

Python 1.4 - Release Notes

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1.4.1-funcrel

Resolved Issues

Customer Ticket Id	Details
34909	Correct the false violation for the rule (1021044): 'Avoid string interpolations to prevent SQL injections (Python)' when using f-strings. Removed false positives.

Rules

Rule Id	New Rule	Details
1021044	FALSE	Removed false positives for the rule (1021044): "Avoid string interpolations to prevent SQL injections (Python)".

1.4.0-funcrel

Other Updates

Details
Create a maximum of one S3 unknown bucket per project
Handle correctly "botocore.client.S3.copy()" method: create useSelectLink and useInsertLink

New Support

Summary	Details
Support web service operations in Bottle Web framework	Creation of web service operations configured by the Bottle framework and links to the respective Python handler methods.
Support web service operations in Sanic Web framework	Creation of web service operations configured by the Sanic framework and links to the respective Python handler methods.

1.4.0-beta8

Other Updates

Details
Generalize app-level linking for any type of objects linkable to Lambda handlers (links representing AWS Lambda triggers).
Interpret calls inside Python Lambda expressions to AWS DynamoDB client objects.
Create non-CRUD links for Boto3 API methods acting on S3 bucket.
Remove "S3 region" objects from modelization of AWS S3.

New Support

Summary	Details
Support Falcon web framework	Creation of REST operations and links to the Python handler methods.
Support CherryPy web framework	Creation of REST operations and links to the Python handler methods.
Support FastAPI web framework	Creation of REST operations and links to the Python handler methods.
Support for Lambdas in AWS-CDK	Creation of (Python) AWS Lambda objects and links to the Python handler methods. Enabled only when no corresponding CloudFormation template files are detected.

1.4.0-beta7

Note

If your application contains AWS code it is highly recommended to add the com.castsoftware.cloudconfig extension, so that proper migration of AWS objects takes place upon upgrading com.castsoftware.python extension from previous versions (v< 1.4.0-beta7).

Other Updates

Details
Support of Cloudformation, SAM and Serverless framework is removed from this extension. The support is now provided by com.castsoftware.cloudconfig. The com.castsoftware.python extension remains responsible for linking AWS objects that have Python methods as handlers.

1.4.0-beta6

Resolved Issues

Customer Ticket Id	Details
33241	Filter out standard library packages from analysis
33452	Avoid crashing the analysis when errors are found during object saving

Other Updates

Details
Metamodel Python function (used for methods and functions indistinctly) now inherits from "APM Methods".
Improved search algorithm of AWS Lambda handlers.
Improved resolution of SQS queue names in AWS framework analysis.
Remove false positive for rule: "Avoid using exec (Python)", Rule ID: 1021038.

Rules

Rule Id	New Rule	Details
1021038	FALSE	Avoid using exec (Python).

New Support

Summary	Details
Support positional-only arguments	Positional-only arguments are recognized when analyzing method definition signatures. This is part of the support for new features in Python 3.8.

1.4.0-beta5

New Support

Summary	Details
Support for SNS in boto3	Support Amazon Simple Notification Service (SNS) for Python in boto3 (Python SDK for Amazon Web Services)

1.4.0-beta4

Note

This release introduces major improvements in method call resolution, notably for those calls involving class instance attributes. These improvements should reduce considerably the number of false call links. Some correct call links might get impacted by these changes, in particular, for calls contained in large and complex classes.

Other Updates

Details
Fix bug leading to innocuous error message during application level
Linux compliant extension version

New Support

Summary	Details
Support for AWS dynamoDB (boto3 sdk)	Creation of dynamoDB tables and CRUD links
Support for Web2py calls to web services	Support for calls to web services via fetch method (GET)

1.4.0-beta3

Note

In this release, the Python analyzer will accept YAML files (.yaml, .yml) in addition to the already handled PYTHON files (.py, .jy).

Resolved Issues

Customer Ticket Id	Details
28660	Improve rule "Avoid hard-coded network resource names (Python)"
28661	Avoid artifacts having recursive (includeLink) calls
28612	Better support of python (namespace) packages (without "init.py" files). Fixes missing links between python methods.
29690	Fix bug when parsing empty dictionary definitions
29822	Fix bug in program call interpreter leading to inner crash

Other Updates

Details
Skip analysis of folders containing external libraries: python code in "site-packages" and "dist-packages" is skipped by default by the analyzer

New Support

Summary	Details
Support for Boto3: Amazon Web Services SDK for Python	Creation of Lambda function objects, SQS messages and S3 buckets
Support for Serverless, SAM, CloudFormation: Amazon Web Service deployment frameworks	Support for AWS deployment frameworks using YAML configuration files, constrained to the Python runtime elements.

1.4.0-beta2

Note

This release officially supports injection of interpreters via different UA extensions (for example for development of custom Python quality rules).

Resolved Issues

Customer Ticket Id	Details
28631	Add default value to BackFired Function Point (24)

Other Updates

Details

Update rule title: 'Avoid Python string interpolations to prevent SQL injections' to 'Avoid string interpolations to prevent SQL injections (Python)'

Python Analyzer Openness for external interpreters (e.g. custom quality rules)

1.4.0-beta1

Resolved Issues

Customer Ticket Id	Details
25623	Python rule (Rule ID:1021030): "Avoid hardcoded network resource names" does not operate as described.
27785	False Violation on Python Analysis for the rule (Rule ID:1021004): "Avoid using a web service with Python requests inside a loop".

Other Updates

Details
Minor update of description for the rule (Rule ID:1021042): "Avoid hard-coded passwords (Python)".
Scope not correctly configured for rule (Rule ID:1021054): "Avoid long docstring lines".
Overall enhancement of method call resolutions, and fixed issues with cross-file method calls.

1.4.0-alpha2

Resolved Issues

Customer Ticket Id	Details
23067	Correct internal error when handling ternary conditional expression in loops.

Other Updates

Details
Fixed issues on method names and calls with (possibly deprecated) keywords: print, exec and await.
Fixed internal error (minor impact).
Corrections in analysis of framework "plac". Fixed internal error that could lead to a crash.
Web Service objects are name after their url (complying with other analyzers) instead of their HTTP method name.

1.4.0-alpha1

Other Updates

Details
Jython files (.jy) are recognized as Python source code by the discoverer. These files are then analyzed as regular python code (see: https://doc.castssoftware.com/display/TECHNOS/Python+1.4#Limitations)

New Support

Summary	Details
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Support to "Plac framework"

Added support to "Plac framework" for command-line argument handling.