

ISRM 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)

ISRM Exercise 2/2 – NI4OS VMs service provider



- A customer reports a problem: when running his ML algorithm on an instantiated VM the following message appears: “...heap size too large, can not allocate enough memory...”
 - Is this an incident?
 - If it is an incident: What should be the pre-defined steps in a standardized procedure for handling this kind of incident?



Standards for lightweight
IT service management

Service Operation & Control

Advanced training in service operation and
control according to FitSM

Version 2.5



This work has been funded by the European Commission.
It is licensed under a [Creative Commons Attribution 4.0
International License](https://creativecommons.org/licenses/by/4.0/).





Standards for lightweight
IT service management

Incident & Service Request Management (ISRM)

Objective

To restore normal / agreed service operation within the agreed time after the occurrence of an incident, and to respond to user service requests

ISRM: Important terms & concepts



Definition following FitSM-0:

Incident:

Unplanned disruption of operation in a *service* or degradation of service quality (versus the expected or agreed level of operation according to *service level agreements*)

Definition following FitSM-0:

Service request:

Request for information, advice, access to a *service* or a pre-approved *change*

Note: Service requests are often handled by the same process and tools as incidents.

ISRM: Important terms & concepts



Definition following FitSM-0:

Priority:

Relative importance of a target, object or *activity*

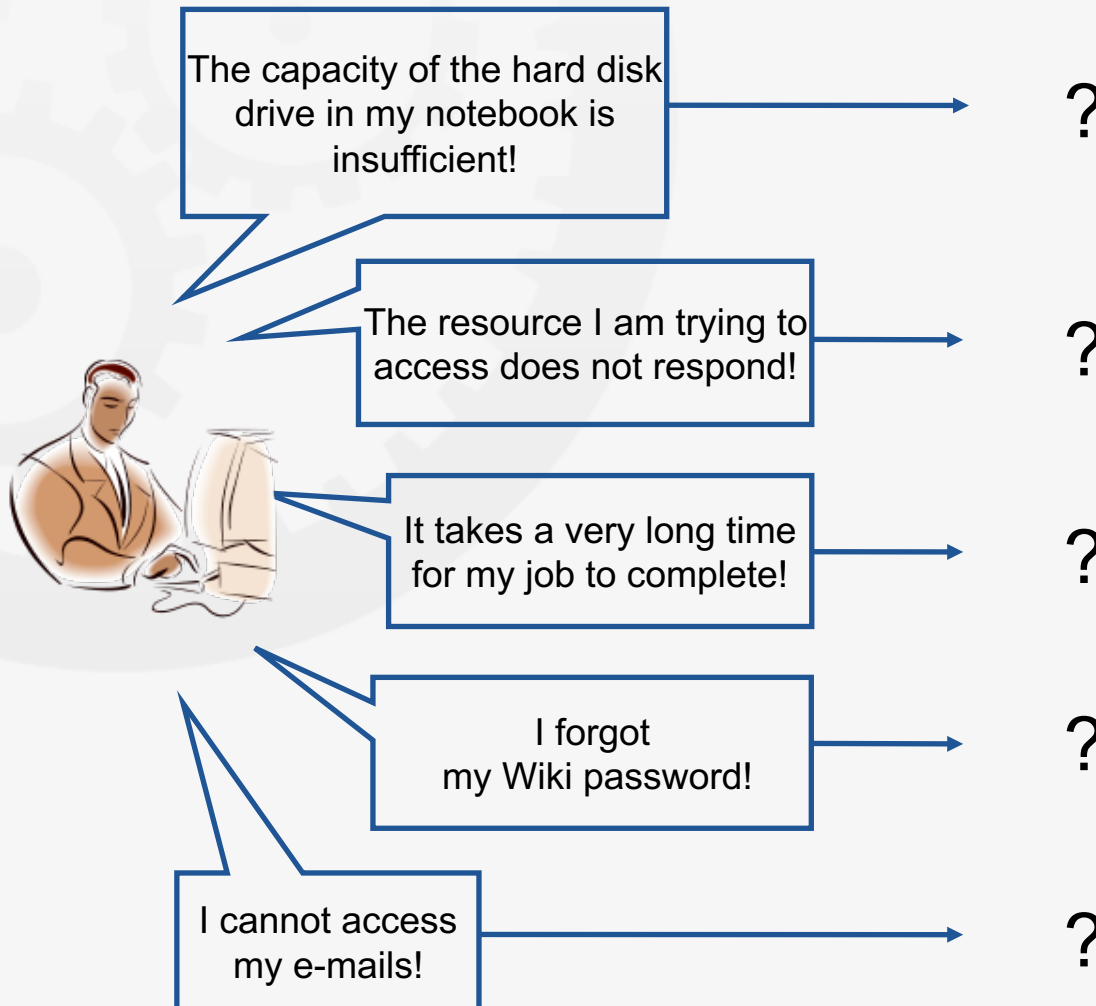
Note: Often incidents, service requests, problems and changes are given a priority. In the case of incidents and problems, priority is usually based on the specific impact and urgency of the situation.

Definition following FitSM-0:

Classification:

The act of breaking down a set of items into a set of categories

ISRM: Service request or incident?



ISRM: Requirements according to FitSM-1



PR9 Incident & Service Request Management

REQUIREMENTS

- PR9.1 All incidents and service requests shall be registered, classified and prioritized in a consistent manner.
- PR9.2 Prioritization of incidents and service requests shall take into account service targets from SLAs.
- PR9.3 Escalation of incidents and service requests shall be carried out in a consistent manner.
- PR9.4 Closure of incidents and service requests shall be carried out in a consistent manner.
- PR9.5 Personnel involved in the incident and service request management process shall have access to relevant information including known errors, workarounds, configuration and release information.
- PR9.6 Users shall be kept informed of the progress of incidents and service requests they have reported.
- PR9.7 There shall be a definition of major incidents and a consistent approach to managing them.

ISRM: Initial process setup



Initial activities	Typical results
<p>Set up a tool (e.g. ticket / workflow tool) supporting the recording and handling (including classification, prioritization, escalation, closure) of reported incidents and service requests.</p>	<p>Initial (empty) incident and service request recording system</p>
<p>Define a standardized and repeatable way of recording incidents and service requests that specifies the sources and channels through which incidents and service requests may be raised, the required format of an incident report or service request, and the way in which the incident or service request is recorded in the recording system.</p>	<p>Generic template(s) for incident records and service request records; procedure for recording incidents and service requests</p>

ISRM: Initial process setup



Initial activities	Typical results
Define a standardized and repeatable way of classifying incidents and service requests that specifies a suitable classification scheme and describes how it should be applied.	Procedure for classifying incidents and service requests
Define a standardized and repeatable way of prioritizing incidents and service requests that specifies a suitable prioritization scheme and describes how the priority of an incident or service request should be calculated.	Procedure for prioritizing incidents and service requests
Define a standardized and repeatable way of escalating incidents and service requests that specifies functional and hierarchical escalation paths.	Procedure for escalating incidents and service requests

ISRM: Initial process setup



Initial activities	Typical results
Define a standardized and repeatable way of closing incidents and service requests that specifies how incidents and service requests are closed, including required user communication and confirmation.	Procedure for closing incidents and service requests
Define the criteria for identifying a major incident, as well as a standardized and repeatable way of dealing with major incidents from recording to closure, including a major incident review.	Criteria for identifying a major incident; major incident procedure

ISRM: Initial process setup



Initial activities	Typical results
Identify well-known and recurring incidents, and for each of them describe, where required, the concrete steps to be carried out in response to the respective incident in order to manage it effectively from recording to closure.	List of “standard incidents”; templates and / or procedures for handling them
Identify standardized service requests based on service descriptions and SLAs, and for each of them describe, where required, the concrete steps to be carried out in response to the respective service request in order to manage it effectively from recording to closure.	List of “standard service requests”; templates and / or procedures for handling them

ISRM: Inputs & outputs



Inputs

Incidents reported by users or identified by the service provider
Service requests raised by users
Configuration information (CMDB)

Outputs

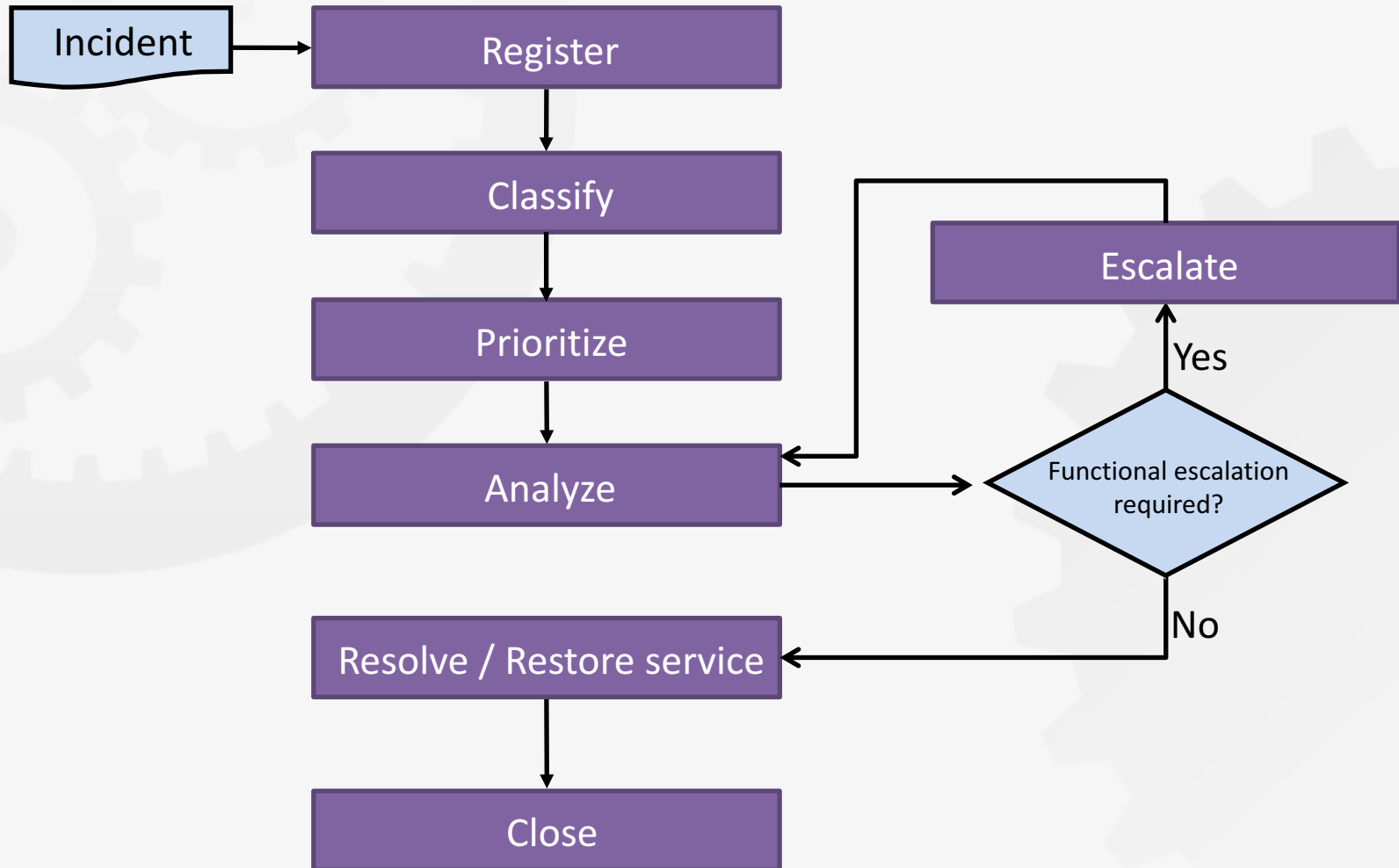
Incident records
Service request records
Major incident review reports
Requests for changes raised to trigger the change management process, in order to commence the fulfilment of service requests
Up-to-date descriptions of step-by-step workflows for standard incidents and service requests
Regular incident reports



ISRM: Ongoing process activities

- Manage incidents (including major incidents) and service requests
 - Record an incident or service request
 - Classify an incident or service request
 - Prioritize an incident or service request
 - Escalate an incident or service request
 - Resolve an incident or service request
 - Close an incident or service request
 - Perform a major incident review
- Maintain the step-by-step workflows for well-known and recurring incidents and standardized service requests

ISRM: Workflow



ISRM: Roles



Role	Tasks	Ca. number of persons performing this role
Process owner ISRM	<i>Generic tasks of a process owner applied in the context of ISRM</i>	1 in total
Process manager ISRM	<i>Generic tasks of a process manager, plus:</i> <ul style="list-style-type: none">• Ensure that all incidents and service requests are recorded, and that records are of sufficient quality to enable traceability and long-term analysis• Monitor the overall progress of incident resolution and service request fulfilment, and identify potential violations of target response and resolution times	1 in total

ISRM: Roles



Role	Tasks	Ca. number of persons performing this role
Incident owner / service request owner	<ul style="list-style-type: none">• Coordinate and take over overall responsibility for all activities in the lifecycle of a specific incident or service request• Monitor the progress of incident resolution or request fulfilment taking into account agreed timeframes• Trigger reminders to those involved in incident resolution or request fulfilment and escalate to the process manager as required• In case of a (potential) SLA violation, trigger communication and escalation as defined in the SLM process• Ensure an adequate level of documentation for the specific incident or service request	1 per incident / service request

ISRM: Critical success factors & KPIs



Critical success factors	Key performance indicators (KPIs)
All incidents and service requests are recorded.	<ul style="list-style-type: none">• Number of incident and service request records versus number of incidents and service requests actually reported (e.g. based on call / e-mail statistics)
Incidents and service requests are prioritized effectively.	<ul style="list-style-type: none">• Distribution of assigned priorities• Relation between assigned priorities and resolution / fulfilment times• Number / percentage of major incidents
Escalation paths are clearly defined and effectively applied.	<ul style="list-style-type: none">• Number / percentage of mis-routed incidents and service requests• Total / average delay due to bad / ineffective functional escalation• Total / average delay due to missed hierarchical escalation

ISRM: Critical success factors & KPIs



Critical success factors	Key performance indicators (KPIs)
Incidents are resolved quickly and effectively.	<ul style="list-style-type: none">• Percentage of incidents that had to be re-opened after closure• Average incident resolution time (per priority)• Number of violations of maximum resolution times according to SLAs
Service requests are fulfilled in time, according to agreed fulfilment times.	<ul style="list-style-type: none">• Average service request fulfilment time (per service request type, priority)• Number of violations of maximum fulfilment times according to SLAs