

LANGUAGE TOOLING FOR IBM I (AS/400, I SERIES)

RPG & DDS Language Engine

Turn your IBM i estate into structured data you can query, analyse and migrate. Battle-tested on more than 30 million lines of production RPG code.

30M+

LINES OF PRODUCTION
RPG PARSED

718

AUTOMATED TESTS

88

RPG BUILT-IN FUNCTIONS
MODELLED

132

RELEASES SINCE 2021

— COMPLETE IBM I COVERAGE IN ONE ENGINE

RPG applications are never just RPG. They are fixed-form and free-form RPGLE, embedded SQL in SQLRPGLE, and DDS files that define the data. Our RPG & DDS Language Engine — also known as our RPG parser — reads all of it, then resolves the references across your whole codebase: a field used in a C-spec links back to the DDS record format or DB2 column that declares it.

The result is a precise, typed model of your application: the basis for impact analysis, documentation, standards enforcement and migration. No black box, no proprietary format.

— WHAT YOU GET

■ RPG IV, fixed and free form

Fully-free **FREE, /FREE blocks and every fixed-form spec — H, F, D, I, C, O, P — plus all 13 compiler directives.

■ DDS, all four file types

Physical, logical (incl. join logicals), display and printer files; 119 DDS keywords modelled.

■ It never gives up on your code

Never throws: you get an AST plus positioned issues, with recovery nodes keeping partial results usable.

■ SQLRPGLE, first class

Embedded EXEC SQL is parsed, not skipped. A dedicated DB2 parser makes DDL columns resolvable RPG symbols.

■ Whole-codebase resolution

Declarations, /COPY members, DDS fields, DB2 columns, subroutines, labels, prototypes — across files.

■ Detailed type modelling

27 declaration type classes: packed and zoned decimal, binary, float, char, varchar, date, time, pointer.

— WHY STRUMENTA

■ Fixed price, guaranteed

The quote we give once scope is agreed is the final cost. One-year guarantee, extendable at your convenience.

■ Language engineering is all we do

Turin, since 2017. Clients worldwide, including Fortune 500 leaders, ADP, CGI and the European Space Agency.

■ Open foundations

Apache-2.0 StarLasu AST framework (Kolasu, Pylasu, Tylasu, Sharplasu). No proprietary IR.

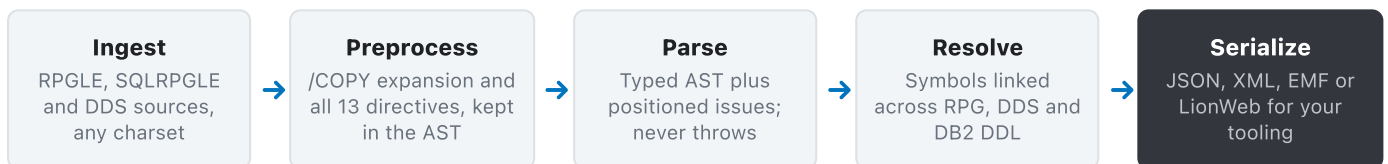
■ Try before you buy

Run your own code through the engine in the Strumenta Playground, then pick your license.

COVERAGE AND DELIVERY

Platform	IBM i (AS/400, iSeries). Runs anywhere with a JVM 11+ — no connection to the IBM i required: analyse exported source members offline, on laptops or CI servers.
Languages	RPGLE fixed and free form; SQLRPGLE; DDS. RPG II/III on the roadmap — talk to us. Files: rpgle, sqlrpgle, rpglem, rpgleinc, dds, pf, lf, dspf, prtfrtf
Serialization	JSON, XML, EMF/Ecore (.ecore/.xmi), LionWeb 2024.1 in both JSON and Protobuf
JVM library	Kotlin and Java, Java 11+, CI on Java 11/17/21; example projects and full docs
CLI & service	Fat-jar CLI batch-parses whole directories to JSON or XML with error-prevalence reports. HTTP microservice: POST /parse, POST /solve, GET /language — callable from any language.
Test corpus	718 automated tests plus 53 open-source RPG repositories (~3,000 files, ~540k lines)

HOW IT WORKS



INTEROPERABILITY, NOT LOCK-IN

The full RPG metamodel — 900+ node classes — is published as a LionWeb Language, with stable node IDs and proxy nodes for incremental processing. LionWeb is the open interoperability initiative Strumenta co-founded with JetBrains MPS and itemis: Python and .NET tooling consumes RPG ASTs directly.

ONE ECOSYSTEM, THREE ENGINES

One AST framework, one data model: analyse RPG, DDS, CL and COBOL as one connected model.

CL Language Engine

2,160 IBM i CL commands as typed AST nodes, LionWeb-native. Analyse the CL orchestrating your RPG apps.

COBOL Language Engine

COBOL 85 and selected extensions, validated against the NIST COBOL-85 test suite.

The only language engineering company automating RPG-to-Python migrations — see our David Nieper case study.

"Completed on time, on budget... we were writing new features in Java within a month of handover."

IT Director, European manufacturing company

TALK TO US

Try it in the Strumenta Playground before you buy. Standard, Distribution and Service licenses — all with documentation, dedicated support and a one-year extendable guarantee.

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