



# DOCUMENTATION

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## *Signal Notifications Templates*

HEAL Software Inc.

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Signal Notifications Templates control the content of the emails and SMS messages HEAL sends. Each template uses placeholder variables that resolve to live values when the notification fires.

## When notifications fire

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There are two Lead Signal types: Early Warning and Problem. HEAL sends a notification when:

- A signal is created (status Open).
- A new service is added to the timeline (status Open).
- A signal is upgraded (status Upgraded).
- A signal is closed (status Closed).
- A new severe event is added to the timeline (status Open).
- Signal severity changes (status Open).
- A signal is open for long or open for too long (regular reminders, status Open).

You only get notifications for services in applications assigned to you.

## Template variables

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Use any of these variables across the templates.

- Signal ID
- Signal Description (impact summary)
- Signal Type (Problem or Early Warning)
- Severity (Critical or Non-Critical)
- Status (Open, Upgraded, or Closed)
- Application Names (an entry-level service may belong to multiple)
- Related Signal IDs
- Started On (with time zone)
- Ended On (with time zone)
- User Name
- Organization Name
- Impacted Entry-Point Service (NA for Early Warnings)
- Root Cause Services (can be multiple)
- Affected Services (newest services added to the timeline that triggered this notification)
- Affected Applications (applications tagged to the affected services, not the signal's primary application)

- Total Events Count (across the signal's life)
- Latest Event Count (on this update)
- Latest Event Time (with time zone)
- Latest Event details: Service Name, Instance Name, Request Name, Host Address, KPI Name, KPI Attribute, Value, Unit, Operation, Lower Threshold, Upper Threshold

## Scenario walkthrough

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Two users, two applications.

- **Jack.** Assigned to Application A1 (Travels) with services S1 (Travel Web), S2 (Hotels), S3 (Hotel Inventory), S4 (Bookings), and S5 (Booking DB).
- **Joe.** Assigned to Application A2 (Flights) with service S4 (Bookings).

**Signal opens.** S1 has transaction failures. Five events on S1. Latest event count is one. Status is Open. Jack gets the notification.

**Signal update 1.** Three events on S2 and two on S3. S2 and S3 join the timeline. Two more events on S1. Latest event count is three. Status is Open. Jack gets the notification.

**Signal update 2.** Four events on S4. S4 joins the timeline. Two more events on S1 and S2. Latest event count is four. S4 is part of A1 and A2. Status is Open. Jack and Joe both get the notification.

**Signal closes.** Jack and Joe both get the close notification.

## Email templates

---

```
Dear User,  
{Events_Changes_Descriptions}  
  
{Signal_Type} is {Signal_Status} on application(s) {App_Names}.  
  
Affected service(s): {Affected_ServiceNames}.  
  
For the detailed overview, please select here.  
  
Impacted Entry Point Service: {EntryPoint_ServiceName}  
  
Suggested Root Cause at {RootCause_ServiceNames}
```

Affected Application(s): {Affected\_ApplicationNames}

Severity: {Severity}

Started On: {StartTime}({TimzoneShortName})

{Signal\_Summary}

{Signal\_Request\_Workload}

{Signal\_Instance\_Behaviour}

Total {Total\_Events} event(s) detected so far on this {Signal\_Type}

{Latest\_Events}

### Lead Problem Closed

Dear User,

{Signal\_Type} is {Signal\_Status} on application(s) {App\_Names}.

For the detailed overview, please select [here](#).

Impacted Entry Point Service: {EntryPoint\_ServiceName}

Suggested Root Cause at {RootCause\_ServiceNames}

Severity: {Severity}

Started On: {StartTime}({TimzoneShortName})

Ended On: {EndTime}({TimzoneShortName})

{Signal\_Request\_Workload}

{Signal\_Instance\_Behaviour}

{Signal\_Summary}

Total {Total\_Events} event(s) were detected on this {Signal\_Type}  
  
{Latest\_Events}

Appreciate your efforts!

## Early Warning Open

Dear User,

{Events\_Changes\_Descriptions}

{Signal\_Type} is {Signal\_Status} on application(s) {App\_Names}.

Affected service(s): {Affected\_ServiceNames}.

For the detailed overview, please select here.

Impacted Entry Point Service: NA

Suggested Root Cause at {RootCause\_ServiceNames}

Affected Application(s): {Affected\_ApplicationNames}

Severity: {Severity}

Started On: {StartTime}({TimzoneShortName})

{Signal\_Summary}

{Signal\_Instance\_Behaviour}

Total {Total\_Events} event(s) detected so far on this {Signal\_Type}

{Latest\_Events}

## Early Warning Closed

Dear User,

{Signal\_Type} is {Signal\_Status} on application(s) {App\_Names}.

For the detailed overview, please select here.

Impacted Entry Point Service: NA

Suggested Root Cause at {RootCause\_ServiceNames}

Severity: {Severity}

Started On: {StartTime}({TimzoneShortName})

Ended On: {EndTime}({TimzoneShortName})

{Signal\_Instance\_Behaviour}

{Signal\_Summary}

Total {Total\_Events} event(s) were detected on this {Signal\_Type}

{Latest\_Events}

Appreciate your efforts!

## Early Warning Upgraded

Dear User,

{Signal\_Type} is {Signal\_Status} on application(s) {App\_Names}.

For the detailed overview, please select here.

Impacted Entry Point Service: NA

Suggested Root Cause at {RootCause\_ServiceNames}

Severity: {Severity}

Started On: {StartTime}({TimzoneShortName})

Ended On: {EndTime}({TimzoneShortName})

{Signal\_Instance\_Behaviour}

{Signal\_Summary}

Total {Total\_Events} event(s) were detected on this {Signal\_Type}

{Latest\_Events}

Appreciate your efforts!

### Info Signal

Subject: <Signal Type> [<Signal ID>: <Description>]

Dear User,

<Signal Type> signal is detected on metric category <KPI category> in service <affected service> on application(s) <Application name> at <detected time>. For the detailed overview, please select [here](#).

Total <Total Events Count> event(s) detected on this <Signal Type> signal

{Signal\_Summary}

{Latest\_Events}

### Batch Problem Open

Subject: Batch Problem[{Signal\_ID}:{Batch\_Job\_Details}, Current Status: {batch\_job\_status}] {Signal\_Status}

Dear User,

{Signal\_Type} is {Signal\_Status} on application {App\_Names}.

For the detailed overview, please select here.

Severity: {Severity}

Signal Started On: {StartTime}({TimzoneShortName})

Total {Total\_Events} event(s) detected so far on this {Signal\_Type}

Latest Event detected on this update on {Latest\_Event\_Time}:

Batch Group name: {Batch\_Job\_Group}, Batch job id: {Batch\_Job}, KPI name: {KPI\_Name}, Actual Duration: {Actual\_Duration}, Unit: {KPI\_Unit}, Expected Duration: {Expected\_Duration}

{Latest\_Events}

## Batch Problem Closed

Subject: Batch Problem[{Signal\_ID}:{Batch\_Job\_Details}, Current Status: {batch\_job\_status}] {Signal\_Status}

Dear User,

{Signal\_Type} is {Signal\_Status} on application {App\_Names}.

For the detailed overview, please select here.

Severity: {Severity}

Signal Started On: {StartTime}({TimzoneShortName})

Signal Ended On: {EndTime}({TimzoneShortName})

Total {Total\_Events} event(s) detected so far on this {Signal\_Type}

Latest Event detected on this update on {Latest\_Event\_Time}:

```
Batch Group name: {Batch_Job_Group}, Batch job id: {Batch_Job}, KPI name:
{KPI_Name}, Actual Duration: {Actual_Duration}, Unit: {KPI_Unit}, Expected
Duration: {Expected_Duration}
```

```
{Latest_Events}
```

## Forensic email

Dear User,

Forensic is captured on metric KPI {KPIName} at {Event\_Detected\_Time},  
category {CategoryName}, instance {InstanceName} in service  
{Affected\_ServiceNames} on application(s) {App\_Names}.

Threshold details:

Severity: {Severity}

KPI Value: {KPIValue}

Operation: {Operation}

Threshold Value: Lower: {Lower}, Upper: {Upper}

For more details, see the attachment.

## Email sample: Lead Problem Closed

Dear User,

Problem is CLOSED on application(s) LOS-DR, NetBanking-DR.

For the detailed overview, please select [here](#).

Impacted Entry Point Service: LOS-App-Service-DR

Suggested Root Cause at NB-App-Service-DR

Severity: Severe

Started On: 2020-12-30 22:15:00 (GMT +09:00)

Ended On: 2020-12-30 22:25:20 (GMT +09:00)

Top 1 request events:

Service: LOS-App-Service-DR

Affected request: GET#/txn/branchserver1.aspx|srv=LOS-App-Service-DR|acc=2

Affected KPIs: Fail (Default), Slow Percentage (Default), Slow (Default), Response Time (Default), Volume (Default)

Events: 88

Latest event: 2020-12-30 22:07:00 (GMT +09:00)

Top 1 instance events:

Service: NB-App-Service-DR

Affected instance: RHEL\_NB\_App\_Host\_146\_Inst\_1-DR

Affected KPIs: Total Process Count (Default), CPU Util (Severe), CPU Util (Default), Listen Status (Default), Ping Status (Default), Process Running (Default), and others

Events: 158

Latest event: 2020-12-30 22:15:00 (GMT +09:00)

Signal summary so far:

NB-App-Service-DR: 27 severe, 131 default events. 4 affected instances.

LOS-App-Service-DR: 0 severe, 88 default events. 10 affected requests.

Total 246 event(s) were detected on this Problem

Appreciate your efforts!

## SMS templates

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Every variable used in email templates also works in SMS.

### Lead Signal Open

```
<Signal Type> [<Signal ID>: <Description>] <Status> on application(s)
<Application Names>. Affected Service(s): <Affected Service>, Affected
Application(s): <Affected Application>. For the detailed overview, please
log in to HEAL and open the Signal list.
```

### Lead Signal Upgraded or Closed

```
<Signal Type> [<Signal ID>: <Description>] <Status> on application(s)
<Application Names>. For the detailed overview, please log in to HEAL and
open the Signal list. Appreciate your efforts!
```

### Info Signal

```
<Signal Type> [<Signal ID>: <Description>] signal detected on metric
category <KPI category> in service <Affected Service> on Application(s):
<Affected Application>. For the detailed overview, please log in to HEAL
and view the Info Signal list.
```

### Info Signal for Config Watch KPIs

```
{Signal_Type} [{Signal_ID}: Events detected in category {KPI_Category} for
service {Affected_ServiceNames}] on Application(s):
{Affected_ApplicationNames}
Status: {Signal_Status}

{Latest_Events_SMS}. For the detailed overview, please log in to HEAL and
view the Info Signal list.
```

### Batch Problem Open

```
Batch Problem [{Batch_Job_Group}: Batch Job {Batch_Job}, Event detected:
{batch_job_status}, Current Status: {batch_job_status}] open on
```

application {App\_Names}. Actual Duration: {Actual\_Duration}, unit: {KPI\_Unit}, Expected Duration: {Expected\_Duration}. For the detailed overview, please log in to HEAL and view the Signal list.

### Batch Problem Closed

Batch Problem [{Batch\_Job\_Group}: Batch Job {Batch\_Job}, Event detected: {batch\_job\_status}, Current Status: {batch\_job\_status}] closed on application {App\_Names}. Actual Duration: {Actual\_Duration}, unit: {KPI\_Unit}, Expected Duration: {Expected\_Duration}. For the detailed overview, please log in to HEAL and view the Signal list.

### SMS sample: Lead Problem (Open, Updates)

Problem [112558: Travel Web transactions failing] open on application(s) Travels. Affected Service(s): Travel Web, Affected Applications: (none). For the detailed overview, please log in to HEAL and open the Signal list.

Problem [112558: Travel Web transactions failing] update on application(s) Travels. Affected Service(s): Hotels, Hotel Inventory, Affected Applications: (none). For the detailed overview, please log in to HEAL and open the Signal list.

Problem [112558: Travel Web transactions failing] update on application(s) Travels. Affected Service(s): Bookings, Affected Applications: Flights. For the detailed overview, please log in to HEAL and open the Signal list.

### SMS sample: Early Warning (Open, Updates)

Early Warning [112556: Metric breaches in services can potentially impact Travels application(s)] open on application(s) Travels. Affected Service(s): Travel Web, Affected Applications: (none). For the detailed overview, please log in to HEAL and open the Signal list.

Early Warning [112556: Metric breaches in services can potentially impact Travels application(s)] update on application(s) Travels. Affected Service(s): Hotels, Hotel Inventory, Affected Applications: (none). For the detailed overview, please log in to HEAL and open the Signal list.

Early Warning [112556: Metric breaches in services can potentially impact Travels application(s)] update on application(s) Travels. Affected Service(s): Bookings, Affected Applications: Flights. For the detailed overview, please log in to HEAL and open the Signal list.

## SMS samples: closed signals

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### Lead Problem Closed

Problem [112558: Travel Web transactions failing] closed on application(s) Travels. For the detailed overview, please log in to HEAL and open the Signal list. Appreciate your efforts!

### Early Warning Closed

Early Warning [112556: Metric breaches in services can potentially impact Travels application(s)] closed on application(s) Travels. For the detailed overview, please log in to HEAL and open the Signal list. Appreciate your efforts!

## SMS samples: Info Signals

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### Info Signal detected

Info [I-2-94-2-26874081: Info: Transaction performance may get affected due to issues in services] signal detected on metric category Uptime\_info in service NB-Web-Service-DR on Application(s): NetBanking-DR. For the detailed overview, please log in to HEAL and view the Info Signal list.

### Property Watch sample

Info [I-2-56-4-26990982: Events detected in category Config for service NB-DB-Service-DR] on Application(s): NetBanking-DR

Status: OPEN

Instance Name: RHEL\_NB\_DB\_Host\_176\_Inst\_1-DR

KPI name: File Watch

File name: /home/raghav/ConfigDataDR/agent\_config.properties

Operation: Modified

New Value: db2dc77382d03161175918c9b771d8b4

Old Value: 4e90699ed82c62fddb5c507d4941c306

Time: 2021-04-26 23:14:00.

For the detailed overview, please log in to HEAL and view the Info Signal list.

### File Watch sample

Info [I-8-56-99-26995358: Events detected in category Config for service NB-Finacle-Service] on Application(s): NetBanking

Status: OPEN

Instance Name: RHEL\_NB\_Finacle\_Host\_204\_Inst\_1

KPI name: File Watch

File name: /opt/appnomic/ConfigData/alert.properties

Operation: Added

New Value: d41d8cd98f00b204e9800998ecf8427e

Old Value: NA

Time: 2021-04-30 03:36:00.

For the detailed overview, please log in to HEAL and view the Info Signal list.

## SMS samples: Batch Problem

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### Batch Problem Open

Batch Problem [test00: Batch Job test000410, Event detected: OPEN, Current Status: OPEN] open on application NetBanking-DR. Actual Duration: , unit: Milliseconds, Expected Duration: . For the detailed overview, please log in to HEAL and view the Signal list.

### Batch Problem Closed

Batch Problem [test00: Batch Job test000410, Event detected: CLOSED, Current Status: CLOSED] closed on application NetBanking-DR. Actual Duration: , unit: Milliseconds, Expected Duration: . For the detailed overview, please log in to HEAL and view the Signal list.

### Next

- Signal Notifications . set per-user notification preferences.
- Navigating Signal Tab . problems and early warnings.
- Viewing Forensics . event-level forensics data.