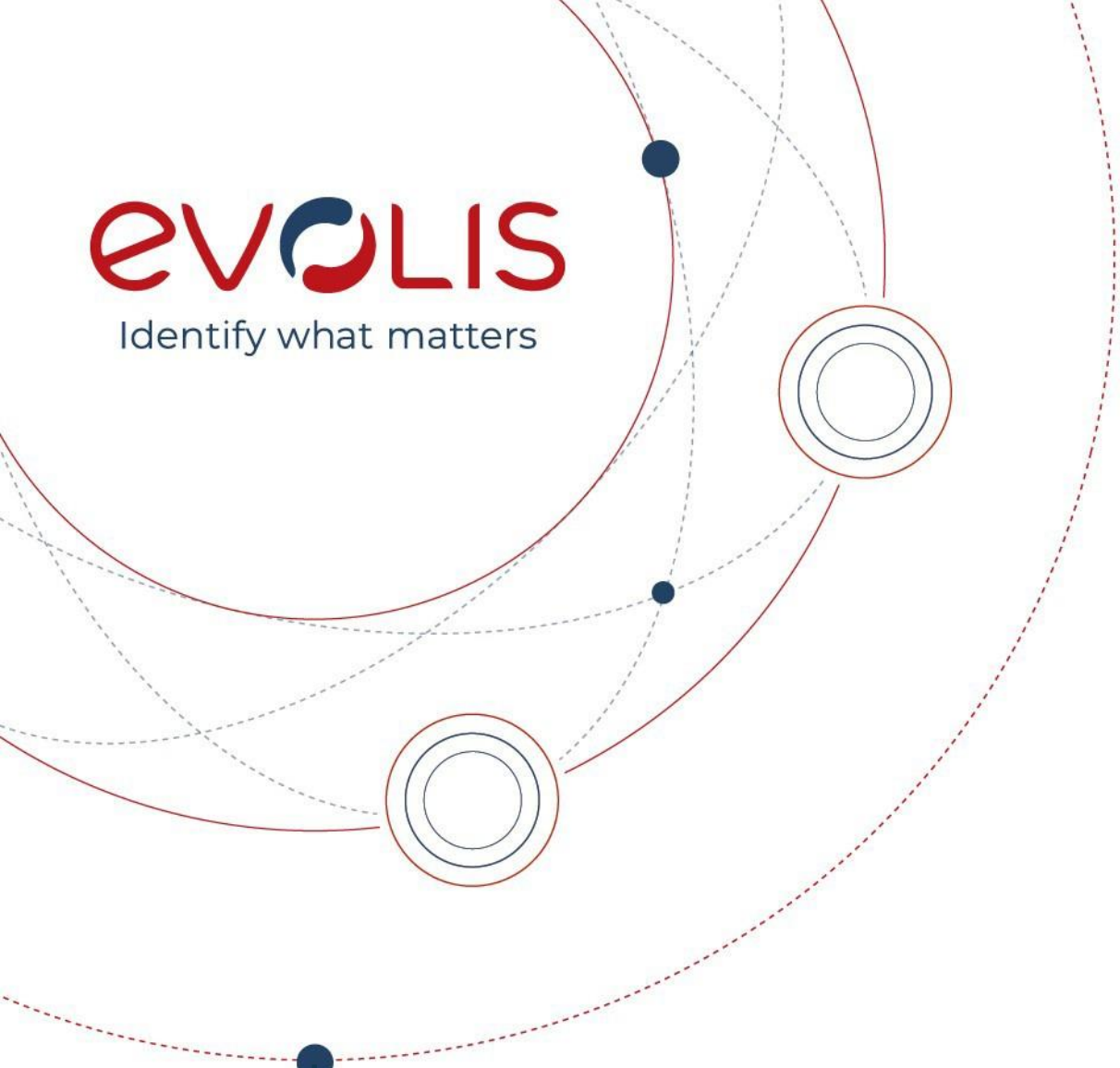

Evolis SDK

Evolis Services provider API

How-to encode magnetic data and print monochrome

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Abstract

This documentation demonstrates how-to encode magnetic data and print one side monochrome design thanks to API mode (Evolis Services Provider).

Prerequisite

One computer with an Evolis driver suite installed in standard or supervision mode (Evolis Premium Suite, Evolis premium suite 2, Edikio Printer Suite, Badgy Premium Suite).

Pay attention to name your printer (designed as "Device" in the request) as it is instantiated on the server (Ex : Evolis Zenius (Copy 1)).

This use-case requires printer equipped with a magnetic encoder.

For further details about magnetic encoding thanks to an Evolis printer, refer to evolis_sdk_magnetic_encoding_with_evolis_printers.pdf in the help_and_support folder.

Technical limitations

Evolis Services Provider API is only available on Windows operating System for the server side.

Client must be compatible with JSON RPC V2.00 specifications.

Testing thanks to the demo tool

To test the requests set, possibly use the demo tool here (click on 1.demo.exe)

select your communication mode in the first section . Copy / paste requests one by one sequentially (the expected results/answer shows up in the lower pane of the demo application).

Set of requests to print a single side monochrome design and encode magnetic track(s)

Request 1: Set the encoder's coercivity

```
{
    "jsonrpc":"2.0",
    "id":"1",
    "method":"CMD.SendCommand",
    "params":
    {
        "command":"Pmc;h",
        "device":"Evolis Primacy",
        "timeout":"5000"
    }
}
```

Expected result

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 2: Set the encoder's track 1 format (here ISO1).

```
{
    "jsonrpc":"2.0",
    "id":"1",
    "method":"CMD.SendCommand",
    "params":{
        "command":"Pmt;1;1",
        "device":"Evolis Primacy",
        "timeout":"5000"
    }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 3: Set the encoder's track 2 format (here ISO2).

```
{
    "jsonrpc":"2.0",
    "id":"1",
    "method":"CMD.SendCommand",
    "params":
    {
        "command":"Pmt;2;2",
        "device":"Evolis Primacy",
        "timeout":"5000"
    }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 4: Set the encoder's track 3 format (here ISO3).

```
{
    "jsonrpc":"2.0",
    "id":"1",
    "method":"CMD.SendCommand",
    "params":
    {
        "command":"Pmt;3;3",
        "device":"Evolis Primacy",
        "timeout":"5000"
    }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 5: Start the sequence (initiate printer'scommunication)

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "CMD.SendCommand",
  "params": {
    "command": "Ss",
    "device": "Evolis Primacy",
    "timeout": "5000"
  }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 6: Download Magnetic track 1 data to the Evolis printer

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "CMD.SendCommand",
  "params":
  {
    "command": "Dm;1;EVOLISCARDPRINTER",
    "device": "Evolis Primacy",
    "timeout": "5000"
  }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 7: Download Magnetic track 2 data to printer

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "CMD.SendCommand",
  "params": {
    "command": "Dm;2;123456789",
    "device": "Evolis Primacy",
    "timeout":"5000"
  }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 8: Download Magnetic track 3 data to printer

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "CMD.SendCommand",
  "params": {
    "command": "Dm;3;987654321",
    "device": "Evolis Primacy",
    "timeout": "5000"
  }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 9: Write magnetic data to the card

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "CMD.SendCommand",
  "params": {
    "command":"Smw",
    "device": "Evolis Primacy",
    "timeout": "5000"
  }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 10: Begin print session

```
{
    "jsonrpc": "2.0",
    "id": "1",
    "method": "PRINT.Begin",
    "params": {
        "device": "Evolis Primacy",
        "session": "JOB000001"
    }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "JOB000001",
  "id": "1"
}
```

JOBID000001 is the session ID, it is generated automatically by the Evolis Services Provider. It remains possible to set its own JOB ID thanks to an additional parameter "session", that overwrites the automatic native naming (see example below in red bold):

Request 11: Set printing parameters

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "PRINT.Set",
  "params": {
      "data": "GRibbonType=RM_KBLACK;Duplex=NONE;IGSendSpoolerSession=OFF",
      "session": "JOB000001"
  }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 12: Send monochrome bitmap

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "PRINT.SetBitmap",
  "params": {
    "session": "JOB000001",
    "face": "front",
    "panel": "resin",
    "data": "base64:BlackBitmapEcodededinBase64 …"
    }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Black is defined (default behavior) by an average RGB (Red, Green, Blue)value that is higher than 253: RGB(253;253;253).

That means all dots that has an average value higher or equal to 253 will be printed thanks to the black panel whatever installed ribbon.

For a better-quality printout, Evolis recommend using black panel for barcodes, QR code, and in general, textual information.

Request 13 : Run the print job

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "PRINT.Print",
  "params": {
    "session": "JOB000001"
  }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Request 14 : End the session

```
{
  "jsonrpc": "2.0",
  "id": "1",
  "method": "PRINT.End",
  "params": {
    "session": "JOB000001"
  }
}
```

Expected result:

```
{
  "jsonrpc": "2.0",
  "result": "OK",
  "id": "1"
}
```

Magnetic ISO standards quick description

Following data could be encoded respecting the ISO standards:

TRACK 1 ISO data: up to 76 alphanumeric characters, A to Z, 0 to 9, ASCII characters between 20 and 95.
TRACK 2 ISO data: up to 37 numeric characters, 0 to 9, ASCII characters between 48 and 62.
TRACK 3 ISO data: up to 104 numeric characters, 0 to 9, ASCII characters between 48 and 62.

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