



Process Governance

MODELING CONVENTIONS FOR AUTOMATION

Version 9.8 – Service Release 4

April 2016

This document applies to ARIS Version 9.8 and to all subsequent releases. Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

Copyright © 2010 - 2016 [Software AG](#), Darmstadt, Germany and/or Software AG USA Inc., Reston, VA, USA, and/or its subsidiaries and/or its affiliates and/or their licensors.

The name [Software AG](#) and all Software AG product names are either trademarks or registered trademarks of [Software AG](#) and/or Software AG USA Inc. and/or its subsidiaries and/or its affiliates and/or their licensors. Other company and product names mentioned herein may be trademarks of their respective owners. Detailed information on trademarks and patents owned by Software AG and/or its subsidiaries is located at <http://softwareag.com/licenses>.

Use of this software is subject to adherence to Software AG's licensing conditions and terms. These terms are part of the product documentation, located at <http://softwareag.com/licenses> and/or in the root installation directory of the licensed product(s).

This software may include portions of third-party products. For third-party copyright notices, license terms, additional rights or restrictions, please refer to "License Texts, Copyright Notices and Disclaimers of Third Party Products". For certain specific third-party license restrictions, please refer to section E of the Legal Notices available under "License Terms and Conditions for Use of Software AG Products / Copyright and Trademark Notices of Software AG Products". These documents are part of the product documentation, located at <http://softwareag.com/licenses> and/or in the root installation directory of the licensed product(s).

Contents

1	Text conventions.....	1
2	Modeling conventions for process automation	2
3	What objects and symbols are relevant to Process Governance?	3
3.1	Events.....	3
3.2	Event (process instance started).....	3
3.3	Event (process instance terminated)	4
3.4	Timer event	4
3.5	Functions.....	4
3.6	Automated task.....	5
3.7	Human task	6
3.8	Notification	8
3.9	Live message	8
3.10	Operators	9
3.11	Organizational elements	9
3.12	Other	11
4	What models are relevant to Process Governance?	12
4.1	Value-added chain diagram.....	12
4.2	EPC - Process flow	12
4.3	EPC - Additional information for process flow	13
4.4	Application system type diagram	14
4.5	Access diagram	15
4.6	IE Data model.....	15
4.7	Organizational chart.....	16

1 Text conventions

Menu items, file names, etc. are indicated in texts as follows:

- Menu items, key combinations, dialogs, file names, entries, etc. are displayed in **bold**.
- User-defined entries are shown **<in bold and in angle brackets>**.
- Single-line example texts (e.g., a long directory path that covers several lines due to a lack of space) are separated by ↵ at the end of the line.
- File extracts are shown in this font format:

This paragraph contains a file extract.

- Warnings have a colored background:

Warning

This paragraph contains a warning.

2 Modeling conventions for process automation

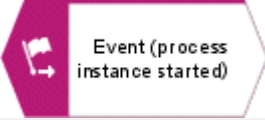
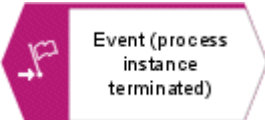


The purpose of these modeling conventions is to ensure that specific rules are observed during the creation of models for process automation. This ensures, for example, that all required items and information are available so that the automatic transformation of a BPM process into a BPMN diagram can run smoothly.

3 What objects and symbols are relevant to Process Governance?

The following tables list the object types/symbol types that are interpreted by Process Governance.

3.1 Events

More symbols and attributes than those listed here may exist for the object type. But Process Governance only interprets the ones listed. The attributes for Process Governance are contained in the **Process automation** attribute type group.

Symbol shape/ Symbol name	Description	Attributes (process automation)
 Event (process instance started)	Triggers automation and generates the process instance.	No attributes for process automation
 Event (process instance terminated)	Terminates the process instance.	No attributes for process automation
 Timer event	Delays the next process step until the specified Process Governance time.	No attributes for process automation
 Event	Describes the status.	No attributes for process automation

3.2 Event (process instance started)

In an EPC, the following modeling conventions must be observed for the event with the **Event (process instance started)** symbol:

- The EPC assigned to the function in the superior value-added chain diagram must have exactly one event with the **Event (process instance started)** symbol.
- The **Event (process instance started)** symbol may only be modeled once in an Process Governance process.

3.3 Event (process instance terminated)

In an EPC, the following modeling conventions must be observed for **Event (process instance terminated)**:






- **Event (process instance terminated)** terminates the process instance.
- In the entire Process Governance process, there must be at least one **Event (process instance terminated)**.
- The process can continue to run after **Event (process instance terminated)** if, for example, steps follow that are not relevant to Process Governance.


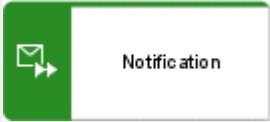
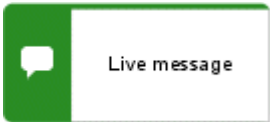


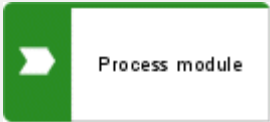
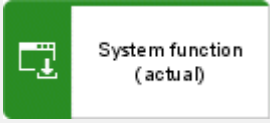

3.4 Timer event

An event can depend on a certain point in time. In this case, the object of the **Timer event** type must be used and the **Date** attribute must be assigned to this event in the data flow.

3.5 Functions

More symbols and attributes than those listed here may exist for the object type. But Process Governance only interprets the ones listed. The attributes for Process Governance are contained in the **Process automation** attribute type group.

Symbol shape/ Symbol name	Description	Attributes (process automation)
 	<p>The process assigned to this function triggers the automation and generates the process instance. There is one symbol for opening the process and one symbol for closing it.</p>	No attributes for process automation
 	<p>The process assigned to this function is supported by Process Governance. There is one symbol for opening the process and one symbol for closing it.</p>	No attributes for process automation
	<p>If the task is ready for editing, it is displayed to the executor in charge in ARIS Process Board. The user can call the dialog and perform the task.</p>	No attributes for process automation

Symbol shape/ Symbol name	Description	Attributes (process automation)
 Automated task	If a task is to be processed, a software service operation type is called, e.g., an ARIS Web service. No action by a user is required.	No attributes for process automation
 Notification	If the relevant person is to be notified, an e-mail is automatically sent to the persons defined as notification recipients in the process model.	No attributes for process automation
 Live message	If the user that triggered the process instance is to be notified, a message is automatically displayed in ARIS.	No attributes for process automation
 Detailed task	Used for the interpretation of the assigned EPC by Process Governance.	No attributes for process automation
 Process interface	Relevant to the superior EPC or value-added chain diagram. Defines which processes belong to the continuous Process Governance process.	No attributes for process automation
 Process module	All other function symbols can be used in value-added chain diagrams/ EPCs. They are relevant to Process Governance if they are assigned a data flow diagram in an EPC.	No attributes for process automation
 System function (actual)		
 Function		

3.6 Automated task

In an EPC, each function of the **Automated task** symbol type must be linked with a single Software service operation type via the **supports** connection.

3.7 Human task

In an EPC, the following modeling conventions must be observed for functions of the **Human task** type:

- A single dialog is assigned.
- It can be linked to a maximum of one information carrier of the **E-mail** symbol type via the **provides input for** connection.

If no e-mail has been modeled, no e-mail is sent, but the task to be performed is still displayed as a task in ARIS Process Board.

Various options exist for assigning human tasks to an executor.

ASSIGNMENT WITH ORGANIZATIONAL ELEMENTS AND THE CONNECTION 'CARRIES OUT'

The human task must be linked to a single automation-relevant organizational element by the **carries out** connection. Possible organizational elements for this are Person, Role, and Organizational unit.

Organizational elements of the **Role** or **Organizational unit** type must be assigned at least one user who is activated for process automation, unless the **Commit employee** attribute is set and/or a predefined user exists.

If a human task is assigned an organizational element of the **Person** type, the user must be activated for process automation.

If no active user is found the escalation manager is notified by e-mail. If no escalation manager is defined the human task receives the status **Failed**.

You can optionally specify the **Executor selection** and **Commit employee** attributes at the **carries out** connection. The default values are **Only one required** and **Same executor(s) required (commit employee)**.

It is possible in the data flow to assign other data that will, however, overwrite the assignment of the organizational element described above. This should be avoided unless the **Executor selection** attribute at the **carries out** connection has the value **All from preselection**.

ASSIGNMENT USING THE 'COMMIT EMPLOYEE' ATTRIBUTE

The attribute value for all human tasks within a process instance, which are assigned to the same organizational element (**Role** or **Organizational unit**), must be specified with either **Commit employee** or **Segregation of duties**. Only the attribute value **No policy** can be combined with one of the other attribute values within an instance.

SAME EXECUTOR(S) REQUIRED (COMMIT EMPLOYEE)

The **Commit employee** attribute with the value **Same executor(s) required (commit employee)** is considered only if the value **Only one required** is selected for the **Executor selection** attribute. This corresponds to the default settings.

It ensures that the user who is editing the first task of the process instance also performs all further tasks. Only then do the tasks receive the status **Completed**. Nevertheless, these tasks can be passed on to other executors in ARIS Process Board (delegate, specify substitution).

Example

The first task in a process instance is assigned to the **QM** user group, i.e., all persons assigned to this organizational element in the organizational chart can edit the first task. The user Peter Sonntag edits the first task. Therefore, all other tasks in this process instance are assigned to him.

OTHER EXECUTOR(S) REQUIRED (SEGREGATION OF DUTIES)

If segregation of duties is specified for the tasks of a process instance the tasks must be carried out by different executors. To ensure this, from the second human task in a process instance, the executor who already carried out a task in the process instance is excluded from execution. However, it is possible to pass on (delegate) the tasks in ARIS Process Board to an executor who has already carried out a task in the process instance.

NO POLICY

Tasks whose **Commit employee** attribute has the value **No policy** can be carried out by all executors assigned via the organizational element.

If a sequence of tasks, for which **Commit employee** is specified, is interrupted by a task with the attribute value **No policy**, the next task with resource commitment is handled as if it were the first task in the process instance. This means that the task can be carried out again by any user of the assigned group, and the resource commitment is specified again for the subsequent tasks.

Example

There are four tasks in a process instance, all of which are assigned to the **QM** user group to which Peter Sonntag and Frank Braun belong. The first task can be carried out by both. Peter Sonntag carries out the task, for which **Commit employee** and **Only one required** are specified, first. Therefore, the second task is assigned to him, as well. No policy is specified for the third task. This means that both persons are assigned for execution again. This time, Frank Braun is faster and thus is assigned the fourth task, as well.

ASSIGNMENT VIA THE DATA FLOW WITH THE ATTRIBUTE 'LOGIN OF THE PREDEFINED EXECUTOR'

With this attribute, the first executor of tasks in a process instance can be specified. If, in addition, the value **Same executor(s) required (commit employee)** is specified for the attribute **Commit employee**, the employee is specified for the entire instance.

This predefined executor must be activated for process automation and belong to the organizational element (**Role** or **Organizational unit**) that is assigned to the human task. The value **Only one required** must be selected for the **Executor selection** attribute. If these conditions are met, all other persons in this organizational element are not assigned any human tasks in this process instance.

3.8 Notification

In an EPC, the following modeling conventions must be observed for functions of the **Notification** type:

- It is linked to exactly one information carrier of the **E-mail** symbol type via the **provides input for** connection.
- It is linked to at least one organizational unit or role by the **must be informed about** connection.
- You must specify at least the following attributes for the e-mail:
 - **Subject**
 - **Text**

3.9 Live message

It allows information to be sent within ARIS and not via the e-mail system. A user who has started a governance process does not need to exit ARIS and switch to another application in order to display messages. In an EPC, the following modeling conventions must be observed for the **Live message** function.

MODELING WITH AN INFORMATION CARRIER

In this case, the following applies for a function of the **Live message** symbol type:

- It is linked to a maximum of one information carrier of the **E-mail** symbol type via the **provides input for** connection.
- You must specify at least the following attributes for the e-mail:
 - **Subject**
 - **Text**

MODELING WITHOUT AN INFORMATION CARRIER

In this case, the following applies for a function of the **Live message** symbol type: If no information carrier has been modeled, you must model the input data for the function of the **Live message** symbol type in the data flow. You can generate the information to be sent by a Web service, for example.

MODELING WITH ORGANIZATIONAL ELEMENTS

In this case, the following applies for a function of the **Live message** symbol type:





- It is linked to at least one automation-relevant organizational unit by the **must be informed about** connection. Automation-relevant means that these are organizational elements that the convention (Page 9) allows.
- The attributes **Only inform people involved** and **Send e-mail notification as ...** should be specified at the **must be informed about** connection.

If attributes are not specified, the default values are used, in other words:

- The **Only inform people involved** attribute value is **Yes**.
- The **Send e-mail notification as ...** attribute value is **Recipient**.

3.10 Operators


More symbols and attributes than those listed here may exist for the object type. But Process Governance only interprets the ones listed. The attributes for Process Governance are contained in the **Process automation** attribute type group.

Symbol shape/ Symbol name	Description	Attributes (process automation)
 XOR rule	Exactly one of the possible process paths must be followed.	No attributes for process automation
 AND rule	All outgoing process paths must be followed.	No attributes for process automation
 OR rule	At least one of the possible process paths must be followed.	No attributes for process automation
 Termination rule	The first process instance specifies the further procedure. All instances that follow are therefore deleted. Example Two persons are modeled in parallel as decision makers. If one person has made a decision, the following decision is deleted.	No attributes for process automation

3.11 Organizational elements

More symbols and attributes than those listed here may exist for the object type. But Process Governance only interprets the ones listed. The attributes for Process Governance are contained in the **Process automation** attribute type group.

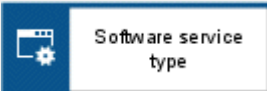
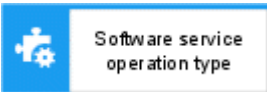
Compared to ARIS version 7.2, there are now only users and user groups in ARIS Administration and no longer any organizational units. When creating an executable process, organizational units are mapped to groups (roles). The escalation relationship from the organizational chart remains unchanged and is represented in ARIS Administration by the corresponding user group (instead of an organizational unit). The method term **Role** has been renamed to **User group**.

Symbol shape/ Symbol name	Description	Attributes (process automation)
 Organizational unit	Combines the task performers of the manpower. Organizational units are the performers of the tasks required to attain the business objectives.	External user (group) ID
 Group	Represents a grouping of employees/persons collaborating for a certain period of time in order to perform specific tasks (as a project group), for example.	External user (group) ID
 Position	The smallest identifiable organizational unit in a company. The responsibilities and authorities are specified in the relevant job description.	External user (group) ID
 Role	Represents a typification of individual employees who have the same properties, such as privileges or responsibilities.	External user (group) ID
 Internal person	Represents a specific employee of a company who can usually be identified by a personnel number.	<ul style="list-style-type: none"> ▪ E-mail address ▪ External user (group) ID ▪ Login ▪ First name ▪ Last name ▪ Process Governance administrator

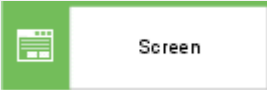
3.12 Other

More symbols and attributes than those listed here may exist for the object type. But Process Governance only interprets the ones listed. The attributes for Process Governance are contained in the **Process automation** attribute type group.


APPLICATION SYSTEM TYPE/IT FUNCTION TYPE

Symbol shape/ Symbol name	Description	Attributes (process automation)
	Assigns software service operation types to the source code to run the IT operation.	No attributes for process automation
	Connects automated tasks to the source code to perform the task.	Script ID


DIALOG

Symbol shape/ Symbol name	Description	Attributes (process automation)
	A human task can only be performed if it is connected to a dialog.	No attributes for process automation

CLUSTER/DATA MODEL

Symbol shape/ Symbol name	Description	Attributes (process automation)
	All relevant data objects are represented by clusters.	<ul style="list-style-type: none"> ▪ Type ▪ Variable context (system, process, process instance)

INFORMATION CARRIER

Symbol shape/ Symbol name	Description	Attributes (process automation)
	If a task is generated for a user, the user receives a corresponding notification by e-mail, if this has been modeled. E-mails can also be sent to pass on information.	<ul style="list-style-type: none"> ▪ Subject ▪ Text

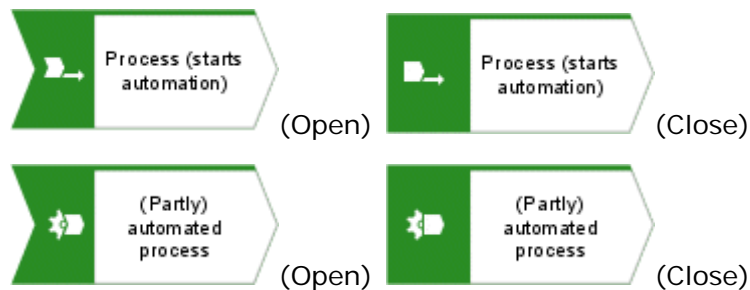
4 What models are relevant to Process Governance?

The following tables list the model types that are interpreted by Process Governance.

4.1 Value-added chain diagram

More symbols and connections may exist for the model other than those listed here. Process Governance only interprets the following symbols. The attributes for Process Governance are contained in the **Process automation** attribute type group.

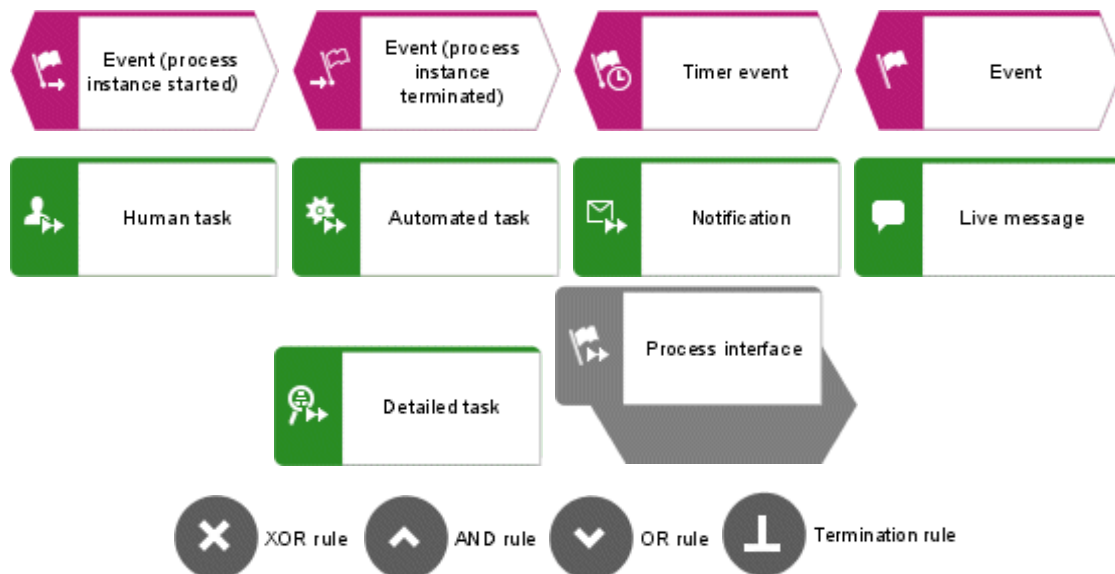
The value-added chain diagram only interprets symbols, and not connections.



4.2 EPC - Process flow

All connections describing the chronological sequence are allowed.










More symbols and connections may exist for the model other than those listed here. Process Governance only interprets the following symbols. The attributes for Process Governance are contained in the **Process automation** attribute type group.



4.3 EPC - Additional information for process flow

More symbols and connections may exist for the model other than those listed here. Process Governance only interprets the following symbols. The attributes for Process Governance are contained in the **Process automation** attribute type group.



Source symbol	Connection	Target symbol	Connection attributes (process automation)
 Screen	creates	 Event (process instance started)	No attributes for process automation
 Organizational unit  Group  Position  Role	carries out	 Human task	<ul style="list-style-type: none"> ▪ Executor selection <ul style="list-style-type: none"> ▪ Only one required ▪ All from preselection ▪ All required ▪ Voting ▪ Commit employee
 Human task	is escalated to	 Position  Role	No attributes for process automation
 Screen	represents	 Human task	No attributes for process automation
 E-mail	provides input for	 Human task	No attributes for process automation
 Software service operation type	supports	 Automated task	No attributes for process automation

Source symbol	Connection	Target symbol	Connection attributes (process automation)
 Organizational unit  Group  Position  Role	must be informed about	 Notification	<ul style="list-style-type: none"> ▪ Only inform people involved ▪ Send e-mail notification as <ul style="list-style-type: none"> ▪ Recipient ▪ Cc ▪ Bcc
 Notification	provides input for	 E-mail	No attributes for process automation
 Live message	provides input for	 E-mail	No attributes for process automation

4.4 Application system type diagram





More symbols and connections may exist for the model other than those listed here. Process Governance only interprets the following symbols. The attributes for Process Governance are contained in the **Process automation** attribute type group.

The service library is defined in the application system type diagram.

Source symbol	Connection	Target symbol	Connection attributes (process automation)
 Software service type	encompasses	 Software service operation type	No attributes for process automation

4.5 Access diagram

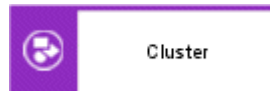
More symbols and connections may exist for the model other than those listed here. Process Governance only interprets the following symbols. The attributes for Process Governance are contained in the **Process automation** attribute type group. The service library is described in detail in the access diagram.

Source symbol	Connection	Target symbol	Connection attributes (process automation)
 Cluster	is input for	 Software service operation type	No attributes for process automation
 Software service operation type	has as output	 Cluster	No attributes for process automation

4.6 IE Data model


More symbols and connections may exist for the model other than those listed here. Process Governance only interprets the following symbols. The attributes for Process Governance are contained in the **Process automation** attribute type group.

Only the **Cluster** symbol is interpreted in the IE Data model. No connections are interpreted. The IE Data model is used to model a variable catalog.



4.7 Organizational chart

More symbols and connections may exist for the model other than those listed here. Process Governance only interprets the following symbols. The attributes for Process Governance are contained in the **Process automation** attribute type group.

	 Organizational unit	 Group	 Position	 Role	 Internal person
 Organizational unit	is superior	is assigned to	is composed of	is composed of	---
 Group	---	is superior	is composed of	is composed of	---
 Position	is organization manager for	is organization manager for	---	occupies	occupies
 Role	is organization manager for	is organization manager for	---	---	is generalization of
 Internal person	---	---	---	---	---