

Streaming Model-driven Telemetry Using NETCONF



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Agenda



NETCONF refresher

Introducing the elastic stack (ELK)

- Elasticsearch
- Logstash
- Kibana

Deploying the ELK stack

Collecting telemetry with NETCONF

Building a Kibana dashboard



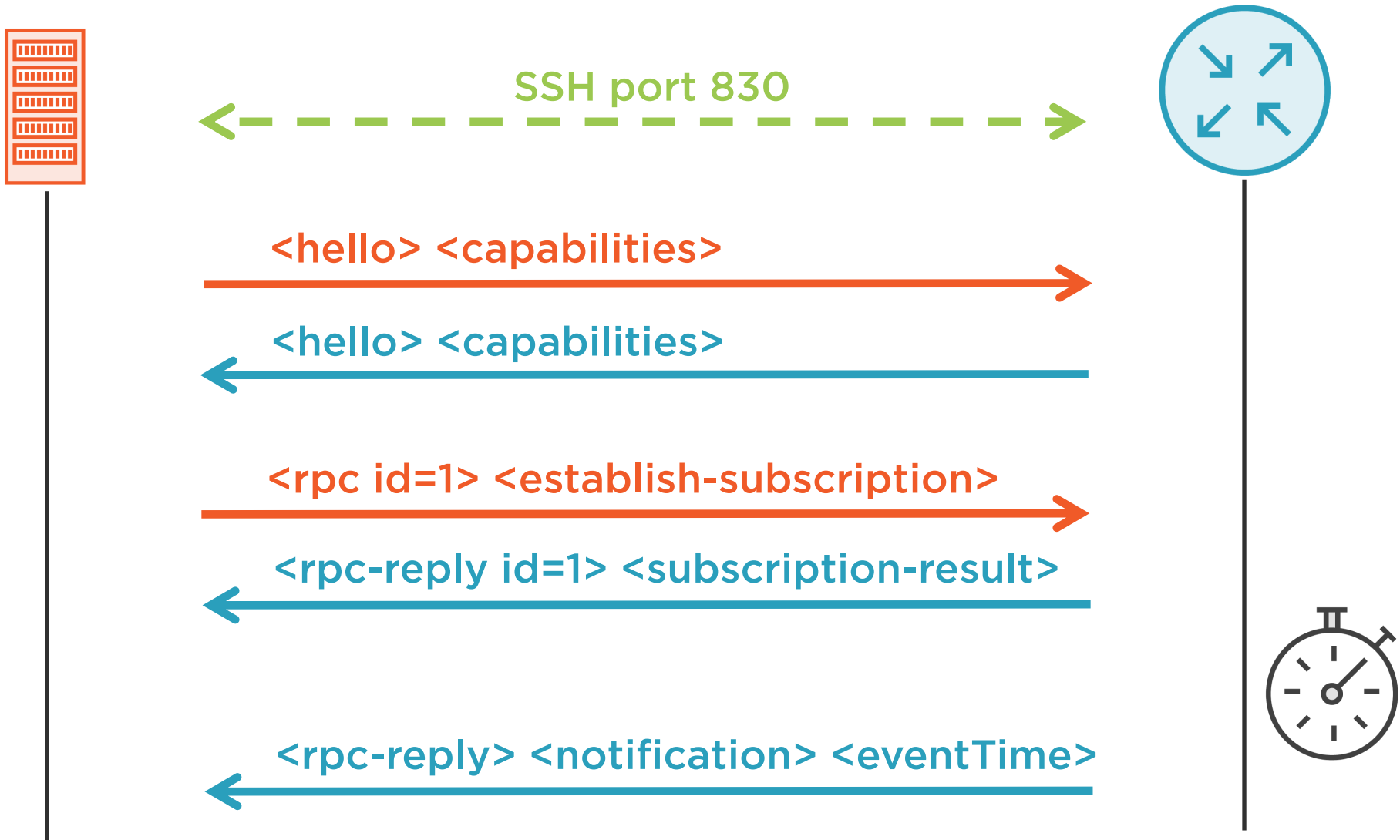
Your Role at Globomantics



"Managers love pretty dashboards!"



Deploying NETCONF for Streaming Telemetry



Different Approaches to MDT

Dial-in



Dynamically initiated by manager
Manager re-establishes if session breaks
No polling!

Dial-out



Statically configured on device
Device re-establishes if session breaks
No polling!

Elastic Stack Components



Elasticsearch – log search and data extraction



Logstash – log collection



Kibana – dashboards/visualization



Demo



Customizing the ELK stack



Demo



Deploying the ELK stack



Demo



Exploring the IOS-XE "oper" models



Demo



Dial-in NETCONF telemetry with Python



Demo



Dry run: verify the script operation



Demo



Displaying ELK telemetry data



Summary



NETCONF/YANG for MDT too!

ELK stack for telemetry collection

Making dashboards in Kibana

