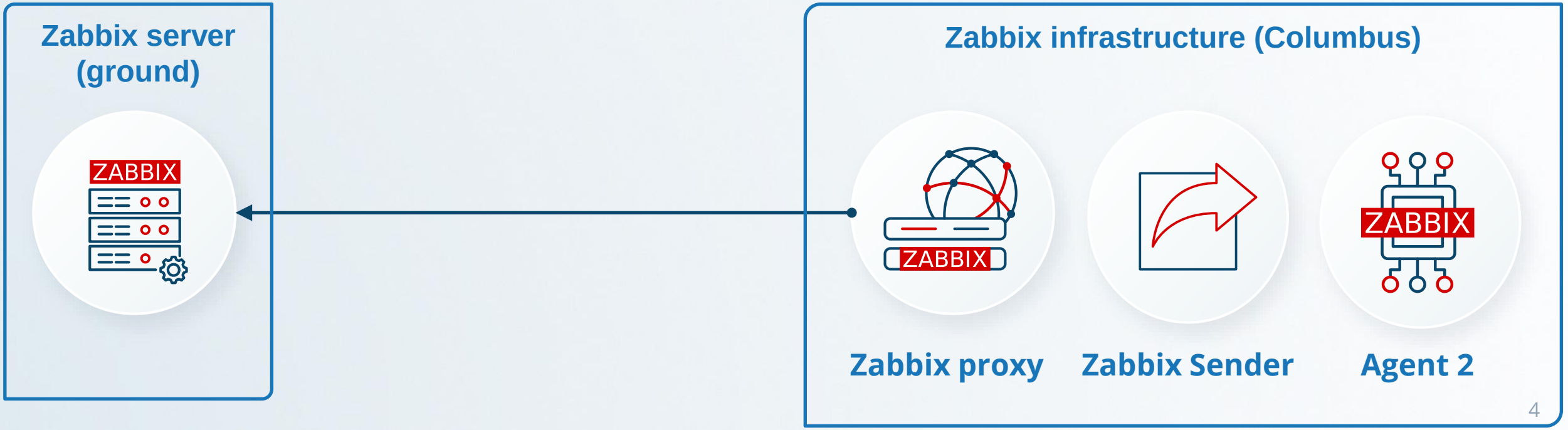
ZABBIX

Case study: Zabbix at the European Space Agency

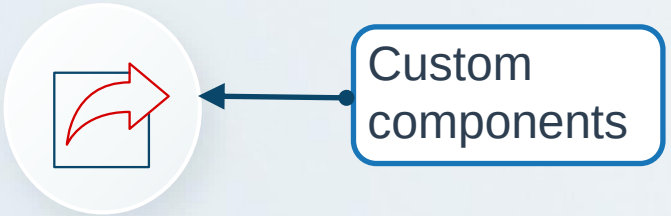
- Zabbix proxy deployed in the European module
- Zabbix server and frontend is deployed in the ground DC
- In case of the link being down, proxy keeps the collected metrics
- Once the link is restored, proxy sends the missing data back to the Zabbix server



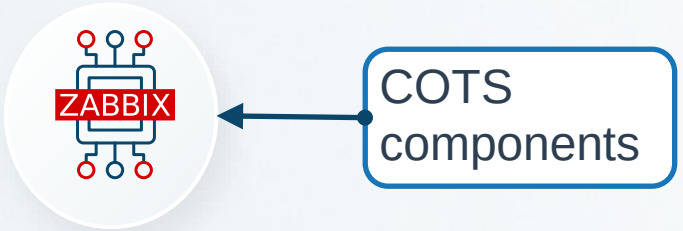
Flight and ground infrastructure made up almost entirely of VMs/LXC running services

Data is collected in a variety of ways:

- Zabbix agent 2
- Native checks mixed with user parameters for Commercial-off-the-shelf components
- Zabbix sender for custom components



Zabbix Sender



Agent 2 (active)
User parameter 1
User parameter 2
...

Many custom metrics per service to be monitored, such as:

- Number of high priority files in the transfer queue for a particular payload
- Currently configured bandwidth allocation for all payloads combined
- Time remaining until next Loss Of Signal (LOS)

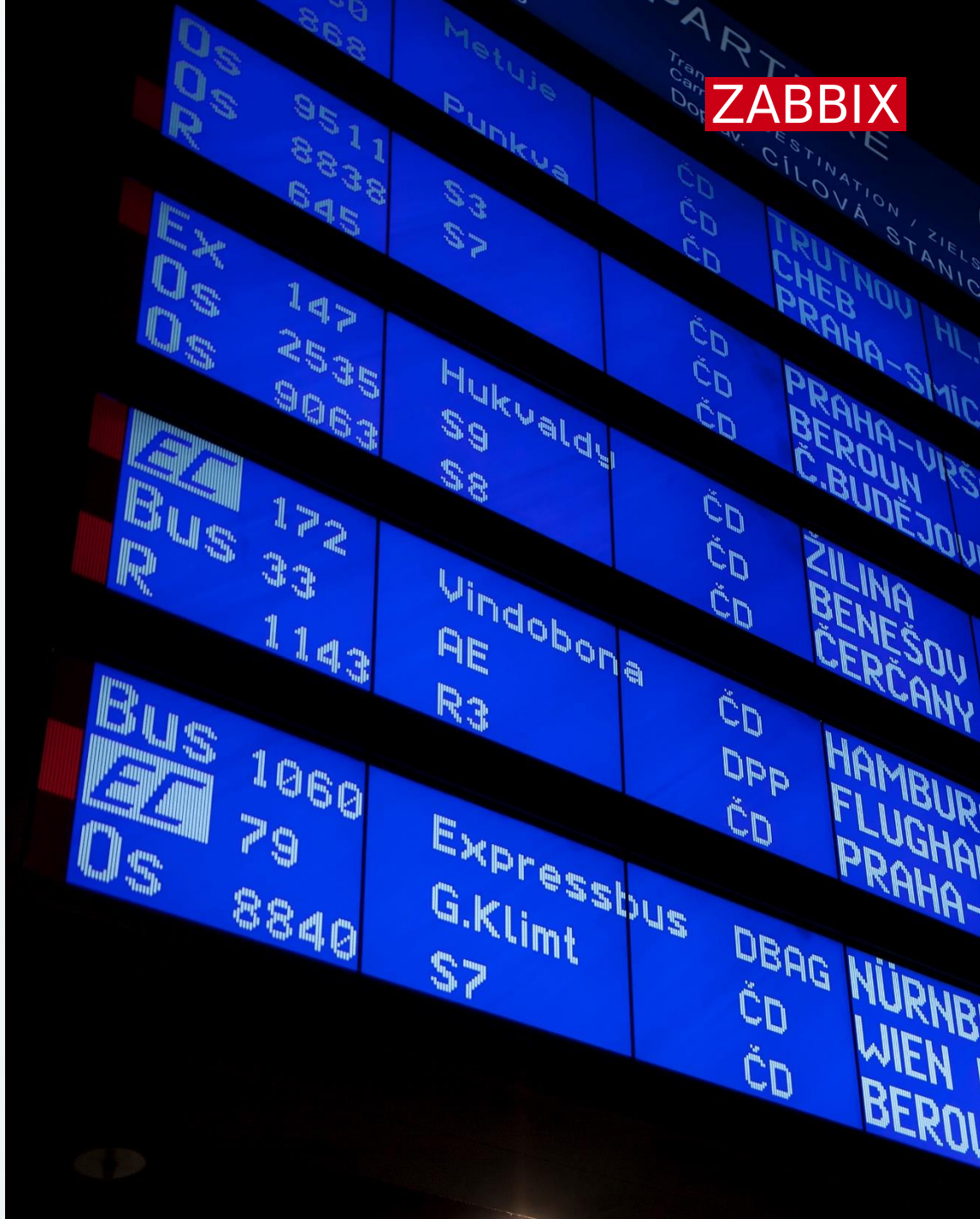
- Low-level discovery is used to automatically discover and monitor new payloads
- Data is visualized live on Zabbix dashboards
- NOC team reacts to Zabbix alerts in real-time

ZABBIX

Case study: Zabbix monitoring of railway infrastructure

- Zabbix is deployed as the monitoring solution in one of Europe’s largest railway networks
- Zabbix is used across multiple internal company departments
- Multiple Zabbix proxies are deployed across different data centers
- Monitoring is performed for OS level metrics, service and application states, railway infrastructure availablility

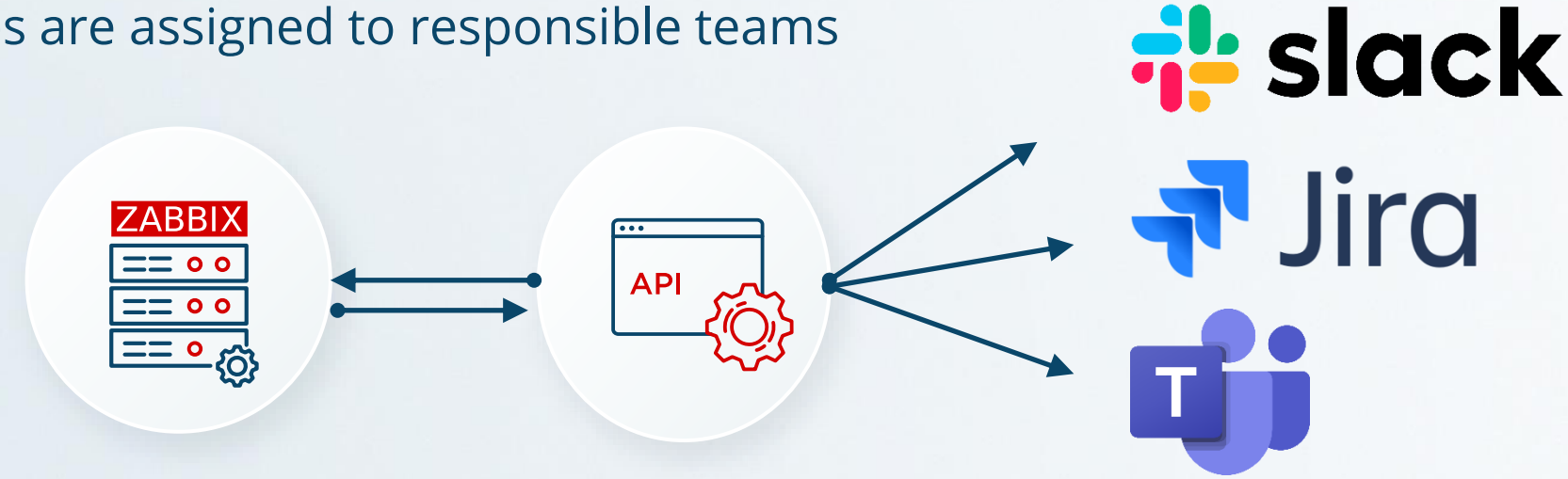
- Zabbix agents are deployed on railway station screens and broadcasting systems
- The devices use Debian OS, therefore they can be monitored on the OS level by Zabbix agents
- In addition, simple ping availability checks are also performed on the hardware



- Zabbix retrieves and monitors data from ActiveMQ

- Data is retrieved via custom bash scripts and sent via Zabbix sender to the Zabbix server and proxies

- Zabbix is integrated with 3rd party ticketing system
- Zabbix API is used to get retrieve the problems related to a specific set of triggers
- Alerts are forwarded to the ticketing system and the issues are assigned to responsible teams



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Thank you!
Q&A