

# NOV-2 Operational Node Connectivity Description

## Description

The Operational Node Connectivity Description is intended to track the need to exchange information from specific operational nodes (that play a key role in the architecture) to others. An NOV-2 does not depict the connectivity between the nodes. NAF modifies the NOV-2 in two ways. First it recommends that an NOV-2 diagram shows the platforms or geographic locations at which operational nodes are deployed. Secondly it provides additional information about each needline in the form of a requirements specification. There are now four types of needlines identified as follows:

1. InformationExchange.
2. EnergyFlow.
3. MaterielFlow.
4. MovementOfPeople.

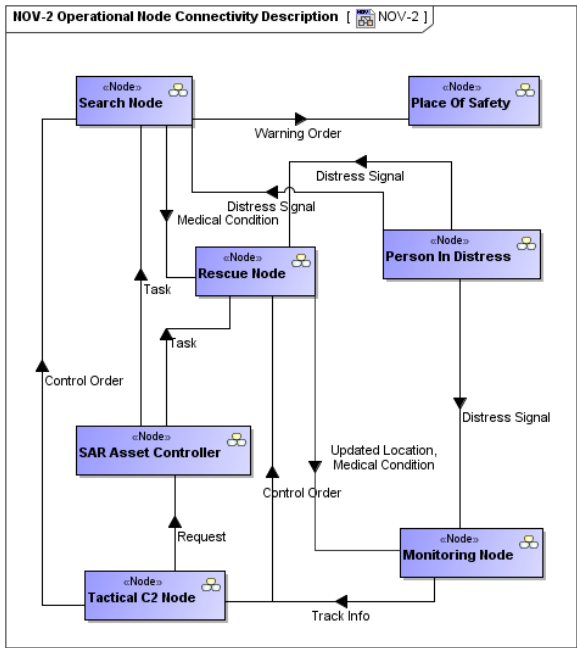
In addition, NAF permits service-oriented architectures. Instead of needlines between nodes, it is possible simply to show which services the nodes provide and consume. Finally, NAF again permits known resources to be shown in a NOV-2. However, this must be clearly shown as a KnownResource in a NOV-2 model. LogicalArchitecture, which is the container class for all the nodes and KnownResources, is introduced.

## Implementation

NOV-2 can be represented using:

- An NOV-2 diagram which is based on the UML Class diagram.
- An NOV-2 diagram which is based on the UML Composite Structure diagram.
- A UML Class diagram.
- A UML Composite Structure diagram.
- A SysML Block Definition diagram.
- A SysML Internal Block diagram.

## Sample



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## Related elements

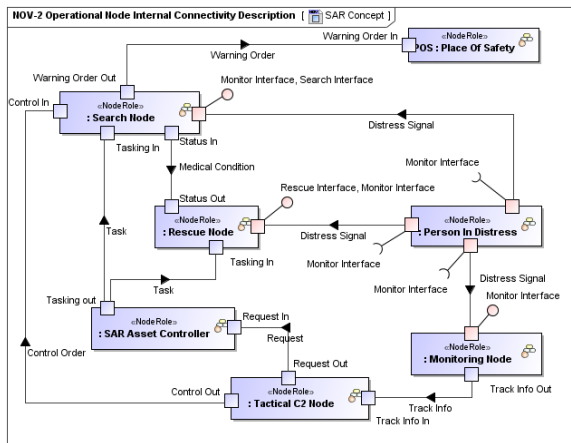
- Node
- Logical Architecture
- Operational Exchange
- Exchange Element
- Node Port
- Node Role
- Needline
- Capability
- Exhibits
- Actual Location
- Location Type
- Energy
- Materiel
- Is Capable Of Performing
- Operational Activity
- Known Resource
- Resource Artifact
- Software
- Capability Configuration
- Organization
- Post
- Problem Domain
- Security Domain
- Service Channel
- Service
- Property
- Request

## Related procedures

- Creating NOV-2 diagram
- Creating Operational Exchanges in NOV-2 diagram

## Related references

- Operational Exchange Creation Wizard
- Operational Exchange Manager Dialog



NOV-2 Operational Node Internal Connectivity Description

### Related views

An NOV-2 is highly related with an NOV-5. Operational Nodes shown in the NOV-2 are the performers of the Operational Activities modeled in the NOV-5. NOV-2 focuses on the Operational Nodes, with the activities being a secondary adornment. The NOV-5, on the other hand, places first-order attention on operational activities and only second-order attention on Nodes, which can be shown as annotations or swim-lanes on the activities.

Information flows can be modeled either in the NOV-2 or NOV-5. In both cases they are highly associated and in general should be reused between these views.

The NOV-2 displays the Capabilities required by Nodes from NCV-2. That is an association between two abstraction levels of user requirements where the NOV is more specific than the StV and a Node is more specific concept than a Capability.

The other important mapping is between NOV-2 and NSV-1. The specification Node and implementation Resource are subjects to map here. One NOV-2 product can have several implementations in the NSV-1.