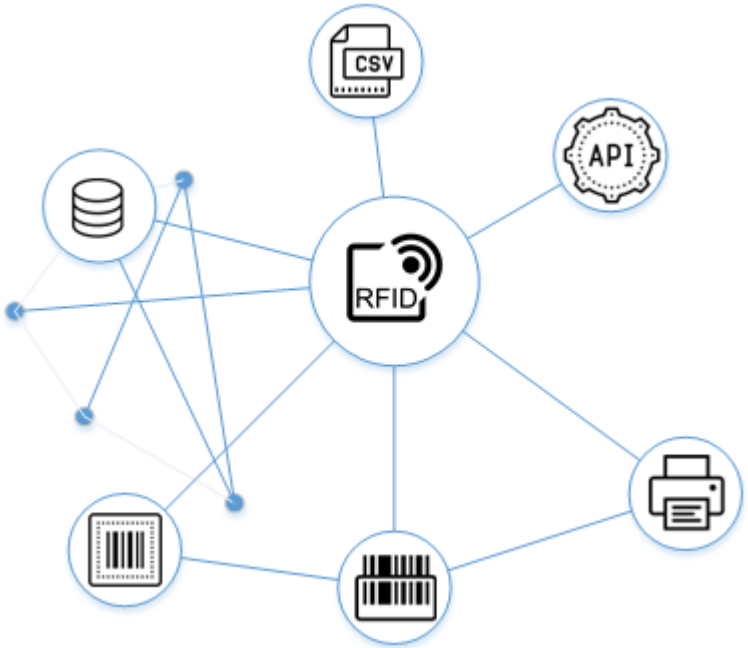
Auto Id Middleware

Focus on your business needs and leave the technology to us!

Do you want to integrate RFID and other AUTO ID devices into your business processes? Focus on your business logic and let our product handle the technology. We have more than 15 years of AUTO ID experience.

AUTO ID Middleware orchestrates RFID readers, barcode readers, printers and their interaction logic. Easily drag & drop equipments and create your business logic. Test and deploy your design with the push of a button.



What is Auto Id?

Auto Id

Auto ID stands for automatic data identification using barcodes and RFID (Radio-Frequency Identification) and devices such as: barcode readers and printers, RFID readers and mobile/hand held computers. Auto ID is used for identifying, tracking, managing and inventorying objects, products, documents etc. in retail, manufacturing, transportation and logistics, healthcare

RFID Middleware

When using RFID in Auto ID processes, the volume of data processed by software systems drastically increases, (hundreds or thousands of tags are read, repeatedly, every second). To make it easier to integrate RFID technology with existing processes, a special class of software, called RFID Middleware, is used.

RFID Middleware is a software product positioned between the physical equipment (RFID readers, barcode readers and printers) and existing business solutions. The role of a RFID Middleware is to integrate with the hardware, get raw data from the hardware, filter received data, aggregate the data, transform it into useful information, and transfer that information to the business solution.

Use cases

- **Retail** – automate pickup, storage, inventory, sale and self-checkout processes using RFID
- **Inventory** – perform asset tracking using RFID tags and barcodes
- **Hospital and healthcare** – traceability for medical instruments' sterilization processes
- **Manufacturing** – tracking components as they move through the production line
- **Access control** – allow access to specific zones/rooms using RFID tags to identify people and vehicles
- **Transportation and logistics** – track vehicles using attached RFID tags

Auto Id Middleware

Auto Id Middleware is a RFID Middleware developed by **Next Id Software ®**, based on visually defining Auto ID processes.

The user draws each step of the process, thus controlling how data is extracted from the RFID readers, transformed into useful information and transferred to existing business solutions.

The solution facilitates the implementation of RFID by:

- Handling all communication with the hardware
- Changing large volumes of data into useful information
- Sending information to one or more existing solutions
- Defining the automatic identification processes in a flexible and easy to use manner
- Plug & play: physically connect the hardware, draw the process and start it immediately

Features

Easy to use

The application has an intuitive web interface. The design surface allows components to be added by drag & drop.

Easy to orchestrate

Process orchestration is done visually, by creating links between components.

Control additional parameters, by editing each component's properties.

Easy to configure

Configure components visually and by editing their properties.

Extend built-in functionality using C# expressions or your own libraries.

Auto complete

Auto complete support when editing expressions that shows suggestions for data elements and built-in functions.

Features

Plug and play

1. Connect your readers to the network
2. Add them on a design surface
3. Decide what to do with the data
4. Run the process

Data connections

Send captured data to:

- Delimited text files
- Excel files
- SQL Server database
- ODBC Compliant Databases

HTTP Connections

Integrate existing software using:

- HTTP input endpoints
- HTTP output endpoints
- HTTP requests

Integration

Supported hardware

- Auto Id Middleware works with fixed RFID readers manufactured by:
  - Zebra (FX7500, FX9600)
  - Impinj (Speedway R120, R220, R420)

- For printing, you can use any Zebra printer that supports ZPL (ZD, GK, GT and GX series)

System integration

Integration between Auto Id Middleware and other software systems is done using:

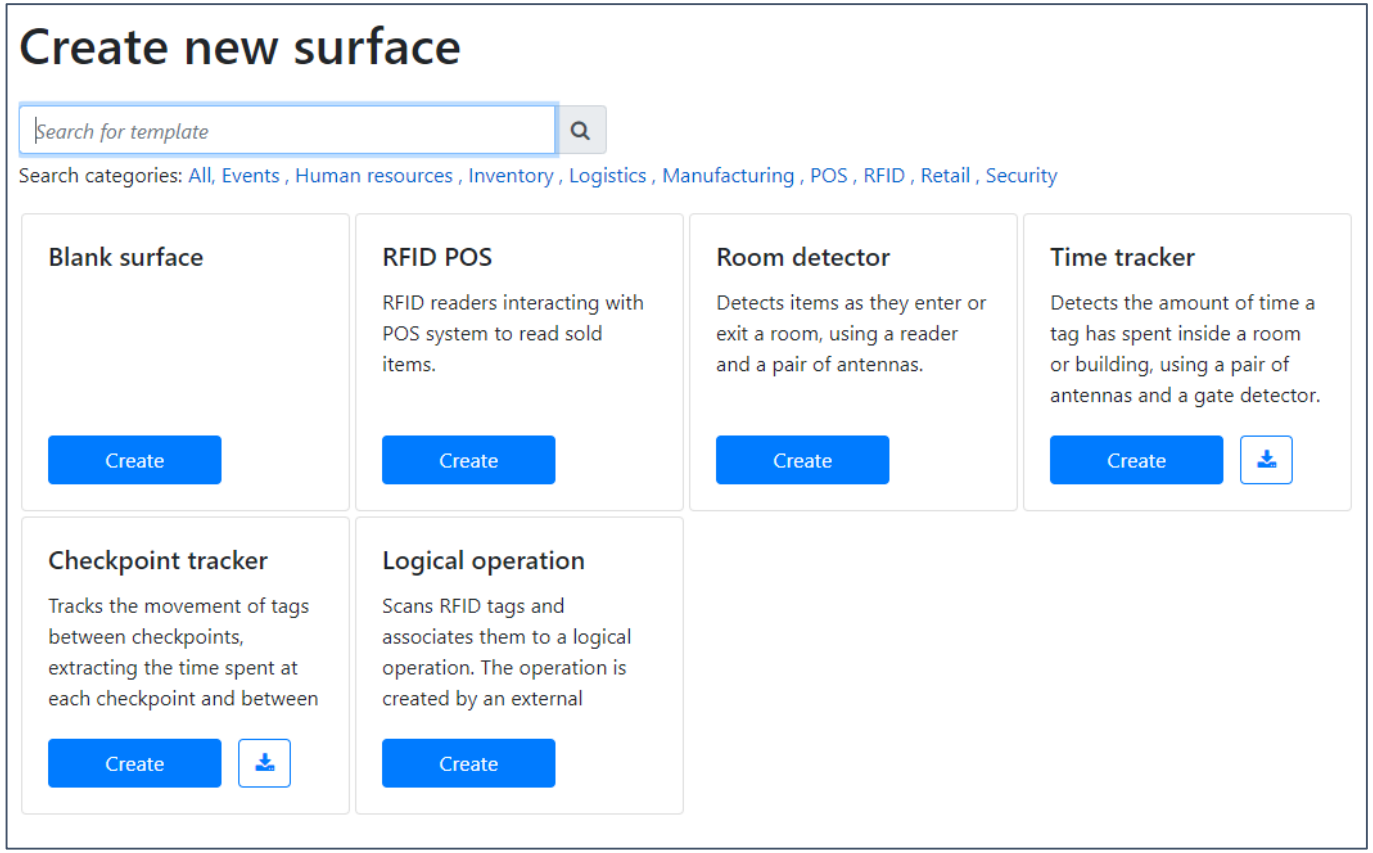
- HTTP, using web requests to existing software and input/output endpoints exposed by Auto Id Middleware in order to receive and send data

- databases – data can be read and written directly to/from SQL Server databases

- files – information can be read and written from/to text or Excel files

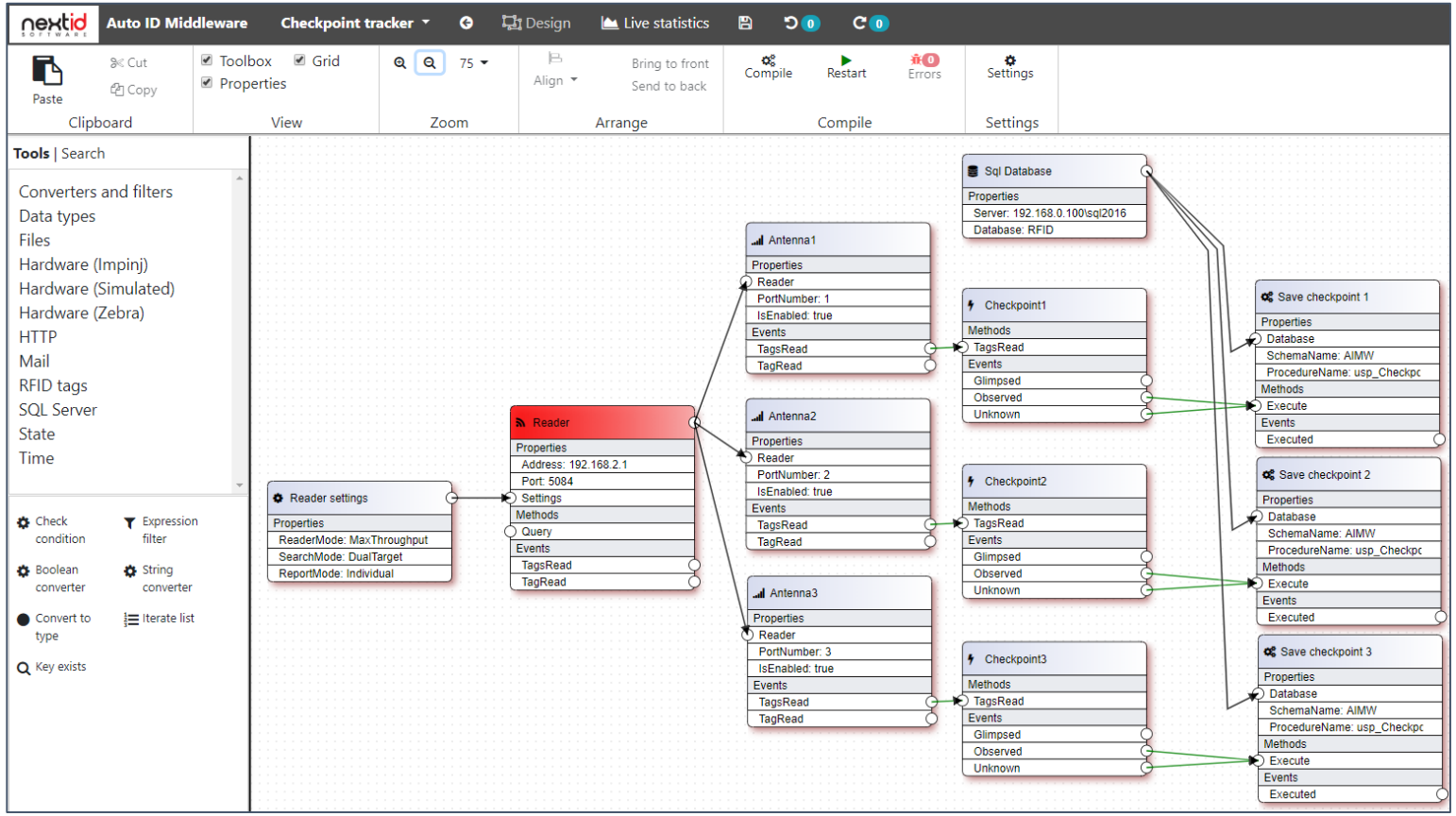
How it works?

The solution allows you to define the automatic data collection processes visually. You create a new design surface, drag objects used by the process from the toolbox, set their properties and create links between them.



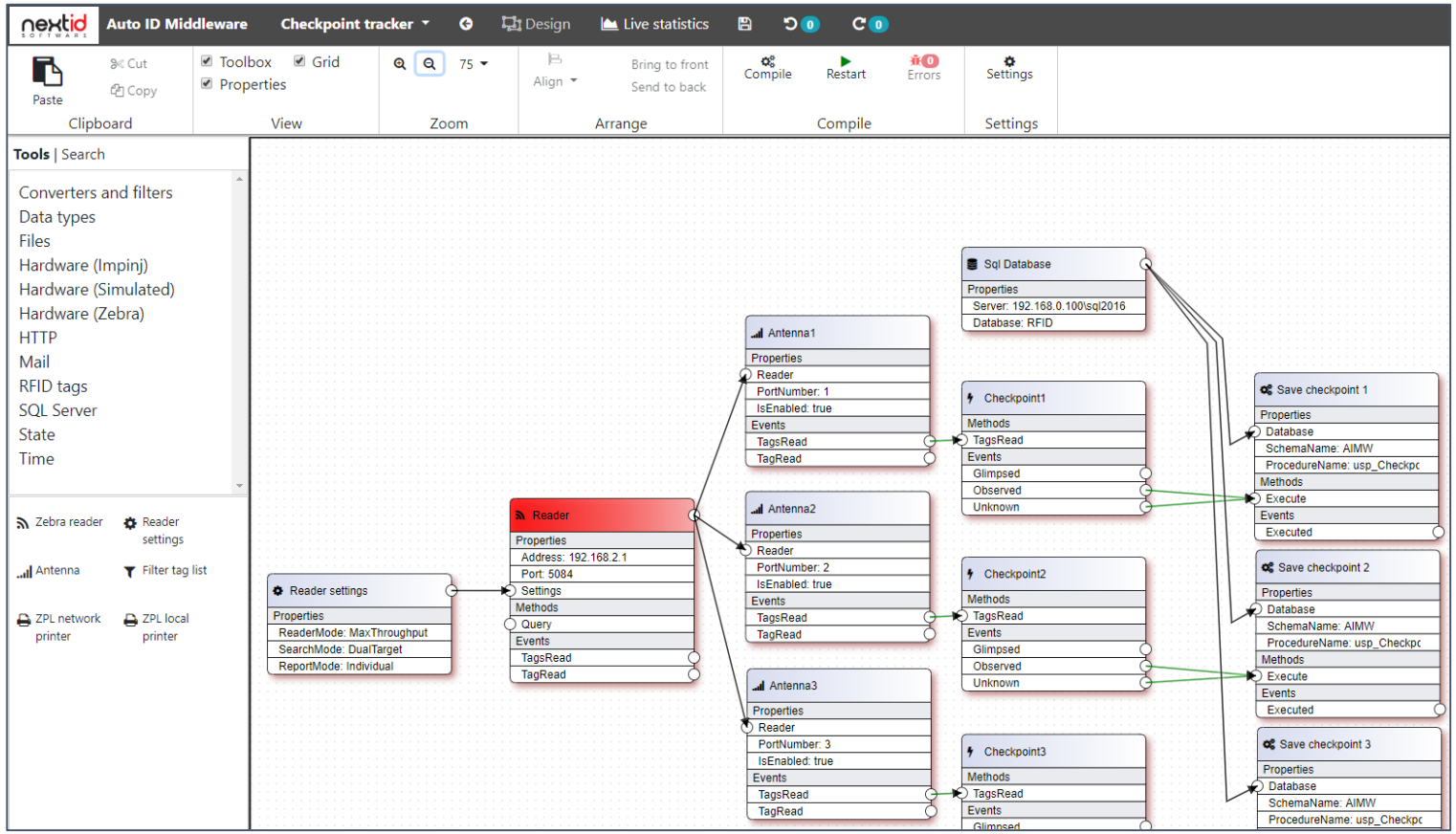
How it works?

The toolbox contains objects that: connect to RFID hardware and get the raw data, filter received tags based on conditions, aggregate and transform the data, transfer information to other systems, print labels and trigger notifications.



How it works?

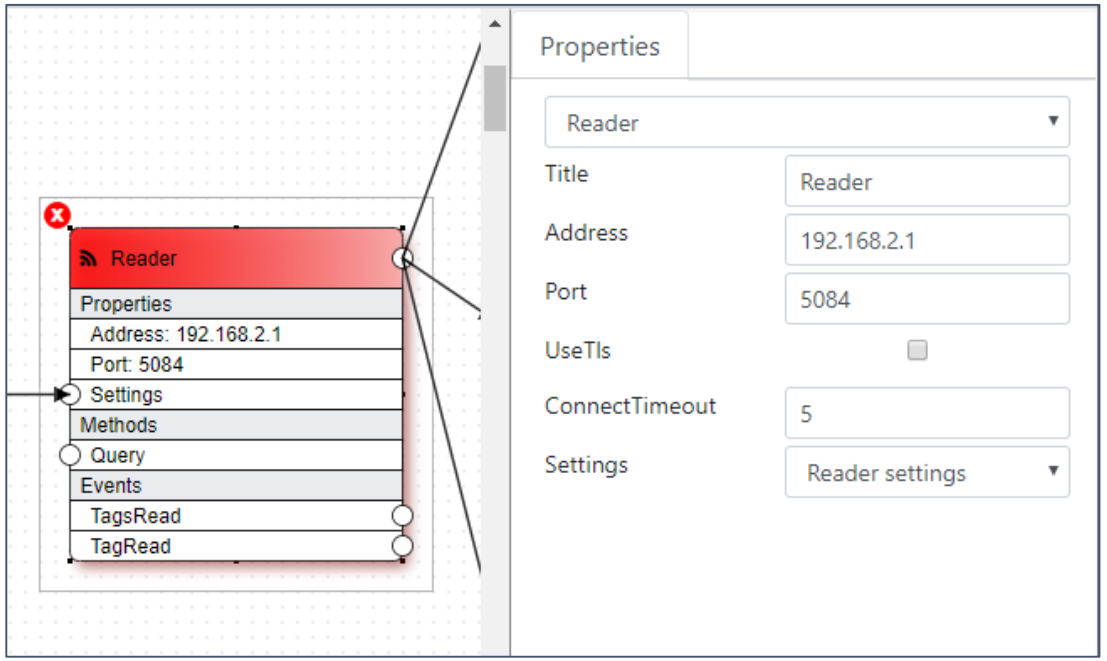
In most cases, you start from the RFID reader, add objects that filter tags, objects that aggregate tags and destinations for the resulting data. The solution includes predefined templates that you can customize and use in common RFID automation scenarios.



Process editor

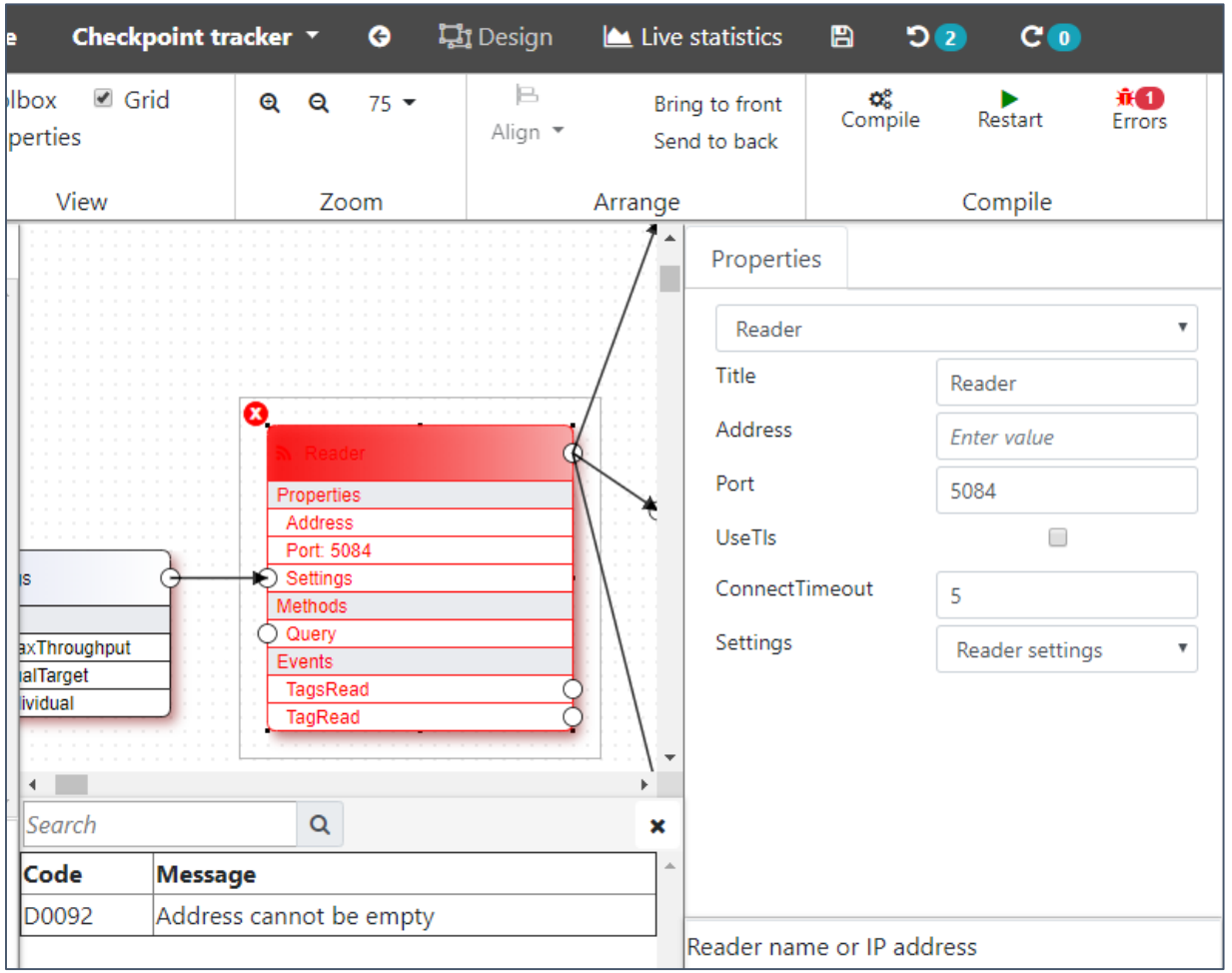
Each object has properties that control its behavior, events that are triggered when they read or receive data and methods used to handle received data. You can link objects together in two ways:

- Initialize properties: the source object is used to initialize a property on the destination object. For example, you can link a Local directory to initialize the location where a text file is saved.
- Data flow: data generated by the source object is processed by the destination object. For example, you can send tags read by a RFID reader to a text file that saves them on disk.



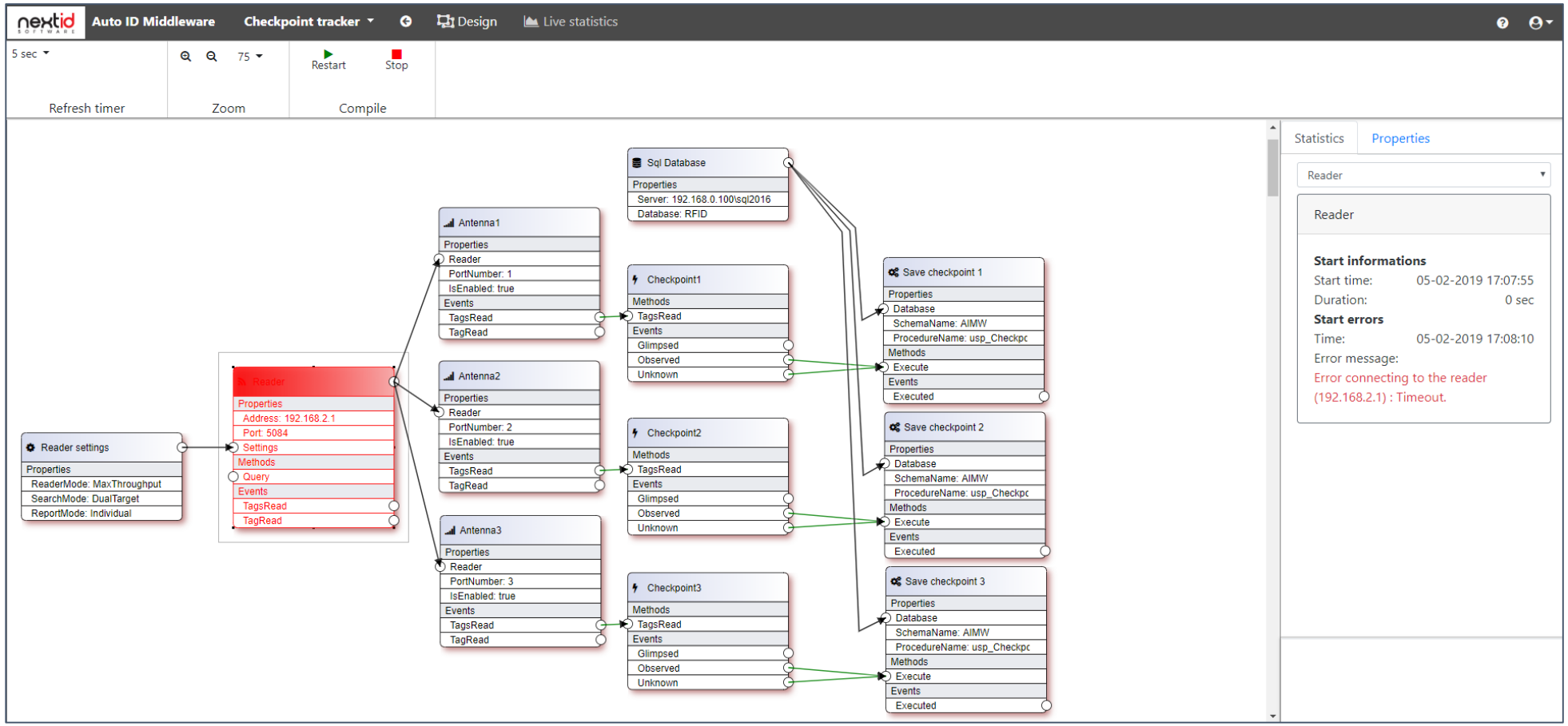
Process editor

The process editor guides and warns you if you have missing or wrong object properties. After you define the process, you can execute and monitor it immediately. If you need to make adjustments, the process can be changed and restarted, at any time



Execution statistics

Auto Id Middleware gives you real time process execution statistics, with details about the frequency and duration of each step involved in the process and any errors encountered during execution.



Auto Id Middleware

Thank you !

Next Id Software

office@nextid.ro

Product page: https://www.nextid.ro/en/products/autoid-middleware/

Technical documentation: http://www.nextid.ro/wiki/