

Indigo DRS Data Reporting and Document Generation System

Indigo Scape DRS is an advanced Data Reporting and Document Generation System for Rapid Report Development (RRD) using HTML, XML, XSLT, XQuery and Python to generate highly compatible and content rich business reports and documents with HTML.

Representing the ultimate in specialist reporting software our advanced technology and reusable reporting platform is a powerhouse in Data Reporting with Artificial Intelligence / Machine Learning*.

Indigo DRS is unique in its ability to query in XQuery, Python and SQL and use data from multiple sources and types simultaneously making it the only choice for demanding business, financial and scientific reporting.

Indigo DRS Advanced Features

- ✓ Powerful RDL Report Engine
- ✓ XQuery / XPath, XSLT, Python, SQL
- ✓ Data Visualization, Charting and Graphs
- ✓ Data Tables, Data Sheets and Pivot Tables
- ✓ Data Mapping, Filtering and Sorting
- ✓ Data Manipulation, Modelling and Forecasting
- ✓ Expression and Formula Evaluation
- ✓ Imaging, Drawing, CAD, Barcodes, QR Codes
- ✓ Report Rules and Data Contexts
- ✓ Artificial Intelligence / Machine Learning*
- ✓ Table of Contents and Indexing
- ✓ Sub Reports, Modular / Shared Reporting
- ✓ Include Data from XML, JSon, CSV, XLSX, SQL
- ✓ Query and Import Data from API's
- ✓ HTML, PDF and Text Document Outputs
- ✓ PDF Security, Permissions and Certificates
- ✓ Report Templates and Fragment Libraries
- ✓ Report Management and Publishing Tools
- ✓ Report Packaging and Deployment
- ✓ Report Licensing Entitlement*
- ✓ Data Security and Encryption
- ✓ Password Management Tools
- ✓ Reusable Reporting Platform (.NET Library)

Indigo DRS Benefits and Advantages

- ✓ Rapid Report Development (RRD)
- ✓ Easier Deployment and Installation
- ✓ Rapid Deployment of Reports
- ✓ Maximised Sharing / Reuse
- ✓ Enhanced Functionality
- ✓ Greater Report Flexibility
- ✓ Reusable Content and Modules
- ✓ Improved Report Maintenance
- ✓ Reporting Engine Maximises Data Assets
- ✓ Lower IT / Support Overhead
- ✓ Secure and Encrypt Reports
- ✓ Protect Report Intellectual Property and Assets
- ✓ Reduced Business and Technology Costs
- ✓ Profitability boost with Report Licensing options

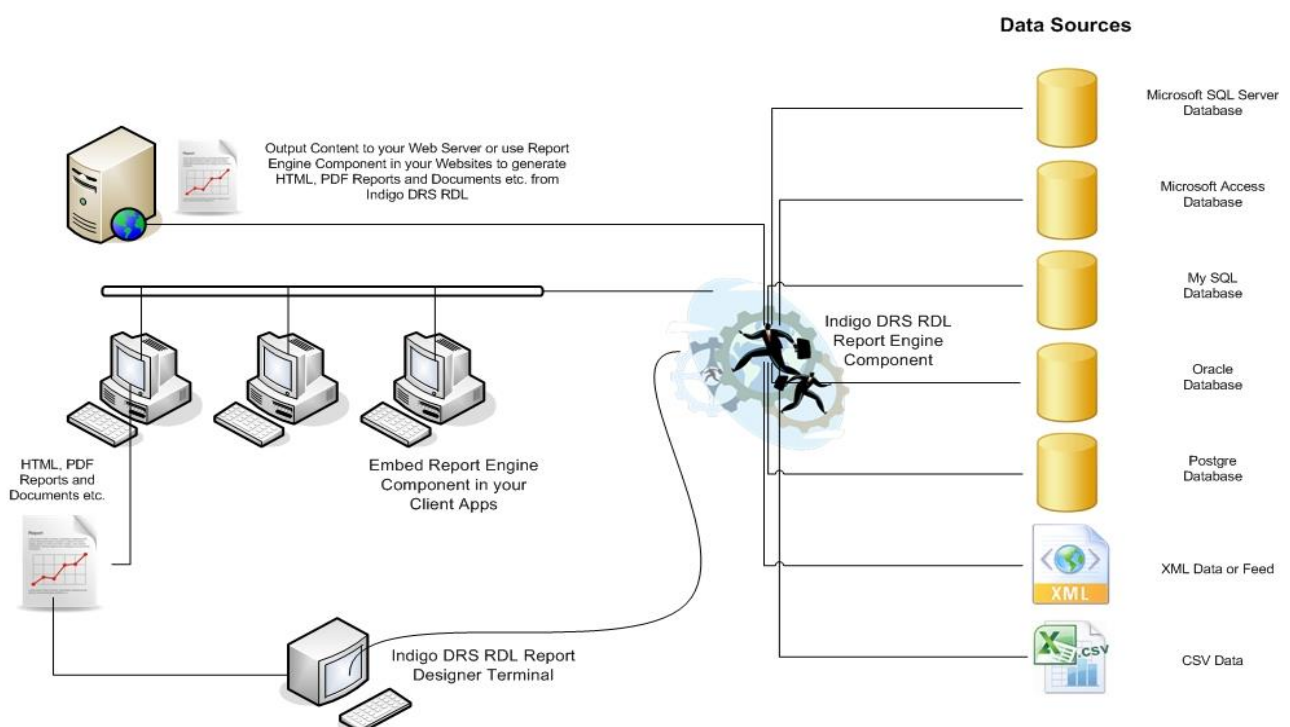
Indigo DRS Creates

- ✓ Finance Reports
- ✓ Crypto Reports
- ✓ Technical Reports
- ✓ Risk Assessments
- ✓ Fund Reporting
- ✓ Charts and Graphs
- ✓ Statistical Reports
- ✓ Engineering Reports
- ✓ Scientific & Medical Papers
- ✓ Technical Data
- ✓ Mathematical Reports
- ✓ Financial Statements
- ✓ Financial Forecasting
- ✓ Suitability Reports
- ✓ Regulatory Reports
- ✓ Management Reports (MI)
- ✓ Invoices / Bills, Quotes
- ✓ Geo Data, Locations & Maps
- ✓ Administrative Papers
- ✓ Legal Documents
- ✓ Account Statements
- ✓ Insurance Policies
- ✓ Certificates / Awards
- ✓ CV's / Resumes
- ✓ General Documents
- ✓ And much more!

With advanced reporting features, unmatched functionality and effortless integration of this powerful software technology into your business you can be assured of having the best reporting capabilities!

Indigo DRS Technology

Indigo Scape Data Reporting System (DRS) comprises of the Report Designer Tools and the separate Report Engine .NET reusable software component library. The Indigo DRS Report Designer creates the Reports and the Report Engine renders the Reports in HTML and PDF for use in your .NET applications and / or websites.



Report Definition Language (RDL)

The Indigo Scape DRS Data Reporting System uses Indigo DRS RDL (Report Definition Language) which is an XML vocabulary for Rapid Report Development (RRD) using a flexible machine readable Markup Language to define and describe Report structure, elements, functionality, content and data.

Indigo DRS Report Definition Language represents a standard for creating complex and interchangeable Reports between Indigo DRS systems and also maximises content reuse and modularity. Fully modular design allows common sections of the Report to be included as Sub Reports.

Reusable Reporting Platform

Data Report Engine .NET Component SDK is a reusable software reporting platform that renders and outputs reports created by the separate Indigo DRS Report Designer. The Report Engine component library can be used to generate and output reports for applications and / or websites in the .NET Framework using Indigo DRS RDL (Report Definition Language).

Report Designer Tools

The Report Designer can quickly create advanced reports rich in content with many options for styling, formatting and customisation. Tables, charts and graphs can be added to the report effortlessly allowing complex data to be presented in a visual and meaningful format with the minimum of effort.

In addition to the Report Designer, Indigo DRS also includes a selection of powerful Report Management Tools and utilities to assist with the design, development and implementation of reports and the querying of data.

Basic Concepts

HTML (Hyper Text Markup Language) is the standard markup language used to create web content. XQuery is a query and functional programming language that queries and transforms collections of structured and unstructured data, usually in the form of XML data.

XSLT (Extensible Stylesheet Language Transformations) is a language for transforming XML documents into other XML documents or other formats such as HTML for web pages or plain text.

IronPython can use the .NET Framework and Python libraries, and other .NET languages can use Python code just as easily.

Indigo DRS brings these technologies together to create an advanced reporting and document generation platform that is highly compatible and requires no additional components, software or hardware upgrades.

XQuery / XPath

XQuery contains a superset of XPath expression syntax to address specific parts of an XML document. The language is based on the XQuery and XPath Data Model (XDM) which uses a tree-structured model of the information content of an XML document.

XQuery is used to query XML Data Sources adding content to the report with queries, rules, paragraphs, charts and tables. Report Rules can also be applied to manage how report content is displayed.

XSL Transformations

XSLT (Extensible Stylesheet Language Transformations) is a language for transforming XML documents into other XML documents or other formats such as HTML for web pages or plain text.

Indigo DRS implements XSLT and is designed for use as part of XSL, which is a stylesheet language for XML. In addition to XSLT, XSL includes an XML vocabulary for specifying formatting. XSL specifies the styling of an XML document by using XSLT to describe how the document is transformed into another XML document that uses the formatting vocabulary.

Python Scripting

In addition to XQuery the Reporting Engine can use IronPython an open-source implementation of the Python programming language which is tightly integrated with the .NET Framework.

IronPython can use the .NET Framework and Python libraries, and other .NET languages can use Python code just as easily. Python can reference external .NET libraries to include additional functionality in the Report. Python scripting can also be used to query Report Data and create Report Data Contexts and Report Rules.

Artificial Intelligence / Machine Learning*

Indigo DRS Data Reporting Engine (DRE) can use Python for Machine Learning / AI and Statistical Modelling. An optional add-in software component for Indigo DRS facilitates the use of the Accord .NET Framework for Machine Learning and enhances the presentation and formatting of data making it suitable for enhanced reporting.

SQL Queries

Using IronPython and the System Data namespace Indigo DRS can run Structured Query Language (SQL) statements to create, maintain and retrieve data from a relational database. SQL queries can also be used to create Report Data Contexts and Report Rules.

Data Mapping, Filtering and Sorting

Data Filtering is the process of choosing a smaller part of a Data Set and using that subset for viewing or analysis. Data Sorting is the process that involves rearranging the data into some meaningful order to make it easier to understand, analyze or visualize.

Report Data Filters can be applied to Report Data Tables and Report Charts allowing data to be filtered and sorted by Data Columns using rules to filter and sort as required.

Data Source Mapping can be used to map data and add additional custom Data Columns to a Data Table using formulas, expressions and queries.

Data Manipulators provides methods to prepare and manipulate data for technical analysis, apply formulas on the data and prepare output data. Advanced formulas and financial analysis such as forecasting can be used to output forecast data and trends.

Expression Evaluation

The Report Engine can evaluate complex mathematical equations and formulas allowing scientific, engineering, finance and mathematical expressions to be calculated.

Report Designer Tools features an Expression Editor which includes common functions, constants and scientific units allowing formulas and equations to be evaluated and used in the report.

Report Data Contexts

Report Data Contexts are used to drive and build report output content and allows the consolidation and integration of data from multiple different sources and types such as API's, websites, databases and data files.

Data Contexts can be applied to specific Report Elements or be shared named Data Contexts reusable throughout the report.

Context types can be XQuery, Python, XML, CSV, JSon, XLSX, HTML, MS SQL, MDB, ODBC and OLEDB Data Sources that can be read and used in the report.

Report Rules

Report Rules are conditional XQuery or Python expressions that determine if report content is enabled and displayed in the output build.

Rule based queries return True or False and can query the Report Data Source and other Report Data Contexts. Report Rules are useful for controlling the flow and visibility of report content.

For example, certain sections of a common report may only be relevant for a particular type of product or customer. Report Rules allow content to be controlled by switching it on or off depending on certain conditions in the Report Data Source or Data Context.

Report Sub Reporting

Report Sub Reporting makes it possible for a report to contain other reports in subsections of the main report. These reports are called Sub Reports and allow report content to be modularised and shared between reports and even other Sub Reports.

Sub Reports can be used if report content is duplicated, reusable or common to other reports. Sub Reporting improves report performance, maintenance, development and deployment. Sub Reports can also be encrypted to protect report assets and intellectual property.

Report Table of Contents (TOC)

Report Table of Contents is used to navigate report content and can be included in report output builds. The Table of Contents (TOC) are automatically generated from the report structure and elements with options for styling and indexing.

Report CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language such as HTML. CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts.

Indigo DRS uses CSS style sheets extensively improving content accessibility, providing more flexibility and control in the specification of presentation characteristics, enabling multiple HTML pages to share formatting by specifying the relevant CSS in a separate CSS file, and reduce complexity and repetition in the structural content.

PDF Security, Encryption, Permissions and Certificates

Indigo's powerful Report Engine can output documents in PDF format with advanced security options to protect intellectual property by password protecting and encrypting documents.

Report content can also be restricted with permissions and certificates can be added to the digital file to ensure content is not tampered or interfered with. This is ideal for sensitive or important legal documents which need to be protected from interference.

Report Templates and Fragment Libraries

Report Template Management helps build new reports from pre-existing designs and layouts enabling the rapid design, development and publishing of report content.

Report Fragment Libraries help build new reports from pre-existing designs and layouts in the form of Report Fragments.

Report Management and Publishing Tools

Report Management and Publishing Tools enables the publishing of report content to multiple locations in one operation.

Report Packaging and Deployment

The File Package and Deployment Manager is a tool for deploying multiple files into a compressed ZIP File with the option to encrypt the packaged files using AES 256 Advanced Encryption.

Reports can be packaged and deployed rapidly and report assets protected with encryption with this powerful tool.

Report Licensing Entitlement*

Report Licensing Entitlement (RLE) allows the use and distribution of reports to be governed and controlled with a powerful licensing system. Flexible licensing terms allow reports to be distributed with conditions tied to hardware, users and infrastructure thus maximising control, distribution and profitability.

Report Licensing is an optional feature that requires a separate application licensing entitlement to be purchased for the Report Designer Tools!

Data Security, Encryption and Password Management

The Password Management Tool allows passwords to be securely stored in an encrypted data file. The Advanced Encryption System (AES) 256 is a symmetrical encryption algorithm that uses a 256-bit encryption key. It is accepted by the U.S. and Canadian governments as the most secure way to store sensitive data.

With AES-256 bit encryption you can be assured that you will be the only one who can access your critical information.

Prerequisites

Any Win32 or Win64 operating system (server or workstation): Windows Vista, Windows 7, Windows 8, Windows 10 or Windows Server 2003, 2008, 2012 etc.

Compatibility

Indigo DRS is compatible with Data sources on most operating systems such as Windows, Linux, Unix, Mac OS etc. using XML, JSon, CSV, XLSX or HTML as the Data source Files.

The Reports generated by Indigo DRS give the best functionality and compatibility and because they use standard HTML for reporting the documents can be displayed on any type of device whether a PC, tablet, mobile and in any type of browser.

Licensing

One software license is required per user.

Installation

Indigo DRD (Data Report Designer) and Tools can be installed on any Win32 or Win64 operating system (server or workstation): Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10, Windows Server 2003, 2008, 2012 etc.

- **Operating Systems for Deployment**

- Windows 2012
- Windows 2008
- Windows 10
- Windows 8
- Windows 7
- Windows Vista
- Windows 2003
- Windows XP

- **Architecture of Product**

- 32Bit, 64Bit

- **Tool Type**

- Application

- **Business Function**

- Report Design, Reporting Tools, Publishing Tools
- Data Reporting, Data Analysis, Data Analytics
- AI / Machine Learning, Statistical Analysis, Data Mapping
- Data Manipulation, Data Modelling, Data Forecasting
- Business Intelligence, Document Generation

- **Compatible Data Sources**

- Microsoft SQL Server
- Microsoft Access
- MySQL
- ODBC
- OleDb
- XML
- JSon
- CSV, TXT
- XLS, XLSX
- HTML

- **Reporting Formats**

- HTML, PDF, DOC, TXT

NOTE: *Optional features that require a separate licensing entitlement to be purchased!