**nly Falcon comes equipped with graphs out-of-the-box**.

WEB INTERFACE

Falcon has a web-used interface which is a clear advantage allowing you to create custom configurations. **Falcon** can be configured according to your requirements by default.

If you're looking for a platform that is easy to deploy and accessible online then Falcon should be your choice.

AUTODISCOVERY



Monitoring large environments could be a nightmare without automation. Falcon provides several ways of automating the management of such StarTrX environments. Devices and elements of devices, such as file systems and network interfaces, batch & online processes, can be added and removed automatically as they come and leave a StarTrX environment. Falcon supports various types of auto discovery in StarTrX environment especially auto-registration of VM's or instances.

PROTOCOL SUPPORT

A large part of a systems monitoring ability is linked to its use of protocols. Without the right protocols, your visibility on a network is severely limited. Luckily Falcon has a decent range of protocols for you to work with. Both Falcon **supports HTTP**, **FTP**, **SMTP**, **SNMP**, **POP3**, and **SSH.**

ALERTS AND NOTIFICATIONS

Alerts and notifications have become one of the most important aspects of network monitoring. Manual monitoring is deeply flawed and even if you were at your desk 24 hours a day you wouldn't be able to spot every little event that takes place on your network. Alerts allow you to rely on your network monitoring system to flag problematic activity for you to resolve.

Falcon has its own alerts system. Falcon alerts you via email and SMS when something problematic is detected. **Falcon's** alerts and notifications are good and allows you to **customize your message content**.

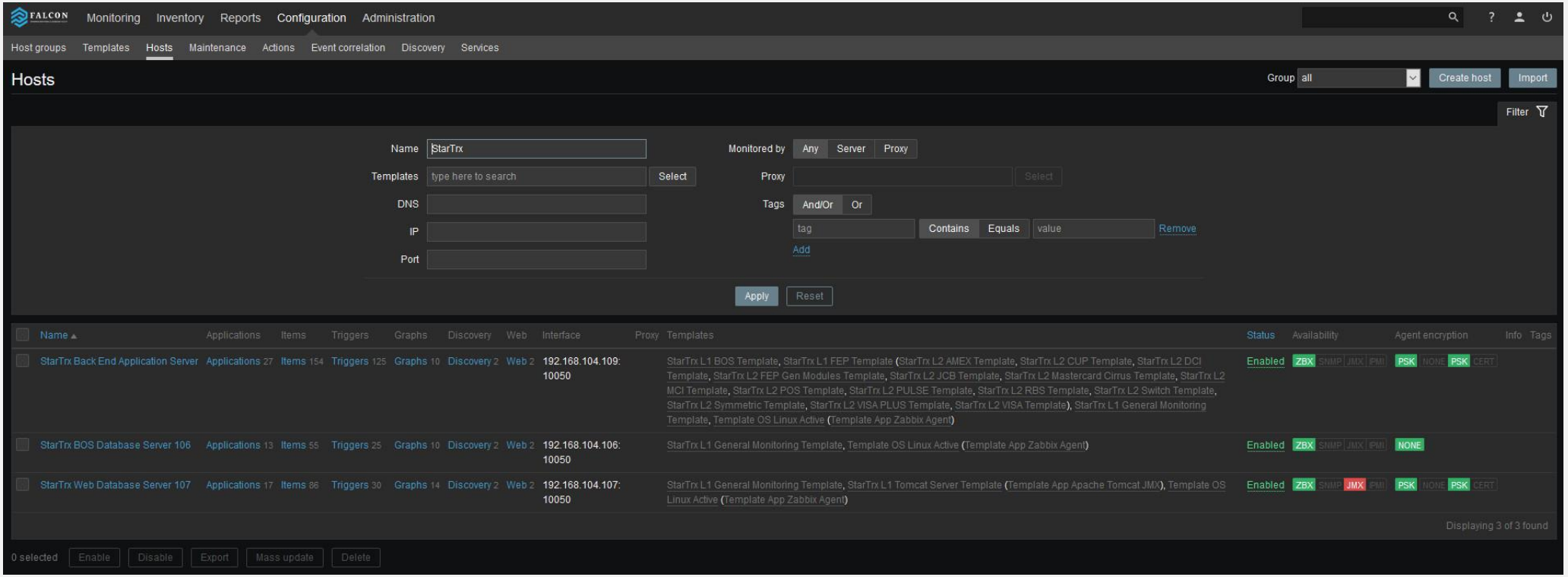
For instance, you can make messages include information such as data and time, hostname, item value, trigger value, host profile, user macros and escalation history. This is very useful for making sure that all the relevant information is included. However, what really gives **Falcon's** alerts system the edge is its escalation abilities. If your initial message receives no response then it will be sent to another recipient. In the event that there is no response at the end of the chain it can execute a command automatically to act.

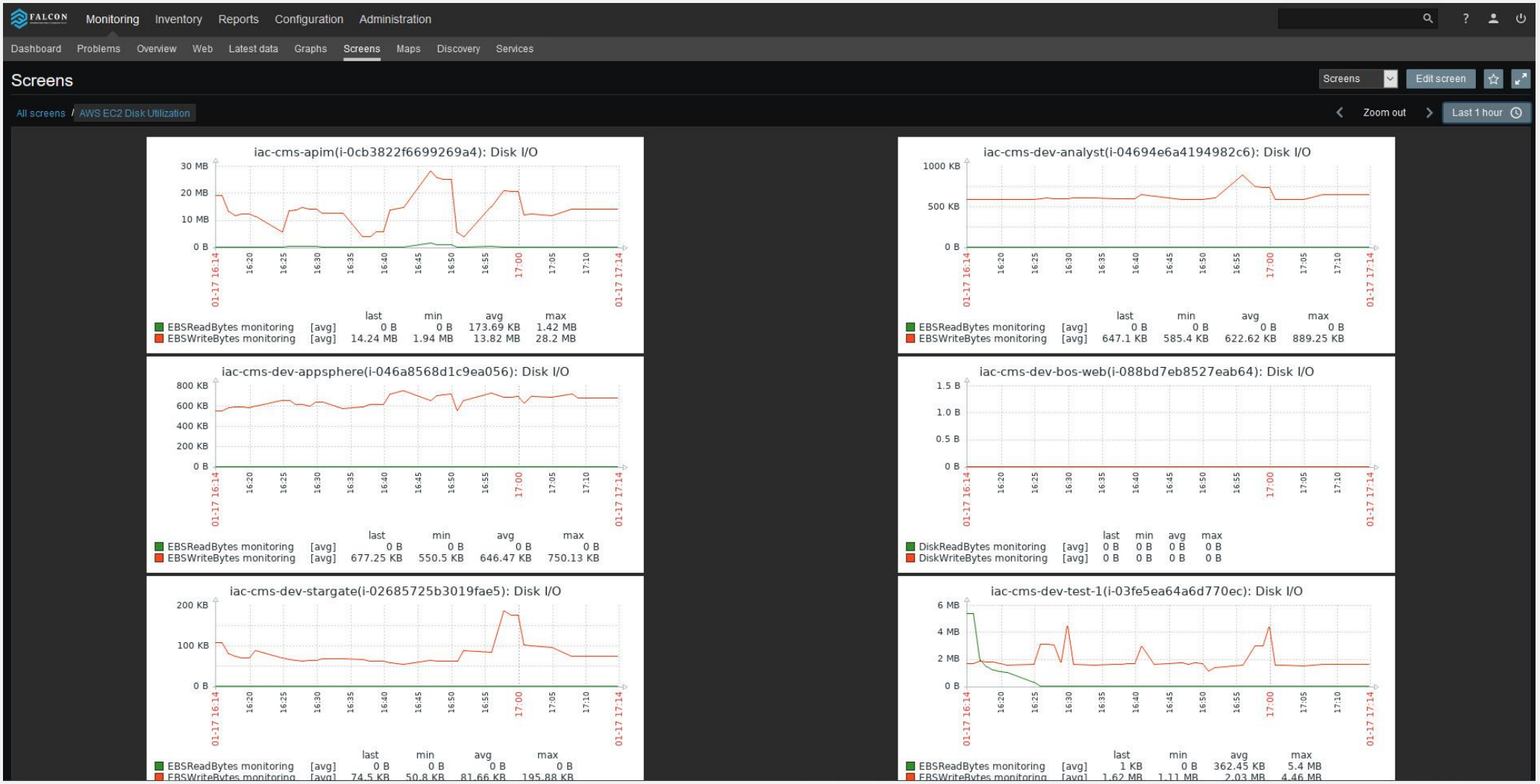
This cluster of alerting configurations allows you to customize an alerts system according to the needs of your operations. You can designate who is the first point of contact and make sure that other team members are ready to step in if there is no response. Based on customized messages and the ability to determine escalation chains, Falcon has a clear advantage.

MONITORING TEMPLATES

Templates are an area that often gets overlooked in favour of grander features like customizable dashboards and visualization. This is unfortunate because monitoring templates eliminate lots of manual configuration needs. **Falcon** has a range of templates for **FTP**, **HTTP**, **HTTPS**, **IMAP**, **LDAP**, **MySQL**, **NNTP**, **SMTP**, **SSH**, **POP** and **Telnet**. These templates allow you to hit the ground running and start monitoring straight away from template settings.

Falcon's templates make a massive difference to the overall network monitoring experience and give this product the upper hand.




FALCON
Monitoring
Inventory
Reports
Configuration
Administration
Dashboard
Problems
Overview
Web
Latest data
Graphs
Screens
Maps
Discovery
Services
Screens
Edit screen
All screens / AWS EC2 Disk Utilization
Zoom out
Last 1 hour
iac-cms-apim(i-0cb3822f6699269a4): Disk I/O
EBSReadBytes monitoring [avg] 0 B 0 B 173.69 KB 1.42 MB
EBSWriteBytes monitoring [avg] 14.24 MB 1.94 MB 13.82 MB 28.2 MB
iac-cms-dev-analyst(i-04694e6a4194982c6): Disk I/O
EBSReadBytes monitoring [avg] 0 B 0 B 0 B 0 B
EBSWriteBytes monitoring [avg] 647.1 KB 585.4 KB 622.62 KB 889.25 KB
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EBSWriteBytes monitoring [avg] 677.25 KB 550.5 KB 646.47 KB 750.13 KB
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DiskReadBytes monitoring [avg] 0 B 0 B 0 B 0 B
DiskWriteBytes monitoring [avg] 0 B 0 B 0 B 0 B
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EBSReadBytes monitoring [avg] 0 B 0 B 0 B 0 B
iac-cms-dev-test-1(i-03fe5ea64a6d770ec): Disk I/O
EBSReadBytes monitoring [avg] 1 KB 0 B 362.45 KB 5.4 MB

FALCON IN STARTRX

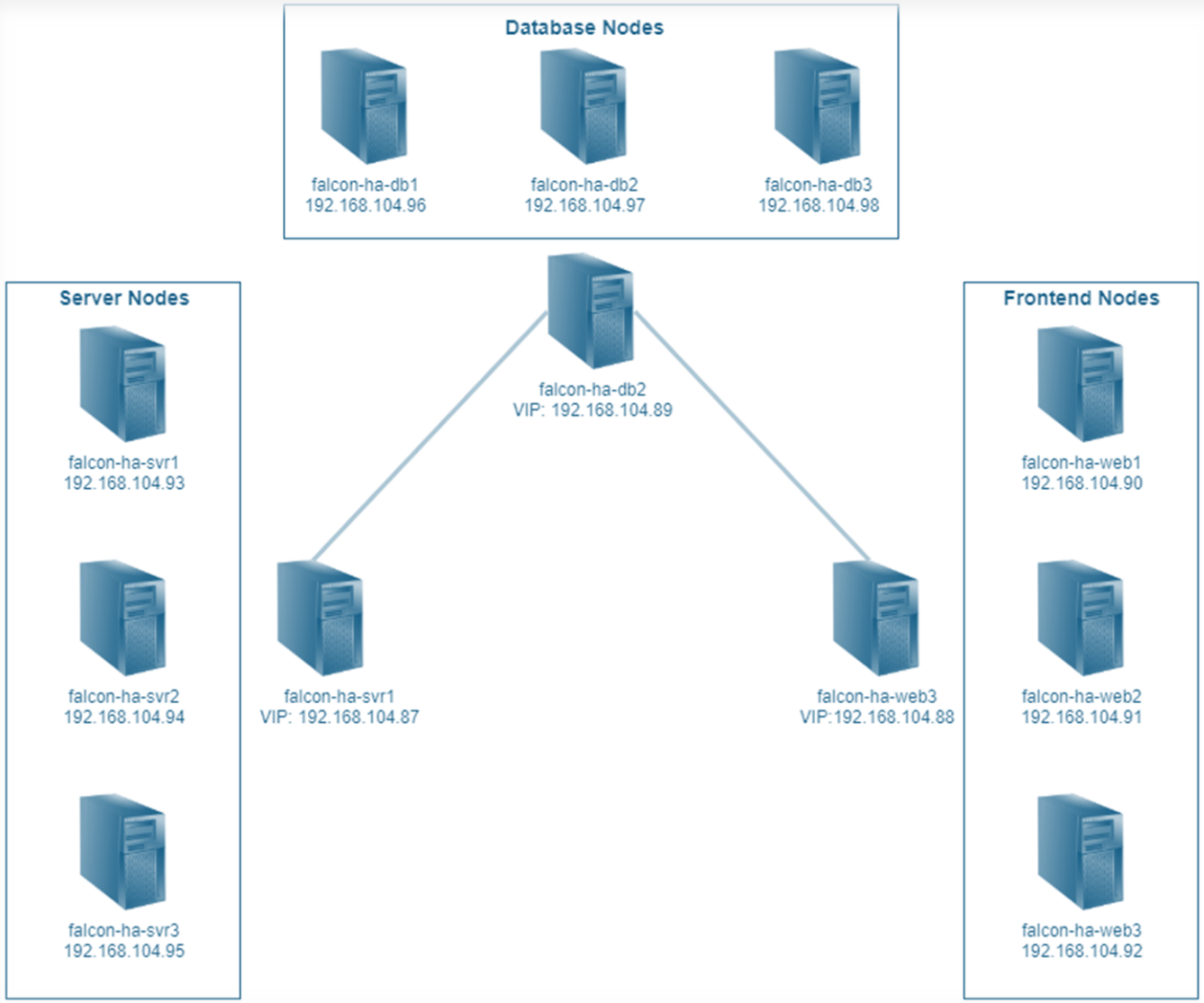
Falcon's features come together with StarTrX platform deployment to build a very simple and fulfilling monitoring experience. Monitoring templates reduce the amount of manual configuration that needs to be completed to view your network. Once a problem has been spotted customized messages and the escalation chain makes event response extraordinarily efficient. The program responds to key events by passing information straight to key members automatically.

FALCON HIGH AVAILABILITY

Falcon infrastructure consist of three-tier setup:

- Falcon GUI
- Falcon Server
- Database

For each of the tier, multiple nodes can be setup and configured, like 3 nodes for GUI, 3 nodes for Server and 3 nodes for Database. For every cluster, there is a virtual IP (VIP) that shows which of the nodes are active at the moment. The nodes will switch automatically if the basic resources die or connections fail. Manual control is also in place to override in case of problems or to perform updates



Sample of the High Availability Servers cluster

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