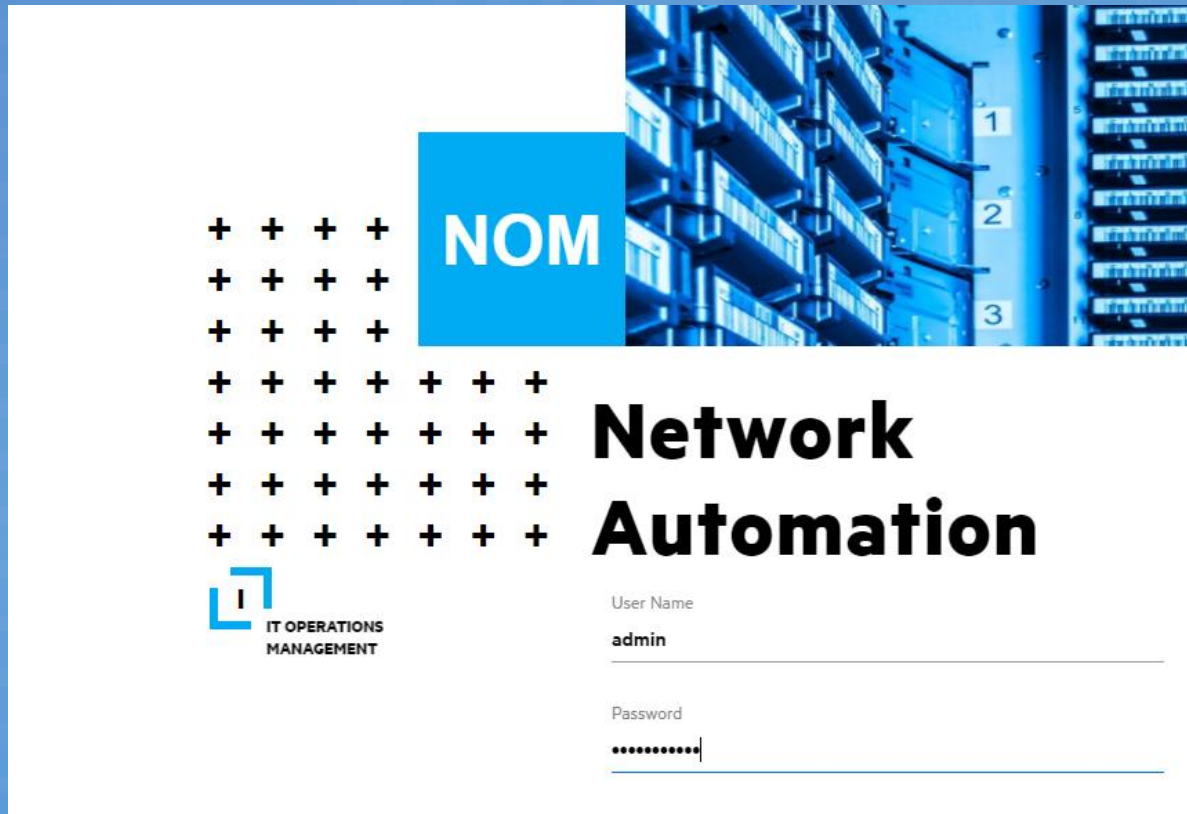




Technical Insights – Network Automation

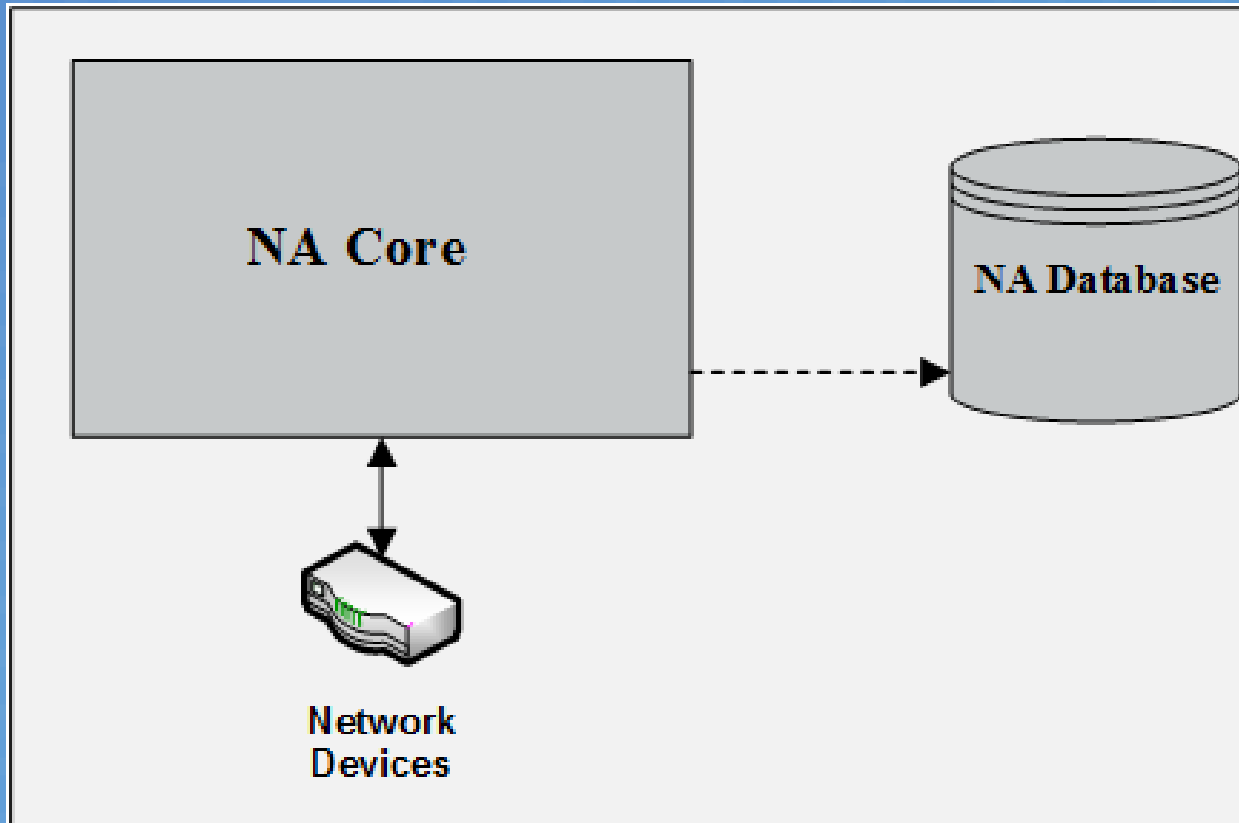
February 2022 – Rafael Segura

Agenda



- Deployment-architecture
- Reports
- Proxy/API
- Troubleshooting

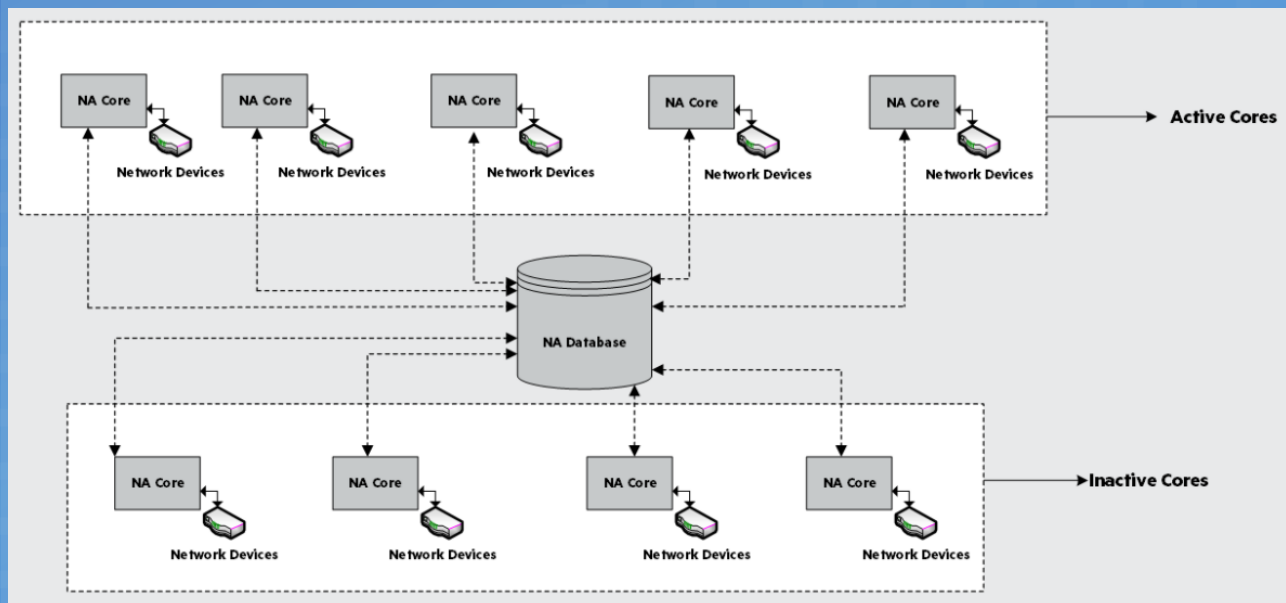
Deployment Architecture



Single Core

Consists of an NA core and a database

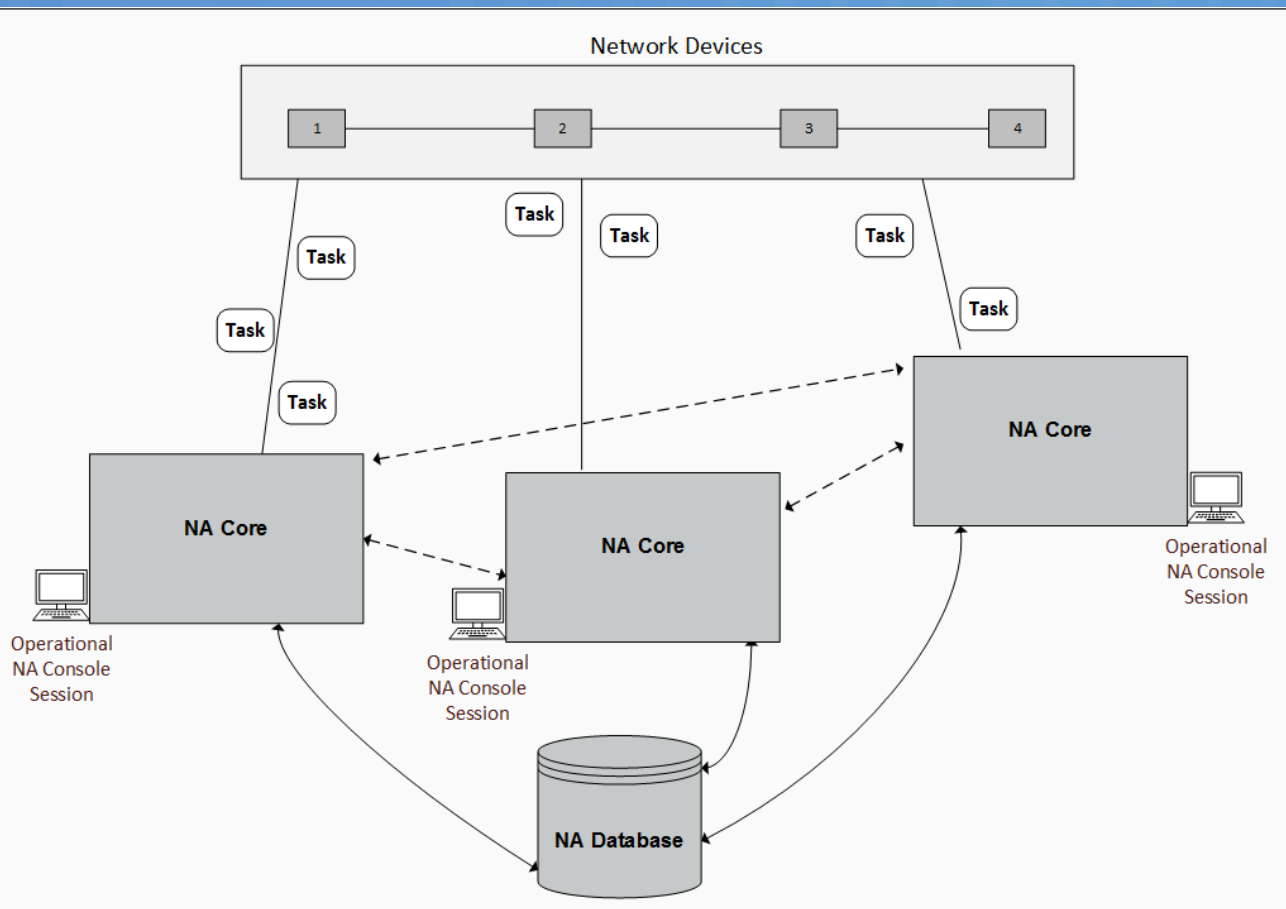
Deployment Architecture



Horizontal Scalability

A horizontally scalable model enables you to combine multiple NA cores with a single database to distribute the load of managing large networks. In this model, you can create specific topologies to distribute tasks across NA cores.

Deployment Architecture



Round Robin

Each NA core can communicate with every device on the managed network

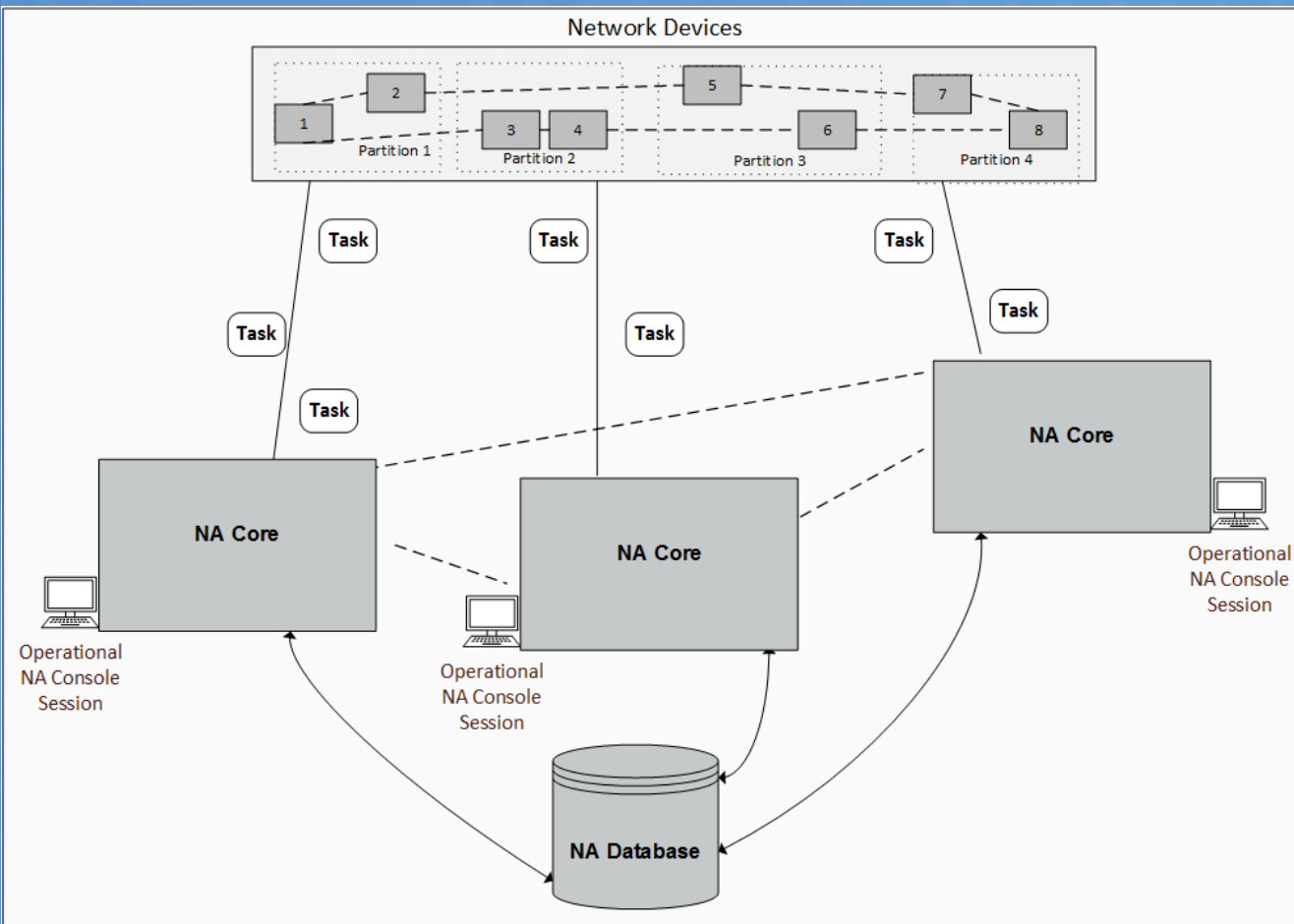
Distributed round robin is the default NA Horizontal Scalability topology.

Automated load sharing of device tasks across the NA cores based on device count.

After first execution of a task, cores own those specific device tasks

Automated failover and failback of tasks.

Deployment Architecture



Core-Binding

Each NA core communicates with a fixed, non-overlapping set of devices.

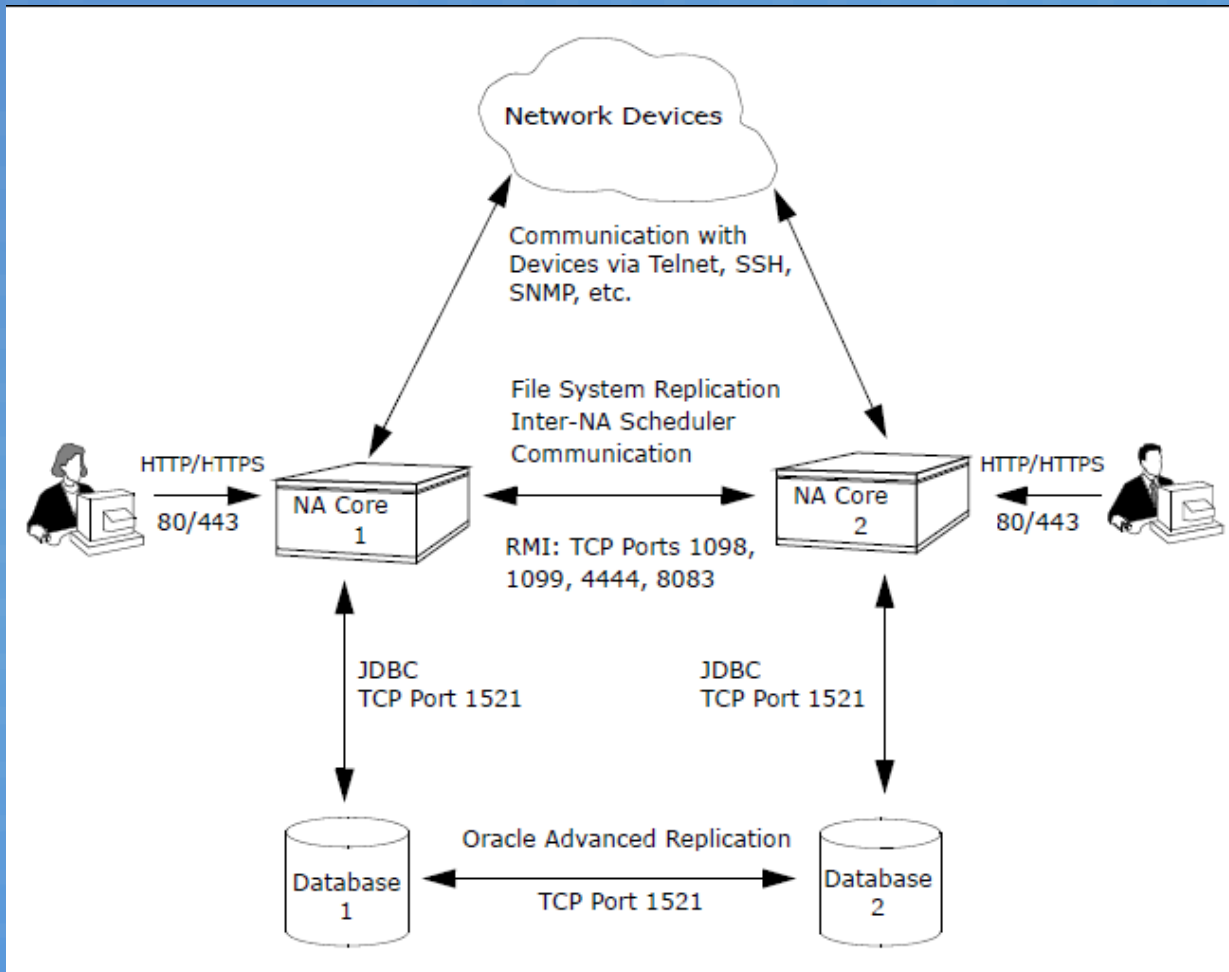
Each device is associated with a partition, and each partition is associated with one NA core.

Automated failover of partitions and tasks for topologies in which devices are reachable from multiple NA cores.

Failback of partitions and tasks is manual.

The NA administrator controls which NA core runs tasks on a given device.

Deployment Architecture



MultiMaster

Database Replication

Certain file system objects, such as software images and driver packages, are in sync.

Obsolete for Oracle in version 2020.11

Obsolete for MSSQL in version 2021.05



- **Performance tips(three or more cores)**
 - **Dynamic Group Calculation**
 - One core for full cycle Dynamic Group Calculation
 - One core for Event driven update
 - Other Cores, disable calculation of Dynamic Groups
 - **Reserve Core for User interaction**
 - Admin – Administrative Settings – Server
 - **Enable Full-text search**
 - To move the contains (full text) and does not contain (full text) search operators to the top of the list: `<option name="fulltextsearch/operators_first">true</option>`



Satellite

The NA satellite functionality can simplify communication between the NA core and remote networks by encrypting packets and limiting the number of firewall ports that need to be opened.

- **Realm**
 - A collection of reachable networks with no overlapping IP addresses.
- **GW MESH**
 - A collection of two or more NA gateways that route traffic among themselves. At a minimum, a gateway mesh consists of one core gateway and one remote gateway.
- **Core GW**
 - Bridges the NA cores and remote gateways, secured connection to remote GW
 - If the NA core runs on a platform that supports the NA satellite(not Windows), it is recommended to install the core gateway on the NA core server
 - Each core gateway is associated with one NA core.
- **Remote GW**
 - An NA gateway running in a realm that does not include an NA core, use a different realm name for each remote gateway.



Reports

Out of the Box Reports

Custom reports

SQL resource

`tc_tools - /opt/NA/client`



Proxy/API

Accessing the proxy

Accessing the API

Commands Available

Creating scripts from proxy sessions



Troubleshooting

Setting Logging

- Task Logs

- Global Logs

Understanding a Troubleshoot package

ThreadDump

getlogs.sh



References

- Dynamic Group Calculation - https://docs.microfocus.com/itom/Network_Automation:2021.11/ConfigureDynamicDevice
- Full-text search - https://docs.microfocus.com/itom/Network_Automation:2021.11/FullTextSearch
- Testing the SOAP API Document- https://community.microfocus.com/it_ops_mgt/nom/f/nom-user-discussions/49355/na-support-tip-how-to-test-na-soap-wsdl-api
- In-depth demos for these topics - <https://web.microsoftstream.com/channel/26966b5b-d9de-4cf0-9b83-6a19364db68e>



Thank You