Crystal Computing

Smart Actions

Administrators Guide

Version: 3.44.0

Crystal Computing   Smart Actions Administrators Guide

About Crystal Computing Solution Limited

Founded in 2011, Crystal Computing is an IBM Business Partner specialising in the IBM OpenPages platform.

Our consultants have many years of multi-project, multi-client OpenPages implementation experience covering all aspects of the platform including configuration and customisation.

Our goal is to be partner of choice to help plan, build, and implement your OpenPages solution.

For more information please email your enquiry to Crystal Computing at info@ccsl.uk.com, visit the website www.ccsl.uk.com or call Ian Sankey on +44 (0) 7782 379773.

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1 Introduction

OpenPages is a deeply configurable application providing the ability to configure Object Types, Data Fields, Views, Workflow, Calculations, and many other elements to build an end-client solution.

But sometimes, configuration isn't enough to implement everything you require.

That is when custom code is often considered.

Smart Actions provide another option instead of custom code.

Smart Actions are a toolkit of OpenPages activities that can be easily automated and tied into key business processes.

Examples of problems that can be solved in just a few hours include:

- Send Users a weekly summary email of their OpenPages data (e.g., Issues due completion, risks due rating).
- Disable User accounts that have been Inactive for more than X months.
- Copy Library Risks to all RCSAs where the Risk is not already present.
- Move records to a new business area or Archive.
- Hard Delete archived data after XX years.
- Rename a Business Entity record (without using the existing off-line tool).

Smart Actions are a good candidate to solve OpenPages related problems that can be described as "I want XXX to happen, automatically".

2   Version Information

Date	Version	Details
2023/09/09	1.20.0	Initial Commercial Release
2023/09/16	1.20.1	Minor Bugfixes and improvements
2023/09/30	1.22.0	See What's New
2023/10/31	1.23.0	See What's New
2024/01/31	2.25.0	See What's New
2024/05/31	2.30.0	See What's New
2024/10/31	2.37.0	See What's New
2025/04/30	3.40.0	See What's New
2025/04/30	3.40.1	See What's New
2025/11/14	3.44.0	See What's New

2.1   What's New

Version	Details
1.20.1	NEW: Email User Smart Action has improved currency field value formatting NEW: Improve clarity in Schedule Logs when Override Email parameter is being used NEW: Reordered parameters in User Email Smart Action for easier use in some use-cases NEW: Added new unused placeholder parameter in the Create Record Smart Action - will prevent breaking changes in later versions FIX: Incorrect error message when ReportName parameter not found FIX: User Email Smart Action fails when last 3 optional parameters are missing
1.22.0	NEW: New Smart Action: Run Schedule, providing capability to execute multiple OpenPages schedules consecutively (I018) NEW: New Smart Action: Update User, providing capability to amend a User Records Email Address & Description fields NEW: Capability to reference a newly created record in a subsequent Smart Action command in the same report using the tag [$SMARTACTION_ID$] in the parameters REV: Smart Actions Update Record & Create Record now allow updating of System Fields:Location to refolder a record (I024) FIX: Setting fields to blank values was being ignored, this can now be achieved by specifying the value [$BLANK$] FIX: Setting Date fields in Update Record, Create Record, Attach Repot Smart Actions not working correctly with date value column passed in from Cognos Report FIX: Associate Records and Disassociate Records Smart Actions showed incorrect child record details in the scheduler log output FIX: Added a short 10s delay after running the Run Schedule Smart Action to allow data changes to be flushed to disk before the next Schedule report is run

Version	Details
1.23.0	NEW: New Smart Action: Show Message, providing capability for a report to return a message and optionally stop the schedule - can be used for data quality validation smart schedules. NEW: Capability to run multiple Cognos Reports from one Smart Action Schedule with each running consecutively and stopping if there is an error. NEW: Capability for failed Smart Action schedule to email a support contact for investigation and/or for a successful schedule to email support contact REV: Smart Action Create Record can now handle the OpenPages V9 Title field utilising the previously reserved Unused Parameter (param 4) REV: Smart Action Create Record can create non-autonamed records using a new "name" parameter REV: Smart Action Associate Records has a new optional parameter to ignore any associations failure such as when the records are already associated together. REV: Improved logging of how many Smart Actions commands have been / are still left to be executed REV: Improved logging when >10,000 Smart Action commands are to be executed. Switches to summary mode instead of logging individual command outputs REV: Improved overall job percent complete tracking, schedule information percent complete should now be accurate FIX: Updating an invalid field name was showing as successful instead of generating an error in Smart Actions: Create Record, Update Record, Attach Report FIX: Updating an Enumeration field with [$BLANK$] was being ignored instead of clearing out the field. FIX: Updating an Enumeration field with an invalid value was showing as success but making no changes, instead of generating an error FIX: Smart Action Run Schedule was reporting failure (even though it was successful) on some slow systems due to a timing issue
2.25.0	NEW: New Launcher for Smart Actions : Workflows - providing capability to execute Smart Actions from a Workflow. Supports either a Single Smart Action or a Cognos Report returning many Smart Actions NEW: New Smart Action : Create User, providing capability to create new OpenPages user accounts including provisioning with Profiles/Groups/Role Assignments NEW: New Smart Action : Terminate Workflow, providing capability to terminate a running workflow on a GRC record NEW: Expand ways of specifying record IDs. As well as just the ID of a GRC Object, can now specify using a Full Path, Relative Path or just an Object Name REV: Move Record Smart Action returns a more friendly error message if attempting to move a record to its existing parent record REV: The new Workflow Launcher requires the special values [$BLANK$] and [$SMARTACTION_ID$] to also be specifiable as [@BLANK@] and [@SMARTACTION_ID@] REV: Smart Action Update User can now amend a user's Password, Locale, Groups, Roles & Profiles FIX: Passing prompt values to Cognos Reports from schedule/workflow fixed for scenarios where the prompt is optional and no value is provided in schedule/workflow FIX: Minor tidy up of error messages to ensure consistent formatting.

Version	Details
2.30.0	**NEW:** New Smart Action : Admin Mode, providing capability to change the Admin Mode of the system to Yes/No
	NEW: New Smart Action : Update Setting, providing capability to change an application setting value via a Smart Action
	NEW: New Smart Action : Refresh Workflow, providing capability to refresh a running workflow, updating the Due Date, Assignees, Subscribers & Criticality
	NEW: New Smart Action : Anonymize User, providing capability to anonymize the details of an OpenPages User Account
	NEW: New Smart Action : Wait Schedule, providing capability to wait for the completion of a schedule that was previously started using Run Schedule and the new NOWAIT option
	NEW: Custom Smart Actions can be implemented by clients and used seamlessly with the built-in Smart Actions - see Developers Guide for details
	NEW: New Settings entries allow the location of the Smart Actions Admin Username/Password to be relocated for clients that already have suitable entries and don't want to duplicate them.
	REV: The Attach Report Smart Action can now handle Microsoft Excel XLSX format files as an output type from Cognos
	REV: The Run Schedule Smart Action can now specify NOWAIT in the scheduleMaxTime parameter to run the schedule and not wait for it to finish before moving on to process the next Smart Action
	REV: Special value[@NOW@] or [NOW] can now be used in any Smart Action where a field value is being set - format is always yyyy-MM-dd HH:mm:ss except for setting Date fields where only the date is set.
	REV: Revised date format of the existing [NOW] handling in the Attach Report Smart Action to be yyyy-MM-dd HH:mm:ss format instead of yyyy.MM.dd HH:mm:ss format for consistency
	REV: When specifying an Objects Record ID in any Smart Action, the Primary Parent of a record can be specified using PRIMARY modifier e.g. PRIMARY ID:101 would specify the Primary Parent of Resource 101.
	FIX: An invalid Licence key is generating message 'ERROR : Failed to set the report parameters (is the report name correct?)'. This message is incorrect and confusing.

Version	Details
2.37.0	NEW: Smart Action commands in an XLSX spreadsheet uploaded to OpenPages can now be executed allowing scripting of bulk operations such as Business Entity reorgs
	NEW: New Smart Action : Generate Framework, providing capability to regenerate all or selected frameworks. Includes ability to set the framework datasource to a different Cognos Connection
	NEW: New Smart Action : Execute SQL, providing capability to execute any SQL statement against the OpenPages or an external database
	NEW: New Smart Action : Classify Watson, providing capability to classify one or more OpenPages Object fields using a Watson NLU AI Model
	NEW: New Smart Action : Train Watson, providing capability to initiate training of a new Watson NLU AI Model directly from within OpenPages - no more need to use Python scripts
	NEW: New Smart Action : Delete Watson, providing capability to delete a Watson NLU Model
	NEW: New Smart Action : Terminate Sessions, providing capability to force logout any or all active user sessions (will never force logout of OPSystem account or users in OPAdministrators group)
	NEW: New Smart Action : Allow Sessions, providing capability to enable/disable normal user logins except for an optional list of permitted users
	REV: Scheduler Launcher can now be configured to execute a single Smart Action Command (like the Workflow Launcher), removing the need to write a Cognos Report in simple configuration use-cases.
	REV: Smart Action Copy Record has an additional parameter to control the Auto Naming of child records of the record being copied.
	REV: Further expand ways of specifying record IDs, now Smart Actions will identify an ID, Name, Relative Path or Full Path automatically meaning you no longer need the NAME, RELPATH, FULLPATH specifiers.
	REV: Revised Workflow launcher so built-in Workflow Operations and Smart Action Operations can coexist when mixed as operations on the same Workflow Action
	FIX: Run Schedule Smart Action can return a failure even when the schedule that was run succeeded if the sub-schedule had previously failed.

Version	Details
3.40.0	**NEW:** Major Feature - New Smart Actions User Interface introduced in this release allowing enhanced organisation and control of Smart Actions scheduled jobs.
	NEW: Smart Action commands in an XLSX spreadsheet can now specify the tab name allowing one master spreadsheet to cover multiple business use-cases
	NEW: New Smart Action : Update Application Text, providing capability to update locale specific application text strings directly from Smart Action commands
	NEW: New Smart Action : Save Id, providing capability to save the record id of a newly created record for use (using [$SMARTACTION_SAVEID$] in later Smart Action commands - this Smart Action is FREE to all clients
	NEW: New Smart Action : Collect Logs, providing capability to collect the Application/Database Logs on a scheduled basis
	NEW: New Smart Action : Cancel Checkout, providing capability to remove the checked out status of a GRC record. E.g. for a SOXDocument prior to archiving/deleting
	REV: Smart Action Show Message now defaults to a FAILED status rather than SUCCESS, simplifying the most common use-case of generating Workflow Validation Errors
	REV: Improved Smart Actions Logging by having Log Level changes take effect immediately and no longer requiring an Application Server restart.
	REV: Improved DEBUG level logging messages for many Smart Actions
	FIX: Smart Action Run Schedule was reporting failure (even though it was successful) on some slow systems due to a timing issue. Previously fixed in V1.23.0 but new failure mode identified.
	FIX: Record ID parameters to Smart Actions Commands read from XLSX Smart Actions spreadsheets fail when the simple number format for a record ID is used
	FIX: Using Update Record Smart Action to blank out Date, Integer, Decimal & Currency field types using [@BLANK@] or [$BLANK$] fails
	FIX: Date fields in emails generated by the Email User Smart Action are in 'YYYY-MM-DD HH:MM:SS' format instead of just 'YYYY-MM-DD' format.
3.40.1	**REV:** Improve Smart Actions User Interface to allow Smart Action Scheduled Jobs to appear on multiple filter tabs
	FIX: Error when running new Cancel Checkout Smart Action
	FIX: Smart Actions User Interface not always ordering schedules on a tab correctly
	FIX: Create User Smart Action has Middle Name as a mandatory field - this should be optional
	FIX: Smart Actions via XLSX Spreadsheet; a blank cell as a command parameter causes later params to be shift left e.g. if P3 is blank then P4 becomes P3, P5 becomes P4 etc
	FIX: Unclear error message in Create User Smart Action if the user id to create already exists

Version	Details
3.44.0	NEW: Major Feature - Smart Actions User Interface can now quickly View and Download Application Server log files directly in the OpenPages User Interface
	NEW: New Smart Action : Run Calculations, run a specific OpenPages Calculation on all or specified objects
	NEW: New Smart Action : Create Folder, providing capability to create folders
	NEW: New Smart Action : Delete Folder, providing capability to delete folders
	REV: Improve Run Schedule Smart Action to better handles cases where MORE than 4 schedules are executed in parallel and OpenPages then queues them.
	REV: Improve Smart Actions User Interface to show the Job configuration parameters of a Smart Action Schedule in a new Job Parameters section of the UI
	REV: Improve Smart Action Terminate Sessions to allow the session termination of specific specified users instead of the default of force logging out all users
	REV: Improve Smart Action Disassociate Records, add ability to ignore errors if records are not already associated - mirrors existing capability in Associate Records
	REV: Improve Smart Action Unlock Record to add capability to optionally unlock the whole tree of child records
	REV: Improve Smart Action Move Record to add capability to optionally specify a conflict resolution method when records already exist at the move destination
	REV: Improve Smart Action Copy Record to add capability to optionally specify a conflict resolution method when records already exist at the copy destination
	REV: Improve Smart Show Message to better format the error message shown to the end-user when used in a Workflow
	REV: Improved error / debug logging messages for many Smart Actions
	FIX: An invalid Licence key error message is unclear for some varieties of invalid Licence Keys

Key: NEW = New feature, REV = Revised feature, FIX = Fixed feature

3   What is a Smart Action

A Smart Action is a software component that implements a discrete piece of OpenPages capability.

For example, there is a Smart Action to Disable an OpenPages User account - which simply needs to be told which user account to disable.

The power of Smart Actions lies in the ability to easily generate lists of Smart Actions to execute - each one with a separate set of data to operate on.

There are multiple ways to provide the Smart Actions Engine with the Smart Actions commands to execute:

- A Cognos Report is used to generate the list of Smart Actions to run - and can implement any business specific rules that are required.

  In the example above, the report could return a list of 'Disable User' Smart Action commands, one for each OpenPages User account you require to be disabled – perhaps these would be accounts with no logins for the last 6 months.

- An Excel Spreadsheet can be uploaded to OpenPages and the Smart Actions Engine can run that static list of Smart Actions commands.

- A single Smart Action command can be configured – this is the simplest method and although much more limited, is all that is required for some use-cases

Many Smart Actions are available and are documented in this Administrators Guide. More are planned for future releases.

All available Smart Actions are provided "in-the-box", and a Production licence key is required to allow use of those purchased. If additional Smart Actions are purchased, a new Licence Key is provided which will unlock those additional Smart Actions on your system without the need for any additional code deployment or even a system restart (although this assumes the version of Smart Actions you have installed already includes the Smart Action you wish to activate).

Production licence keys can be used on any supporting environment (Development, Test etc) for the Production system you have purchased the licence for. Production Licence Keys do not have any expiry date.

Crystal Computing can provide time limited Evaluation licence keys so you can try out additional Smart Actions from those you have already licenced – just contact support to get a new Licence Key.

4   Smart Actions

The following Licensable Smart Actions are available for use in this release:

Area	Item	Smart Action	Details
GRC Records	1	Associate Records	Associates two records (parent, child)
	2	Disassociate Records	Disassociates two records (parent, child)
	3	Create Record	Creates a new record
	4	Update Record	Updates values of any fields on a record (up to 4 field values per Smart Action)
	5	Delete Record	Deletes a record
	6	Hard Delete Record	Hard Deletes a record – removing all trace from the system (can also hard delete records already soft-deleted in the UI)
	7	Anonymize Record	Anonymizes specified fields on a record (can be used to anonymize any data in the system with a suitable controlling report)
	8	Move Record	Move a record to a new primary parent (optionally move specified primary child types)
	9	Copy Record	Copy a record to a new primary parent (optionally copy specified primary child types)
	10	Lock Record	Locks a Record (direct lock is applied)
	11	Unlock Record	Unlocks a Record (direct lock is removed – inherited locks may remain)
	12	Attach Report	Execute a Cognos Report and attaches the output to a record (XLSX, PDF, CSV, HTML supported)
	13	Cancel Checkout	Cancels Checked Out status of a file attachment record
Users	14	Create User	Creates a new OpenPages User account
	15	Email User	Email a user with custom Subject & Body text including content from one or more GRC records
	16	Update User	Updates a User Account, allowing the editing of the Email Address, Description, First Name, Middle Name and Last Name, Password, Locale, Profiles, Groups & Roles
	17	Enable User	Enable a User account
	18	Disable User	Disable a User account
	19	Lock User	Lock a User account
	20	Unlock User	Unlock a User account
	21	Anonymize User	Anonymize the details of an OpenPages User Account
Workflow	22	Start Workflow	Start a Workflow on a record
	23	Terminate Workflow	Terminates a Workflow on a record
	24	Refresh Workflow	Refresh a running workflow, updating the Due Date, Assignees, Subscribers & Criticality and for OpenPages V9.0.0.1 onwards update the object to the latest published Workflow version.
	25	Workflow Action	Perform a workflow Action on a record
Admin	26	Add FXRates	Add FX Rates to the system
	27	Run Schedule	Run an OpenPages Schedule job and waits until it has completed. (This allows multiple Schedules to be executed consecutively)
	28	Wait Schedule	Wait for a previously started schedule to complete
	29	Show Message	Show a message in the schedule log and optionally terminate the schedule/workflow action
	30	Admin Mode	Allows Enable and Disabling of System Administration Mode
	31	Update Setting	Allows changes to be made to Application Settings
	32	Generate Framework	Regenerate one or all Reporting Frameworks including capability to set a custom Data Source
	33	Execute SQL	Execute SQL against the OpenPages or external database

Area	Item	Smart Action	Details
	34	Classify Watson	Set enumeration fields to classify an object using Watson NLU AI Model
	35	Train Watson	Train a Watson NLU AI Model directly from OpenPages
	36	Delete Watson	Delete a Watson NLU AI Model directly from OpenPages
	37	Allow Sessions	Enable or Disable normal user logins except for Administrators and an optional set of permitted users
	38	Terminate Sessions	Force logout all active user sessions except Administrators and explicitly permitted users
	39	Update Application Text	Updates the text label of an Application Text item
	40	Collect Logs	Runs the Log Collector process allowing this to be scheduled periodically.
	41	Create Folder	Creates a new Folder
	42	Delete Folder	Deletes a Folder
	43	Run Calculations	Execute a specific OpenPages Calculation on all or specified objects

Each Smart Action is individually licenced via the Licence Key configured during installation. Attempts to use an unlicenced Smart Action will fail and an appropriate error will be logged to the Scheduler Execution log. Additional licences can be obtained from CCSL including temporary time-limited evaluation licence keys if you wish to try out a Smart Action.

There are also several additional built-in, free for use, Smart Actions:

Area	Item	Smart Action	Details
Built-In	44	Do Nothing	Does nothing – used to validation installation
	45	Install Sessions	Installs or Removes the CCSL User Session Tracker used by the Allow Sessions and Terminate Sessions Smart Actions
	46	Install UI	Installs or Removes the Smart Actions User Interface JSP
	47	Save ID	Saves the GRC Record ID stored in the special id [$SMARTACTIONS_ID$] to a new variable called [$SMARTACTIONS_SAVEID$]

5   How to use Smart Actions

Smart Actions are executed via a 'Launcher'. Currently, we provide Launchers for the OpenPages Schedule and for the OpenPages Workflow system.

The following diagram explains how Smart Actions fits within the OpenPages platform:
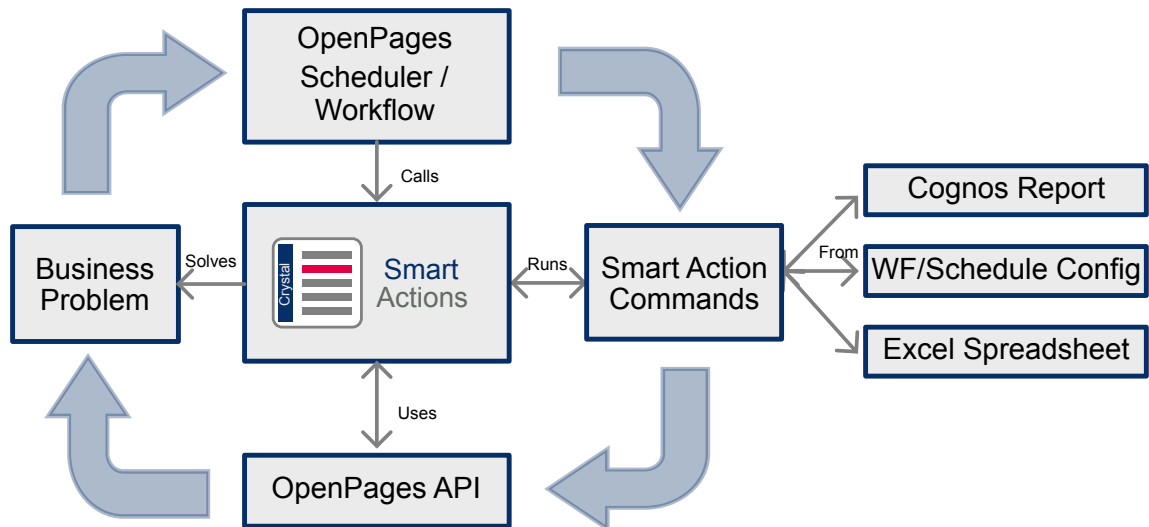
Using Smart Actions to solve a business problem always comprises these three steps:

1. Break your business problem down into a solution that can be executed by an OpenPages Scheduled job or Workflow Action.

2. Create a Cognos Report to output a List of Smart Action commands or Upload a Spreadsheet of Smart Action Command or identify a single Smart Action command that solves the problem.

3. The Smart Actions system will execute, in turn, each of the Smart Action commands, the result of which will be a solution to your business problem.

The Smart Actions engine is responsible for running the specified Smart Actions commands in the order provided and then executing them in the order provided. Any errors encountered will cause the Smart Actions engine to stop (a limited number of Smart Actions commands can specify that errors can continue execution).

There is no restriction on how many different Smart Action commands can be executed in a Schedule or Workflow although total execution time can be a consideration – particularly for Workflow based Smart Actions.

If your business problem requires a mixture of different Smart Action commands be executed, then simply specify these in the Cognos Report or Excel Spreadsheet.

5.1   Single Command Mode

When configuring a Schedule or Workflow for Smart Actions, one option is to simply execute a single Smart Action Command. This is called Single Command Mode and allows the execution of a Single Smart Action for a Workflow Operation or Scheduled Job. In this mode, the 4 steps required to use Smart Actions is changed slightly:

To use this mode, simply specify a 'Command' parameter on the Schedule Configuration or Workflow Operation instead of a ReportName or CommandXLSX parameters. Parameters passed to the single Smart Action command are specified using Schedule / Workflow Operation parameters named P1, P2, P3 etc instead of coming from a Cognos Report.

The following screenshot shows an example of using the 'Move Record' Smart Action from a Workflow Operation using Single Command Mode:

Class Name *

com.ccsl.workflow.SmartActions

Properties   Add Property +

Name	Value
Command	Move Record
P1	[$System Fields:Resource ID$]
P2	RELPATH:SOXBusEntity:[$CCSL-Move:Target Business Entity$]

5.2   Spreadsheet Mode

Another method of specifying Smart Actions to be executed is to hand-craft them in an Excel spreadsheet (similar to how a FastMap file is created) and then upload this Excel file to OpenPages and configure the Workflow or Schedule to run the Smart Actions in the spreadsheet

The format for the Excel spreadsheet content is detailed in Section 13 of this document.

To use this mode, simply specify a 'CommandXLSX' parameter on the Schedule Configuration or Workflow Operation instead of a ReportName or Command parameters.

The CommandXLSX parameter specifies a Record ID of either the SOXDocument attachment uploaded to OpenPages or another Record ID – say a Risk or Loss Event – from which the most recently added XLSX type attachment will be used. OpenPages Record IDs can be specified in any of the formats contained in section 5.4 below.

By default, the Smart Actions commands to be executed must be located within the Excel spreadsheet on a worksheet tab called SmartActions. This can be overridden by explicitly specifying the tab name(s) in the CommandXLSX parameter.

For example, to execute commands located on a tab named Commands in a spreadsheet named SmartActionCommands.xlsx the CommandXLSX parameter would be specified as:

　　　SmartActionsCommands.xlsx#Commands

Multiple tab names can be specified, in which case all commands are read from the specified tabs, added together in the order listed in the CommandXLSX parameter and then executed.

e.g.

　　　SmartActionsCommands.xlsx#Commands#MoreCommands

This commands would execute all the SmartActions commands in the Commands tab and then the MoreCommands tab.

5.3   Cognos Report Mode

The most common method of specifying Smart Actions to be executed is to have a Cognos Report return the commands. The advantage of using Cognos is that Business Logic can easily be embedded within the report to make the list of Smart Action commands returned dependent on data conditions and business rules.

The Cognos Report should return one table of data with the first column being the Smart Action command to be executed and the following columns being the parameters to be passed to the command. The Column names are not used to determine the parameters, just the ordering so that the P1 parameter of a command would be in column 2 or the report output and so on.

To use this mode, simply specify a 'ReportName' parameter on the Schedule Configuration or Workflow Operation instead of a Command or CommandXLSX.

5.4   Referencing Record Ids

Smart Actions commands that reference a GRC record (many Smart Actions do this), can specify the ID of the record in several different ways:

1) The simplest method is to just provide the Resource ID of the record e.g. 2522

    From a Workflow action only (i.e. not via the Schedule), the resource id of the current workflow record can easily be specified using the special OpenPages System field : [$System Fields:Resource ID$]

    This is most likely the format you will use when specifying IDs in a Cognos Report.

2) Specify the Resource ID of the record in the format "ID:Resource ID"

    e.g. ID:2522

3) Specify the Resource ID by providing the object type and folder path of the object in the format "RELPATH:OBJECT TYPE:/Folder/Path/Name"

    e.g. "RELPATH:SoxBusEntity:/Global Financial Services/Retail" or "RELPATH:SOXRisk:/CCSL Bank/Retail/Mortgages/R12345678"

    When using the RELPATH format for the Business Entity object type, the format allowed is extended to allow a Business Entity Selector field contents to be used

    e.g."RELPATH:SOXBusEntity:Global Financial Solutions / Retail / Mortgages"

4) Specify the Resource ID by simply providing the relative path to the object. Unlike the explicit RELPATH option, the object type is not provided and the Smart Actions system will search all object types until a match is found.

    e.g. "/CCSL Bank/Retail/Mortgages/R12345678"

    Using this format can be slower due to the searching required.

5) Specify the record by providing the full path to the object in the format "FULLPATH:fullpath"

    e.g. FULLPATH: /_op_sox/Project/Default/ICDocumentation/Loss Events/CCSL Bank/Retail/Mortgages/E12345678.txt

6) Specify the record by providing the full path to the object without specifying the FULLPATH prefix.

   e.g. /_op_sox/Project/Default/ICDocumentation/Loss Events/CCSL Bank/Retail/Mortgages/E12345678.txt

7) Specify the Resource ID by object type and Name only in the format "NAME:Object Type:Object Name"

   e.g. NAME:LossEvent:E12345678

   Note: If there are multiple records with the same name (but in different folders) then the Smart Actions system will select the first one it finds – no error will be returned.

8) Specify the Resource ID using the objects Name only. Unlike the explicit NAME option, the objects type is not provided and the Smart Actions system will search all object types until a match is found.

   e.g. E12345678

   Note: Using this format can be slower due to the searching required.

The NAME and RELPATH formats are particularly useful when using Smart Actions via a Workflow in single command mode – for example if moving a record to an Archive node as the ID of the Archive Node can easily be specified in RELPATH or NAME format without needing to hard-code an ID values. In this scenario, the ID of an Archive Risk (which is named Archive Risk) to which Controls can be archived could be specified in the workflow as : NAME:SOXRisk:Archive Risk or RELPATH:SOXRisk:/Archive/Archive Risk

The ability to specify an object by name only (e.g., MySpearchSheet.XLSX) is particular useful when using the CommandXLSX option to specify a spreadsheet from which to execute Smart Action commands as this format is simply than specifying the file name in the NAME format e.g, NAME:SOXDocument:MySpearchSheet.XLSX

Lastly, it is sometimes useful to specify the Primary Parent record and to make that easier, a "PRIMARY" modifier is available to the above Id methods.

Using the PRIMARY modifier, the PRIMARY Parent of Resource ID (e.g. resource 2522 for a Risk in Retail/Mortgages) could be specified as:

        PRIMARY 2522
        PRIMARY ID:2522
        PRIMARY RELPATH:SOXRisk:/CCSL Bank/Retail/Mortgages/R12345678
        PRIMARY FULLPATH: /_op_sox/Project/Default/ICDocumentation/Risks/ CCSL Bank/Retail/Mortgages/R12345678.txt
        PRIMARY NAME:SOXRisk:R12345678
        PRIMARY R12345678

The PRIMARY modifier can be used multiple times to specify records higher up the object model.

e.g.,   PRIMARY PRIMARY NAME:SOXRisk:R12345678

        This would specify the Primary Parent of the Primary Parent of a Risk named R123456

5.5   Referencing newly created records

Smart Action commands run independently of each other. However, it is sometime necessary to create a record and then immediately reference that newly created record in a subsequent Smart Action command within the same set of Smart Action commands returned from a Cognos Report.

To facilitate this, any Smart Action commands that creates data (i.e. the Smart Actions: Create Record, Copy Record, Attach Report) will set a special placeholder tag that can be referenced in subsequent Smart Action commands.

The tag is: [$SMARTACTION_ID$] or ([@SMARTACTION_ID@] from Workflow in Single Command Mode)

For example, if a new Risk record is created as below:

    Create Record,SOXRisk,12345,Risk Description

Then a subsequence Smart Action command can reference the record Id of the newly created Risk as below:

    Email User, ChrisJones, subject.key, body.key, A Risk has been created, [$SMARTACTION_ID$]

The tag [$SMARTACTION_ID$] can be used in as many subsequent Smart Action commands as required and will automatically reference the LAST record that was created by a previous Smart Action command executed in the running report.

The Smart Actions that set the tag [$SMARTACTION_ID$] are:

    Create Record
    Copy Record
    Attach Report

Note: The Smart Actions [$SMARTACTION_ID$] cannot be used in Workflow Single Command mode because in this mode there is only one Smart Action command executed and so there is no 'next' Smart Action command that could use the tag.

5.6   Saving a record id for later use

Although in most cases the [$SMARTACTION_ID$] or ([@SMARTACTION_ID@] tags are adequate for referencing a newly created record, there are cases when creating multiple new records that the SMARTACTION_ID of an earlier record might be been overwritten by the ID of a newer record and won't then be available when you need it.

For example:
    Create Record, ...
    Create Record, ...
    Associate Records   <<< Here we wish to associate the two records created above

In this case, the SMARTACTION_ID tag refers to the ID of the second record created and the ID of the first record is no longer available.

To assist with this, we have another ID tag available [$SMARTACTION_SAVEID$] or [@SMARTACTION_SAVEID@].

The SMARTACTION_SAVEID tag is set to the current value of the SMARTACTION_ID but only when the Smart Action command "Save ID" is used.

Using this new tag, the above sequence of creates and associate can be written as:

> Create Record, ...
> Save ID
> Create Record, ...
> Associate Records, [$SMARTACTION_SAVEID$], [$SMARTACTION_ID$]

5.7   Specifying field values

Some Smart Actions allow the setting of field values (Create Record, Update Record, Attach Report). For these, the field & value to set is specified as follows:

<u>**Field Name**</u>

The field name is specified as a combination of the field group name and the system field name of the field.

For example, on a Loss Impact record, the "Actual Loss" field might be the field group OPSS-LossIm and the system name of the field might be "Actual Loss". In this case, the field name would be specified to the Smart Actions system as :

> OPSS-LossIm:Actual Loss

<u>**Field Values**</u>

The field value is simply the value you wish to set for the field – but there are some exceptions:

> **Single Value Enumeration Fields**:
>
> The field value is the system name of the enumeration value and NOT the language locale name.
>
> **Multi Value Enumeration Fields:**
>
> The field value is the system name of the enumeration value and NOT the language locale name. You can specify multiple values to set but these values must be separated with a ~ character.
>
> > e.g.,   Compliance~Technology
>
> **Currency Values Fields:**
>
> A currency value comprises six components, two are required, one is optional and three will be ignored to set a currency field.
>
> 1. Currency Symbol   (not required - can be given – always ignored)
> 2. Local Amount
> 3. Local Currency Code
> 4. Base Currency Symbol   (not required - can be given – always ignored)
> 5. Base Amount   (optional – today's fx rate will be used if not provided)
> 6. Base Currency Code   (not required - can be given – always ignored)
>
> Consequently, to specify a currency field value the following are all valid:
>
> > £1234.56 GBP ($ 1456.78 USD)   Will calculate fx rate by dividing local and base

1234.56 GBP 1456.78 USD	Will calculate fx rate by dividing local and base
£1234.56 GBP	Will set the base amount based on today's fx rate
1234.56 GBP	Will set the base amount based on today's fx rate

Date Values Fields:

Date field values should always be specified in yyyy-MM-dd format. E.g., 2024-04-13. The special value [NOW] or [@NOW@] can be used to set the current date into a field value.

String / Text Fields:

Simple set the value you wish to set in the field.

The special value [NOW] or [@NOW@] can be used to set the current date & time into a field value and this will always be set in the format yyyy-MM-dd HH:mm:ss format e.g., 2024-04-13 14:25:01

5.8   Solution Example

Requirement:

Disable Inactive OpenPages User accounts 6 months after the user last logs into OpenPages. Send the user an email informing them that their account had been disabled and providing details of what to do if they need their account to be re-enabled.

Analysis:

This problem can be solved by:

1) Running a schedule each (for example) week, that identifies any enabled user account that has not been logged into OpenPages in the last 6 months (e.g., the last 183 days).

2) Generate a row in the Cognos report for every such user record, formatted as a Smart Action command to disable that user account

   e.g.,
   > Disable User,ChrisJones
   > Disable User,JohnSmith
   > Disable User,FredBlogs

3) Generate a row in the Cognos report for every such user record, formatted as a Smart Action command to send an Email to that user account notifying them their account has been disabled.

   > Email User,ChrisJones,smartaction.email.disableuser.subject, smartaction.email.disableuser.body

   > Email User, JohnSmith,smartaction.email.disableuser.subject, smartaction.email.disableuser.body

   > Email User, FredBlogs,smartaction.email.disableuser.subject, smartaction.email.disableuser.body

4) Putting the two steps above together in the Cognos Report (likely using a query union) with the final output looking like:

> Disable User,ChrisJones
> Email User,ChrisJones,smartaction.email.disableuser.subject,
> smartaction.email.disableuser.body
> Disable User,JohnSmith
> Email User, JohnSmith,smartaction.email.disableuser.subject,
> smartaction.email.disableuser.body
> Disable User,FredBlogs
> Email User, FredBlogs,smartaction.email.disableuser.subject,
> smartaction.email.disableuser.body

5) The final step is to simply set up a new OpenPages Scheduler Job:
   - Enter an appropriate Schedule Name.
   - Enter the class path of the Smart Actions component: com.ccsl.schedule.SmartActions
   - Configure the ReportName parameter to point to the report created above.
   - Set the required schedule executions timings e.g., Weekly.

In this example, the client would need a Smart Action Licence for the Disable User and the Email User Smart Actions.

6   Smart Action Application Settings

After installation of Smart Actions, several application settings are added, which can subsequently be configured as required:

Item	Application Setting	Purpose
1	/Custom Deliverables/CCSL/Admin Account Id	The account name of an Administrator level account that is to be used for executing Smart Actions commands. Recommend an account with a name like 'SmartActions' so that users have clear visibility of who has made changes to their data.
2	/Custom Deliverables/CCSL/Admin Account Password	The password for the automation account specified above. It is recommended to check the 'Encrypted' check box to protect the password from being seen once initially set up.
3	/Custom Deliverables/CCSL/Log Level	Valid Values: ERROR/INFO/DEBUG Sets the level of logging of CCSL Customisations including Smart Actions. A value of ERROR will output errors encountered during Smart Action Processing to log files in the 'custom' folder below aurora/logs folder. A value of INFO will output Smart Action Command Completion messages to a log file in the 'custom' folder below aurora/logs folder. A value of DEBUG will output additional detailed logging messages to log files in the 'custom' folder below aurora/logs folder. Default installation is set to ERROR. Changes to Log Level take effect immediately.
4	/Custom Deliverables/CCSL/Smart Actions/Licence Key	The licence key for the Smart Actions system. Determines which Smart Actions can be used. Contains details of the Customer Name, the System for which the licence applies, and which Smart Actions can be used. For evaluation licences, contains cut-off dates after which the affected Smart Actions can no longer be used. Details of the licence can be seen in the Schedule Log output when a Smart Action schedule is executed.

Item	Application Setting	Purpose
5	/Custom Deliverables/CCSL/Smart Actions/Override Email	An email address to which any email generated via a Smart Action command (e.g., the Email User Smart Action) will be sent INSTEAD of the intended recipient. This setting is typically used in development and testing environments to allow one email address to receive any email. Defaults to blank which means any emails will be sent to the intended recipient.
6	/Custom Deliverables/CCSL/Smart Actions/Admin Account Id Key	A registry key where the Administrator Account Id can be loaded from if the standard location above is not suitable. This is intended for use-cases where a client may already have suitable account details configured within Application Settings and does not wish to have a second copy of the credentials. Leave blank to use the standard location defined in item 1 from which to load the Admin Account Id Example value: /Custom Deliverables/Client Settings/Accounts/Super User Account Id
7	/Custom Deliverables/CCSL/Smart Actions/Admin Account Password Key	A registry key where the Administrator Account Password can be loaded from if the standard location above is not suitable. This is intended for use-cases where a client may already have suitable account details configured within Application Settings and does not wish to have a second copy of the credentials. Leave blank to use the standard location defined in item 1 from which to load the Admin Account Password Example value: /Custom Deliverables/Client Settings/Accounts/Super User Account Password
8	/Custom Deliverables/CCSL/Smart Actions/Custom Smart Actions Class	Java Class Name of a Custom Smart Actions class. See the Smart Actions Developers Guide for more information on how to build a Custom Smart Action. Leave blank if you are not creating Custom Smart Actions. A Custom Smart Action requires the 'Custom Smart Action' Smart Action licence entitlement to be called by the Smart Actions Engine. Changing this value takes effect as soon as the next Smart Action Schedule or Workflow is started but changing the Java class by uploading a new JAR file will require an Application Server restart to load the new code. Example value: com.client.CustomSmartActions

Item	Application Setting	Purpose
9	/Custom Deliverables/CCSL/Smart Actions/Schedule Launcher/Default Notify Failure	Valid Values : Yes/No Specifies if a failure email is to be sent to notify system support that a Smart Action schedule has failed. Defaults to blank which means NO Failure Notification emails will be sent. This setting can be overridden in each Smart Action schedule if required.
10	/Custom Deliverables/CCSL/Smart Actions/ Schedule Launcher/Default Notify Success	Valid Values : Yes/No Specifies if a failure email is to be sent to notify system support that a Smart Action schedule has completed successfully. Defaults to blank which means NO Success Notification emails will be sent. This setting can be overridden in each Smart Action schedule if required.
11	/Custom Deliverables/CCSL/Smart Actions/ Schedule Launcher/Failure Email Address	Specifies the email address to which Smart Action schedule failure emails are to be sent. If not set then no schedule failure emails will be sent, even if the schedule is configured to send them.
12	/Custom Deliverables/CCSL/Smart Actions/ Schedule Launcher/Success Email Address	Specifies the email address to which Smart Action schedule success emails are to be sent. If not set then no schedule success emails will be sent, even if the schedule is configured to send them. In cases where a success email is configured to be sent but there is no Success Email Address configured then the Schedule will Fail – and a failure email will be sent if the system is configured to do so.

13	/Custom Deliverables/CCSL/Smart Actions/Execute SQL/Template	The various settings below this folder are used by the "Execute SQL" Smart Action to connect to a specified database/schema.
		
		This whole folder should be copied to as many new folders as required depending on how many external databases you require the Execute SQL Smart Action to connect to:
		
		For example, you might copy the folder:
		
		    /Custom Deliverables/CCSL/Smart Actions/Execute SQL/Template
		
		to:
		    /Custom Deliverables/CCSL/Smart Actions/Execute SQL/Warehouse
		
		Then configure the settings inside the new Warehouse folder to provide the various settings for connecting to that database. Then the "Execute SQL" Smart Action would specify "Warehouse" as the connection parameter (P1) to run whatever SQL was specified for the command.

Item	Application Setting	Purpose
14	/Custom Deliverables/CCSL/Smart Actions/Execute SQL/Template/DB Account ID	Specify the Database Account ID or Schema Name to connect to.
15	/Custom Deliverables/CCSL/Smart Actions/Execute SQL/Template/DB Account Password	Specify the Database Account ID or Schema Password to connect to.
16	/Custom Deliverables/CCSL/Smart Actions/Execute SQL/Template/JDBC Connection	Specify the Database JDBC Connection String e.g., jdbc:db2://servername.clientname.com:50000/OPX
17	/Custom Deliverables/CCSL/Smart Actions/Execute SQL/Template/JDBC Driver Class Name	Specify the File path of the Vendor specific JDBC Driver Class Name. This will be the Java Class Name documented by the Database Vendor. This setting is optional and if not specified, the Smart Actions engine will attempt to use an appropriate class name for the same database vendor as that on which the OpenPages instance is installed e.g., DB2 or Oracle For DB2, a database JDBC Class Name of "com.ibm.db2.jcc.DB2Driver" will be assumed. For DB2, a database JDBC Class Name of "oracle.jdbc.driver.OracleDriver" will be assumed. Note: If an OpenPages update changes the version of the DB2/Oracle driver then this Smart Action may fail if the default class names are no longer valid. As a workaround, you can specify the new class names explicitly using this parameter.
18	/Custom Deliverables/CCSL/Smart Actions/Execute SQL/Template/JDBC Driver JAR	Specify the File path of the Vendor specific JDBC Driver jar file This will be the JDBC driver JAR file provided by whichever database vendor you are connecting to. This setting is optional and if not specified, the Smart Actions engine will attempt to locate either a driver for the same database vendor as that on which the OpenPages instance is installed e.g., DB2 or Oracle within the following folder on the application server: <OP_HOME>/aurora/lib For DB2, a database JAR file called db2jcc4.jar will be assumed. For Oracle, a database JAR file called ojdbc8.jar will be assumed Note: If an OpenPages update changes the version of the DB2/Oracle driver then this Smart Action may fail if the default file names are no longer present. As a workaround, you can specify the file names explicitly using this parameter.

Item	Application Setting	Purpose
19	/Custom Deliverables/CCSL/Smart Actions/Watson/Watson API Key	API Key used to allow the Smart Action Classify Watson, Train Watson and Delete Watson to authenticate the Smart Action connection to the IBM Watson NLU. This API Key is obtained directly from the IBM Watson NLU instance. Example value (not real) : a1b2c3d4-1ab2-3cba-abcd-12ab9876d12 This parameter is mandatory if any of the Watson Smart Actions are to be used.
20	/Custom Deliverables/CCSL/Smart Actions/Watson/Watson Connect Timeout	Network timeout setting in milliseconds when connecting to Watson NLU by the Classify Watson, Train Watson and Delete Watson Smart Actions. Default value on install is '10000' i.e., 10 seconds After this timeout period an error will be returned to the Schedule/Workflow.
21	/Custom Deliverables/CCSL/Smart Actions/Watson/Watson Response Timeout	Timeout setting in milliseconds while wating for Watson NLU to respond after a successful connection is made to Watson NLU by the Classify Watson, Train Watson and Delete Watson Smart Actions. Default value on install is '10000' i.e., 10 seconds After this timeout period an error will be returned to the Schedule/Workflow.
22	/Custom Deliverables/CCSL/Smart Actions/Watson/Watson URL	The URL used to connect to the Watson NLU system and is used by the Smart Actions Classify Watson, Train Watson and Delete Watson. This URL is obtained directly from the IBM Watson NLU instance. Example value: https://api.us-south.natural-language-understanding.watson.cloud.ibm.com/instances/c1234a98764b1-2a1b-ab12-123d456v7cba This parameter is mandatory if any of the Watson Smart Actions are to be used.

Item	Application Setting	Purpose
23	/Custom Deliverables/CCSL/Smart Actions/Watson/Default/Watson Model ID	The trained Watson NLU Model ID that should be used. The key is used when the Classify Watson to classify one or more fields and is set by the Train Watson Smart Action after successfully training a new Watson NLU Model. The Model ID in the 'Default' folder is only used when the Classify/Train Watson Smart Actions are called with no configSetting parameter supplied (P4 for Classify Watson and P6 for Train Watson respectively). If an explicit configSetting is supplied then the Smart Action Engine will look for a 'Watson Model ID' setting in a folder below the specified configSetting Parameter. For example, if a configSetting parameter of EventCategorisation is specified then the Smart Action Engine will look for the Watson Model ID parameter in setting: /Custom Deliverables/CCSL/Smart Actions/Watson/ EventCategorisation/Watson Model ID

7   Smart Action Schedule Configuration

When configuring a Smart Actions Schedule job, always specify the Schedule as a 'Custom' Schedule and enter the following for the Java Class Path:

com.ccsl.schedule.SmartActions

The OpenPages schedule that calls Smart Actions has the following parameters that can be configured:

Item	Parameter Name	Purpose	Mandatory / Optional
1	ReportName	The name of the Cognos Report to run and which will return the Smart Action commands to be executed. Multiple reports can be specified in this parameter in a comma separated list of reports. Each report will be run consecutively, in the order provided.	Optional
2	Command	The Single Smart Action command to be executed on the Schedule.	Optional
3	CommandXLSX	The name of an OpenPages attachment object – that must be an Excel xlsx file – see section 5.4 above for options on how this parameter can be provided.	Optional
4	AdminSession	Valid values: Yes or No (true or false also supported but deprecated) Specifies if this Schedule should create a new Admin Session with which to execute each individual Smart Action command. The credentials for the Administrator session are those specified in the Registry Settings during the Smart Actions Installation process. This parameter defaults to Yes (true) if not specified. When set to No (false), the Smart Actions commands will run as the default OPSystem account, and each individual Smart Action command will NOT be committed to the database individually. This can be advantageous if it is preferred that the results of all the Smart Actions from the report either commit or rollback changes in their entirety. Note, though, that this can cause transaction failures at high volumes of Smart Action updates and that there is potential for database locking and deadlocks if other processes are changing data at the same time as the Smart Actions are running.	Optional

Item	Parameter Name	Purpose	Mandatory / Optional
5	NotifyFailure	Valid Values Yes/No Specifies if a notification email should be sent if the schedule fails. If not specified, uses the value specified in Application Settings: /Custom Deliverables/CCSL/Smart Actions/Schedule Launcher/Default Notify Failure If this application setting is not provided, then defaults to No.	Optional
6	NotifySuccess	Valid Values Yes/No Specifies if a notification email should be sent if the schedule succeeds. If not specified, uses the value specified in Application Settings: /Custom Deliverables/CCSL/Smart Actions/Schedule Launcher/Default Notify Success If this application setting is not provided, then defaults to No.	Optional
7	SummaryLogging	Valid Values: Yes/No/Auto Specifies if the schedule should log every Smart Action command result or if summary logging at each % complete should be used instead. Summary logging may be preferred in schedules that run greater than 10,000 Smart Action commands because OpenPages will only retain the last 10,000 log outputs in a scheduled job run. The default value is Auto , which will activate Summary Logging only when necessary.	Optional
8	UI	Specify the Tab on which this Smart Actions Schedule will appear in the Smart Actions UI. This parameter can also be a comma separated list of tab names. e.g. Daily If all daily scheduled Smart Actions jobs have UI=Daily then all these Scheduled jobs will appear under a Daily tab on the Smart Actions UI	Optional

8   Smart Action Workflow Configuration

When configuring a Smart Actions Workflow job, always specify the Operation as a 'Custom action' and enter the following for the Class Name:

> com.ccsl.workflow.SmartActions

The OpenPages Workflow that calls Smart Actions has the following parameters that can be configured:

Item	Parameter Name	Purpose	Mandatory / Optional
1	ReportName	The name of the Cognos Report to run and which will return the Smart Action commands to be executed. Multiple reports can be specified in this parameter in a comma separated list of reports. Each report will be run consecutively, in the order provided.	Optional
2	Command	The Single Smart Action command to be executed on the workflow operation.	Optional
3	CommandXLSX	The name of an OpenPages attachment object – that must be an Excel xlsx file – see section 5.4 above for options on how this parameter can be provided.	Optional

Item	Parameter Name	Purpose	Mandatory / Optional
4	AdminSession	Valid values: Yes or No (true or false also supported but deprecated) Specifies if this Workflow Operation should create a new Admin Session with which to execute each individual Smart Action command. The credentials for the Administrator session are those specified in the Registry Settings during the Smart Actions Installation process. This parameter defaults to No if not specified (the opposite of the default for Schedule Smart Actions). When set to No, the Smart Actions commands will run as the user initiating the Workflow Action or as OPSystem account if the Workflow Action is set to run as a background task. Note that, unlike for Scheduler executed Smart Actions, Smart Actions executed via Workflow are NEVER committed individually and either the whole Workflow Action will succeed or fail in its entirety. This can cause transaction failures at high volumes of Smart Action updates and that there is potential for database locking and deadlocks if other processes are changing data at the same time as the Smart Actions are running. There is also a limit within OpenPages of one hour for Workflow background tasks to run and this will limit the number of Smart Actions that can be executed via a workflow Workflow Action. This one hour limit (setting value 3600) can be changed in Application Settings by modifying the following setting: Up to OpenPages Version 9.0.0.0 **Platform > Workflow Implementations > OP> Transaction timeout** Note: This setting is hidden and will need to be revealed by changing setting to true: **Applications > Common > Configuration > Show Hidden Settings** OpenPages 9.0.0.1 onwards **Platform > Workflow Implementations > OpenPages > Transaction timeout**	Optional

Note: One and only one of parameters ReportName, Command, CommandXLSX must be provided.

9   Smart Actions User Interface

Released in Smart Actions R3.40.0, the Smart Actions User Interface is an (Optional) User Interface component for OpenPages that provides two productivity features:

1. An alternate way to interact with Smart Actions Schedules.

2. View and Download Application Server log files directly in the OpenPages User Interface

Access to these functions is via the Smart Actions menu, located in the upper right of the Smart Actions User Interface:
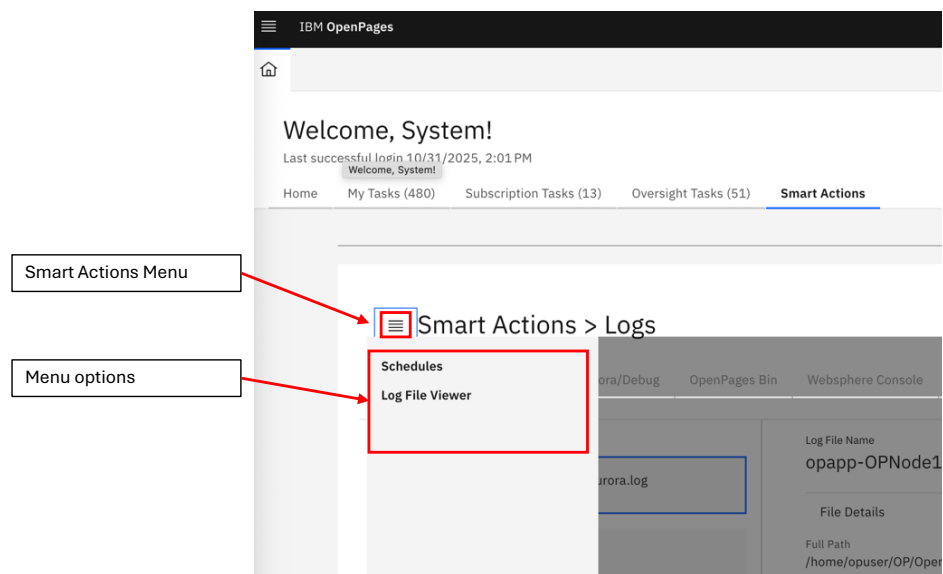
Note: Access to the Log Viewer function requires purchase of the 'UI Log Viewer' Smart Action or hold a Universal Licence that includes all Smart Actions.

9.1   Manage Schedules using the Smart Actions User Interface

The advantages of the Smart Actions User Interface over the standard OpenPages Schedule screens are:
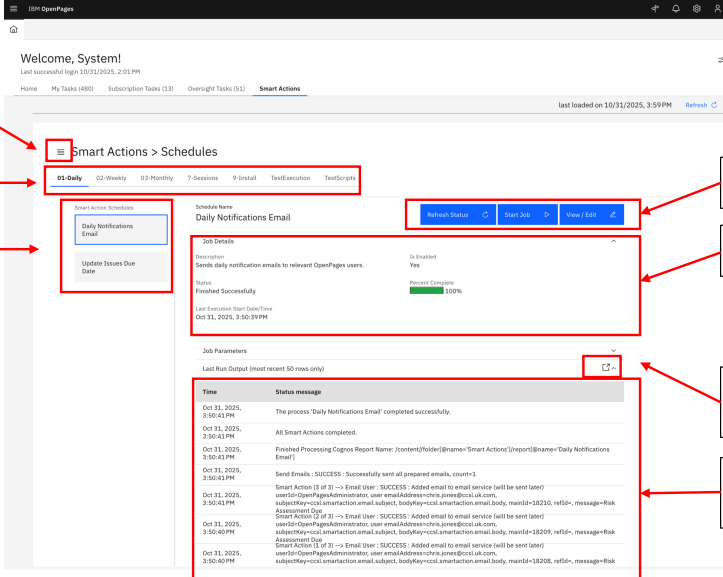
1. Ability to put sets of Smart Actions Schedule Jobs onto different filter tabs for fast and easy access.

2. Combines four different OpenPages screens (Schedule List, Schedule Detail, Job Execution Overview and Job Execution Log) onto one page

3. Easily start Smart Actions Scheduled jobs manually by simply clicking the Start Job button – no more clicking checkboxes and scrolling to the top of the page.

4. At a glance, see the last execution details for a Scheduled Smart Action Job including the last few rows of the job output (with the ability to quickly open the full output log screen).

Below is a screenshot of the Smart Actions Schedules User Interface along with descriptions of the various components:

9.2   Adding a Schedule to a User Interface Tab

To add a Smart Actions Schedule to a tab on the User Interface, simply edit the Scheduled Job and add a 'UI' Property with the name of the spreadsheet tab (or commas separated list of tab names).

Tab Names are not pre-defined and are derived from the total set of UI property values on all the Smart Actions Scheduled Jobs.

For example, if there is a Smart Actions Scheduler Job called "Daily Notifications" and you wanted that job to appear on a Tab names "Daily" then simply created a property called UI on the "Daily Notifications" scheduler job and give the property the value "Daily".

Edit Job

Name *
Daily Notifications

Description

Java class name *
com.ccsl.schedule.SmartActions

Enabled
True

Custom Configuration   New +

ReportName : /Smart Actions/Daily ...

UI : Daily

Schedule   Edit

9.3   View Application Server Log Files using the Smart Actions User Interface

The Log Viewer is used to view the OpenPages Application Server log files. The Aurora logs are the most common logs to review but the Log Viewer can view the Aurora custom and debug logs, the OpenPages ObjectManager logs as also the various directories of the Websphere Console logs.

The log locations below are supported:

Log Location	Application Server Directory
Aurora	aurora/logs
Aurora/Custom	aurora/logs/custom
Aurora/Debug	aurora/logs/debug
Websphere Console	wlp-usr/servers/opapp-OPNode1Server1/logs
Websphere Console/ffdc	wlp-usr/servers/opapp-OPNode1Server1/logs/ffdc
OpenPages Bin	bin/logs

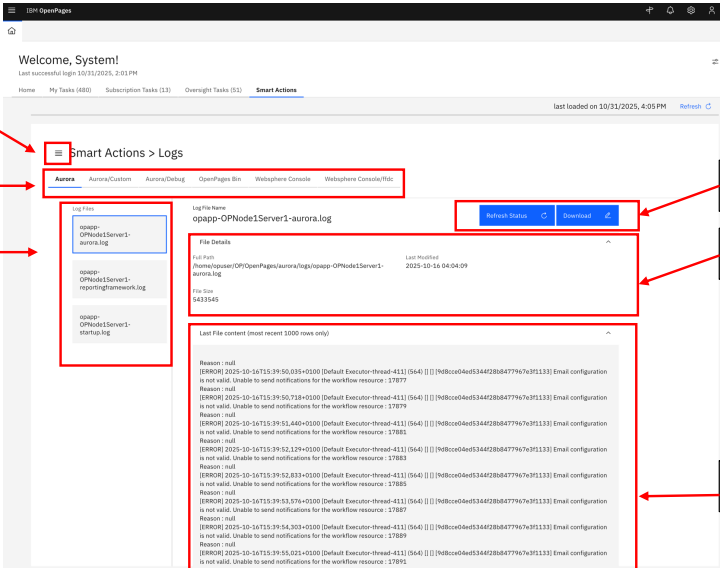The application server directories are all below the <OP_HOME> directory.

> Note:
>
> Replace <OP_HOME> with the directory where OpenPages with Watson is installed.
>
> For example:
> - On Windows, this is typically: C:\IBM\OpenPages
> - On Linux, this is typically: /opt/opuser/IBM/OpenPages

Below is a screenshot of the Smart Actions User Interface for the Log Viewer along with descriptions of the various components:

10 Smart Action Command Parameters

10.1   Associate Records

This Smart Action creates an association between two OpenPages Records. The Association MUST be valid according to your object model (for example you can usually Associate a Risk to a Control but can't usually associate a Control to a Loss Impact).

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory / Optional
1	Command	Associate Records	The Smart Action Command	Mandatory
2	P1	parentRecord	The Resource ID of the Parent Record to associate	Mandatory
3	P2	childRecord	The Resource ID of the Child Record to associate	Mandatory
4	P3	ignoreError	Valid values: Yes/No Set to Yes to ignore any failure to associate the records – such as when the records are already associated together. Default value is No – meaning an error will be displayed and the schedule will stop if an attempt is made to associate together two records that are already associated.	Optional

10.2   Disassociate Records

This Smart Action disassociates two OpenPages Records. The association MUST already exist.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Disassociate Records	The Smart Action Command	Mandatory
2	P1	parentRecord	The Resource ID of the Parent Record to associate	Mandatory
3	P2	childRecord	The Resource ID of the Child Record to associate	Mandatory
4	P3	ignoreError	Valid values: Yes/No Set to Yes to ignore any failure to disassociate the records – such as when the records are not already associated together. Default value is No – meaning an error will be displayed and the schedule will stop if an attempt is made to disassociate together two records that are not already associated.	Optional

10.3   Create Record

This Smart Action creates a new auto named OpenPages record (of any object type) and can set the system description field and up to 4 specified fields to provided values.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Create Record	The Smart Action Command	Mandatory
2	P1	objectType	The Object Type of the record to create.	Mandatory
3	P2	parentRecord	The Resource ID of the Primary Parent Record for the newly created record	Mandatory
4	P3	name	The name of the new GRC record. Set to null or blank to create an auto-named object.	Mandatory
5	P4	title	Value of the Openpages V9 Title field Leave set to null on preV9 systems.	Mandatory
6	P5	system description	Value of the system description field	Mandatory
7	P6	field1Name	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
8	P7	field1Value	Value to set the field to on the newly created record	Optional
9	P8	Field2Name	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
10	P9	Field2Value	Value to set the field to on the newly created record	Optional
11	P10	Field3Name	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
12	P11	Field3Value	Value to set the field to on the newly created record	Optional
13	P12	Field4Name	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
14	P13	Field4Value	Value to set the field to on the newly created record	Optional

Notes:
1. For multi-value enumeration fields, to set multiple values use a ~ separator between field values

    e.g., To set the Domain field on an Issue to both Compliance and Technology, you must specify the field value as Compliance~Technology

    This is because field values may contain a comma character which is the more common way to specify a list of fields but is not viable in this use-case so the ~ character is chosen.

2. The fields to be set can also include to the followings System Fields
   - System Fields:Name - Allows renaming of the record
   - System Fields:Title - Allows setting of the OpenPages V9 Title field (only on V9 installs)
   - System Fields:Location - Allows changing the folder path of the record

3. If more than 4 fields need to be set to values then follow the Create Record Smart Action command with an Update Record Smart Action command to set additional fields (use the [$SMARTACTION_ID$] for the resource id – see section 5.5 for more details.)

4. The special value [@NOW@] or (NOW) can be used to insert the current date/time into a fields value – this is always in the format is always yyyy-MM-dd HH:mm:ss. When used to set a Date field, only the date part of the value is used because OpenPages Date fields cannot store a time component.

10.4   Update Record

This Smart Action updates field values on any GRC record, setting up to 4 specified fields to provided values.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Update Record	The Smart Action Command	Mandatory
2	P1	updateRecord	The Resource ID of the record to be updated.	Mandatory
3	P2	field1Name	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
4	P3	field1Value	Value to set the field to on the record	Optional
5	P4	Field2Name	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
6	P5	Field2Value	Value to set the field to on the record	Optional
7	P6	Field3Name	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
8	P7	Field3Value	Value to set the field to on the record	Optional
9	P8	Field4Name	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
10	P9	Field4Value	Value to set the field to on the record	Optional

Notes:

1. A blank field value will result in no change to that field, to clear out (set to blank) a field specify the special value [$BLANK$] (or [@BLANK@] from Workflow in Single Command Mode).

2. For multi-value enumeration fields, to set multiple values use a ~ separator between field values

    e.g., To set the Domain field on an Issue to both Compliance and Technology, you must specify the field value as Compliance~Technology

    This is because field values may contain a comma character which is the more common way to specify a list of fields but is not viable in this use-case so the ~ character is chosen.

3. The fields to be updated also allow changes to the followings System Fields
    - System Fields:Name - Allows renaming of the record
    - System Fields:Title - Allows setting of the OpenPages V9 Title field (only on V9 installs)
    - System Fields:Location - Allows changing the folder path of the record

4. The special value [@NOW@] or (NOW] can be used to insert the current date/time into a fields value – this is always in the format is always yyyy-MM-dd HH:mm:ss. When used to set a Date field, only the date part of the value is used because OpenPages Date fields cannot store a time component.

10.5   Delete Record

This Smart Action deletes any GRC record.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Delete Record	The Smart Action Command	Mandatory
2	P1	deleteRecord	The Resource ID of the record to be deleted	Mandatory

10.6   Hard Delete Record

This Smart Action Hard Deletes any GRC record. Hard Delete will remove any trace of the record from the system, including all audit trails.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Hard Delete Record	The Smart Action Command	Mandatory
2	P1	deleteRecord	The Resource ID of the record to be hard deleted	Mandatory

10.7   Anonymize Record

This Smart Action will Anonymize specified fields on any GRC record. Only Text fields can be anonymized. Specifically, numeric, currency, user/group selector & enumeration fields CANNOT be anonymized.

Note: If you require different fields to be anonymized to different values then you will need to generate multiple Smart Action commands for each record, each with a set of fields and an anonymize string value.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Anonymize Record	The Smart Action Command	Mandatory
2	P1	anonymizeRecord	The Resource ID of the record to be anonymized	Mandatory
3	P2	anonymizeFields	A comma separated list of OpenPages fields to be anonymized with each field specified in fieldgroup:fieldname format. E.g., OPSS-Control:Control Activity,OPSS-Ctl:Additional Description,OPSS-Ctl-Fin:Who Performs Control	Mandatory
4	P3	anonymizeString	The value to put into any anonymized field.	Mandatory

10.8 Move Record

This Smart Action will Move a GRC Record to a new Primary Parent record – updating the folder of the record to match the new parent.

By default, all primary child records (& their primary child records and so on) will also be moved to the new folder.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Move Record	The Smart Action Command	Mandatory
2	P1	moveRecord	The Resource ID of the record to be moved to a new parent/folder.	Mandatory
3	P2	newParent	The Resource ID for the new parent records – this MUST be a valid parent for the type of record being moved	Mandatory
4	P3	childTypes	Child Object types to be moved (system names of the object types). This should be a comma separated list of object types. e.g., SOXRisk,SOXControl,LossEvent If left blank or not provided, then all primary child records (& their primary child records and so on) will also be moved to the new folder. If you just want to move the one record and leave all primary child objects in their current folder, then specify the object type of the record being moved in this field.	Optional
5	P4	conflictHandling	Valid Values: Error/Overwrite Error – An error message is generated if the destination folder already contains an object with the same name as the record being moved. Overwrite – If the destination already contains a record of the same name as the record being moved, the destination record is overwritten. Default to Error if not provided.	Optional

10.9   Copy Record

This Smart Action will Copy a GRC Record to a new Primary Parent record – updating the folder of the record to match the new parent.

By default, all primary child records (& their primary child records and so on) will also be copied to the new folder.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Copy Record	The Smart Action Command	Mandatory
2	P1	copyRecord	The Resource ID of the record to be copied to a new parent/folder.	Mandatory
3	P2	newParent	The Resource ID for the new parent records – this MUST be a valid parent for the type of record being copied	Mandatory
4	P3	childTypes	Child Object types to be copied (system names of the object types). This should be a comma separated list of object types. e.g., SOXRisk,SOXControl,LossEvent If left blank or not provided, then all primary child records (& their primary child records and so on) will also be copied to the new folder. If you just want to copy the one record and leave all primary child objects in their current folder, then specify the object type of the record being copied in this field.	Optional
5	P4	childAutoName	Valid values: Yes/No Determines if copied child records should be auto-named according to the objects naming configuration. If set to Yes, copied child records will be auto-named according to the respective object types auto-naming definition. If set to No (the default) or if the object type being copied is not auto-named in the configuration then OpenPages will try to copy child objects keeping the objects Name the same and will employ the specified "Conflict Behaviour" to determine actions when a copied object name already exists in the destination folder. Please review the OpenPages Administrators Guide for further conformation on configuring the Conflict Behaviour. Defaults to No if not provided.	Optional

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
6	P6	conflictHandling	Valid Values: Error/Overwrite/Copy Error – An error message is generated if the destination folder already contains an object with the same name as the record being copied. Overwrite – If the destination already contains a record of the same name as the record being copied, the destination record is overwritten. Copy - If the destination already contains a record of the same name as the record being copied, the copied record will receive an object name with the "Copy Of" prefix in the object name. Defaults to Error if not provided.	Optional

10.10 Lock Record

This Smart Action will lock the specified GRC Record.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Lock Record	The Smart Action Command	Mandatory
2	P1	lockRecord	The Resource ID of the record to be locked.	Mandatory

10.11 Unlock Record

This Smart Action Hard will remove a lock on the specified GRC Record.

This Smart Action will NOT remove any lock inherited from a parent record and so the record may still be locked after attempting the unlocking.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Unlock Record	The Smart Action Command	Mandatory
2	P1	unlockRecord	The Resource ID of the record to be unlocked.	Mandatory
3	P2	unlockChildren	Valid values: Yes/No Set to Yes for child records of the unlockRecord to also be unlocked – this will unlock all child and child of child records underneath the unlockRecord, following the Primary Parent association only. Default value is No – meaning child records will not be unlocked.	Optional

10.12 Attach Report

This Smart Action will create a new Attachment record for a specified GRC record with the attachment being the output of a specified Cognos Report (XLSX, CSV, PDF & HTML formats supported).

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Attach Report	The Smart Action Command	Mandatory
2	P1	parentRecord	The Resource ID of the record to which the Attachment will be added.	Mandatory
3	P2	cognosReport	The folder path & report name of the Cognos report to run. e.g., /CCSL Reports/Risk Assessment Report	Mandatory

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
4	P3	attachmentName	The Name of the Attachment file. e.g., Evidence.docx The special value [@NOW@] can be used to embed the date and time into the attachment object name. e.g., Specifying an attachment Name of : RCSA Report – [@NOW@] would result in an attachment object named like: RCSA Report – 2024-01-10 17:35	Mandatory
5	P4	outputFormat	The output format required from the Cognos Report. XLSX, CSV, PDF, HTML supported.	Mandatory
6	P5	attachmentDescription	Description of the attachment	Mandatory
7	P6	cognosParameterName	If the specified cognosReport requires a parameter to run, then one can be specified using this Smart Action to specify the parameter name.	Optional
8	P7	cognosParameterValue	If the specified cognosReport requires a parameter to run, then one can be specified using this Smart Action to specify the parameter value.	Optional
9	P8	attachmentFieldName	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Due Date	Optional
10	P9	attachmentFieldValue	Value to set the field to on the newly created attachment record.	Optional

Notes:
1. For multi-value enumeration fields, to set multiple values use a ~ separator between field values

    e.g., To set the Domain field on an Issue to both Compliance and Technology, you must specify the field value as Compliance~Technology

   This is because field values may contain a comma character which is the more common way to specify a list of fields but is not viable in this use-case so the ~ character is chosen.

2. The special value [@NOW@] or (NOW) can be used to insert the current date/time into a fields value – this is always in the format is always yyyy-MM-dd HH:mm:ss. When used to set a Date field, only the date part of the value is used because OpenPages Date fields cannot store a time.

10.13 Cancel Checkout

This Smart Action will removed the Checked Out status of a specified GRC Record – usually an Attachment File (SOXDocument) object type.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Cancel Checkout	The Smart Action Command.	Mandatory
2	P1	checkoutRecord	The Resource ID of the record for which Checked Out status is to be removed.	Mandatory

Notes:

1. If the specified record is not currently checked out, then this Smart Action will perform no action and will not generate an error.

10.14 Create User

This Smart Action creates a User Account, allowing the setting of the Email Address, Description, First Name, Middle Name, Last Name, Password, Locale, Profiles, Groups and Role Assignments.

Note: An Administrator level account CANNOT be created programmatically using Smart Actions.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Create User	The Smart Action Command	Mandatory
2	P1	userId	The user Id of the account to Create. e.g., NewUser1	Mandatory
3	P2	userEmail	The email address of the user account.	Mandatory
4	P3	userDescription	The description field of the user account.	Mandatory
5	P4	userFirstName	The First Name of the user account.	Mandatory
6	P5	userMiddleName	The Middle Name of the user account.	Optional
7	P6	userLastName	The Last Name of the user account.	Mandatory
8	P7	UserPassword	The password to assign to this user account.	Mandatory
9	P8	userLocale	The Locale to assign to the user account.	Mandatory
10	P9	userProfiles	Comma separated list of Profiles to assign to the account. The first profile listed will becomes the users current profile.	Optional
11	P10	userGroups	Comma separated list of Groups to assign to the account.	Optional
12	P11	userRoles	Comma separated list of Role Assignments to assign to the account. Each Role Assignment takes the form Business Entity=Role Template For example: /CCSL Bank/Retail=Event Approver Thus, two Role Assignments for a user account could be specified like: /CCSL Bank/Retail=Event Approver,/Library/Risks=Risk Owner	Optional

Notes:

1. A blank field value will result in no change to that field, to clear out (set to blank) a field specify the special value [$BLANK$] (or [@BLANK@] from Workflow in Single Command Mode).

10.15 Email User

This Smart Action will send an Email to an OpenPages User Account.

If multiple Smart Actions commands send the same email (i.e., the same emailSubjectKey & emailBodyKey) to a User (userId) then these separate email commands will be consolidated into one email to that user with repeating sections to allow multiple records to be referenced (i.e., for each mainRecordId, refRecordId & message).

See section 12 for details on constructing the Email Body Text and how to reference fields whose values will be inserted into the Email Body Text.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Email User	The Smart Action Command	Mandatory
2	P1	userId	The user Id of the account to email. e.g., OpenPagesAdministrator	Mandatory
3	P2	emailSubjectKey	Application Text key for the Email Subject text	Mandatory
4	P3	emailBodyKey	Application Text key for the main Email Body text	Mandatory
5	P4	message	A message which can be inserted into the Email Body Text. Must appear inside a Repeater Block	Optional
6	P5	mainRecordId	OpenPages Resource ID – the value of fields from this record can be placed into the Email Body Text. Must appear inside a Repeater Block	Optional
7	P6	refRecordId	A second OpenPages Resource ID – the value of fields from this record can be placed into the Email Body Text. Must appear inside a Repeater Block	Optional

10.16 Update User

This Smart Action updates a User Account, allowing the editing of the Email Address, Description, First Name, Middle Name, Last Name, Password, Locale, Profiles, Groups and Role Assignments.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Update User	The Smart Action Command	Mandatory
2	P1	userId	The user Id of the account to Unlock. e.g., OpenPagesAdministrator	Mandatory
3	P2	userEmail	The email address of the user account.	Optional
4	P3	userDescription	The description field of the user account.	Optional

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
5	P4	userFirstName	The First Name of the user account.	Optional
6	P5	userMiddleName	The Middle Name of the user account.	Optional
7	P6	userLastName	The Last Name of the user account.	Optional
8	P7	userPassword	The password to assign to this user account.	Optional
9	P8	userLocale	The Locale to assign to the user account.	Optional
10	P9	userProfiles	Comma separated list of Profiles to assign to the account. These profiles will replace any existing profiles and so should be a complete list of the profiles you wish the user account to be assigned. Leave the field blank for no changes to user profile assignments. The special value of [$BLANK$] or [@BLANK@] will remove all profiles from the user account.	Optional
11	P10	userGroups	Comma separated list of Groups to assign to the account. These groups will replace any existing groups and so should be a complete list of the groups you wish the user account to be assigned. Leave the field blank for no changes to user group assignments. The special value of [$BLANK$] or [@BLANK@] will remove all groups from the user account.	Optional

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
12	P11	userRoles	Comma separated list of Role Assignments to assign to the account. These Role Assignments will replace any existing Role Assignments and so should be a complete list of the Role Assignments for the user account. Leave the field blank for no changes to user role assignments. Each Role Assignment takes the form Business Entity=Role Template For example: /CCSL Bank/Retail=Event Approver Thus, two Role Assignments for a user account could be specified like: /CCSL Bank/Retail=Event Approver,/Library/Risks=Risk Owner The special value of [$BLANK$] or [@BLANK@] will remove all Role Assignments from the user account.	Optional

Notes:

1. A blank field value will result in no change to that field, to clear out (set to blank) a field specify the special value [$BLANK$] (or [@BLANK@] from Workflow in Single Command Mode).

10.17 Enable User

This Smart Action will Enable the OpenPages account of the specified user.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Enable User	The Smart Action Command	Mandatory
2	P1	userId	The user Id of the account to Enable. e.g., OpenPagesAdministrator	Mandatory

10.18 Disable User

This Smart Action will Disable the OpenPages account of the specified user.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Disable User	The Smart Action Command	Mandatory
2	P1	userId	The user Id of the account to Disable. e.g., OpenPagesAdministrator	Mandatory

10.19 Lock User

This Smart Action will Lock the OpenPages account of the specified user.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Lock User	The Smart Action Command	Mandatory
2	P1	userId	The user Id of the account to Lock. e.g., OpenPagesAdministrator	Mandatory

10.20 Unlock User

This Smart Action will Unlock the OpenPages account of the specified user.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Unlock User	The Smart Action Command	Mandatory
2	P1	userId	The user Id of the account to Unlock. e.g., OpenPagesAdministrator	Mandatory

10.21 Anonymize User

This Smart Action will anonymize the details of an OpenPages User Account.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Anonymize User	The Smart Action Command	Mandatory
2	P1	userId	The user Id of the account to Unlock. e.g., OpenPagesAdministrator	Mandatory
3	P2	anonymizeString	The text to user for anonymisation. Defaults to Anonymous if not specified	Optional

<u>Actions performed</u>

The first name, last name and description of the user will be the anonymized string passed in as a parameter.

 The middle name of the user will be empty.

 The email address of the user will be set to "{anonymizeString}@{anonymizeString:lowercase}.com", e.g. "Anonymous@anonymous.com".

10.22 Start Workflow

This Smart Action will start a specified Workflow on a GRC Record.

Note:
1. The specified record must not have a Workflow already running as a record can (currently) only have one workflow running at a time.
2. The specified Workflow must be a valid & enabled Workflow for the record specified.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Start Workflow	The Smart Action Command.	Mandatory
2	P1	wfRecord	The Resource ID of the record for which a Workflow is to be started.	Mandatory
3	P2	wfName	The Name of the Workflow to start.	Mandatory

10.23 Terminate Workflow

This Smart Action will terminate the running workflow on a GRC Record.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Terminate Workflow	The Smart Action Command.	Mandatory
2	P1	wfRecord	The Resource ID of the record for which a Workflow is to be started.	Mandatory

Note:
1. The specified record must have a Workflow already running.

10.24 Refresh Workflow

This Smart Action will refresh a running workflow, updating the Due Date, Assignees, Subscribers & Criticality.

On OpenPages systems V9.0.0.1 onwards, this Smart Action will also update the running workflow for the object to the latest published version where this is possible (i.e., the objects current Workflow Stage must also exist in the newly published workflow version).

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Refresh Workflow	The Smart Action Command.	Mandatory
2	P1	wfRecord	The Resource ID of the record for which a Workflow is to be refreshed.	Mandatory

Note:
1. The specified record must have a Workflow already running.

10.25 Workflow Action

This Smart Action will execute a specified Workflow Action on a GRC Record.

Note:
1. The specified record must already have a Workflow running.
2. The specified Workflow Action must be a valid workflow action for the currently Workflow Stage of the specified record.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Workflow Action	The Smart Action Command.	Mandatory
2	P1	wfRecord	The Resource ID of the record for which a Workflow is to be started.	Mandatory
3	P2	wfAction	The name of the Workflow Action to be performed	Mandatory
4	P3	wfComment	The Comment to be applied to the Workflow Action. This field will be ignored if the workflow action does not have comments enabled.	Optional

10.26 Add FXRates

This Smart Action will Add Exchange Rates to the system.

Note: Although the exchange rates are documented as all being supplied at once in the fxRates column, it is permitted to just provide one exchange rate in the format CUR=value (e.g., AUD=0.1234566) and simply repeat the Smart Actions rows, one row per currency exchange rate you wish to load.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Add FXRates	The Smart Action Command	Mandatory
2	P1	fxDate	The Date the Exchange Rates are valid for. MUST be specified in YYYY-MM-DD format. e.g., 2023-09-13	Mandatory
3	P2	fxRates	The Exchange Rates to load. Specified as a comma separated list of currencies and exchange rates. e.g., AUD=0.1234566, GBP=0.987642, EUR=0.6543524,JPY=3.0928374	Mandatory

10.27 Run Schedule

This Smart Action will run an OpenPages Schedule and wait until it is complete.

Notes:
1. Take care not to execute the same schedule as the one running this Smart Action command or you will get into an infinite loop of Smart Actions running the same Schedule which run a Smart Action to run the same schedule again.
2. The key benefit of this Smart Action is the ability to run multiple OpenPages Scheduled Jobs consecutively – rather than the typical common practice of allocating Scheduled Jobs different timeslots to ensure they are not running in parallel.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Run Schedule	The Smart Action Command	Mandatory
2	P1	scheduleName	The Name of the OpenPages Schedule to execute	Mandatory
3	P2	scheduleMaxTime	The Maximum amount of time to wait for the scheduled job to finish. Defaults to 60 minutes if not provided. After the maximum time has passed, the Smart Action will return an error and depending on the next parameter may stop processing of subsequent Smart Actions. Specify NOWAIT in this parameter to run the schedule but not wait for completion before progressing to the next Smart Action command. See also, the Smart Action Wait Schedule to wait for completion of a schedule started with the NOWAIT option. Note: The Scheduled Job that is taking longer than the max time to run WILL NOT be stopped/cancelled by this Smart Command.	Optional
4	P3	continueOnError	Valid values: Yes/No Determines if further Smart Actions will be processed if the executed schedule fails. Defaults to No if not provided meaning that no further Smart Actions will be executed if the scheduled job fails (or fails to finish within the max time specified)	Optional

Examples:

1) To run three schedules consecutively, waiting for each to complete before running the next :

   Run Schedule, Schedule 1
   Run Schedule, Schedule 2
   Run Schedule, Schedule 3

2) To run three schedules, the first two in parallel and then waiting for them both to complete before running a third schedule:

   Run Schedule, Schedule 1, NOWAIT
   Run Schedule, Schedule 2, NOWAIT
   Wait Schedule, Schedule 1
   Wait Schedule, Schedule 2,
   Run Schedule, Schedule 3

10.28 Wait Schedule

This Smart Action will wait until a specified schedule has completed. If the schedule finished in error then this Wait Schedule Smart Action will generate an error and stop. Stopping on error can be overridden with the continueOnError parameter.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Wait Schedule	The Smart Action Command	Mandatory
2	P1	scheduleName	The Name of the OpenPages Schedule to wait for completion of.	Mandatory
3	P2	scheduleMaxTime	The Maximum amount of time to wait for the scheduled job to finish. Defaults to 60 minutes if not provided. After the maximum time has passed, the Smart Action will return an error and depending on the next parameter may stop processing of subsequent Smart Actions. Note: The Scheduled Job that is taking longer than the max time to run WILL NOT be stopped/cancelled by this Smart Command.	Optional
4	P3	continueOnError	Valid values: Yes/No Determines if further Smart Actions will be processed if the executed schedule fails. Defaults to No if not provided meaning that no further Smart Actions will be executed if the scheduled job fails (or fails to finish within the max time specified)	Optional

10.29 Show Message

This Smart Action will show a message in the schedule log and can optionally terminate the schedule / workflow action.

This Smart Action is intended to be used for business data validation purposes.

The most common use-case for this Smart Actions is in Workflow Operations to perform enhanced data validation using Workflow Operation "When" Conditions and using Show Message to display a validation error message to the user and terminate the Workflow Operation.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Show Message	The Smart Action Command	Mandatory
2	P1	resultMessage	The message to show to the user in Workflow Operations or placed into the job output for Scheduled Smart Actions.	Mandatory
3	P2	resultStatus	Valid values: FAILED or any other value A status code for the message. This status code will be shown as a prefix to the message in the scheduler log output. If not provided, will default to FAILED If set to FAILED the schedule / workflow action is terminated / cancelled.	Optional

10.30 Admin Mode

This Smart Action allows the Enabling and Disabling of System Administration Mode.

Important Limitation : **The OpenPages API prevents System Administration Mode being enabled within a Scheduler Job. This means that this Smart Action CANNOT be used to ENABLE System Administration Mode via a Schedule Job launched Smart Action. However, DISABLING System Administration Mode in a Schedule Job will work as expected. Also, this Smart Action CAN be used from a Workflow Action to enable or disable System Administration Mode.**

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Admin Mode	The Smart Action Command	Mandatory
2	P1	enableDisable	Valid Values: Yes / No Set to Yes to Enable System Administration Mode and No to Disable it. No error will occur if change the mode to the existing mode i.e. there is no error on setting Admin Mode to Yes on a system that is already in System Administration Mode.	Mandatory

10.31 Update Setting

This Smart Action allows changing an Application Setting value.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Update Setting	The Smart Action Command	Mandatory
2	P1	settingFullPath	The full path to the Application Setting e.g., /Applications/GRCM/Environment Migration/Allow ObjectManager XML

The Application Setting MUST already exist; this Smart Action cannot create new Settings. | Mandatory |
| 2 | P2 | settingValue | The new value to place into the Application Setting. e.g., false | Mandatory |

10.32 Generate Framework

This Smart Action will generate one or more Reporting Frameworks with an option to specify an alternative Data Source (which MUST be already configured in Cognos).

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Generate Framework	The Smart Action Command	Mandatory
2	P1	allFrameworks	Valid Values: Yes / No Set to Yes to Generate all frameworks or No to explicitly specify one or more frameworks to ne generated. Default Value: Yes if frameworkName (P2) is blank otherwise No	Optional
3	P2	frameworkName	Comma separated list of Frameworks to be generated. These names are the system names of the Frameworks and NOT the final generated framework names. e.g., Platform_Reporting The framework system names are the folder names in Settings below folder: /Platform/Reporting Framework V6/Models/	Optional
4	P3	dataSource	The Cognos DataSource to set into the generated frameworks. Generally, leave this parameter blank and use the standard data source of "OpenPages DataSource" but the name of an alternative data source can be provided (that MUST be already configured within Cognos.) This option may be useful if : 1) You wish to generate a framework that targets a copy of the OpenPages schema – e.g., a copy that is static throughout the day to allow data-consistent reporting. 2) You are using CCSL's TIME Module for monthly data capture for trending and historical reporting and wish to generate a framework to run reports against this data.	Optional

10.33 Execute SQL

This Smart Action will execute a SQL statement against the OpenPages schema (by default) or a schema on any other database.

This other schema can be on the same database as the OpenPages instance or a different database entirely. The other database also need not be the same technology as the OpenPages installation, so an Oracle OpenPages system could use 'Execute SQL' to run a SQL command against an external DB2 instance for example.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Execute SQL	The Smart Action Command	Mandatory
2	P1	databaseSetting	If blank then the SQL below is executed on the main OpenPages database Schema If a value is provided, then the Smart Actions Engine will look to find the connection settings in the Settings folder below the value specified For example if Warehouse is specified then the database connections settings will be loaded from Settings below: /Custom Deliverables/CCSL/Smart Actions/Execute SQL/Warehouse See section 6 above for details of the database settings required and how to configure them.	Optional
3	P2	SQL	The SQL Statement to execute. The Smart Actions Engine will not process any data rows returned by the SQL statement and so a SQL Statement of the form 'SELECT XXX FROM YYY' is of limited use. Packages and Stored Procedures can be called to perform actions and operations.	Mandatory

10.34 Classify Watson

This Smart Action will set one or more OpenPages enumeration fields to values specified by an external Watson NLU AI system.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Classify Watson	The Smart Action Command	Mandatory
2	P1	updateRecord	The Resource ID of the record for which classification fields are to be set.	Mandatory
3	P2	outputFieldNames	One or more OpenPages Enumeration fields that are to be set with values passed back from Watson NLU If more than one field is to be specified, comma separate them e.g. OPSS-Shared-Basel:Risk Category,OPSS-Shared-Basel:Risk Subcategory,OPSS-Shared-Basel:Risk Example	Mandatory
4	P3	inputString	The text to be classified.	Mandatory
5	P4	configSetting	The configuration setting to be used to determine the Watson NLU Model ID. For example, if a configSetting parameter of EventCategorisation is specified then the Smart Action Engine will look for the Watson Model ID parameter in setting: /Custom Deliverables/CCSL/Smart Actions/Watson/ EventCategorisation/Watson Model ID If this parameter is blank then a value of Default is used and the Watson Model ID will be loaded from Setting: /Custom Deliverables/CCSL/Smart Actions/Watson/ Default/Watson Model ID	Optional

10.35 Train Watson

This Smart Action will train a new Watson NLU AI model using a specified set of training data that has already been uploaded as an Attachment File in the OpenPages system.

The advantage of using this Smart Action is that the traditional approach requires the use of Python scripts to train the IBM Watson NLU instance, requiring Python skills, installs of Python onto corporate laptops and often the opening of firewalls so that Python can be executed against an external system. None of this is required when using the Smart Action to train the Watson NLU model.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Train Watson	The Smart Action Command	Mandatory
2	P1	trainingFile	The Resource ID of an XLSX attachment file already uploaded to OpenPages containing the Watson NLU training data. This file should be formatted exactly as already documented in the OpenPages Administrators Guide for training Watson NLU for Classification.	Mandatory
3	P2	dataRowStart	The Watson NLU Training file does not normally have headers and the training data starts on row 1 of the spreadsheet. If preferred, a header row(s) could be added and this parameter set to the row number where the training data starts. If blank, defaults to the value 1	Optional
4	P3	timeLimit	Time limit to wait for Watson NLU to train the model. After this time limit is exceeded, this Smart Action will report an error – even though the Watson NLU may still actually succeed and train the model. If blank, the default value is 60 minutes.	Optional
5	P4	Unused	This parameter is reserved for future used and any value provided will be ignored.	Optional
6	P5	Unused	This parameter is reserved for future used and any value provided will be ignored.	Optional

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
7	P6	configSetting	The configuration setting to be used to specify where the newly trained Watson NLU Model ID should be stored. For example, if a configSetting parameter of EventCategorisation is specified then the Smart Action Engine will store the new Model ID in setting: /Custom Deliverables/CCSL/Smart Actions/Watson/ EventCategorisation/Watson Model ID If this parameter is blank then the newly trained Model ID will NOT be stored in the Settings.	Optional
8	P7	updateRecord	The Resource ID of a GRC Record into which the outcome of training the Watson NLU will be stored - in the field names provided in the P8 & P9 below. If blank, the results of training will not be stored in a GRC record.	Optional
9	P8	updateModelIDField	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Model ID If provided (along with a GRC Record ID in P7) then the trained Watson Model ID will be stored in this field on the specified record.	Optional
10	P9	updateStatusField	An OpenPages field name in fieldgroup:fieldname format. e.g., OPSS-AI:Model Status If provided (along with a GRC Record ID in P7) then the outcome of training the new Watson NLU Model will be stored in this field on the specified record. This field must be an enumeration field with values that match the values specified in the next two parameters P10 & P11	Optional
11	P10	trainedValue	An enumeration value to store in the field specified in P9 above when the Wataon NLU Model training was successful.	Optional

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
12	P11	errorValue	An enumeration value to store in the field specified in P9 above when the Wataon NLU Model training was not successful.	Optional

10.36 Delete Watson

This Smart Action will delete a Watson NLU AI model.

The advantage of using this Smart Action is that the traditional approach requires the use of Python scripts to manage the IBM Watson NLU model instances, requiring Python skills, installs of Python onto corporate laptops and often the opening of firewalls so that Python can be executed against an external system. None of this is required when using the Smart Action to train the Watson NLU model.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Delete Watson	The Smart Action Command	Mandatory
2	P1	configSetting	The configuration setting to be used to specify from where the newly should be retrieved. For example, if a configSetting parameter of EventCategorisation is specified then the Smart Action Engine will retrieve the new Model ID to delete from setting: /Custom Deliverables/CCSL/Smart Actions/Watson/ EventCategorisation/Watson Model ID If this parameter is blank then the Model ID to delete will NOT be retrieved from the Settings. In this case, the Model ID can be specified in the following P2 parameter. Note: Either P1 or P2 must be provided.	Optional
3	P2	deleteModelID	The Watson NLU Model ID to be deleted. Note: Either P1 or P2 must be provided.	Optional

10.37 Allow Sessions

This Smart Action allows the system to be placed into a limited access mode where normal user accounts are prevented from logging into OpenPages.

In limited access mode, the OpenPages system continues to operate as normal for user accounts who are permitted to remain using the system.

The intent of limited access mode is to allow system administrators to restrict access to the application whilst administration and maintenance activities are undertaken. In this mode, administrators can use System Administration Mode and normal user mode as required to make system changes whilst knowing that normal users cannot use the system. Limited access mode, when enabled using this Smart Action, remains in force until either (1) it is explicitly switched off using this Smart Action or (2) the OpenPages application is restarted.

This Smart Action will enable or disable the ability for all user logins except the list below who will continue to use the system unaffected by limited access mode:

> OpenPagesAdministrator
> OPSystem
> Any user account in the OPAdministrators Group
> The user account specified in Settings that Smart Actions is configured to use.
> Any user account explicitly allowed to login in using the 'Allow Sessions' Smart Action

This Smart Action only controls the enabling and disabling of limited access mode and configuring the list of exempted users, it will not force logout any user already logged into OpenPages prior to limited access mode being enabled. The 'Terminate Sessions' Smart Action can be used to force logout users who are not in the exempted users list.

Important Restriction: The session management Smart Actions should only be used on OpenPages system with one application server. Load balanced systems are not supported.

Session Management installation: Before the 'Allow Session' or 'Terminate Sessions' Smart Actions can be used; installation of the Smart Actions Session Tracker must be completed as described in the Installation & Upgrade Guide Section 4.4 Item 12.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Allow Sessions	The Smart Action Command	Mandatory
2	P1	enableSessions	Valid Values: Yes / No or leave blank Yes, means that OpenPages system will permits user logins in the normal way. No, means OpenPages system will be placed into limited access mode, limiting who can log in. Default value is Yes	Optional

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
3	P2	allowUsers	A comma separated list of one or more OpenPages user accounts who should still be permitted to log into OpenPages when enableSessions is No. This Smart Action can be called multiple times to add additional users to the list of permitted users. The list of permitted users is cleared if: • Allow Sessions is used to re-enable normal user logins. • Allow Sessions is called with enableSessions set to No and the allowUsers parameter is left blank.	Optional

10.38 Terminate Sessions

This Smart Action will terminate the login sessions of all users except:

> OpenPagesAdministrator
> OPSystem
> Any user account in the OPAdministrators Group
> The user account specified in Settings that Smart Actions is configured to use.
> Any user account explicitly allowed to login in using the 'Allow Sessions' Smart Action

Important Restriction: The session management Smart Actions should only be used on OpenPages system with one application server. Load balanced systems are not supported.

Session Management installation: Before the 'Allow Session' or 'Terminate Sessions' Smart Actions can be used; installation of the Smart Actions Session Tracker must be completed as described in the Installation & Upgrade Guide Section 4.4 Item 12.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Terminate Sessions	The Smart Action Command	Mandatory
2	P1	logoutUsers	A comma separated list of one or more OpenPages user accounts who login session is to be terminated.	Optional

10.39 Update Application Text

This Smart Action will update the text label of an Application Text item.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Update Application Text	The Smart Action Command	Mandatory
2	P1	textKey	The Application Text Key to update e.g., com.label.logon.system.notice.text	Mandatory
3	P2	usLocaleString	The new Application Text label for the US Locale e.g., Logins have been disabled by the Administrator whist the system is updated. Leave this parameter blank for no change to the US Locale Text	Optional
4	P3	ukLocaleString	The new Application Text label for the UK Locale e.g., Logins have been disabled by the Administrator whist the system is updated. Leave this parameter blank for no change to the UK Locale Text	Optional

| 5 | P4 | locale | The Locale code for the language for which the application text label is to be changed. e.g. Language — Locale German locale de_DE United Kingdom English locale en_GB United States English locale en_US Spanish locale es_ES French locale fr_FR Italian locale it_IT Japanese locale ja_JP Portuguese (Brazilian) locale pt_BR Simplified Chinese locale zh_CN Traditional Chinese locale zh_TW | Optional |
| 6 | P5 | localeString | The new Application Text label for the Locale specified in the previous parameter. e.g., Logins have been disabled by the Administrator whist the system is updated. Leave this parameter blank for no change to the UK Locale Text | Optional |

Notes:
1. A blank value will result in no change to that application text local item, to clear out (set to blank) an application text label for a locale, specify the special value [$BLANK$] (or [@BLANK@] from Workflow in Single Command Mode).

10.40 Collect Logs

This Smart Action Runs the Log Collector process allowing this to be scheduled periodically.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Collect Logs	The Smart Action Command	Mandatory
2	P1	collectAppLogs	Valid Values : Yes/No Specifies if the Application Server Logs are to be collected. Defaults to No if left blank.	Optional
3	P2	collectDBLogs	Valid Values : Yes/No Specifies if the Database Logs are to be collected. Defaults to No if left blank.	Optional

Notes:
1. At least one of P1 or P2 must be set to Yes.

10.41 Create Folder

This Smart Action creates a new Folder.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Create Folder	The Smart Action Command	Mandatory
2	P1	parentFolder	Folder ID of the parent folder for the newly created folder.	Mandatory
3	P2	folderName	The name for the newly created folder	Mandatory
3	P3	folderDescription	The description of the newly created folder	Optional

Notes:
1. The parentFolder parameter can be specified in the following formats

    a numeric resource id – must correspond to an existing Folder resource
        e.g. 12345
    a full path to the resource
            e.g. /_cw_channels/Reporting/SOX (
            note: spaces befor/after the '/' character will be ignored so the prior example could be:
            / _cw_channels / Reporting / SOX
    a prefix of ID: followed by a numeric resource ID
            e.g. ID:12345
    a prefix of FULLPATH: followed by a full path to the resource
            e.g. FULLPATH: . /_cw_channels/Reporting/SOX
    a prefix of FOLDER followed by a GRC Resource specified as per section 5.4 above
            e.g. FOLDER PARENT R1234556
            This specified the folder of the Primary Parent record of Risk R123456

10.42 Delete Folder

This Smart Action deletes a Folder.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Delete Folder	The Smart Action Command	Mandatory
2	P1	deleteFolder	Folder ID of the Folder to be deleted	Mandatory

Notes:
1. The deleteFolder parameter can be specified in the following formats

   a numeric resource id – must correspond to an existing Folder resource

       e.g. 12345

   a full path to the resource

       e.g. /_cw_channels/Reporting/SOX (

       note: spaces befor/after the '/' character will be ignored so the prior example could be:

       / _cw_channels / Reporting / SOX

   a prefix of ID: followed by a numeric resource ID

       e.g. ID:12345

   a prefix of FULLPATH: followed by a full path to the resource

       e.g. FULLPATH: . /_cw_channels/Reporting/SOX

   a prefix of FOLDER followed by a GRC Resource specified as per section 5.4 above

       e.g. FOLDER PARENT R1234556

       This specified the folder of the Primary Parent record of Risk R123456

10.43 Run Calculations

This Smart Action runs a specific OpenPages Calculation on all or just specified objects.

Important Limitation : OpenPages will send an email when the required calculations have been run. This means that if you call this Smart Action 1000 times (e.g. for one GRC Object at a time), you will receive 1000 emails.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Run Calculations	The Smart Action Command	Mandatory
2	P1	calculation	Name of thew calculation to run. The calculation can be either an Automatic or Manual calculation type.	Mandatory
3	P2	calculateRecords	Comma separated list of one of more GRC Objects against which the calculation is to be run If left blank, the calculation will be run against all valid GRC Objects to which the calculation applies.	Optional

Notes:
1. The GRC Objects can be specified as a comma separated list of GRC Objects, with each GRC object specified as per section 5.4, above.

   e.g. ID:123456,/GFS/Retail/Mortgages/R54321,R987654   is a valid way to specify 3 Risks.

2. Calculations will be executed using the OpenPages Long Running Process framework, exactly as if you executed the calculation manfully using Administration > Workflows > Start Workflow. You can view progress on the calculation process using Administration > Other > Background Processes. The Run Calculations Smart Action will not complete until the background process has completed.

10.44 Do Nothing

This Smart Action does nothing and is used to help verify successful installation of the Smart Actions system.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Do Nothing	The Smart Action Command	Mandatory

10.45 Install Sessions

This Smart Action Installs or Removes the CCSL User Session Tracker used by the Allow Sessions and Terminate Sessions Smart Actions

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Install Sessions	The Smart Action Command	Mandatory
2	P1	installSessions	Valid Values : Yes/No Specifies if the CCSL Sessions Tracked is to be installed (Yes) or removed (No) Defaults to Yes if left blank.	Optional

Notes:
1. After installing or removing the CCSL User Session Tracked, an Application Server restart is required for the change to take effect. The need to do this will be provided in the Scheduler Log output for this Smart Action after execution.
2. The Enable Sessions and Terminate Sessions Smart Actions cannot be used until the CCSL User Session Tracked has been installed.
3. The Smart Actions Installation Guide provides an alternative, manual, method of installing the CCSL User Session Tracker should that be preferred.

10.46 Install UI

This Smart Action Installs the Smart Actions UI JSP into the correct place on the OpenPages Server and must be run as part of the (Optional) installation of the Smart Actions UI.

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Install UI	The Smart Action Command	Mandatory
2	P1	installUI	Valid Values : Yes/No Specifies if the CCSL Smart Actions User Interface JSP file is to be installed (Yes) or removed (No) Defaults to Yes if left blank.	Optional

10.47 Save ID

This Smart Action saves the GRC Record ID stored in the special id [$SMARTACTIONS_ID$] to a new variable called [$SMARTACTIONS_SAVEID$]

Cognos Column	Workflow Parameter	Parameter	Purpose	Mandatory /Optional
1	Command	Save ID	The Smart Action Command	Mandatory

Notes:
1. See section 5.6 above for more details on the use of the [$SMARTACTIONS_SAVEID$] special id.

11 Steps to build a test Smart Action solution.

To validate that the Smart Actions software is correctly installed and configured, a validation Smart Action called 'Do Nothing' can be used.

This Smart Action does absolutely nothing but can be used to verify that the software and configuration steps have been performed correctly.

Perform these steps:

1. From the Software release folder, open the following file in Windows Notepad:

    /Test/CCSL Do Nothing Report.txt

    > Note: If you are not using Windows then use an appropriate text editor for your platform
    >   e.g., Use TestEdit.app for Apple Macs

2. Copy the entire file to the Clipboard by pressing <Ctrl-A> to select all and then <Ctrl-C> to copy the contents to the clipboard.

    > Note: If you are not using Windows then use an appropriate text editor for your platform
    >   e.g., Use TestEdit.app for Apple Macs

3. Log into OpenPages using an Administrator level account.

4. Launch Cognos by clicking Primary Menu > Analytics.

5. In Cognos, navigate to report content by clicking Top Left Menu > Content.

6. Identify where you wish to store Smart Actions Cognos reports and if necessary, create any required Folders.

7. Click top right 'New' button and select 'Report'.

8. In a New report wizard, click 'Create'.

9. Now select the top right 3-dot button and select 'Open Report from Clipboard':
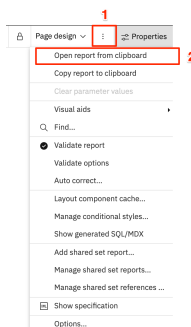
10. In the 'Open report from clipboard' popup – simply paste the contents of your clipboard (as copied in step 2 above by pressing <Ctrl-V> and finally click OK

11. Finally, Save the report using the Save button and storing to the folder in step 6 above. Choose a Report name such as 'Do Nothing Test Report'.
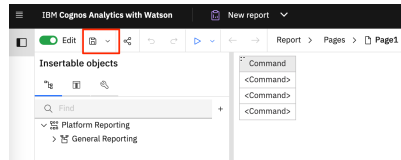
12. Go back to the OpenPages UI and Navigate to: Administrator Menu > Solution Configuration > Scheduler.

13. Click the 'New Job' button.

14. In the New Job screen, enter the following:

    Name: Do Nothing Test
    Java class name: com.ccsl.schedule.SmartActions

    Click Custom Configuration New button

    Enter Name: ReportName
    Enter Value: <Put the complete folder & name of the 'Do Nothing Test Report' you saved above>
                 e.g., /CCSL Report/Do Nothing Test Report

    Click Done
    Click Create

15. Now, Execute the newly created schedule job:

    Click the checkbox top the left of the job name

    Click the upper right button: 'Start Job'

    Dismiss the popup 'Start Jobs Report' window.

16. Finally, validate the job was successful:

    Click on the 'Do Nothing Test' job

    Click the Executions tab and validate that the job 'Completed Successfully'.

12 Appendix A – Configure email text for Email User Smart Action

The Email User Smart Action sends an Email to an OpenPages User. The email text to send is specified in an Application Text key as a parameter to the Smart Action command produced by the Cognos Report.

The Application Text key can be formatted using simple HTML to produce a more professional layout if required.

12.1   Defining Email Text

The email text can be any message you require in the email. Some simple HTML formatting can improve the look of the resulting email, giving a more professional look.

HTML	Purpose
 	Inserts a line break into the email. Without these, all the text will flow on one long line.
<table>.......</table>	Inserts a table into the email Tables are particularly useful when used with the Repeating Block markers to generate multiple rows of output in the final email.
<tr>.......</tr>	Inserts a new row for a table into the email. Putting the row between the Repeating Block markers is how multiple rows are generated for one email.
<tr style='background-color:#062e67;color:#ffffff;'>	Defines a row, exactly as above but applies a background shading and text colour. This is used for the header row. Note: the background colour #062e67 is the shade of Blue used by Crystal Computing. The colour #ffffff is white.
<th>.......</th>	Inserts a new header cell (column) for a row for a table into the email. You should have as many header cells as columns you want in the final email.
<th style='width:20%'>	Defines a header cell (column), exactly as above but applies a width setting to indicate how much of the total table width should be used for this column. You should ensure that the widths of all columns add up to 100% for best results.
<td>.......</td>	Inserts a new cell (column) for a row for a table into the email. Putting the row between the Repeating Block markers is how multiple rows are generated for one email. Each row should have one or more cells (columns) as it is the cells (columns) that can hold field values.

Note: The above is only the smallest introduction to HTML formatting and much more is possible. There are many references on the internet on how to use HTML. However, the above (along with some setting of column widths and background colours in the example below) is all that may be needed to get very good results.

12.2   Example Email

The following example shows a simple email for a weekly summary list of risks approved within the last 7 days. It will display the Risk ID, Name and Residual Risk Rating.

There are 2 separate Application Text entries required: the subject Header and the subject Body.   Example XML to create these two entries can be found in the Samples folder on the installation media.

The suggested naming convention when creating Smart Action Email application text is as follows:

> smartaction.email.[emailname].body
> smartaction.email.[emailname].header
> - Where [emailname] is replace with a short unique name for this email.

They should ideally be created in the 'Email Template' Category.

The Application Text Value used will be based on the locale of the Smart Action system user, so make sure the value is entered into that specific locale.

E.g.

The example XML file creates these 2 entries, **but you should amend to your actual values before loading**.

The Value field for the email body contains this following sample html:

```
Dear [$END_USER:Display Name$],
<br/>
<br/>
The following is your weekly summary of risks approved this week in OpenPages:
<br/>
<br/>
<table>
<tr style='background-color:#062e67;color:#ffffff;'>
<th style='width:20%'>Risk ID</th>
<th style='width:60%'>Risk Name</th>
<th style='width:20%'>Residual Rating</th>
</tr>
[#REPEAT_START#]
<tr>
<td>[$System Fields:Name$]</td>
<td>[$System Fields:Description$]</td>
<td>[$OPSS-Risk-Qual:Residual Risk Rating$]</td>
</tr>
[#REPEAT_END#]
</table>
<br/>
<br/>
You can log onto OpenPages using this link: [$APPLICATION_URL:Link to OpenPages$]
<br/>
<br/>
Please do not reply to this email.
<br/>
<br/>
Regards
<br/>
OpenPages Smart Actions
<br/>
```

12.3   Replaceable Parameters in the email

Parameter	Purpose

[$FieldGroup:FieldName$]	Places the value of the OpenPages field specified by FieldGroup:FieldName from the object specified in the mainRecordId parameter of the Smart Action command into the email.
	
	Note:
	  1. Currency Fields are displayed in the format:
	    £1,000.99 GBP ($1,231.01 USD)
	
	    Where :
	        GBP value is the Local Amount
	        USD value is the Base Amount
	  2. Enumerations show the language Locale variant for the Locale configured on the Automation account set up in the registry on installation of Smart Actions.

[$Parent:FieldGroup:FieldName$]	Places the value of the OpenPages field specified by FieldGroup:FieldName from the Primary Parent of the object specified in the mainRecordId parameter of the Smart Action command into the email.
[$Ref:FieldGroup:FieldName$]	Places the value of the OpenPages field specified by FieldGroup:FieldName from the object specified in the refRecordId parameter of the Smart Action command into the email.
[$SMARTACTION_MESSAGE$]	Places the message parameter provided in the Smart Action command into the email.
[$REPEAT_START$]	Identifies the start of a block of the email that will be repeated for every Smart Action command generating an email to a user for the same subject key and body key. This repeating section allows for multiple Smart Action commands each identifying different record ids to be summarised together into one email with multiple repeating blocks.
[$REPEAT_END$]	Identifies the end of the repeating block started above.
[END_USER]	Places the User Id into the email.
[$END_USER:Display Name$]	Places the Display Name of the user into the email.
[$END_USER:First Name$]	Places the first name of the user into the email.
[$END_USER:Middle Name$]	Places the middle name of the user into the email.
[$END_USER:Last Name$]	Places the last name of the user into the email.
[$END_USER:Email Address$]	Places the email address of the user into the email.
[$APPLICATION_URL$]	Places a URL to the OpenPages system into the email. The link will have the text "OpenPages"
[$APPLICATION_URL:Text String$]	Places a URL to the OpenPages system into the email. The link will have the text "Text String". You can use your own text for Text String. i.e., [$APPLICATION_URL:Link to Op Risk Sytem$]
[$System Fields:Name$]	Places the Name System Field (ID) of the object into the email. The name (ID) will automatically be a hyperlink to that record in the OpenPages system.
[$System Fields:Description$]	Places the Description System Field of the object into the email.

Parameter	Purpose
[$System Fields:Title$]	Places the Title System Field of the object into the email. This field will only work on OpenPages V9+. Use pre-V9 will result in the text "Title field requires OpenPages V9+" being placed into the email.
[$System Fields:Location$]	Places the Folder Path of the record into the email. e.g., /Global Financial Services/Retail/Cards
[$System Workflow Fields:Workflow Name$]	The Workflow Label Name of the running workflow on the object.
[$System Workflow Fields:Stage Name$]	The Workflow Stage Label Name of the current workflow stage of the running workflow on the object.
[$System Workflow Fields:Stage Due Date$]	The Workflow Stage Due Date of the current workflow stage of the running workflow on the object.
[$System Workflow Fields:Workflow Criticality$]	The Workflow Criticality of the running workflow on the object.
[$Parent:System Fields:Name$]	Places the Name System Field (ID) of the Primary Parent of the main object specified in the Smart Action command into the email. The name (ID) will automatically be a hyperlink to that record in the OpenPages system.
[$Parent:System Fields:Description$]	Places the Description System Field of the Primary Parent of the main object specified in the Smart Action command into the email.
[$Parent:System Fields:Title$]	Places the Title System Field of the Primary Parent of the main object specified in the Smart Action command into the email. This field will only work on OpenPages V9+. Use pre-V9 will result in the text "Title field requires OpenPages V9+" being placed into the email.
[$Parent:System Fields:Location$]	Places the Folder Path of the Primary Parent of the main object specified in the Smart Action command into the email. e.g., /Global Financial Services/Retail/Cards
[$Ref:System Fields:Name$]	Places the Name System Field (ID) of the reference object specified in the Smart Action command into the email. The name (ID) will automatically be a hyperlink to that record in the OpenPages system.
[$Ref:System Fields:Description$]	Places the Description System Field of the reference object specified in the Smart Action command into the email.
[$Ref:System Fields:Title$]	Places the Title System Field of the reference object specified in the Smart Action command into the email. This field will only work on OpenPages V9+. Use pre-V9 will result in the text "Title field requires OpenPages V9+" being placed into the email.
[$Ref:System Fields:Location$]	Places the Folder Path of the reference object specified in the Smart Action command into the email. e.g., /Global Financial Services/Retail/Cards
[$Ref:System Workflow Fields:Workflow Name$]	The Workflow Label Name of the running workflow on the reference object.
[$Ref:System Workflow Fields:Stage Name$]	The Workflow Stage Label Name of the current workflow stage of the running workflow on the reference object.

Parameter	Purpose
[$Ref:System Workflow Fields:Stage Due Date$]	The Workflow Stage Due Date of the current workflow stage of the running workflow on the reference object.
[$Ref:System Workflow Fields:Workflow Criticality$]	The Workflow Criticality of the running workflow on the reference object.

13 Appendix B – Smart Actions Spreadsheet Format

When loading Smart Actions using the CommandXLSX mode, the spreadsheet of Smart Actions commands should be formatted as detailed below:

- The Excel Spreasdsheet MUST be .xlsx format.

  The legacy .xls format is not supported.

- The Smart Actions commands MUST be placed into a tab called: SmartActions

  No other tabs in the spreadsheet will be processed.

- Row one of the spreadsheet is the header row for your convenience

  The information in this row will be ignored by the Smart Actions engine

- Row two onwards of the spreadsheet contain the Smart Actions commands

- Each row of Smart Action commands must contain the Smart Action command in the first column, followed by command parameters in the subsequent columns.

  As with Cognos reports returning Smart Actions commands, each Smart Action parameter is determined by position in the spreadsheet and so blank parameters should leave an empty column entry.

Example Spreadsheet:

Command	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Update Setting	/Platform/Reporting Framework V6/Models/Platform_Reporting_TIME/Is Enabled	true												
Generate Framework	No	Platform_Reporting_TIME	TIME DataSource											
Update Setting	/Platform/Reporting Framework V6/Models/Platform_Reporting_TIME/Is Enabled	false												