# [G-2] User manual - Governance for Creatio

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# **Application installation**

## General

Governance application comes as single install package. You can install it from Creatio Marketplace using application hub.

# **Deployment**

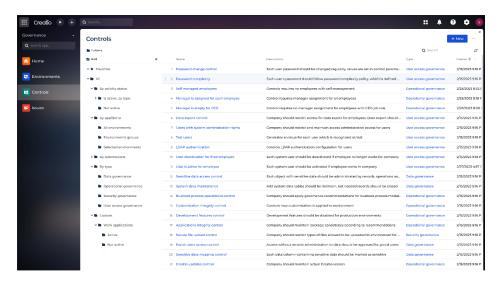
Governance application was design for installation on a single stand alone Environment of Creatio, but it also possible to install app to your common Creatio Environment.

Deploy as separate environment allows to isolate application from your main production instance in order to sparate business functions of employees and increase performance of automations executions.

# User-Interface - how to use application

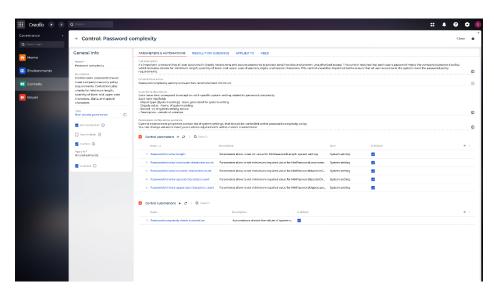
# **Controls**

In the context of Governance applications, "Controls" refer to policies and rules that determine compliance with specific regulations or standards. To access these controls, navigate to the "Controls" section within the Governance workspace. The Governance application includes a predefined list of controls that can be applied to your Environments.



#### **Control UI page:**

As an example let's overview Password complexity control. This control checks Creatio system settings for managing password complexity.



On a left of the page, under General information you can find:

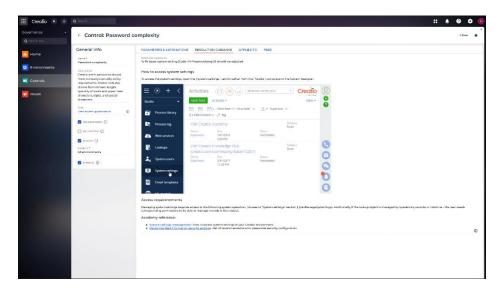
- Name desired name for control.
- Description short description, that will be used is Controls section.
- Type refers to control groups, user for control organisation and filtration within registry.

- Has parameters defines if parameters will be used within control. Parameters are values, that could be customise for specific Environment. For example, one Environment requires minimal password length to be 10 symbols, on other Environment it required to be 8.
- Has whitelist defines if there is a whitelist functionality for current control. Inclusion into whitelist allows to ignore issue creation.
- Is active defines if control is active for all environment and will be applied during audit runtime process
- Apply to refers to which environments control could be applied. It has options:
  - o All environments controls applied to all connected Environemnts
  - Environments Groups controls applied to group of Environments. Useful, when you implement specific check for your Production, pre-production and development environments within a group.
  - Selected environments controls applied to specified environments.
- Is default defines if current control comes out of the box after application installation.

#### On a right under Parameters & Automations:

- Full description field contains information about what organisation desire of control within Environment
- Created issue name field defines the Name for new Created issues
- Issue item descriptions each issue is a group of violations. Issue item is specific violation. Issue item description helps user to understand what fields are represented in Issue item.
- Parameters configuration guidance instruction for user for configuration parameters and it's values.
- Controls parameters list of configurable parameters within a control
- Control automations list of automations that being executed during audit process
- Whitelist guidance user instruction for adding new item into whitelist

#### On a right under Resolution Guidance:



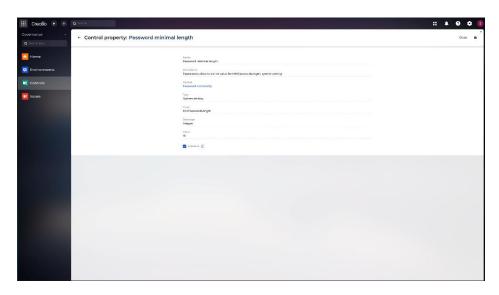
This field allows to add user instructions of what to do, in order to resolve specific issue and its items. This information will be displayed for specific issue item.

On a right under Applied to tab:

- Business rules display dynamic content, based on "Apply to" filed under General info
- Allows to add environments groups
- Allows to add specific environments

#### **Control parameters**

Control parameter - configurable parameter for control.



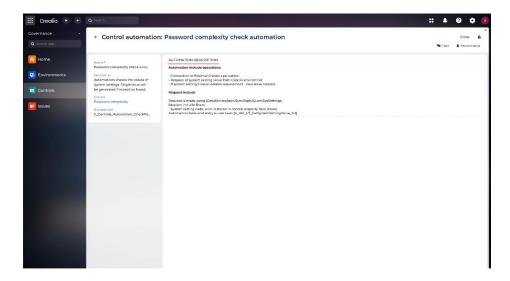
There are fields on control property page:

- Name desired name for control parameter
- Description description of purpose of current parameter
- Control link to control
- Type is what current target of parameter in Creatio Environment
  - System setting refers to system setting
  - System operation refers to system operation within Creatio
  - o Value refers to custom value of parameter
- Code relates for code, which refers the code of Environment component
- Data type allow to specify data type of parameter
- Value defines a controlled value of parameter.

#### **Control automations**

Control automations - are automatic procedures lunched during audit process for specific control. Goal of automation is to run process during which data from external environment will be

received and checked. If violation found - new issue will be created within business process, which is linked to automation



#### Description of fields:

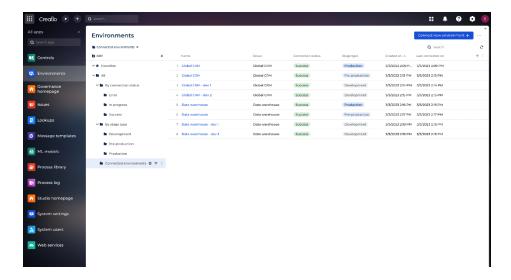
- Name desired name for control automation
- Description short description of automation procedure
- Control link to Control
- ProcessCode code of business process, that will be launched during automation execution
- Automation description full description of what is done on a back-end of automation.

# **Environments**

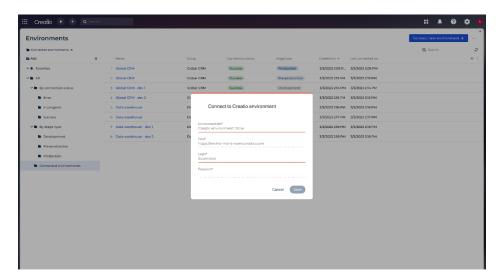
Environment in the context of the Governance application refers to an instance of the Creatio platform that is deployed in the cloud or on-site.

#### How to connect new Environment

To add new Creatio environment you can click on action "Add new environment" in Environments section.



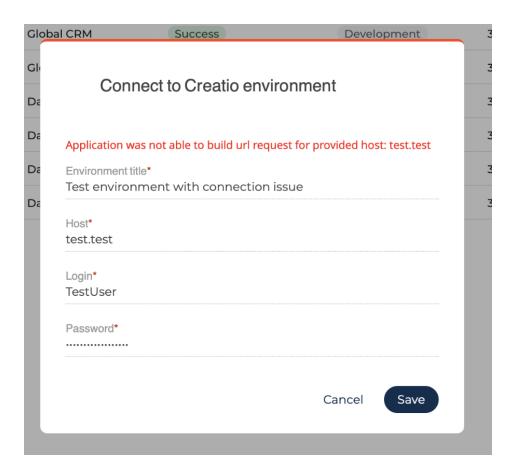
You will see a modal window with required fields:



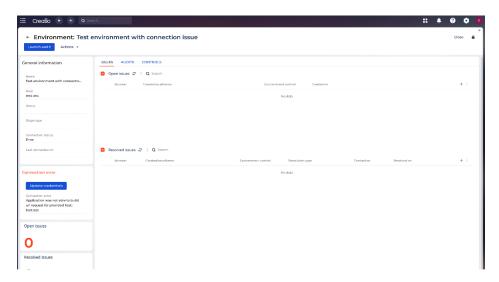
- Environment title specify desired name for Environment.
- Host web address by which governance application will be able to establish connection
- Login user login
- Password user password

#### **Connection issues**

In case Governance application faced connection issues - short description will be displayed in modal window



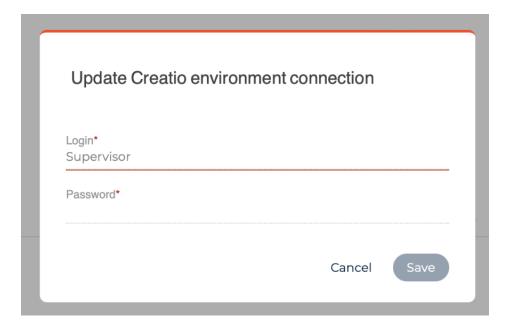
In case connection step was abandoned - this issue information is still accessible in Environment page.



If you need to modify host address, you can change the value in UI

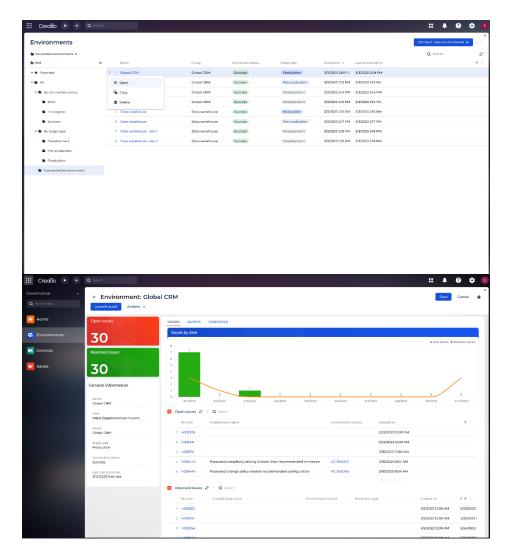
If you need to Update credentials for user connection - you can click on Update credentials.

If you will do so, new modal window will be pop-up.



#### **User Interface overview**

You can navigate to environment by clicking on a record in Environment section



**General information** 

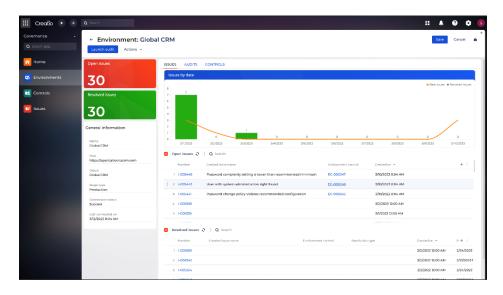
# General information Name Global CRM Host https://application.tscrm.com Group Global CRM Stage type Production Connection status Success Last connected on 3/12/2023 8:04 AM

#### Includes information:

- Name specified desired name for Creatio instance
- Host web address of Creatio instance
- Group this is lookup field for grouping your environments by its functionality. For example you may have production, development, pre-production instances and you would like to apply same audits and controls to all Environments within a group.
- Stage type defines stage type such as: production, pre-production and development. Based on selected values - issue priorities will be set during audit process

- Connection status defines if connection status. This could be Success or Error
- Last connected on last date, when governance application was able to connect to Environment

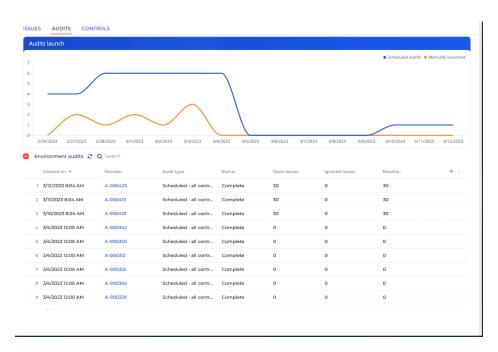
#### **Issues tab**



Issues - are found problems on your Environment

There are two lists within tab for: open issues and resolved issues.

#### **Audits tab**

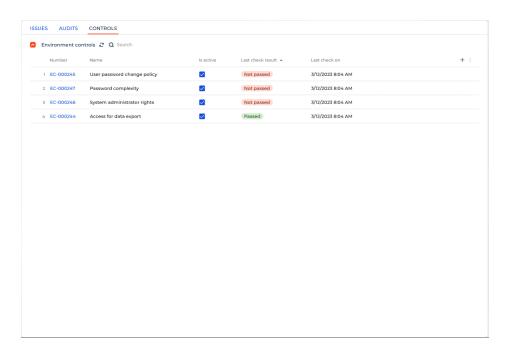


Audits contain a list of launched audits for current environment. During the audit automation checks each control for selected environment. If some violations of rules will be found - new issue will be generated.

Here are some important fields within detail:

- Audit type this the type of audit launch. It could be:
  - o Scheduled means that audit was initiated by schedule, for example ones a day
  - o Manual all controls means audit was initiated by specific user manually.
  - o Manual specific controls means audit was initiated for selected control.

#### **Controls**

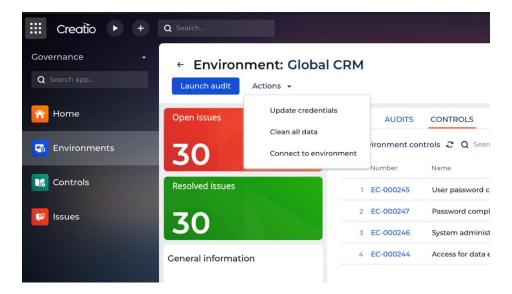


Refers to controls applied to specific Environment. During the launch of audit - Active controls will be filtered by "Apply to" setting of control and added to Environment. This will allow to modify control parameters, whitelists or disable control on Environment level.

#### Detail has fields:

- Is active defines if specific control is active for current environment
- Last check result displays the last check result of control.
  - o Passed means no violations found
  - Not passed means violations found and issues created
  - Scheduled means this control is scheduled for audit check
- Last check on the date time of last control check

#### Actions



In top bar of the Environment page you can find:

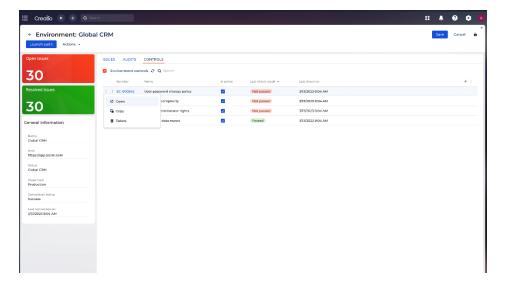
- Launch audit by clicking this button new audit will be created and applied to Environment
- Actions
  - Update credentials pop-up will be shown in order to update login and password for Environment
  - o Clean all data erases all environment data, except whitelists
  - o Connect to Environment governance application tries to connect to Environment

## **Environment controls**

Environment control - is the control applied to specific Environment. You are able to define, if control is applicable and active for specified Environment, assign specific control parameters for current Environment.

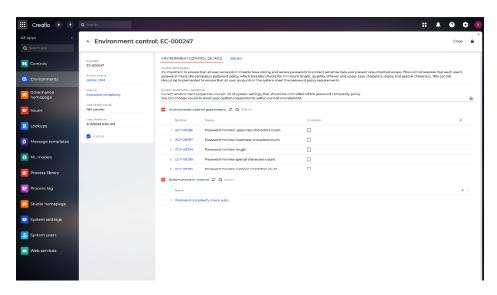
#### How to access Environment controls

In order to access Environment controls: open Environment, navigate to Controls and open a record. In order to open Environment control, click on "Number" caption



Here on Controls tab you are able to disable specific control for current Environment, by unchecking "Is active" checkbox in the detail.

#### **Environment control page**



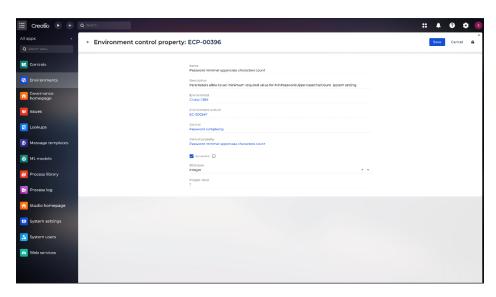
#### On a left there are fields:

- Number autogenerated display name for applied control to Environment
- Environment Environment to which current control is applied
- Control Link to global control within controls section
- Last check result the last result of control check during last audit. Possible values are:
  - o Scheduled control is scheduled for execution
  - Not passed check of control was not successful
  - Passed check of control was successful
- Last check on date time of last check

On a right under Environment control details:

- Control description field is taken from control description, field displayed as linked field. Provides an overview of control.
- Control parameters guidance Guidance of how configure Control parameters
- Environment control parameters List of configurable parameters for current Environment. "Is custom" checkbox defines if parameter has specific value for current Environment.
- Automation in control link to automations defined in global control under "controls" section

#### **Environment control parameters**



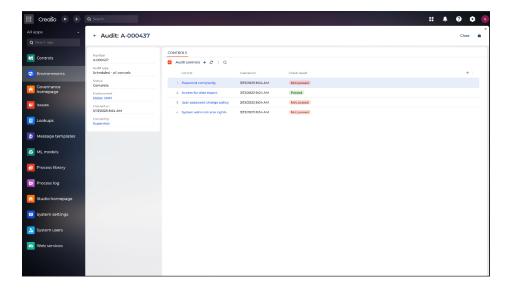
This page has the same logic as control parameters. In order to define value for specific parameter within Environment - "Is custom" checkbox should be checked. After, value customisation is accessible.

# **Audits**

Audit represent a launch of control checks within specific environment.

Audits accessible via Environment page under Audits tab.

#### **Audits UI**



#### On left area:

- Number autogenerated number of launched audit for Environment
- Audit type represents types of launched audit:
  - o "Manual all controls" execution of all assigned controls within environment
  - o "Manual specific control" execution of specific controls within Environment. Added on action "Check if resolved" from Issue or Issue-item.
  - o "Scheduled all controls" execution of all controls on a daily basis.
- Status represent a progress status for audit execution
- Environment to which environment current audit was applied to
- Created on data time of audit launch
- Created by user which created current audit.

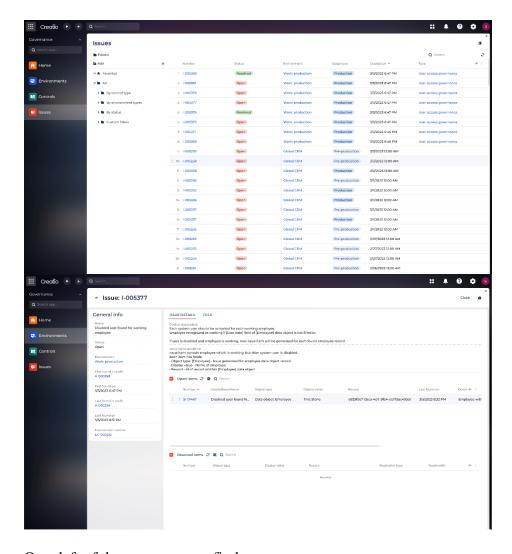
#### On a right under "Controls" tab:

Is located audit controls details, which represent status of check of specific controls within launched audit.

#### **Issues**

Issues - are found violations within environments for specific controls

You can view issues view Issues sections or via Environment page



#### On a left of the page you can find:

- Name value for new issue, which is set in control
- Status defines a status of an issue
- Environment on which environment current issue was found
- First found in audit defines during which audit, issue first appeared
- First found on date of first finding
- Last found in audit during which audit issue was lastly found
- Last found on date of last finding
- Environment control link to control within Environment

#### On a right under issue details:

- Control description Control policy defined within control
- Issue item guidance User guidance for fields within issue items
- Open items list of open issue items
- Resolved list of resolved items
  - o Resolution type defines a resolution for issue:

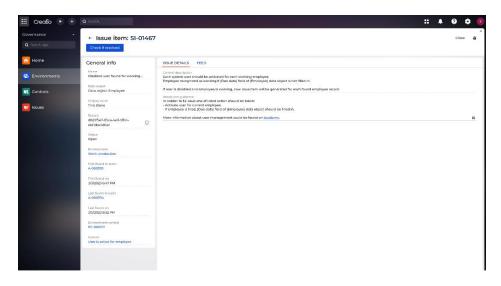
- Fixed issue no longer appear in Environment
- Whitelisted whitelist record was created for current issue item
- Canceled control disabled if control was disabled on Environment level
   Resolution will be set to canceled.

In top-bar there are actions:

Check if resolved - lunches audit for control connected to issue

#### **Issue item**

Issue item - is violation item, that relates to specific record or configuration within Environment grouped under specific issue.



#### It has fields:

- Name is set in control in field "Created issue name"
- Data object target object of violation
- Display value display value of record
- RecordId Id of record
- Status issue status.
- Environment link to Environment

#### Issue details:

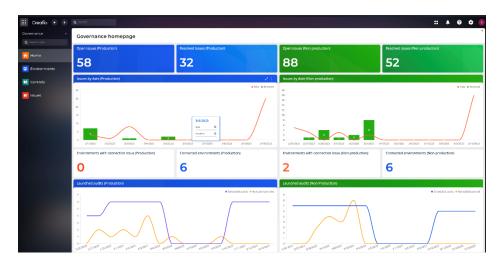
- Control description control description, which is set within control
- Resolution guidance guidance of how to resolve an issue

In top-bar there are actions:

Check if resolved - lunches audit for control connected to issue

# **Governance homepage**

Dashboard with provides general information about audits and issues.



Dashboard is divided on two areas: left represent production environments and right non-production such as pre-production and development.

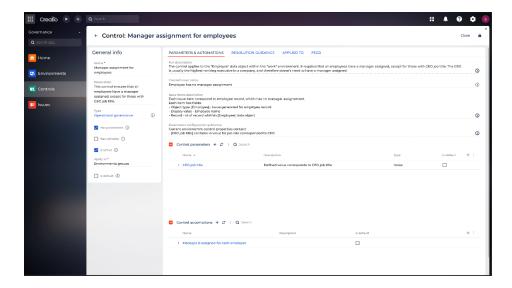
- Open issues number of issues with status "Open"
- Resolved issues Number of issues with status "Resolved"
- Issues by date (Production) represent dynamics of issue creation.
  - o New on which data, how many new issues found
  - o Resolved how many issues were resolved on a specific date
- Environments with connection issues number of Environments, which have issue with connections.
- Connected environments number of Environments with success connection status
- Launched audits number of launched audits
  - Scheduled audits represent number of automatically launched audits within specific date
  - o Manually launched audit launch initiated by user.

# Implementation of control automations

# **Control: Manager assignment for employees**

Current control is custom, which is not provided as out of the box. The goal of current control is to make sure each employee of company has assigned manager. There is condition, that if Employee has CEO job title, no manager assignment needed.

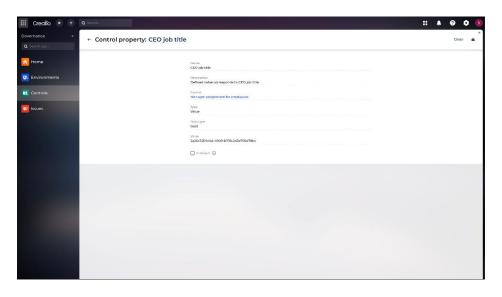
You can view all filled in details within control on a screenshot below.



#### On left area:

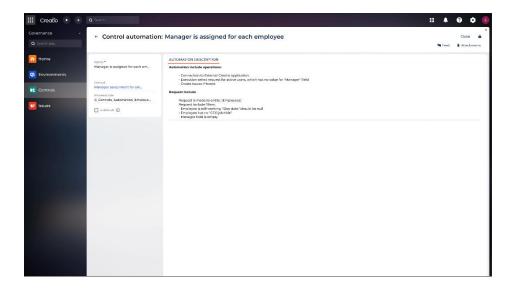
- "Has parameters" is checked, which means, that there is configurable parameter, value of which is used within automation. Details of controls parameters are listed under "parameters and automations" tab in "Parameters configuration guidance" field.
- "Has whitelist" is not checked, which means, that all issues could be resolved only, and there will be no option for whitelisting.
- "Apply to" is set to "Environments groups", which means that this control will applied only to Environments, which are specified under "Applied to" tab.

#### CEO job title parameter



• Value - is Id of job title, which correspond to CEO job title. This value is used within automation.

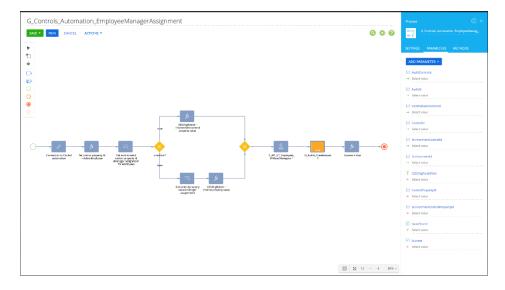
## **Control automation**



All details listed on a screenshot.

ProcessCode field contain value for Business process code.

## $Business\ process: G\_Controls\_Automation\_EmployeeManagerAssignment$



# **Business process parameters**

Business process will be called during automation execution. It's important to add parameters.

Input:

AuditId

- AuditControlId
- ControlAutomationId
- ControlId
- EnvironmentControlId
- EnvironmentId

#### Output:

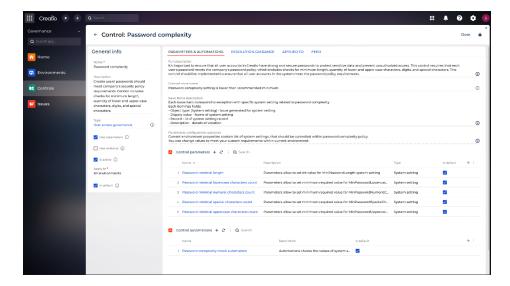
Success

#### **Elements of business process:**

- Connect to Control automation connects business process log to automation record.
- Set control property Id sets an Id for control property, which was described above.
- Get environment control property Id get's id of control property within Environment. Each control property is assigned separately to Environment.
- Is Custom split flow if "Is custom" value is set for current Environment
  - o If not custom set's value from "control property"
  - o If custom set's value from "environment control property"
- G\_API\_UT\_Employees\_WithoutManagers executed custom user task, which returned a collection of Employees with control violation
- G\_Audits\_CreateIssues runs business process, which will created issues for found employees.
- Success = true set's success value.

It's important to implement business process as sequential process and "Run in background" shouldn't be used. Main back-end logic waits for Success parameter. And if it's not set - control status will be set as "Not passed". In case "Run in a background" will be used in any element before Success will be set - automation will allayed receive false value and control will be "Not passed"

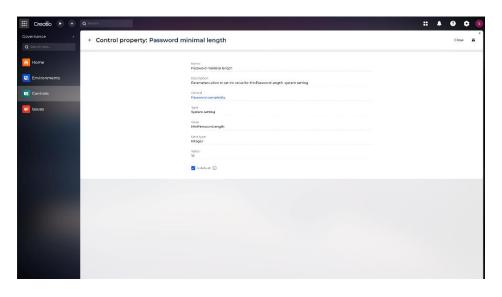
# **Control: Password complexity**



#### On left area:

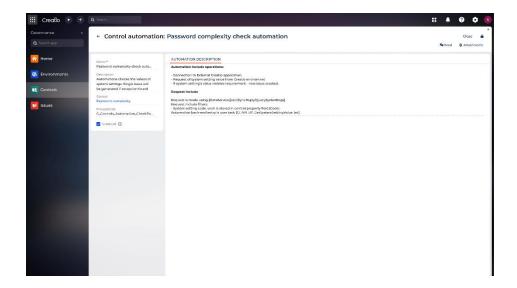
- "Has parameters" is checked, which means, that there is configurable parameter, value of which is used within automation. Details of controls parameters are listed under "parameters and automations" tab in "Parameters configuration guidance" field.
- "Has whitelist" is not checked, which means, that all issues could be resolved only, and there will be no option for whitelisting.
- "Apply to" is set to "All environments", which means that control will be executed for all Environments.

#### Control property: password minimal length

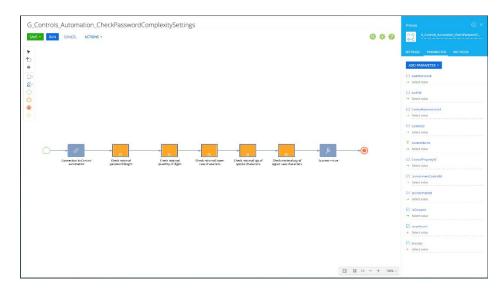


Value as 10 symbols is set for password minimal length

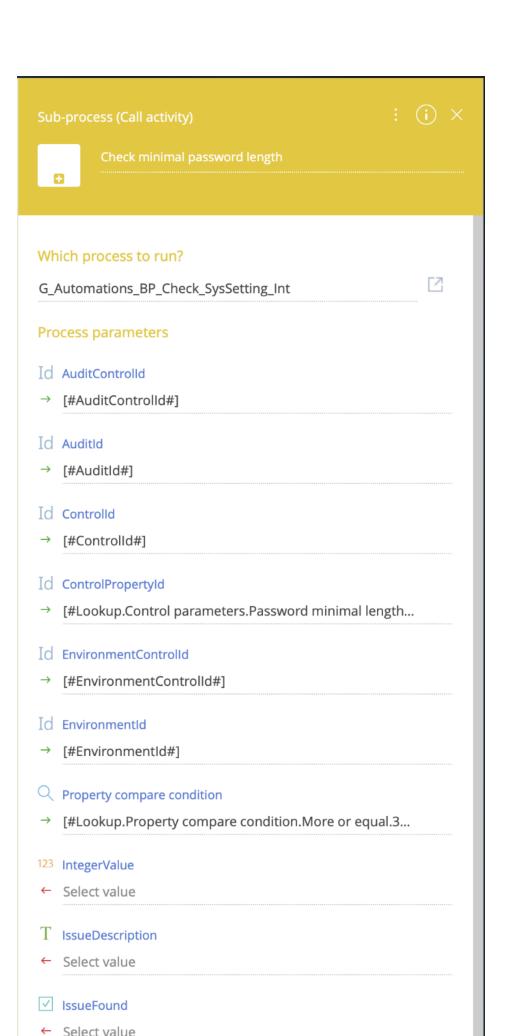
#### **Control automation**



#### Business process:



Within business process, sub-process is called to check each parameter.



G\_Automations\_BP\_Check\_SysSetting\_Int - business process provided out of the box, that allows to check Integer system settings.

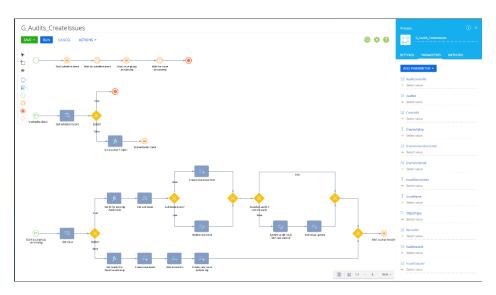
- ControlPropertyId value for control property
- Property compare condition lookup field, which allows to set condition of property compare.

Overview of current business process will be provided later in manual under **Common business** processes for automations

# **Common business processes for automations**

# **Business process: G\_Audits\_CreateIssues**

Current business process is used for handing issue creation.



### **Process parameters**

# **Process** G\_Audits\_CreateIssues SETTINGS PARAMETERS METHODS ADD PARAMETER ▼ Id AuditControlld → Select value Id AuditId → Select value Id Controlld → Select value T DisplayValue → Select value Id EnvironmentControlld → Select value Id EnvironmentId → Select value T IssueDescription

→ Select value

T IssueName

Listed input parameters are required for issue creation handling.

- AuditControlId Id audit control record
- AuditId Id of audit record
- Controlld Id of executed control
- DisplayValue Each issue has display value field, for example if some SysSetting has issue, name of SysSetting could be used.
- EnvironmentControlId Id of environment control record
- EnvironmentId Id of environment record
- IssueDescription short description of issue
- IssueName name of created issue
- ObjectType type of object for found violation. For example it could be name of data object, system setting, system operation and more.
- RecordId Id of record, which violates control

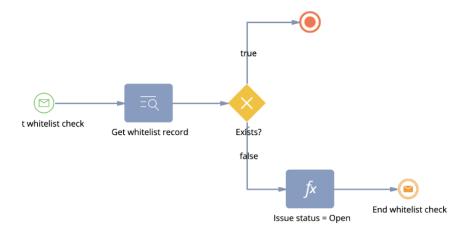
Output parameters used only within process.

#### **Process flows**



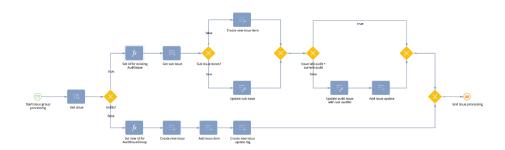
This flow is used to separate process logic and make it more readable:

- Start whitelist check starts check of whitelist inclusion
- Wait for whitelist check waits for finish of whitelist inclusion
- Start issue group processing starts flow for actual issue creation
- Wait for issue processing waits for finish of issue creation



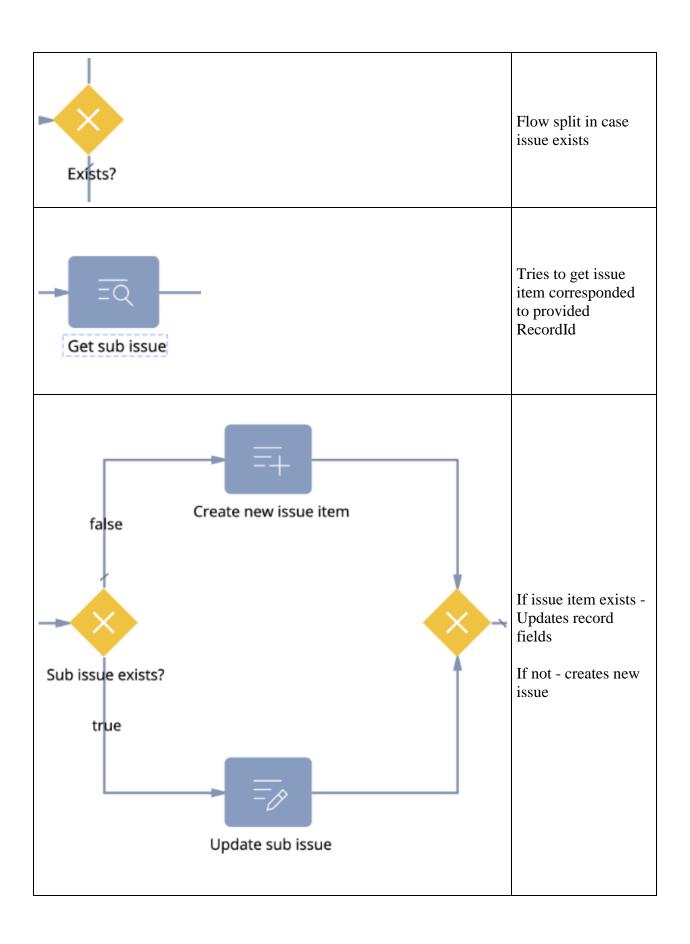
#### This flow is used for whitelist check:

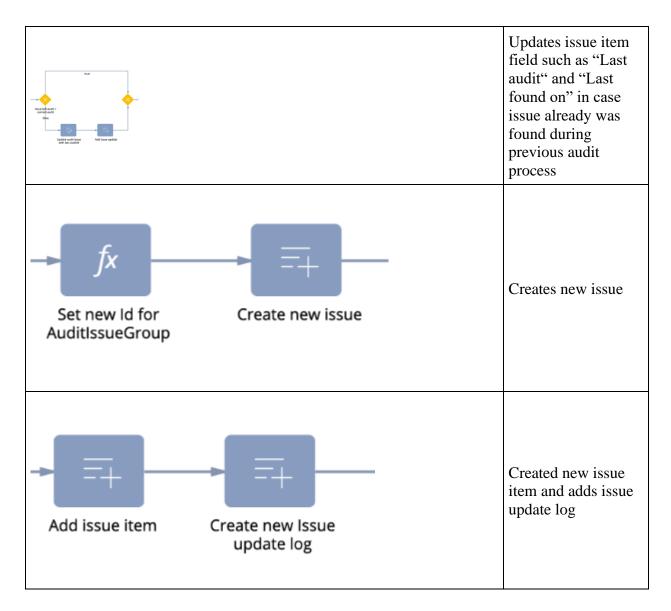
- Get whitelist record checks, if record is added to whitelist
- Exists checks if record exists
  - o If Exists > terminate process
  - o If not > Sets issue status to open



#### This flow is executed for actual issue creation

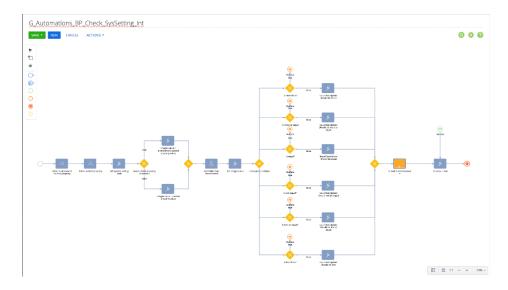
	Element	Description
Get issue		Tries to get open issue it for control and environment





# **Business process:**

 $G\_Automations\_BP\_Check\_SysSetting\_Int$ 



**Business process parameters** 

# Process







← Select value

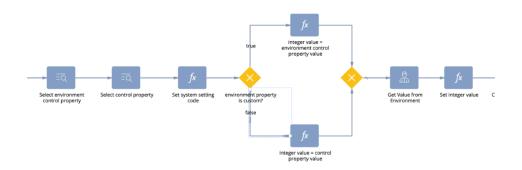
O Y	_Automations_br_c	meck_syssetting_int
<u></u> ⊚←∐		
SETTINGS	PARAMETERS	METHODS
Id AuditCor	ntrolld	
→ Select va	lue	
Id Auditld		
→ Select va	alue	
Id Controlle	b	
→ Select va	alue	
***************************************		
Id ControlP	ropertyld	
→ Select va	alue	
Id Environn	nentControlld	
→ Select va	lue	
Id Environn	nentld	
→ Select va	lue	
Property	compare condition	
→ Select va	lue	
123 IntegerV	alue	

#### Input parameters are required:

- AuditControlId Id of audit control record
- AuditId Id of audit record
- ControlId Id of control record
- ControlPropertyId Id of control property record
- EnvironmentControlId Id of environment control record
- EnvironmentId Id of environment record
- Property compare condition lookup value of how int value of system setting should be checked

Output parameters used within a process.

## **Process flow for getting values**



Element	Description
Select environment control property	Selects Environment control property
	Select control property

F Na Action of the Steman	Sets system setting code for process parameter
The Account of Maries	Depending on customisation of control property - sets it's value
The American States	Gets system setting value and set's it's value to process parameter
The second and delegate	Depending on set value for parameter "Property compare condition" runs scenario and generates issue description
(F) the part of the Brown	If issue found - generates issue
(F) the second of distance	Terminates a process

# **Development documentation**

# Package: G\_General

Package implements common back-end logic used across application.

# **Objects**

Name	Description
G_AllDataTypes	Implements virtual data object with all Creatio data types. Used as parent object for control properties

#### **User tasks**

Name	Description
G_UT_SetGlobals	Used to store system setting values and user session in memory

#### **Data**

Name	Description
SysSettings	Used for installation of system settings.
SysSettingsValue	Used for installation of system settings value

# Package: G\_Creatio\_API

Package implements back-end API for Creatio platform. Contains user tasks and c# code for calling external application

#### **User tasks - default controls**

List of user tasks for default control implementation

Name	Description
G_API_UT_GetSysAdminUsers	Returns list of users with system administration rights
G_API_UT_GetSystemSettingValue_Int	Returns int value for system setting code
G_API_UT_GetUsersWithExportPermissions	Returns list of users with global export permissions

#### **User tasks - custom controls**

Useful for designing custom controls. Provided as examples for custom controls implementation

Name	Description
G_API_UT_Employees_GetCEOWithManagers	Returns list of employees with CEO title, who has manager assigned. Currently used by custom control
G_API_UT_Employees_WithSelfManagers	Returns list of employees, who are self managed
G_API_UT_Employees_WithoutManagers	Returns list of employees, who has no manager and who's job title is not CEO
G_API_UT_GetActiveEmployeesWithDisabledUsers	Returns list of employees, who are employees, but their user is disabled
G_API_UT_GetDisabledEmployeesWithActiveUsers	Returns list of employees, who are fired, but their user is active
G_API_UT_GetUsersWithoutLDAP	Returns list of user, who doesn't have LDAP auth configured
G_API_UT_Users_GetTestUsers	Returns list of users, who recognised as test user

# **Package: G\_Environments**

Package implements back-end logic for interaction with Environment

# **Objects**

Name	Description
G_Environments	Main object for Environments data
G_EnvironmentGroups	Lookup for managing environment groups
G_EnvironmentStageType	Lookup for managing stages.
G_EnvironmentConnectionStatuses	Lookup for environment connection statuses
G_CreatioVersions	Lookup for Creatio environment version

#### Data

Name	Description
G_EnvironmentConnectionStatuses	Data for Environment connection statuses
G_EnvironmentStageType	Data for Environment stage types

## User tasks

Name	Description
G_ConnectToCreatio_UT	Connects to Creatio environment and saves auth data to memory for reuse in control automations
G_RemoveAccessInfo_UT	Removes auth data for Creatio environment from memory

# **Business processes**

Name	Description
G_BP_Connect_To_Creatio_Site	Handles connection to Environment, used while creation of new environment or audits execution
G_BP_Environments_Connect	Is sub process. Deletes all data in objects for specified Environment
G_Environment_BP_ClearAllData	Allows to clear all data within environment. Whitelists are not cleaned within current process

 $Business\ process:\ G\_BP\_Connect\_To\_Creatio\_Site$ 

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Parameters	:
To desire and on findinged	
	vironmentId - id of environment for connection ccess - defines, if connection was successful
Elements	
Element	Description
To the price and in deploymen	Sets global variables such as:
	<ul> <li>Data base operation limit - used for batch requests</li> <li>API limit - used to batch requests to external environment</li> </ul>
	<ul> <li>IsDebug - allows to set limits regardless of specified values for debug purposes</li> </ul>
To the point set to deliver.	
	Allows to establish connection to external environment. Saves auth data to memory for reuse within control automations
(T) The printer sent for description	Set's value for Success parameter from "Connect to Creatio environment" user task
T The galaxies and he displayed.	F - Account of Assault
	Updates last success connection data in Environment object
(F) The galaxies send to displayed.	(F based on the base)
	Sets Error status to environment
Business <sub>I</sub>	process: G_BP_Environments_Connect

The policy conflict degrees.

Parameters			
To No John Galleri.			
• La	vironmentId is set from manual operation or as internal BP stConnectedOn - date for las connection to Environment	parameter	
Elements			
Element	Description		
To the point and in respiral.	[F Name and American American		
	Initiates business process, if new Environment created		
To the policy and in displayed.	F vaccine frame		
	Initiates business process if credentials updated		
(F) To price and in displayed.	Used for manual launch of connection procedure from UI		
(F* To price set in diployed.	F Variance of Annual Contract		
T The produce and in displayed.			
	Removes connection data from application memory		
Business <sub>1</sub>	process: G_Environment_BP_ClearAllData		
Deletes da	ta for Environment within current package		
T Was also over Millions.			