Services based on the SPA platform

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SPA is a modular blueprint guide for designers and developers that want to build a next generation service management platform by integrating functionalities in a flexible and uniform way.

SPA platform is the implementation of the SPA to orchestrate and automate network services in the GÉANT and NREN network infrastructures.
Service Provider Architecture (SPA)

- Design a LEGO® type of service architecture
- Support the service lifecycle of all network services
- Use automation wherever possible
- Orchestration for complex workflows
- Common information model
- TMF Frameworx compliant
SPA platform

Self-service portal

Command-line client application

Service orchestrator

Service catalogue

CRM

Order mgmt

Service inventory

Resource inventory

Service activation

Service testing

OpenNSA

Network Infrastructure
Services based on SPA

GÉANT Connection Service

E-Line Service in NMaaS
GÉANT Connection Service (GCS)

- Microsoft ExpressRoute point-to-point L2 circuits in the GÉANT infrastructure
- Production service for GÉANT OC
- OpenNSA as the activation component (topology abstraction, access to the infrastructure)
- Continuous improvements
  - New requirements from the GÉANT OC
  - UAT (User Acceptance Test) environment for pre-production tests

### GÉANT Connection Service (GCS)

*33 STPs*

*40 routers*

*52 active circuits*

*187 automated workflows*

*121 terminated circuits*
E-Line Service in NMaaS

• Sandbox for testing L2 point-to-point connection service
  • All SPA components with default test settings
  • OpenNSA with simple emulated network topology
  • All service lifecycle actions

• No need to deploy the service on your own resources
  • Only an account in NMaaS is needed
  • User creates an instance of the service for testing

• SPA in NMaaS may help to familiarize with the OAV concept and the available SPA implementation (start of the orchestration and automation journey)
Single Point of Truth for the orchestration and automation framework

- New version 3 of the Resource and Service Inventory
- OpenAPI 3.0 schema validation for the REST API
  - Any data model described by the schema can be supported
- REST API compliant with TMF OpenAPI specs (verified with the test suites from TMF)
- Flexible for data model extensions and updates (NoSQL database)
- REST API OAuth 2.0 Authentication with Keycloak
- Upcoming: a series of tests in the PIONIER network
  - SPoT - one of the key components for the work on automation of resource and service configuration
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https://wiki.geant.org/display/NETDEV/SPA
Thank you