

# ALARM MANAGEMENT

## Process

The Alarm Management process consists of three procedures.

The first procedure is called "Alarm Handling". It is used by operators when they deal with [alarms](#) raised by network and system management applications.

The second procedure is called "Alarm Review". This procedure is used by the operations manager to identify opportunities for improvement of the efficiency with which alarms are handled.

The third and last procedure is called "Outage Review". The operations manager follows this procedure to identify weaknesses in the monitoring of the [services](#) by periodically reviewing the information about [service outages](#) that affected multiple [users](#).

For more details about these procedures, click on the Process button to return to the graphical representation of this process and click on the box that represents the procedure that you would like to know more about. The graphical representation of this procedure will appear and you will be able to click on the Description button in the upper left-hand corner of your screen to read more about it.

## Mission

The mission of the Alarm Management process is to get [alarms](#) acknowledged as quickly as possible, following the Alarm Handling procedure and the handling instructions associated with the alarms.

## Scope

The scope of the Alarm Management process is limited to alarms generated by network and system management tools.

## Level of Detail

The level of detail in which Alarm Management information is to be registered is specified in the field utilization guidelines for the fields of the forms that are available in the service management application for the support of this process.

The following forms are available in the service management application for the Alarm Management process:

[Alarm](#)

[Support Request](#)

Click on a form to obtain the field utilization guidelines for each of its fields.

## Roles & Responsibilities

The table below lists the different roles that are involved in the Alarm Management process, along with their

respective responsibilities. Click on a role to review its profile.

Role	Responsibility
<a href="#">Operations Manager</a>	<p>Ensures that each new <a href="#">alarm</a> gets acknowledged in an efficient and consistent manner, as specified by the Alarm Handling procedure.</p> <p>Reviews all acknowledged alarms to identify opportunities for improvement of the efficiency with which alarms are handled.</p> <p>Reviews all <a href="#">service outages</a> that affected multiple <a href="#">users</a> to check whether the automated monitoring functionality of the network and system management applications is working correctly, and also to make sure that the alarm handling tasks are carried out properly. This is done to ensure that downtime is minimized when an outage occurs.</p>
<a href="#">Operator</a>	<p>Reviews all new alarms.</p> <p>Correlates each new alarm with other alarms and with information regarding <a href="#">planned changes</a> and events.</p> <p>Generates a support request for each alarm that represents an unplanned service <a href="#">degradation</a> or <a href="#">outage</a>, or that represents the first warning of a future service degradation or outage, and ensures that the support request information is complete and meaningful.</p> <p>Resolves as many of the support requests that he/she generated as possible within the limitations of his/her access rights and time constraints.</p> <p>Assigns the support requests that he/she generated and that cannot be resolved by the operators to the appropriate group for resolution.</p>

## Key Performance Indicators

The table below lists the key performance indicators ([KPIs](#)) that have been selected for tracking the success of the Alarm Management process.

KPI	Definition	Frequency	Unit
Time to acknowledge	The average time it takes for the value in the <a href="#">Status</a> of an alarm to get from "Registered" to "Acknowledged".	Monthly	# of hours
Operator resolutions	The number of support requests that were both registered and resolved by an operator, divided by the total number of support requests registered by operators.	Monthly	%

## Beneficiaries

The roles that rely on the Alarm Management process are listed in the table below, along with their respective requirements for the Alarm Management process.

Beneficiary	Requirement
Group coordinators	Information regarding support requests that have been assigned to a group by an operator.

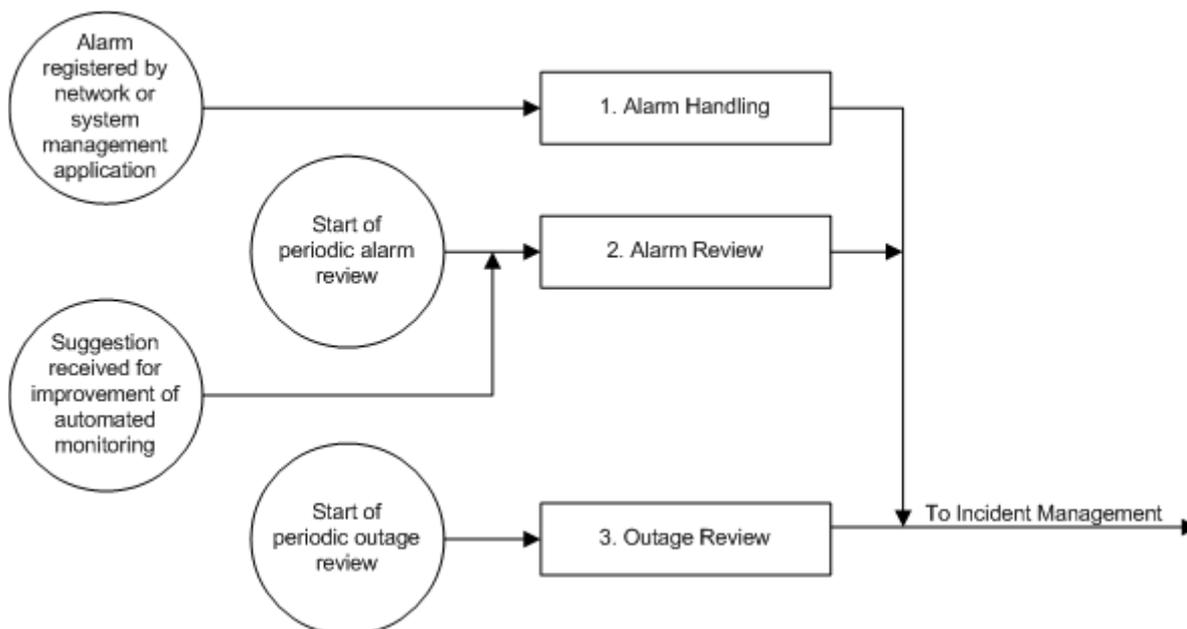
Operators	Alarm handling instructions for each type of alarm to help determine how the alarms are to be handled.
Service desk agents	Information regarding support requests of the category " <a href="#">Request for Incident Resolution</a> " that were generated from alarms and that an operator assigned to another group for resolution. Solution information of support requests resolved by operators.

## Owner

The owner of the Alarm Management process is the Service Management [CAB](#).

This CAB is responsible for reviewing, and subsequently approving or rejecting, requests for improvement of the Alarm Management process and its supporting functionality in the service management application.

## Process



## Procedure 1, Alarm Handling

After the registration of a new [alarm](#) by a network or system management application, the operator reviews its information to determine the configuration item ([CI](#)) that has failed, or is about to fail, and to find out the apparent cause of the alarm.

Next, the operator reviews the other recently generated alarms to ensure that the alarm was not raised because the network or system management application could no longer accurately determine the CI's status due to the failure of another CI elsewhere in the infrastructure. In addition, the operator checks if the alarm is the result of a [planned change](#) or event.

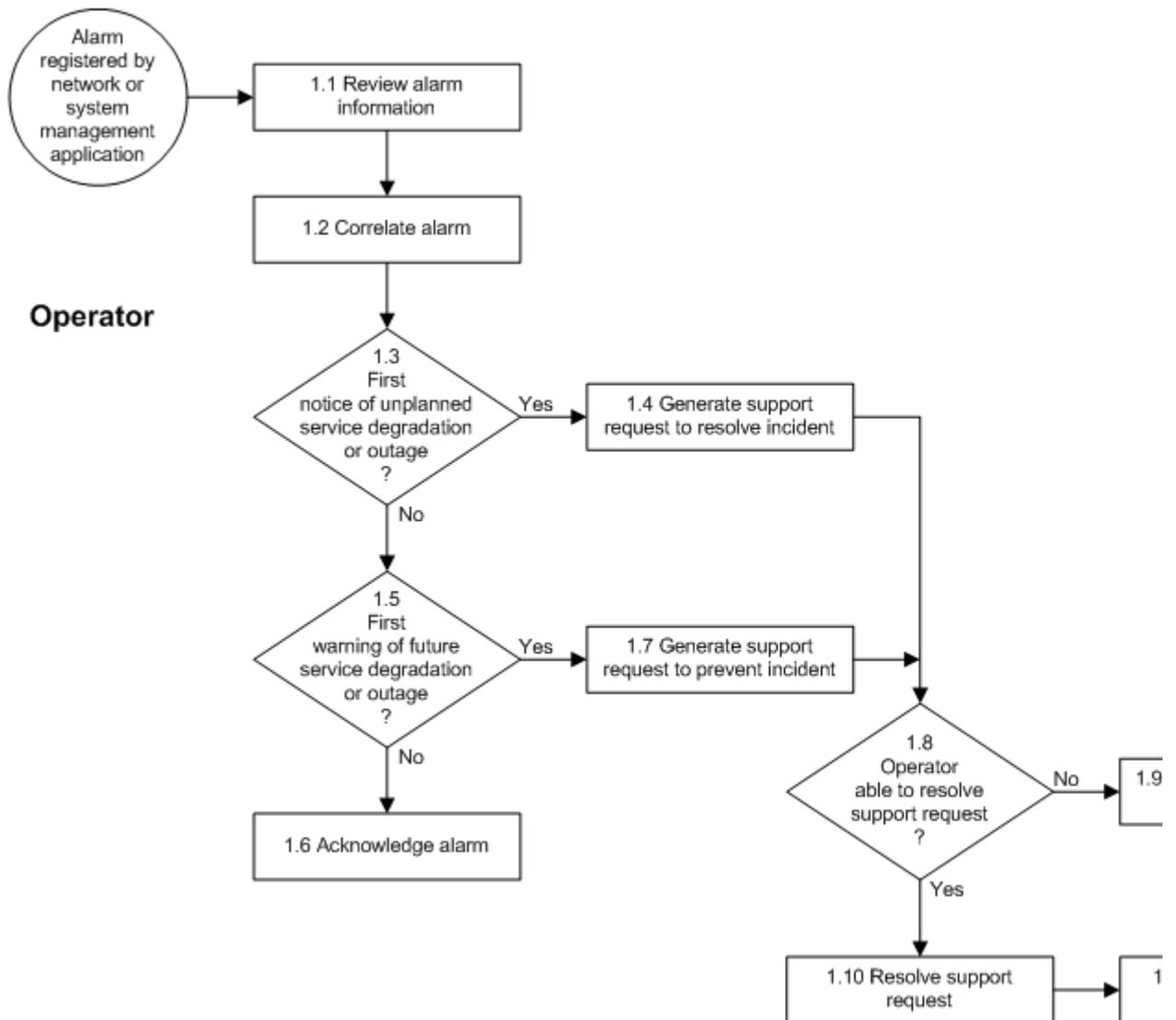
If the alarm represents the first notification of an unplanned [service outage](#) or [degradation](#), the operator registers a new support request of the category "[Request for Incident Resolution](#)" and links it to the alarm. The operator subsequently ensures that the affected [service](#) is linked to the support request and that the information in the support request is meaningful.

If, on the other hand, the alarm represents the first warning of a future service degradation or service outage (e.g. because a certain threshold has been exceeded), the operator registers a new support request to prevent this future incident. In this case, the operator sets the category of the support request to "[Request for Change](#)" and links the service that is going to be affected to it.

If the operator is able to resolve the request for incident resolution or the request for change (in terms of skills, access rights, and time restrictions), he/she resolves and updates it. If not, the operator assigns the support request to the appropriate group.

If the alarm was not the first alarm generated for a current or future incident (i.e. a request for incident resolution or a request for change has already been registered for this), or if this alarm represents a service degradation or outage that was planned, the operator simply acknowledges the alarm to remove it from the list of open alarms.

## Procedure 1, Alarm Handling



## Work Instructions

Procedure Step	Work Instructions for Operators
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">1.1 Review alarm information</div>	1.1.1 Determine for which <a href="#">CI</a> the alarm has been generated.  1.1.2 Examine the alarm information to find out the apparent cause of the alarm.

### Work Instructions

Procedure Step	Work Instructions for Operators
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">1.2 Correlate alarm</div>	1.2.1 Check the other recently generated alarms to determine if the alarm is really caused by the <a href="#">CI</a> for which it was generated, or if the apparent failure of this CI is actually due to the fact that another CI has failed (e.g. a server might appear to have failed when the network connection to that server has gone down).  1.2.2 Check the <a href="#">planned changes</a> and events and determine if the alarm was generated because of a planned circumstance.

### Work Instructions

Procedure Step	Work Instructions for Operators
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: auto;"> <p style="text-align: center;">1.3 First notice of unplanned service degradation or outage ?</p> </div>	1.3.1 Continue with 1.4.1 if the alarm represents the first notification of a <a href="#">service degradation</a> , or a complete <a href="#">service outage</a> , that is current and which was not planned. Otherwise go to 1.5.1.

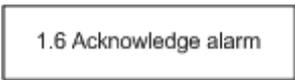
### Work Instructions

Procedure Step	Work Instructions for Operators
<div style="border: 1px solid black; padding: 5px; width: fit-content;">1.4 Generate support request to resolve incident</div>	<p>1.4.1 Use the <a href="#">Relations</a> field of the alarm to open a new support request.</p> <p>Note: After registering this support request, it will automatically be linked to the alarm.</p> <p>1.4.2 Select the special person with the code "OPERATOR" in the <a href="#">Customer</a> field of the support request.</p> <p>1.4.3 Select the affected <a href="#">CI</a> for which the alarm was generated in the <a href="#">CI</a> field of the support request.</p> <p>1.4.4 Open the CI and click on the <a href="#">Services</a> tab to determine which service the affected CI supports. If multiple services are listed, make sure that you choose the service that is at the bottom of the service hierarchy (e.g. if a Unix server has failed on which the SAP service runs, select the Unix Infrastructure service; not the SAP service itself).</p> <p>Select this <a href="#">service</a> in the <a href="#">Service</a> field of the support request.</p> <p>1.4.5 Enter a meaningful description of the incident in the <a href="#">Description</a> field of the support request.</p> <p>1.4.6 Add any additional information that could prove useful when resolving the support request in the <a href="#">Information update</a> field.</p> <p>1.4.7 Ensure that the <a href="#">Source</a> field of the support request is set to "Alarm".</p> <p>1.4.8 Determine the extent to which the service is impacted and select the appropriate impact level in the <a href="#">Impact</a> field from the following options:</p> <ul style="list-style-type: none"> <li>Low - Service Degraded for 1 User;</li> <li>Medium - Service Down for 1 User or Degraded for Several;</li> <li>High - Service Down for Several Users.</li> </ul> <p>Note: The service management application automatically sets the <a href="#">Category</a> field of the support request to "Request for Incident Resolution" after one of the above-mentioned impact levels has been selected.</p> <p>Note: The service management application automatically determines the appropriate priority and calculates the target date and time for the support request using the default business importance level (<a href="#">BIL</a>) and the default <a href="#">service hours</a>.</p> <p>1.4.9 Check the service management application to see which changes, implemented during the past 24 hours, could have caused the <a href="#">incident</a>. If you find a change that appears to have caused the incident, link it to the support request using the <a href="#">Relations</a> field. When creating such a link, select the relation type "Caused by Change Implementation". Enter the change number in the <a href="#">Information update</a> field and specify why you suspect the incident to have been caused by the implementation of this change.</p> <p>Note: To find a change that was implemented in the previous 24 hours and that is linked to the service for which the incident is being registered, click on the "Advanced Find..." button from the Advanced toolbar. Specify in the Advanced Find window that you are looking for implementation work orders that have been completed within the past 24 hours, and that are linked to a change which <a href="#">Service</a> field is set to the service for which the incident is being registered.</p>

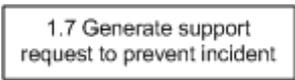
## Work Instructions

Procedure Step	Work Instructions for Operators
	<p>1.5.1 If the alarm represents a warning of a future <a href="#">service degradation</a> or <a href="#">service outage</a> (e.g. because a certain threshold has been exceeded) determine if a request for change has already been registered to prevent this incident from happening. A request for change will have already been registered for this if the alarm is not the first one that was generated to warn of this future service degradation or outage.</p> <p>1.5.2 Continue with 1.6.1 if this was not the first alarm received for a current or future incident (i.e. a request for incident resolution or a request for change has already been registered for this). Also continue with 1.6.1 if this alarm represents a service degradation, or a complete service outage, that was planned. Otherwise go to 1.7.1.</p>

## Work Instructions

Procedure Step	Work Instructions for Operators
	<p>1.6.1 Acknowledge the alarm by setting its <a href="#">Status</a> field to "Acknowledged". This causes the alarm to disappear from the open alarms view.</p>

## Work Instructions

Procedure Step	Work Instructions for Operators
	<p>1.7.1 Use the <a href="#">Relations</a> field of the alarm to open a new support request.</p> <p>Note: After registering this support request, it will automatically be linked to the alarm.</p> <p>1.7.2 Select the special person with the code "OPERATOR" in the <a href="#">Customer</a> field of the support request.</p>

	<p>1.7.3 Select the <a href="#">CI</a> for which the alarm was generated in the <a href="#">CI</a> field of the support request.</p> <p>1.7.4 Open the CI and click on the <a href="#">Services</a> tab to determine which service(s) the CI supports. If multiple services are listed, make sure that you choose the service that is at the bottom of the service hierarchy (e.g. if a Unix server has failed on which the SAP service runs, select the Unix Infrastructure service; not the SAP service).</p> <p>Select this <a href="#">service</a> in the <a href="#">Service</a> field of the support request.</p> <p>1.7.5 Explain in the <a href="#">Description</a> field of the support request what should be changed to avoid future incidents.</p> <p>1.7.6 In the <a href="#">Information update</a> field, add any additional information about what should be changed and why the request was registered.</p> <p>1.7.7 Ensure that the <a href="#">Source</a> field of the support request is set to "Alarm".</p> <p>1.7.8 Set the <a href="#">Category</a> field of the support request to "Request for Change".</p> <p>Note: The service management application automatically sets the impact level to "None - No Degradation of Service" for the request for change. It subsequently determines the appropriate priority and calculates the target date and time based on the default <a href="#">BIL</a> and the default <a href="#">service hours</a>.</p>
--	--

## Work Instructions

Procedure Step	Work Instructions for Operators
 <p>1.8 Operator able to resolve support request ?</p>	<p>1.8.1 Follow the alarm handling instructions that have been prepared for this type of alarm to determine whether or not you can resolve the support request.</p> <p>1.8.2 If the support request should be resolved by an operator (with the help of other operators if necessary), go to 1.10.1. Otherwise continue with 1.9.1.</p> <p>Note: Also continue with 1.9.1 if alarm handling instructions have not yet been made available for this type of alarm.</p>

## Work Instructions

Procedure Step	Work Instructions for Operators
<div style="border: 1px solid black; padding: 5px; width: fit-content;">1.9 Assign support request to appropriate group</div>	<p>1.9.1 Select the group stipulated by the alarm handling instructions in the <a href="#">Group</a> field of the support request.</p> <p>Note: If alarm handling instructions have not yet been made available for this type of alarm, select the administrator group of the CI for which the alarm was generated. The code of the CI's administrator group is visible in the gray area directly underneath the <a href="#">CI</a> field of the support request.</p> <p>1.9.2 Ensure that the <a href="#">Status</a> field of the support request is set to "Assigned".</p> <p>1.9.3 If it concerns a support request that must be dealt with as soon as possible (e.g. in case of a virus attack), page or telephone the coordinator of the group to which you have assigned the support request to ensure that he/she is aware of the urgency.</p> <p>To find out who the current coordinator is of the group, open the group's details from the <a href="#">Group</a> field of the support request. Do this by clicking on the Group field label and by subsequently selecting the option "Open". You can find the contact details of the group coordinator from the Coordinator field of the group in the same fashion.</p> <p>Note: The service management application automatically informs the <a href="#">service desk</a> via e-mail that this support request has been registered if:</p> <ul style="list-style-type: none"> <li>the <a href="#">Customer</a> field is set to "OPERATOR",</li> <li>the <a href="#">Category</a> field is set to "Request for Incident Resolution", and</li> <li>the <a href="#">Status</a> field of the support request is set to a value that is less than "Completed".</li> </ul> <p>1.9.4 Acknowledge the alarm by setting its <a href="#">Status</a> field to "Acknowledged". This causes the alarm to disappear from the open alarms view.</p>

## Work Instructions

Procedure Step	Work Instructions for Operators
<div style="border: 1px solid black; padding: 5px; width: fit-content;">1.10 Resolve support request</div>	<p>1.10.1 Resolve the support request by following the alarm handling instructions that have been prepared for this type of alarm. If necessary, ask other operators for assistance.</p>

## Work Instructions

Procedure Step	Work Instructions for Operators
<div style="border: 1px solid black; padding: 5px; width: fit-content;">1.11 Complete support request</div>	<p>1.11.1 Describe how the support request was resolved in the <a href="#">Solution</a> field.</p> <p>1.11.2 Select the appropriate <a href="#">CI</a> in the <a href="#">CI</a> field if the support request was found to have been caused by a different CI than the one specified in the alarm.</p> <p>1.11.3 Select the appropriate completion code in the <a href="#">Completion code</a> field.</p> <p>1.11.4 Perform a final review to ensure that the support request has been filled out correctly.</p> <p>1.11.5 Ensure that the <a href="#">Status</a> field of the support request is set to "Completed".</p> <p>1.11.6 Acknowledge the alarm by setting its <a href="#">Status</a> field to "Acknowledged". This causes the alarm to disappear from the open alarms view.</p>

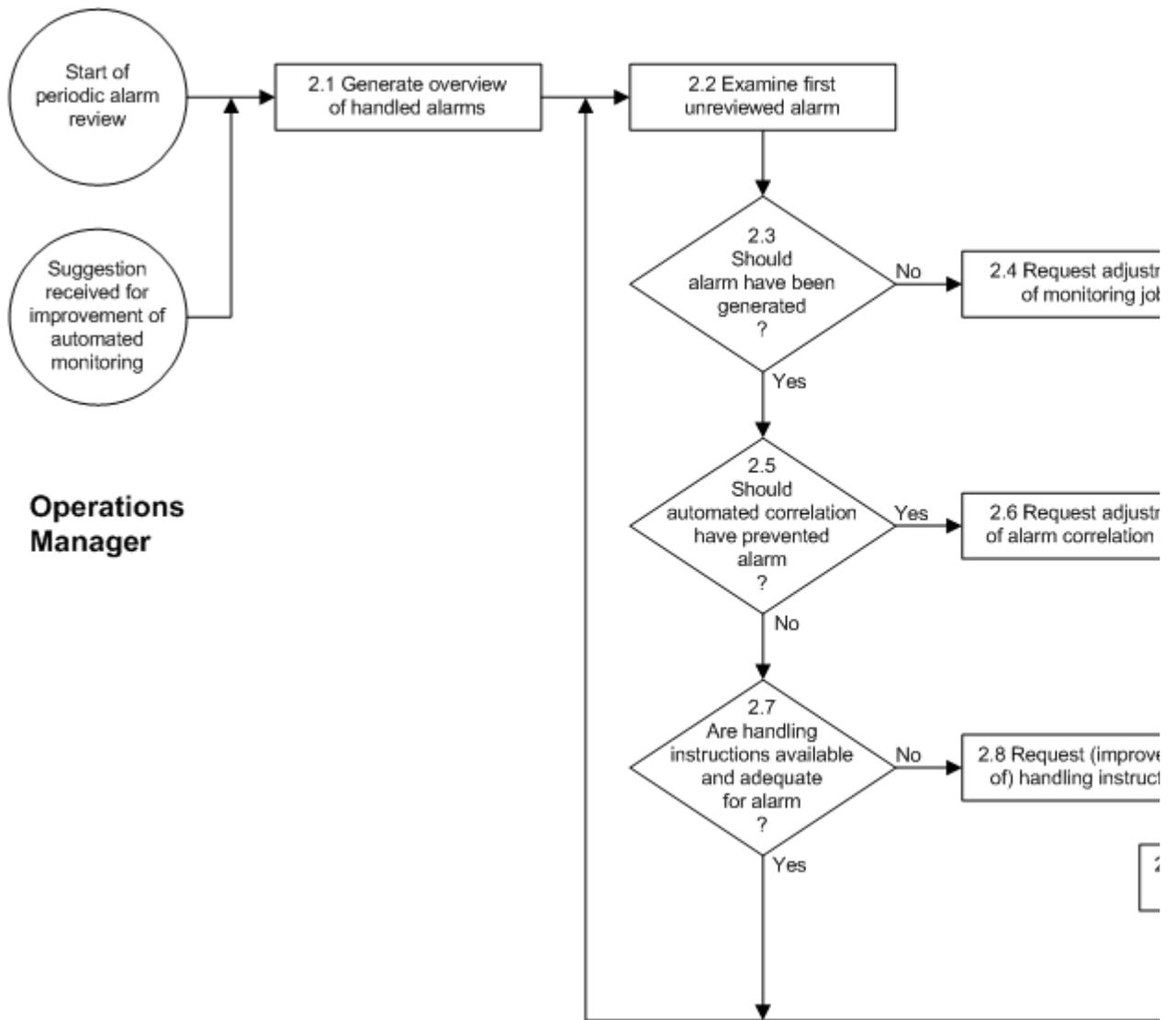
## Procedure 2, Alarm Review

The operations manager regularly reviews all [alarms](#) that have been handled by the operators. He/she also considers suggestions offered by operators and specialists for the improvement of the manner in which the [service infrastructures](#) are being monitored by the network and system management applications. The operations manager does this in order to identify:

- [monitoring jobs](#) that generate unnecessary alarms,
- missing or ineffective automated alarm correlation rules, and
- missing or inadequate alarm handling instructions for the operators.

When the operations manager has identified an improvement opportunity, he/she opens a new support request and explains what should be changed. Having filled out the new support request, the operations manager assigns it to the group that will be responsible for implementing the improvement.

## Procedure 2, Alarm Review



## Work Instructions

Procedure Step	Work Instructions for Operations Managers
<div style="border: 1px solid black; padding: 5px; width: fit-content;">2.1 Generate overview of handled alarms</div>	<p>2.1.1 At the start of the periodic alarm review, generate an overview of the <a href="#">alarms</a> that have been acknowledged since the previous alarm review was conducted.</p> <p>2.1.2 After an operator or specialist has drawn your attention to an improvement opportunity that could help increase the efficiency and/or the consistency with which alarms are handled, create an overview that includes the alarm(s) that the operator or specialist referred to, as well as any similar alarms.</p>

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>2.2 Examine first unreviewed alarm</p> </div>	<p>2.2.1 Review the information of the first <a href="#">alarm</a> on the list that has not yet been reviewed. Check the <a href="#">Relations</a> field to find out whether a support request was registered to resolve or prevent the <a href="#">incident</a> that this alarm warned of.</p> <p>Note: The alarm review has been completed when all alarms in the overview have been reviewed.</p> <p>2.2.2 If a support request was registered, open it and review the information in its <a href="#">Solution</a> field to find out how it was completed.</p> <p>Note: A support request that has been linked to an alarm can be opened from an alarm by double-clicking on it in the <a href="#">Relations</a> field.</p> <p>2.2.3 If a support request is not linked to the alarm, determine why the operator who handled the alarm must have decided to acknowledge the alarm without opening a support request for it.</p>

### Work Instructions

Procedure Step	Work Instructions for Operations Managers
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 10px auto;"> <p>2.3 Should alarm have been generated ?</p> </div>	<p>2.3.1 Determine if the <a href="#">monitoring job</a> that generated the <a href="#">alarm</a> is providing an added value because the alarms it generates correctly warn about current or imminent <a href="#">incidents</a>.</p> <p>If the monitoring job is generating alarms that provide any other type of notification than the warning about a current or imminent incident, continue with 2.4.1. Otherwise go to 2.5.1.</p>

### Work Instructions

Procedure Step	Work Instructions for Operations Managers
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>2.4 Request adjustment of monitoring job</p> </div>	<p>2.4.1 Open a new support request.</p> <p>2.4.2 Select yourself in the <a href="#">Customer</a> field.</p> <p>2.4.3 Select the monitoring service in the <a href="#">Service</a> field.</p> <p>2.4.4 In the <a href="#">CI</a> field, select the network or system management application that generated the <a href="#">alarm</a> that caused you to register this support request.</p> <p>2.4.5 Specify in the <a href="#">Description</a> field that it concerns a request for the</p>

	<p>adjustment off a <a href="#">monitoring job</a>.</p> <p>2.4.6 In the <a href="#">Information update</a> field, describe why the monitoring job needs to be adjusted (e.g. why its capacity threshold needs to be increased, or why it should be deactivated).</p> <p>2.4.7 Set the <a href="#">Source</a> field of the support request to "Own Observation".</p> <p>2.4.8 Set the <a href="#">Category</a> field of the support request to "Request for Change".</p> <p>Note: The service management application automatically determines the appropriate impact, priority, and target time for the support request based on the selected category.</p>
--	--

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
 <p>2.5 Should automated correlation have prevented alarm ?</p>	<p>2.5.1 Determine whether the <a href="#">alarm</a> should have been filtered out by an automated correlation rule.</p> <p>For example: An alarm that was handled by an operator could have warned of a server failure. If this server is connected to a failed switch for which an alarm had already been registered, it should have been clear that the alarm for the server was only generated because a connection to the server could no longer be established. In such cases, the automated correlation rules should have filtered out the alarm for the server.</p> <p>If the alarm should have been filtered out, continue with 2.6.1. Otherwise go to 2.7.1.</p>

## Work Instructions

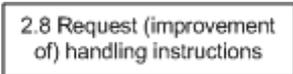
Procedure Step	Work Instructions for Operations Managers
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>2.6 Request adjustment of alarm correlation rules</p> </div>	<p>2.6.1 Open a new support request.</p> <p>2.6.2 Select yourself in the <a href="#">Customer</a> field.</p> <p>2.6.3 Select the monitoring service in the <a href="#">Service</a> field.</p> <p>2.6.4 In the <a href="#">CI</a> field, select the network or system management application that should in future use its correlation functionality to automatically filter out this type of <a href="#">alarm</a> when a similar situation occurs.</p>

	<p>2.6.5 Specify in the <a href="#">Description</a> field that it concerns a request for the adjustment of the automated correlation rules.</p> <p>2.6.6 In the <a href="#">Information update</a> field, describe how the automated correlation rules should be adjusted.</p> <p>2.6.7 Set the <a href="#">Source</a> field of the support request to "Own Observation".</p> <p>2.6.8 Set the <a href="#">Category</a> field of the support request to "Request for Change".</p> <p>Note: The service management application automatically determines the appropriate impact, priority, and target time for the support request based on the selected category.</p>
--	--

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
 <p>2.7 Are handling instructions available and adequate for alarm?</p>	<p>2.7.1 Determine whether alarm handling instructions are available for this type of <a href="#">alarm</a>. If this is the case, determine whether these instructions are clear, concise, and easy to understand so that they can be followed in an efficient manner by the operators when they have to handle this type of alarm.</p> <p>If the alarm handling instructions are missing or inadequate, continue with 2.8.1. Otherwise go back to 2.2.1 to review the details of the next alarm from the overview of handled alarms.</p>

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
 <p>2.8 Request (improvement of) handling instructions</p>	<p>2.8.1 Open a new support request.</p> <p>2.8.2 Select yourself in the <a href="#">Customer</a> field.</p> <p>2.8.3 Select the monitoring service in the <a href="#">Service</a> field.</p> <p>2.8.4 In the <a href="#">CI</a> field, select the <a href="#">configuration item</a> in which the alarm handling instructions are maintained (e.g. a system management application or a web site).</p> <p>2.8.5 Specify in the <a href="#">Description</a> field that it concerns either a request for the creation, or the improvement, of alarm handling instructions.</p> <p>2.8.6 In the <a href="#">Information update</a> field, specify for which <a href="#">monitoring job</a> the alarm handling instructions are to be created or improved. If an improvement of alarm handling instructions is required, also</p>

	<p>specify why the current instructions are inadequate.</p> <p>2.8.7 Set the <a href="#">Source</a> field of the support request to "Own Observation".</p> <p>2.8.8 Set the <a href="#">Category</a> field of the support request to "Request for Change".</p> <p>Note: The service management application automatically determines the appropriate impact, priority, and target time for the support request based on the selected category.</p>
--	---

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
2.9 Assign support request to appropriate group	<p>2.9.1 Select the group that is responsible for the monitoring service in the <a href="#">Group</a> field of the support request.</p> <p>2.9.2 Ensure that the <a href="#">Status</a> field of the support request is set to "Assigned".</p>

## Procedure 3, Outage Review

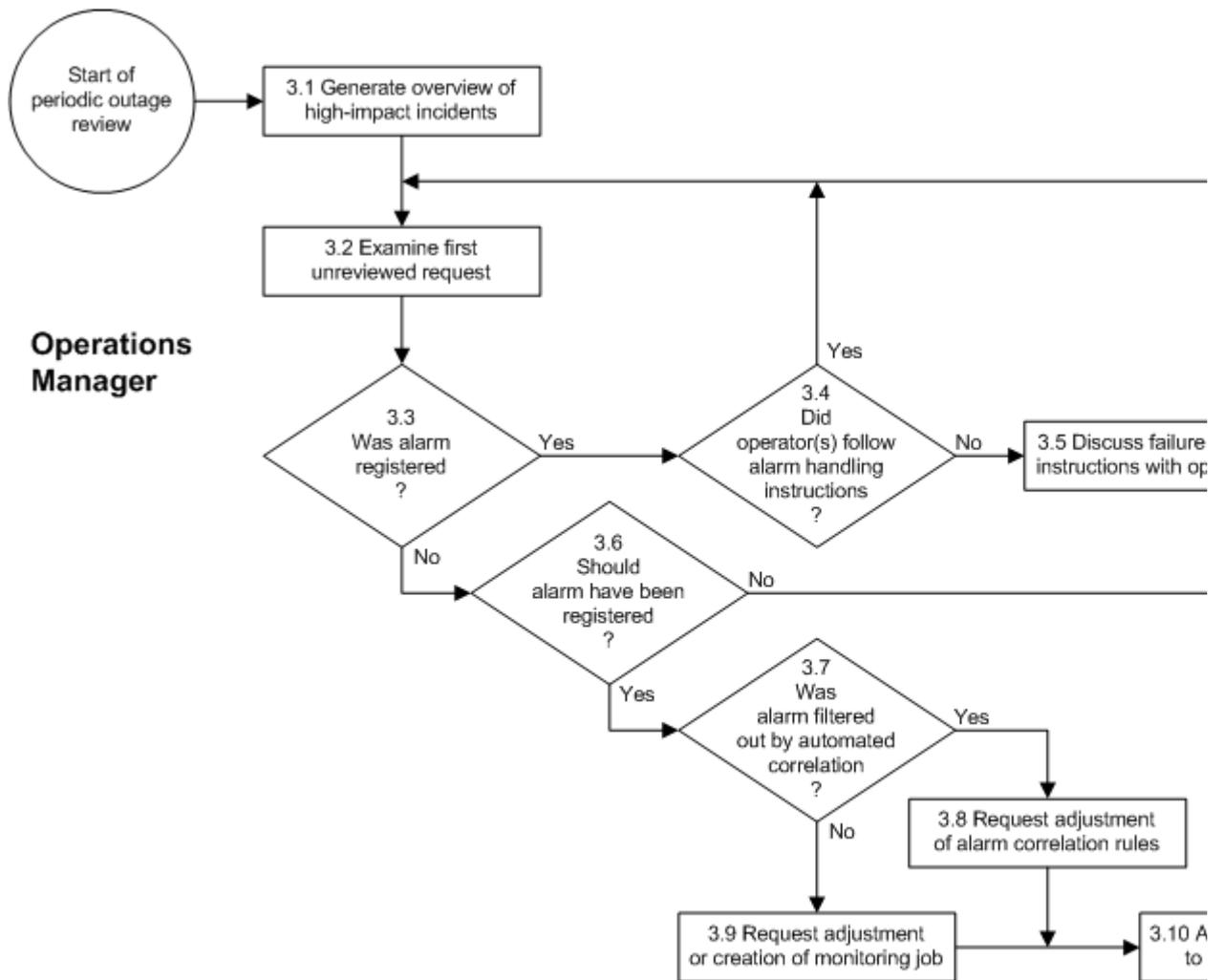
The operations manager periodically reviews all high-impact support requests (i.e. all [service outages](#) that affected multiple [users](#)). For each of these support requests, the operations manager first determines whether or not an [alarm](#) was generated to notify the service provider organization of the outage.

If an alarm was generated, the operations manager finds out whether or not the operator(s) followed the alarm handling instructions correctly. If this was not the case, the operations manager collects the information for review with the operators.

If an alarm was not generated for the service outage, this might be correct (e.g. because it has been decided that it is too expensive to automatically monitor the [service](#) that was affected). If an alarm should have been registered, however, the operations manager finds out whether this was prevented by the automated correlation rules, or because a [monitoring job](#) needs to be created or adjusted. The operations manager will subsequently register a new support request to request a correction in the automated correlation rules or the (re)configuration of a monitoring job.

After completing the review of a high-impact support request, the operations manager reviews the next one until all of the high-impact support requests that were resolved during the past review period have been reviewed.

## Procedure 3, Outage Review



**Operations Manager**

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
<div style="border: 1px solid black; padding: 5px; width: fit-content;">3.1 Generate overview of high-impact incidents</div>	<p>3.1.1 Generate an overview of all support requests with the <a href="#">Impact</a> field set to "High - Service Down for Several Users" that have been resolved since the start of the previous outage review. This means that the <a href="#">Completion date</a> field of the support requests should be set to a date and time that is greater than the start of the previous outage review.</p> <p>3.1.2 Make sure that support requests with the <a href="#">Reporting tag</a> field set to "Duplicate" are excluded from the overview.</p>

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>3.2 Examine first unreviewed request</p> </div>	<p>3.2.1 Review the information of the first high-impact support request on the list that has not yet been reviewed.</p> <p>Note: The outage review has been completed when all high-impact support requests in the overview have been reviewed.</p> <p>3.2.2 If the support request does not really describe a <a href="#">service outage</a> that affected multiple <a href="#">users</a>, set the <a href="#">Impact</a> field to the correct value and go back to 3.2.1 to review the next support request on the list.</p> <p>3.2.3 Check the overview to see if any other support requests were registered for the same <a href="#">incident</a>. If this is the case, find out if one of them was registered by an operator. If there is one, keep this one open. Otherwise continue to use the support request you opened in 3.2.1. Ensure that the other support requests that were reported for the same incident are excluded from the <a href="#">availability</a> calculation for the <a href="#">service infrastructure</a> that was affected. Do this by setting the <a href="#">Reporting tag</a> field to "Duplicate" and by specifying the number of the support request that will not be excluded from the calculation in the <a href="#">Information update</a> field.</p> <p>3.2.4 Check the <a href="#">Relations</a> field of the support request that you have open to see if it is linked to an <a href="#">alarm</a>. If this is not the case, look up the outage period on the <a href="#">SLA Tracking</a> tab of the support request and use this information to look up the alarms that were generated around the same period.</p> <p>3.2.5 If you found one or more alarms that were generated to warn of the incident, review the alarm handling instructions that are associated with the first alarm and determine whether or not these instructions were followed.</p> <p>Note: If alarm handling instructions were not yet available for this type of alarm, the support request that was registered for the alarm should have been assigned to the administrator group of the <a href="#">CI</a> for which the alarm was generated.</p> <p>Note: <a href="#">Procedure 2. Alarm Review</a> will ensure that a support request is submitted to request alarm handling instructions for this type of alarm.</p>

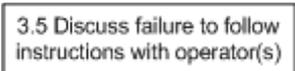
## Work Instructions

Procedure Step	Work Instructions for Operations Managers
<div style="border: 1px solid black; padding: 10px; width: fit-content; margin: 10px auto;"> <p>3.3 Was alarm registered ?</p> </div>	<p>3.3.1 If an <a href="#">alarm</a> was registered for the <a href="#">incident</a>, continue with 3.4.1. Otherwise go to 3.6.1.</p>

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
 <p>3.4 Did operator(s) follow alarm handling instructions ?</p>	<p>3.4.1 If alarm handling instructions were available for this type of <a href="#">alarm</a>, but they were not followed by the operator(s), continue with 3.5.1. On the other hand, if the available alarm handling instructions were followed, go back to 3.2.1.</p> <p>3.4.2 If alarm handling instructions were not yet available for this type of alarm, the support request that was registered for the alarm should have been assigned to the administrator group of the <a href="#">CI</a> for which the alarm was generated. If the operator did not do that, continue with 3.5.1. Otherwise, if the operator did assign the support request to the administrator group of the CI, return to 3.2.1.</p>

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
 <p>3.5 Discuss failure to follow instructions with operator(s)</p>	<p>3.5.1 Collect the necessary information to be able to review this failure to follow the available instructions with the involved operator(s).</p> <p>Note: To optimize efficiency, it might be best to complete the outage review first so that all information that needs to be reviewed with the operators has been collected.</p> <p>3.5.2 Review the collected information with the involved operator(s) to ensure that the alarm handling instructions will be followed in future.</p>

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
 <p>3.6 Should alarm have been registered ?</p>	<p>3.6.1 If an <a href="#">alarm</a> should have been registered to warn of the <a href="#">incident</a>, continue with 3.7.1. Otherwise, if it is correct that an alarm was not registered, go back to 3.2.1.</p> <p>Note: It might be correct that an alarm was not registered, for example when it has been decided that it is too expensive to automatically monitor the <a href="#">service</a> that was affected.</p>

### Work Instructions

Procedure Step	Work Instructions for Operations Managers
 <p>3.7 Was alarm filtered out by automated correlation ?</p>	<p>3.7.1 Find out whether or not a <a href="#">monitoring job</a> generated an <a href="#">alarm</a> for the <a href="#">incident</a>. Continue with 3.8.1 if an alarm was generated but subsequently filtered out by an automated correlation rule. Otherwise, if a monitoring job is missing or not working correctly, go to 3.9.1.</p>

### Work Instructions

Procedure Step	Work Instructions for Operations Managers
<div data-bbox="236 1467 533 1541" style="border: 1px solid black; padding: 5px;"> <p>3.8 Request adjustment of alarm correlation rules</p> </div>	<p>3.8.1 Open a new support request.</p> <p>3.8.2 Select yourself in the <a href="#">Customer</a> field.</p> <p>3.8.3 Select the monitoring service in the <a href="#">Service</a> field.</p> <p>3.8.4 In the <a href="#">CI</a> field, select the network or system management application which correlation <a href="#">functionality</a> automatically filtered out the <a href="#">alarm</a> for the high-impact <a href="#">incident</a>.</p> <p>3.8.5 Specify in the <a href="#">Description</a> field that it concerns a request for the adjustment of the automated correlation rules.</p> <p>3.8.6 In the <a href="#">Information update</a> field, describe how the automated correlation rules should be adjusted.</p> <p>3.8.7 Set the <a href="#">Source</a> field of the support request to "Own Observation".</p> <p>3.8.8 Set the <a href="#">Category</a> field of the support request to "Request for Change".</p>

	Note: The service management application automatically determines the appropriate impact, priority, and target time for the support request based on the selected category.
--	---

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
3.9 Request adjustment or creation of monitoring job	<p>3.9.1 Open a new support request.</p> <p>3.9.2 Select yourself in the <a href="#">Customer</a> field.</p> <p>3.9.3 Select the monitoring service in the <a href="#">Service</a> field.</p> <p>3.9.4 In the <a href="#">CI</a> field, select the network or system management application that should have generated an <a href="#">alarm</a> to warn of the high-impact <a href="#">incident</a>.</p> <p>3.9.5 Specify in the <a href="#">Description</a> field that it concerns a either a request for the adjustment of an existing <a href="#">monitoring job</a>, or the creation of a new one.</p> <p>3.9.6 In the <a href="#">Information update</a> field, describe the conditions that should cause an <a href="#">alarm</a> to be generated by the monitoring job.</p> <p>3.9.7 Set the <a href="#">Source</a> field of the support request to "Own Observation".</p> <p>3.9.8 Set the <a href="#">Category</a> field of the support request to "Request for Change".</p> <p>Note: The service management application automatically determines the appropriate impact, priority, and target time for the support request based on the selected category.</p>

## Work Instructions

Procedure Step	Work Instructions for Operations Managers
3.10 Assign support request to appropriate group	<p>3.10.1 Select the group that is responsible for the monitoring service in the <a href="#">Group</a> field of the support request.</p> <p>3.10.2 Ensure that the <a href="#">Status</a> field of the support request is set to "Assigned".</p>

## Alarm

The table below lists the fields of the Alarm form and provides utilization guidelines for each field.

<b>Page</b>	<b>Main</b>	
<b>Field</b>	<b>Utilization</b>	
Number	This field contains the unique alarm number. This number is automatically generated by the application.	
Status	Use this field to select the appropriate status for the alarm from the following list of options:	
	Registered	The alarm is ready to be reviewed and correlated by an operator.
	Acknowledged	The alarm has been reviewed and correlated by an operator. A support request has been registered if action had to be taken.
	Separator	
CI	The configuration item for which the alarm has been created is automatically selected in this field by the network or system management application that created it.	
Source	The network or system management application that created the alarm is automatically selected in this field.	
Job ID	The network or system management application that created the alarm automatically enters the job identifier in this field to indicate which <a href="#">monitoring job</a> of the network or system management application created the alarm.	
Source ID	The network or system management application that created the alarm automatically enters the unique identifier, under which the alarm is registered inside the network or system management application, in this field.	
	Separator	
Description	An alarm description is automatically entered in this field by the network or system management application that created the alarm.	
Information	All alarm details are automatically entered in this field by the network or system management application that created this alarm.	
	Separator	
Folder	This field is automatically set, by the network or system management application that created the alarm, to the folder of the organization for which the alarm is intended.	

<b>Page</b>	<b>Details</b>
<b>Field</b>	<b>Utilization</b>
Creation date	This field is automatically set to the date and time at which the alarm was created.
Completion date	This field is automatically set to the date and time at which the alarm status was set to "Acknowledged".
Relations	Use this field to create a new support request and to link the alarm to it.
<b>Page</b>	<b>History</b>
<b>Field</b>	<b>Utilization</b>
Registration	The application automatically specifies in this field who created the item and when it was created. The application also uses this field to indicate who last updated the item and when this was done.
History	The application automatically creates a line when an audited field is filled out or updated. For each history line the application specifies who caused it to be created and when it was created.

## Support Request

The table below lists the fields of the Support Request form and provides utilization guidelines for each field.

<b>Page</b>	<b>Main</b>
<b>Field</b>	<b>Utilization</b>
Number	This field contains the unique support request number. This number is automatically generated by the application.
Status	Use this field to select the appropriate status for the support request from the following list of options: <ul style="list-style-type: none"> <li>Rejected            The support request had better be assigned to another group.</li> <li>Assigned            The responsibility for the resolution of the support request has been assigned to a specific group or member.</li> <li>Accepted            The support request will be resolved as soon as the member to whom the support request has been assigned is ready to start working on it.</li> <li>In Progress        The support request is currently being resolved.</li> <li>Waiting for...      It is temporarily not possible to make any further progress</li> </ul>

	<p>in the resolution of the support request.</p> <p>Completed      The work on the resolution of the support request has come to an end because of the reason specified in the <a href="#">Completion code</a> field.</p> <p>Change Pending      A change has been registered for the implementation of the requested change.</p> <p>ClosedMail      The customer has been informed via e-mail of the manner in which the support request has been completed. The e-mail has asked the customer to verify the solution of the support request.</p> <p>Closed      The customer has accepted the solution of the support request (i.e. the customer has indicated that he/she is satisfied with the solution, or the customer has not responded to the "ClosedMail" e-mail notification within 28 days).</p>
	Separator
Customer	Use this field to select the customer who submitted the support request.
Service	Use this field to select the <a href="#">service</a> for which the customer has submitted the support request. Select the special service "N/A - Service does not (yet) exist or is out of scope" if the support request does not concern a specific service, or if it concerns a service that is not (yet) provided.
CI	Use this field to select the configuration item ( <a href="#">CI</a> ) that is causing the service disruption (in case of a request for incident resolution), or that the user wants to know something about (in case of an request for information), or that the user wants to have changed (in case of a request for change). Select the special CI with the code "NORECORD" if the CI has not yet been registered in the configuration management database ( <a href="#">CMDB</a> ). Select the special CI with the code "N/A" if the support request does not concern a specific CI (e.g. in case of a request for support improvement).
	Separator
Description	Use this field to enter a short description of the support request.  Examples: For requests for incident resolution: Slow response time on <Service> Error message using <Service> Cannot log onto (or access) <Server or Service> Job <Job name> failed with <Abend code> <Customer code> router in <City> down  For requests for information: How to <Requested information>  For requests for change: Install <Software & Version> on <Workstation or Server Code> Apply upgrade from <Current Software & Version> to <Requested Software & Version>  For requests for support improvement: Request <Support Request Number> not resolved in time Change <Change Number> was implemented without approval
Information	This field shows all information that was entered in the Information update field when the support request was saved. Above each entry, the application indicates who entered the text in the Information update field and when it was saved. Each new entry is inserted at the top of this field.

Information update	<p>Use this field to provide any additional information that could prove useful for resolving the support request and/or to provide a summary of the actions that have been taken to date.</p> <p>In case of incidents, specify for instance if the customer has used the service before and whether or not the same incident was encountered. If the customer used the service before, specify since when the customer is experiencing the incident.</p> <p>If there is an error message, enter the complete error message in this field, even if a screen shot of this message has been attached to the support request.</p>
	Separator
Folder	This field is automatically set to the folder of the organization to which the person who created the support request belongs.
<b>Page</b>	<b>Details</b>
<b>Field</b>	<b>Utilization</b>
Source	<p>Use this field to select the manner in which the support request was submitted from the following list of options:</p> <ul style="list-style-type: none"> <li>Alarm</li> <li>E-mail</li> <li>Fax, Letter, Paper Form, or Memo</li> <li>Own Observation</li> <li>Personal Visit</li> <li>Telephone</li> <li>Web Request Form</li> </ul>
Category	<p>Use this field to select the support request category from the following list of options:</p> <ul style="list-style-type: none"> <li><a href="#">Request for Change</a></li> <li><a href="#">Request for Incident Resolution</a></li> <li><a href="#">Request for Information</a></li> <li><a href="#">Request for Support Improvement</a></li> <li>Request is Out of Scope</li> </ul>
	Separator
Impact	<p>Use this field to select the extend to which the service is impacted from the following list of options:</p> <ul style="list-style-type: none"> <li>None - No Degradation of Service</li> <li>Low - Service Degraded for 1 User</li> <li>Medium - Service Down for 1 User or Degraded for Several</li> <li>High - Service Down for Several Users</li> </ul> <p>Note that a service is degraded when some of its <a href="#">functionality</a> is not functioning, or when the response time of the service is slow. A service is down when none of its functionality can be accessed.</p>
Priority	For requests for incident resolution, the application automatically selects the correct priority from the following list of options after the customer, the service

	<p>level agreement, and the impact level have been selected:</p> <p>P40 - To Be Completed within 40 Service Hours  P16 - To Be Completed within 16 Service Hours  P8 - To Be Completed within 8 Service Hours  P4 - To Be Completed within 4 Service Hours  P2 - To Be Completed within 2 Service Hours  P1 - To Be Completed within 1 Service Hour</p> <p>For requests for information, the application always sets the priority to P40.</p> <p>For requests for support improvement, the application always sets the priority to P8.</p> <p>For requests for change, the application always sets the priority to P40.</p>
	Separator
Creation date	This field is automatically set to the date and time at which the support request was created.
Target date	This field is automatically set to the date and time at which the support request should be completed, after the priority has been set.
Completion date	This field is automatically set to the date and time at which the support request status was set to "Completed" or greater.
Assignment	Separator
Group	Use this field to select the group to which the support request is to be assigned.
Member	Use this field to select the person to which the support request is to be assigned.
Supplier	Use this field to select the supplier organization that has been asked to assist with the support request.
Reference number	Use this field to enter the unique reference number under which the support request has been registered by the supplier organization.
	Separator
Solution	Use this field to describe, step by step, how the support request has been completed.
Completion code	<p>Use this field to select the appropriate completion code for the support request from the following list of options, after the support request has been completed:</p> <p>Gone - Not Able to Reproduce  Solved - Root Cause Analysis not Required  Unable - Not Able to Solve or in Conflict with Standard or Policy  Withdrawn - Request Withdrawn by Customer  Workaround - Root Cause not Removed</p>

<b>Page</b>	<b>SLA Tracking</b>
<b>Field</b>	<b>Utilization</b>
SLA	Use this field to open the <a href="#">SLA</a> that is linked to the support request.
	Separator
Creation date	This field is automatically set to the date and time at which the support request was created.
Target date	This field is automatically set to the date and time at which the support request should be completed, after the priority has been set.
Maximum duration	This field automatically calculates the difference between the Target date and the Creation date, taking into account only the <a href="#">service hours</a> of the SLA that is linked to the support request.
Completion date	This field is automatically set to the date and time at which the support request status was set to "Completed" or greater.
Actual duration	This field automatically calculates the difference between the Completion date and the Creation date, taking into account only the service hours of the SLA that is linked to the support request.
	Separator
Outage start date	Use this field to enter the exact date and time at which the service became unavailable due to the incident described in this support request.
Outage end date	Use this field to enter the exact date and time at which the service became available again after the incident described in this support request was resolved.
Outage duration	This field automatically calculates the difference between the Outage end date and the Outage start date, taking into account only the service hours of the SLA that is linked to the support request.
	Separator
Reporting tag	Use this field to select the one of the following options to ensure that accurate SLA reports can be generated using the support request information: <ul style="list-style-type: none"> <li>Customer Accountable</li> <li>Service Provider Accountable</li> <li>Supplier Accountable</li> <li>Duplicate</li> </ul>
<b>Page</b>	<b>Relations</b>
<b>Field</b>	<b>Utilization</b>
Relations	Use this field to link alarms, problems and/or changes to this support request.

<b><i>Page</i></b>	<b><i>History</i></b>
<b>Field</b>	<b>Utilization</b>
Registration	The application automatically specifies in this field who created the item and when it was created. The application also uses this field to indicate who last updated the item and when this was done.
History	The application automatically creates a line when an audited field is filled out or updated. For each history line the application specifies who caused it to be created and when it was created.