

Spirent TTplugin JSON

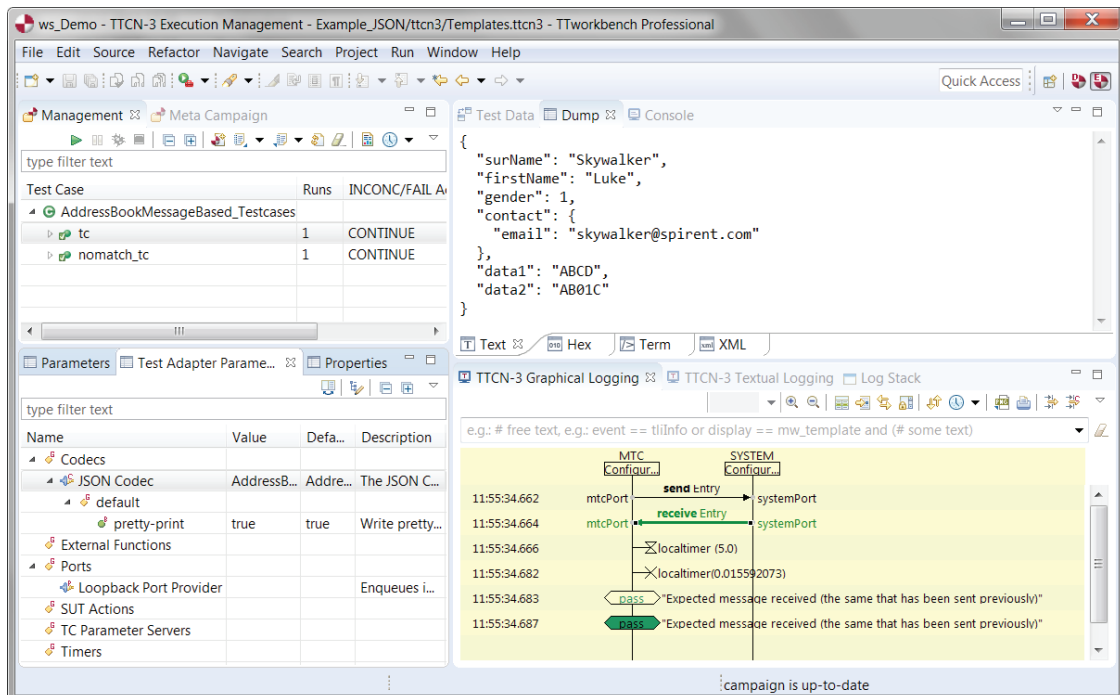
Mapping TTCN-3 Values to JSON

The JavaScript Object Notation (JSON) is a lightweight data exchange format widely used nowadays, especially in JavaScript web applications to communicate with services. JSON became popular as part of the JavaScript standard, as it is easy to read and write for humans and efficient to encode and decode for machines.

The TTplugin JSON allows serialization of the TTCN-3 values to JSON and vice-versa. It consists of a generic codec that handles all TTCN-3 types and maps them to JSON values. To use it, simply add the “JSON Codec” to the Test Adapter Configuration.

Features & highlights

- Automatic encoding and decoding of TTCN-3 values
- Compatible with existing type systems: TTCN-3, ASN.1, XSD, Protobuf, etc.
- Automatic encoding and decoding of anytype values (JSON key is the qualified type name)
- Automatic mapping of JSON field names which are TTCN-3 keywords (e.g. JSON field “value” mapped to TTCN-3 field “value_”)
- Support of RFC 7159, the JavaScript Object Notation (JSON) Data Interchange Format
- Optional indentation of JSON values during encoding
- No coding effort needed
- Freely combinable with additional test access like HTTP, CoAP, MQTT, WebSocket



The screenshot displays the TTworkbench Professional interface. The top window shows a JSON object representing test data:

```
{
  "surName": "Skywalker",
  "firstName": "Luke",
  "gender": 1,
  "contact": {
    "email": "skywalker@spirent.com"
  },
  "data1": "ABCD",
  "data2": "AB01C"
}
```

The bottom window shows the TTCN-3 Graphical Logging, illustrating a sequence of events between an MTC (Mobile Terminal Controller) and a SYSTEM (System Controller):

- 11:55:34.662: MTC sends a message to SYSTEM via mtcPort.
- 11:55:34.664: SYSTEM receives the message via systemPort.
- 11:55:34.666: A localtimer (5.0) expires.
- 11:55:34.682: A localtimer (0.015592073) expires.
- 11:55:34.683: A "pass" event occurs, indicating the expected message was received.
- 11:55:34.687: Another "pass" event occurs, indicating the expected message was received.

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