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# InControl – User Manual

Versie	Reden	Uitvoerder
1.0	First issue	KHE
1.1	For Approval	SHx
1.2	Approved	NVH
1.3	Needs Update	TD

# Content Table

<b>1</b>	<b>INTRODUCTION .....</b>	<b>3</b>
<b>2</b>	<b>CONFIGURATION SETUP .....</b>	<b>4</b>
2.1	GENERAL SETTINGS .....	4
2.1.1	License.....	5
2.1.2	Default acknowledge time .....	5
2.1.3	Default time-out time .....	5
2.2	REASONS .....	6
2.3	MODULE .....	6
2.3.1	OPC License .....	6
2.3.2	Module list .....	7
2.4	EMAIL.....	ERROR! BOOKMARK NOT DEFINED.
2.5	ROLES .....	9
2.6	USERS.....	10
2.7	GROUPS .....	11
2.8	WORKFLOW .....	12
<b>3</b>	<b>USING INCONTROL .....</b>	<b>13</b>
3.1	MANAGING BYPASSES .....	13
3.1.1	Requesting a new bypass.....	14
3.1.2	Requesting a group .....	15
3.1.3	Acknowledging an unrequested bypass .....	15
3.1.4	Approving bypasses .....	16
3.1.5	Status overview .....	17
3.2	HISTORIAN .....	19
3.3	ANALYZE.....	20

# 1 Introduction

This document describes the necessary steps to successfully complete an InControl configuration setup. This document can be used to implement the basic configuration settings and features to fully configure and use InControl. This document contains all the necessary help & info to start using InControl at it's fullest potential.

## 2 Configuration setup

### 2.1 Configuration wizard

#### 2.1.1 Import

Under settings > import/export you can make an export of your InControl configuration. This file is saved as a .config file to import it here to skip the initial setup.

### Import

If you have a configuration file you are able to import it below. Importing a configuration file will skip the configuration wizard.

Geen bestand geselecteerd.

#### 2.1.2 Email

Under configuration you can fill in the settings for your SMTP Email server.

- **SMTP Server:** The IP-address of your server, If it runs on the same machine you can fill in localhost
- **Port:** The SMTP port, usually 25 or 587
- **Authentication:** Either None or SSL
- **Send from:** Email address where all the automated mails will be send from

Just fill in your desired Username and password at Authentication.

For test settings fill in the email address a test email will be sent to so you can verify your email settings are working.

### Configuration

**SMTP Server**

**Port**

**Authentication**  ▼

**Send from**

### Authentication

**Username**

**Password**

### Test Settings

After filling in the information on this screen, we recommend you test your account by clicking the button below. This will send a test email to verify that your settings are correctly configured.

**Recipient**

## 2.2 Settings - General

### 2.2.1 License

#### License

Select a new license to be used by the application.

#### Current

Expiration Date	2/12/2019 12:00:00 AM
Maximum Tags	100

Here you can find/upload your license and verify it's details.

**IMPORTANT NOTE:** When the amount of tags configured to be monitored is higher than the maximum amount of tags of your license, InControl will no longer read data!

An error message will be displayed saying that you have exceeded the maximum amount of tags.

Application has more parameters configured than license permits. No data is being read.

### 2.2.2 Default acknowledge time

This setting defines the amount of time a bypass will be acknowledged for by default.

#### Default Acknowledge Time

02:00:00

### 2.2.3 Default time-out time

If a request has not been approved/declined during the time specified in this setting, then a reminder for approval will be sent via email.

#### Timeout Time

<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="5"/>
days	hours	minutes

## 2.2.4 Reasons

For requesting or approving/declining a bypass. Here you can configure your reasons the users can select.

### Reasons for bypass

New Reason:

#### Reason

Other

### Reasons for Approval/Decline

New Reason:

#### Reason

Other

By default, "Other" is configured. This reason will give an addition field were the user can enter some text to specify the reason. For other used reasons please add them to the list. Some suggestions:

- Maintenance
- Shutdown
- Startup
- I/O problems
- Wrong bypass

By using these default reasons, analyzing will be easier and they will help you optimize your process.

## 2.3 Settings - Module

Here you can configure which bypasses you want to be monitored.

Show  entries
Search:

Module	Tag		Description Tag		Description	Value	
MOD1	MOD1/INTERLOCK/CND1/DISABLE.CV	✓	MOD1/INTERLOCK/CND1/DESC.CV	✓	ID1 Process Interlock Condition 1	1	<input type="button" value="Delete"/>
MOD1	MOD1/INTERLOCK/CND8/DISABLE.CV	✓	MOD1/INTERLOCK/CND8/DESC.CV	✓	ID1 Process Interlock Condition 8	1	<input type="button" value="Delete"/>
MOD1	MOD1/INTERLOCK/CND7/DISABLE.CV	✓	MOD1/INTERLOCK/CND7/DESC.CV	✓	ID1 Process Interlock Condition 7	1	<input type="button" value="Delete"/>

### 2.3.1 OPC License

Configure your maximum amount of OPC tags you want InControl to use. This can be useful if you wish to limit the license cost and/or load on your DCS system. Take in consideration that a low limit might cause InControl to update with a higher latency. Recommended practice is to take the number of used module tags.

## 2.3.2 Module list

Load in your module list through a .csv file (import button) or add one or more manually (add button).

Module \*

Description Tag \*

Value Tag \*

Active Value \*




The .csv (comma separated) file has the following format and can be easily generated by a spreadsheet application.

<b>Module</b>	Name/tag of the module to be monitored
<b>Description Tag</b>	The parameter that references the description of the bypass. (Usually the information presented to the operator)
<b>Value Tag</b>	The parameter that references the actual value of the bypass. (Usually this is a Boolean used in the DCS system)
<b>Active value</b>	Configure this parameter so it matches the value of " <b>Value Tag</b> " when the bypass is active.

## 2.4 Settings – E-mail

For creating and sending emails you can configure the default SMTP server settings:

### Configuration

SMTP Server	<input type="text" value="Server"/>
Port	<input type="text" value="0"/>
Authentication	<input type="text" value="None"/>
Username	<input type="text" value="Admin"/>
Password	<input type="password" value="...."/>
From	<input type="text" value="From"/>

### Test Email

When clicking on the 'Test' button below, the email configuration will be saved and a test email will be send to the email entered.

Recipient	<input type="text" value="To"/>
-----------	---------------------------------

If you don't use the email functionality you will not be able to send email reminders, notifications for approval and user information when creating accounts.




There is also an additional feature to send a test email.



## 2.5 Settings - Roles

InControl by default supports 5 roles. You can use and configure these roles as you require. All the roles can be configured with specific rights based on your site needs. A default configuration has been selected. Please go over these settings to make sure it meets your demands and requirements.

### Name

OPERATOR	
CONFIGURATOR	
CHIEF	
ADMINISTRATOR	
MANAGER	

### Permissions

Name	Include
ConfigureUsers	<input checked="" type="checkbox"/>
ConfigureRoles	<input checked="" type="checkbox"/>
ConfigureGeneral	<input checked="" type="checkbox"/>
ConfigureModule	<input checked="" type="checkbox"/>
ConfigureEmail	<input checked="" type="checkbox"/>
ConfigureWorkflow	<input checked="" type="checkbox"/>
ConfigureGroup	<input checked="" type="checkbox"/>
ReportAcknowledge	<input checked="" type="checkbox"/>
ReportRequestWithApproval	<input checked="" type="checkbox"/>
ReportRequestWithoutApproval	<input checked="" type="checkbox"/>
ReportRequestGroup	<input checked="" type="checkbox"/>
ApprovalReport	<input checked="" type="checkbox"/>
ApprovalGroup	<input checked="" type="checkbox"/>
ViewApproval	<input checked="" type="checkbox"/>
ViewReports	<input checked="" type="checkbox"/>
ViewReportsDeclined	<input checked="" type="checkbox"/>
ViewAnalyze	<input checked="" type="checkbox"/>
ViewWorkflow	<input checked="" type="checkbox"/>
ViewGroup	<input checked="" type="checkbox"/>
ViewHistorian	<input checked="" type="checkbox"/>
HistorianExport	<input checked="" type="checkbox"/>

Cancel

Save

**Operator**: Usually used only for visualization and requesting bypasses

**Chief**: Usually used for low level approval, analytics and creating groups

**Manager**: Usually used for high level approvals of bypasses and groups

**Configurator**: Somebody with configuration rights without being admin (site specific)


**Administrator**: Full rights control

## 2.6 Settings - Users

Add as many users as you require and assign their roles.

Username *	Role *
<input type="text" value="Username"/>	<input type="text" value="OPERATOR"/>
Firstname *	Lastname *
<input type="text" value="Firstname"/>	<input type="text" value="Lastname"/>
Email *	
<input type="text" value="Email"/>	
Phone Number	
<input type="text" value="Phone Number"/>	
<input type="button" value="Submit"/> <input type="button" value="Cancel"/>	

By default, after creating a user an email will be send to the user containing their account login information. When email is not configured the password will be “*default*”. After logging in with your account the user can change his password by clicking on their account name.

 Account Information

Firstname	Lastname
<input type="text"/>	<input type="text"/>
Change password	
New Password	
<input type="text"/>	
Reenter New Password	
<input type="text"/>	
<input type="button" value="Change Password"/>	

## 2.7 Groups

Make multiple groups to request bypasses that can be grouped by one request.

Name \*  Reason \*

### Parameters

Show  entries

Search:

Module	Description	Value Tag	Include
MOD9	ID9 Process Interlock Condition 6	MOD9/INTERLOCK/CND6/DISABLE.CV	<input type="checkbox"/>
MOD9	ID9 Process Interlock Condition 5	MOD9/INTERLOCK/CND5/DISABLE.CV	<input type="checkbox"/>
MOD9	ID9 Process Interlock Condition 4	MOD9/INTERLOCK/CND4/DISABLE.CV	<input type="checkbox"/>
MOD9	ID9 Process Interlock Condition 3	MOD9/INTERLOCK/CND3/DISABLE.CV	<input type="checkbox"/>
MOD9	ID9 Process Interlock Condition 2	MOD9/INTERLOCK/CND2/DISABLE.CV	<input type="checkbox"/>
MOD9	ID9 Process Interlock Condition 1	MOD9/INTERLOCK/CND1/DISABLE.CV	<input type="checkbox"/>
MOD9	ID9 Process Interlock Condition 7	MOD9/INTERLOCK/CND7/DISABLE.CV	<input type="checkbox"/>
MOD9	ID9 Process Interlock Condition 8	MOD9/INTERLOCK/CND8/DISABLE.CV	<input type="checkbox"/>
MOD8	ID8 Process Interlock Condition 8	MOD8/INTERLOCK/CND8/DISABLE.CV	<input type="checkbox"/>
MOD8	ID8 Process Interlock Condition 7	MOD8/INTERLOCK/CND7/DISABLE.CV	<input type="checkbox"/>

Showing 1 to 10 of 98 entries

Previous **1** 2 3 4 5 ... 10 Next

Manage and view the status of your groups.

Name	Status	
Unit1	Approved	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
Unit2	NotApproved	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

When you add a new group, it needs to get approved before you can use it. A notification will appear on the approval tab. By clicking on this tab, the group can be approved or declined.

1

## 2.8 Workflow

Manage and create your workflows that define how the request will be processed.

+ Add Workflow

Name		
Workflow 1 (no approval)		
Workflow 2 (approval)		

Workflow Name

Name

---

Approval

☒ Required   ☐ Not Required

Notification

☒ Required   ☐ Not Required

Reminder

☒ Required   ☐ Not Required

---

**Users**

Username	Firstname	Lastname	Include
Admin	Admin	Admin	<input type="checkbox"/>

Submit


Cancel









Here you can define whether the request needs approval, a notification e-mail and a reminder e-mail. You can also select to which user the e-mails should be sent to.

## 3 Using InControl



### 3.1 Managing bypasses








































Now that you have successfully set up InControl, you can start monitoring the desired bypasses.

On the  **Reports** page, you have a clean overview of all your bypasses:

**InControl**  Reports  Analyze  Approval  Workflows  Groups  Historian  Settings  Log out Logged in as: Admin


**Reports**

 Request Parameter  Request Group

Ack	Active	Status	Created	Module	Description	Expiration	Info
		Unrequested	2/8/2018 11:24:13 AM	MOD1	ID1 Process Interlock Condition 1		
		Unrequested	2/8/2018 11:24:14 AM	MOD1	ID1 Process Interlock Condition 4		
		Unrequested	2/8/2018 11:24:14 AM	MOD1	ID1 Process Interlock Condition 3		
		Unrequested	2/8/2018 11:24:14 AM	MOD1	ID1 Process Interlock Condition 2		
		Unrequested	2/8/2018 11:24:18 AM	MOD5	TEST PERIODIC T=5s		
		Unrequested	2/8/2018 11:25:00 AM	MOD10	TEST PERIODIC T=60s		
		Unrequested	2/8/2018 11:25:42 AM	MOD1	ID1 Process Interlock Condition 8		
		Requested	2/8/2018 1:09:55 PM	MOD1	ID1 Process Interlock Condition 7	in 4 months	
		WaitingForApproval	2/8/2018 1:16:18 PM	MOD1	ID1 Process Interlock Condition 6	5 days ago	
		Requested	2/8/2018 2:12:23 PM	MOD10	ID10 Process Interlock Condition 8	5 days ago	
		Requested	2/8/2018 2:12:46 PM	MOD11	ID11 Process Interlock Condition 5	5 days ago	
		Requested	2/8/2018 2:13:37 PM	MOD12	ID12 Process Interlock Condition 6	5 days ago	
		Requested	2/8/2018 2:14:15 PM	MOD11	ID11 Process Interlock Condition 4	in 5 months	

On this page you have access to the following info:

- All active bypasses.
- The status of the request, as explained in the flowchart (see [3.1.4 Status overview](#))
- The timestamp when the request was made or when an unrequested bypass became active.
- The name of the module that is being bypassed.
- The description of what exactly is being bypassed.
- The date when the requests will expire.

When you press the info button  , you get access to additional info such as:

- The parameter that is being monitored.
- Which user requested the bypass.
- The reason of the request.

### 3.1.1 Requesting a new bypass

By clicking on [+ Request Parameter](#), you can request a single new bypass. This opens the following page:


Show  entries Search:

Module	Tag	Description	
MOD1	MOD1/INTERLOCK/CND7/DISABLE.CV	ID1 Process Interlock Condition 7	<a href="#">+ Request</a>
MOD1	MOD1/INTERLOCK/CND6/DISABLE.CV	ID1 Process Interlock Condition 6	<a href="#">+ Request</a>
MOD1	MOD1/INTERLOCK/CND5/DISABLE.CV	ID1 Process Interlock Condition 5	<a href="#">+ Request</a>
MOD10	MOD10/INTERLOCK/CND2/DISABLE.CV	ID10 Process Interlock Condition 2	<a href="#">+ Request</a>
MOD10	MOD10/INTERLOCK/CND8/DISABLE.CV	ID10 Process Interlock Condition 8	<a href="#">+ Request</a>
MOD10	MOD10/INTERLOCK/CND7/DISABLE.CV	ID10 Process Interlock Condition 7	<a href="#">+ Request</a>
MOD10	MOD10/INTERLOCK/CND6/DISABLE.CV	ID10 Process Interlock Condition 6	<a href="#">+ Request</a>
MOD10	MOD10/INTERLOCK/CND5/DISABLE.CV	ID10 Process Interlock Condition 5	<a href="#">+ Request</a>
MOD10	MOD10/INTERLOCK/CND4/DISABLE.CV	ID10 Process Interlock Condition 4	<a href="#">+ Request</a>
MOD10	MOD10/INTERLOCK/CND3/DISABLE.CV	ID10 Process Interlock Condition 3	<a href="#">+ Request</a>


Showing 1 to 10 of 89 entries Previous **1** 2 3 4 5 ... 9 Next

Here you can search and select which parameter you need. Once found, press [+ Request](#)

Then you define which workflow it should use, for what reason you want to activate the bypass and for how long it should be active.

Module	Description
<input type="text" value="MOD1"/>	<input type="text" value="ID1 Process Interlock Condition 7"/>
Workflow *	
<input type="text" value="Workflow 1 (no approval)"/>	
Reason *	Select when the bypass should be inactive
<input type="text" value="Other"/>	<input type="text" value="08/02/2018 2:00 PM"/> 
<input type="button" value="Submit"/> <input type="button" value="Back"/> <input type="button" value="Cancel"/>	


### 3.1.2 Requesting a group

By clicking on , you can request a single new bypass. This opens the following page. Here you select the group you wish to request, the workflow and the time until the request lasts:


Group \*

Workflow \*

Select when the bypass should be inactive



### 3.1.3 Acknowledging an unrequested bypass

When an unrequested bypass is activated, it can be acknowledged by clicking the 


Ack	Active	Status	Created	Module	Description	Expiration	Info
		Unrequested	12/02/2018 15:54:08	MOD57	ID57 Process Interlock Condition 1		

Then the same action as with requesting a bypass is to be performed: you define which workflow it should use, for what reason you want to activate the bypass and for how long it should be active.

Workflow \*

Reason \*


Select when the bypass should be inactive



### 3.1.4 Approving bypasses

When a user has requested a bypass using a workflow that requires approval, then another user with the right to approve or decline requests must decide what will happen.

When there are requests that need to be checked for approval, a notification will appear in the approval button:

 Reports  Analyze  Approval **1** 

The number indicates the number of items that await approval. When a new group is made, it also appears here for approval.

Module	Description	Tag	
MOD12	ID12 Process Interlock Condition 4	MOD12/INTERLOCK/CND4/DISABLE.CV	<a href="#">Approve/Decline</a>

By clicking approve/decline [Approve/Decline](#) the following menu opens:

#### Report Information

Module	Description
MOD12	ID12 Process Interlock Condition 4
Value Tag	
MOD12/INTERLOCK/CND4/DISABLE.CV	
Requested Time	Estimated End Time
2/13/2018 5:36:38 PM	2/13/2018 6:36:00 PM
Reason	
Startup	

#### Approval Information

Reason for approval/decline

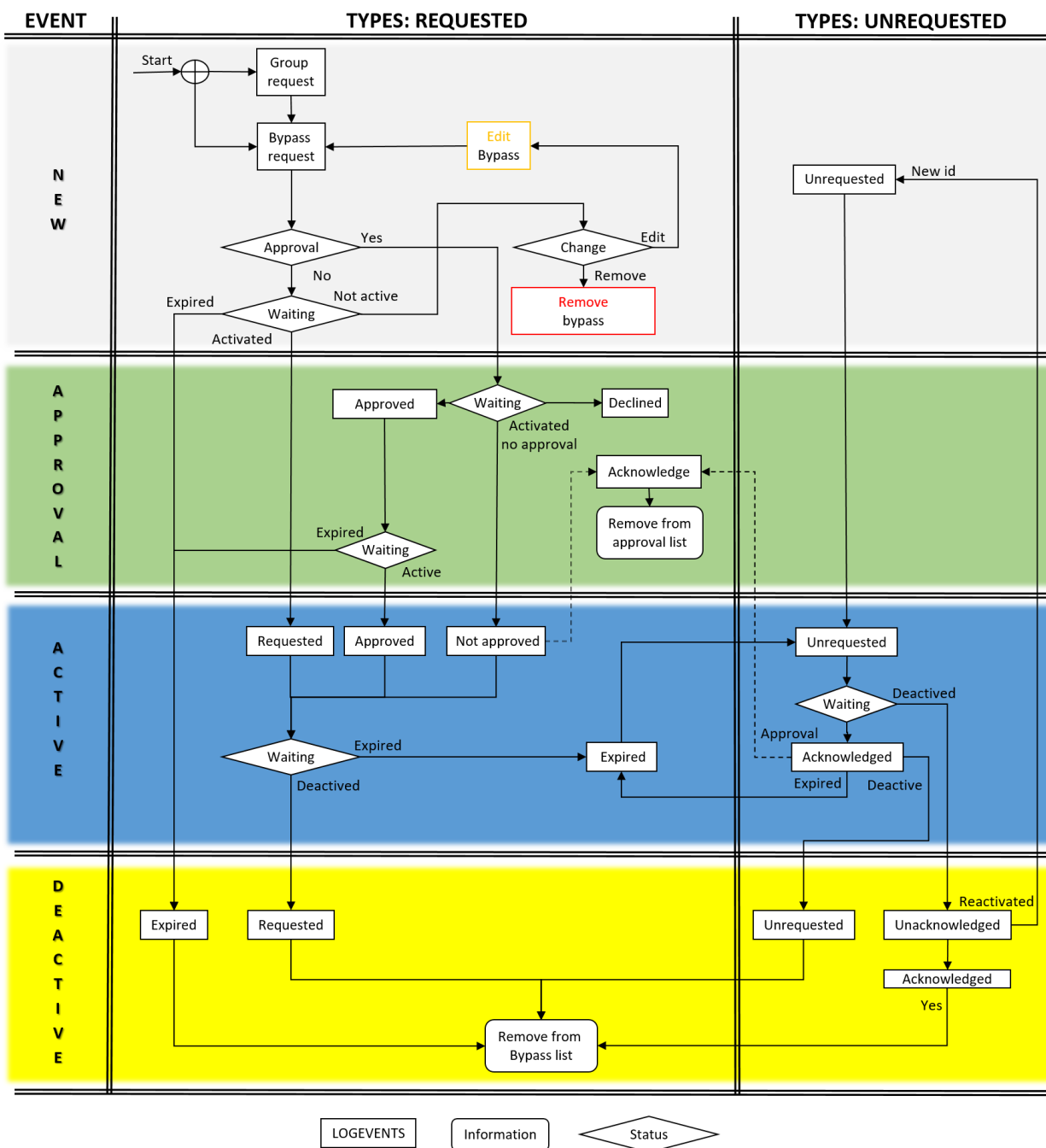
Other ▼

[Accept](#) [Decline](#) [Cancel](#)

Here the user can approve or decline the requests and select a reason why.



The following flowchart explains how InControl processes your bypasses:



All the bypasses are divided in 2 groups:


- Requested: Bypasses that have been requested using either **+ Request Parameter** or **+ Request Group**
- Unrequested: Bypasses that have been activated on your control system without a request in InControl

Furthermore, the bypasses also have 4 different states:

- **New:** requesting a new bypass/group of bypasses. Requested bypasses waiting to become active.
- **Approval:** requested bypasses waiting to be approved/declined. Also waiting to become active.
- **Active:** when a requested/unrequested/approved bypass is active.
- **Deactive:** when a requested/unrequested/approved bypass becomes inactive.

The historian (see [3.2 Historian](#)) is build up from all the log events (the square fields on the flow chart).

## 3.2 Historian

On the historian page  Historian you can view all events regarding the bypasses and requests, but also when changes are made to the configuration of your InControl setup. Below is a table with all the possible items that can appear in the historian.

Timestamp	id	Event	Type	Workflow	User	Name	Condition	Description	Log Type	Reason	EndTime	Extra	Intation info
27/06/2017 11:00		NEW	BYPASS	<workflowname>	<username>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>		User requests a new bypass
27/06/2017 11:00		NEW	GROUP	<workflowname>	<username>	<groupname>			System	<reason>: <+desc>	<endtime>		User requests a new group
27/06/2017 11:00		NEW	GROUP		<username>				Audit	<reason>: <+desc>			User creates a new group
27/06/2017 11:00		NEW	USER		<username>				Audit			<newusername>, <firstname>, <lastname>, <email>, <role>	A new user is created
27/06/2017 11:05		APPROVAL	APPROVED	<workflowname>	<username>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>	<motivation>	User approves a requested bypass
27/06/2017 11:05		APPROVAL	DECLINED	<workflowname>	<username>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>	<motivation>	User declines a requested bypass
27/06/2017 11:10		EDIT	GROUP		<username>	<groupname>			Audit	<reason>: <+desc>			User edits an existing group
27/06/2017 11:10		EDIT	USER		<username>				Audit			<from>, <to>	User edits an existing user
27/06/2017 11:10		EDIT	BYPASS	<workflowname>	<username>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>		User edits an existing workflow
27/06/2017 11:20		REMOVE	BYPASS	<workflowname>	<username>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>		Removing a requested bypass that hasn't been active yet
27/06/2017 11:20		REMOVE	USER		<username>				Audit			<newusername>, <firstname>, <lastname>, <email>, <role>	Removing an user
27/06/2017 11:20		REMOVE	GROUP		<username>				Audit	<reason>: <+desc>			Removing a group
27/06/2017 11:30		ACTIVE	UNREQUESTED	Undefined	<system>	<modulename>	<condition>	<conditiondescription>	System				An unrequested bypass became active
27/06/2017 11:30		ACTIVE	EXPIRED	<workflowname>	<system>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>		An acknowledged/requested bypass expired
27/06/2017 11:30		ACTIVE	REQUESTED	<workflowname>	<system>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>		A requested bypass became active
27/06/2017 11:30		ACTIVE	UNREQUESTED ACKNOWLEDGED										???
27/06/2017 11:40		DEACTIVE	UNREQUESTED		<system>	<modulename>	<condition>	<conditiondescription>	System				An unrequested bypass became inactive
27/06/2017 11:30		DEACTIVE	EXPIRED	<workflowname>	<system>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>		A deactivated, requested bypass expired
		DEACTIVE	ACKNOWLEDGED	<workflowname>	<system>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>		A deactivated, unrequested bypass has been acknowledged
27/06/2017 11:40		DEACTIVE	REQUESTED	Undefined	<system>	<modulename>	<condition>	<conditiondescription>	System	<reason>: <+desc>	<endtime>		A requested bypass expired

## 3.3 Analyze

These pages provide you analytic insights from the bypasses on your system:

Analyze ▾

- Top Bypasses
- Top Unrequested
- Top Reasons
- Statistics

- Top Bypasses: the top 5 most activated bypasses.
- Top Unrequested: the top 5 most activated bypasses without a request.
- Top Reasons: the top 5 most used reasons to request a bypass
- Statistics:

