

## CONFM Exercise 1/2 – NI4OS VMs



- You are a service provider that has been on-boarded to the NI4OS pre-production environment.
- You are offering different types of VMs to the EOSC customers
- A customer can choose a VM flavor using the following parameters
  - OS (Ubuntu LTS, CentOS, FreeBSD, Kali Linux)
  - CPU cores (2 – 8)
  - RAM size (16 GB – 64 GB)
  - Disk size (512 GB – 2 TB)
  - Network (private / public / both)

## CONFIRM Exercise 2/2 – NI4OS VMs service provider



- What would be the scope and model for a CMDB for the NI4OS VMs service provider?
  - Define at least 3 CI types (including attributes) and 1 relationship type
  - What would be the pros and cons of defining a “VM package” CI type?



Standards for lightweight  
IT service management

## Service Operation & Control

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Advanced training in service operation and  
control according to FitSM

Version 2.5



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Standards for lightweight  
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## Configuration Management (CONFM)

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### Objective

To provide and maintain a logical model of all configuration items and their relationships and dependencies

# CONFIM: Important terms & concepts



## Definition following FitSM-0:

### Configuration item (CI):

Element that contributes to the delivery of one or more *services* or *service components*, and therefore needs to be controlled

*Note: CIs vary widely and can be anything from technical components (computer hardware, network components, cables, software) to documents (SLAs, manuals, contracts, license documentation).*

## Definition following FitSM-0:

### Configuration management database (CMDB):

Store for data about *configuration items (CIs)* (therefore configuration data)

*Note: The CMDB likely includes attributes of CIs as well as information on relationships between them.*

# CONFM: Important terms & concepts



Definition following FitSM-0:

Configuration baseline:

The state of a specified set of *configuration items (CIs)* at a given point in time

# CONFM: Requirements according to FitSM-1



## PR11 Configuration Management

### REQUIREMENTS

- PR11.1 Configuration item (CI) types and relationship types shall be defined.
- PR11.2 The level of detail of configuration information recorded shall be sufficient to support effective control over CIs.
- PR11.3 Each CI and its relationships with other CIs shall be recorded in a configuration management database (CMDB).
- PR11.4 CIs shall be controlled and changes to CIs tracked in the CMDB.
- PR11.5 The information stored in the CMDB shall be verified at planned intervals.
- PR11.6 Before a new release into a live environment, a configuration baseline of the affected CIs shall be taken.

# CONFM: Initial process setup



Initial activities	Typical results
Define the scope of the configuration management process and the integrated configuration management database (CMDB).	CMDB scope statement
Identify and define CI types (including their attributes) and relationship types.	CMDB model document, CI type specifications
Based on the defined scope, identify all existing sources of configuration information in the environment of the service provider.	List of definitive sources of configuration information (and a mapping to CI types, relationships and their attributes)
Create a configuration management plan to describe the concept for integrating available sources of configuration information and add missing configuration information to the integrated CMDB, including the selection of appropriate supporting technology / tools.	Configuration management plan



# CONFM: Inputs & outputs



## Inputs

Relevant information / data on configuration items (CIs) and their relationships

Information on changes to CIs

## Outputs

Up-to-date logical model of all relevant CIs and their attributes and relationships, reflected by the information / records stored in the configuration management database (CMDB)

Configuration baselines

Configuration verification reports

# CONFM: Ongoing process activities



- Continual maintenance of documentation of the current configuration
  - Create a configuration record
  - Update a configuration record
- Verify information in CMDB
  - Plan automated and non-automated configuration verifications
  - Perform a configuration verification
  - Inform stakeholders about inconsistencies and identify follow-up actions

# CONFM: Roles



Role	Tasks	Ca. number of persons performing this role
Process owner CONFM	<i>Generic tasks of a process owner applied in the context of CONFM</i>	1 in total
Process manager CONFM	<i>Generic tasks of a process manager, plus:</i> <ul style="list-style-type: none"><li>• Maintain the definitions of all CI and relationship types</li><li>• Plan regular verifications of the configuration information held in the CMDB</li><li>• Ensure that configuration verifications are conducted and identified nonconformities addressed</li><li>• Take a configuration baseline when needed</li></ul>	1 in total
CI owner	<ul style="list-style-type: none"><li>• Ensure that the information on a specific CI in the CMDB is accurate and up-to-date</li><li>• Collaborate with the process manager and other CI owners to ensure that all information on the relationships from / to a specific CI are accurate and up-to-date</li></ul>	1 per CI

# CONFM: Critical success factors & KPIs



Critical success factors	Key performance indicators (KPIs)
Balanced approach to CMDB scope and model	<ul style="list-style-type: none"><li>• Number of defined CI and relationship types</li><li>• Number of CI and relationship attributes</li><li>• Number of actual CIs and attributes</li><li>• Percentage of incident, service request, problem and change records linked to CIs</li><li>• Average and maximum number of CIs linked to of incident, service request, problem and change records</li><li>• Average workload for creating and updating CIs</li></ul>
Effective control over configuration information	<ul style="list-style-type: none"><li>• Percentage of nonconformities per configuration item reviewed</li></ul>