

CUG meeting 16/06/2016

Agenda



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- **Welcome: objectives of this CUG meeting**
- **Find & fix slow SQL query's**
- **Using Document DB in Caché Object Script, SQL & REST by Alain Houf & Danny Wijnschenk**
- **Learning & support, new Developer Community portal by Evgeny Shvarov**
- **Interactive discussion: hot topics to be covered (Atelier, security, ...), system integration & server monitoring, use of modern technology with existing systems, member suggestions ...**
- **Lunch break**

Find & fix slow SQL query's

By Kyle Baxter

Using Document DB in Caché Object Script, SQL & REST

By Alain Houf & Danny Wijnschenk

Learning & support, new Developer Community portal

<https://community.intersystems.com/>

By Evgeny Shvarov

Interactive discussion

- Hot topics to be covered (Atelier, security, ...)
- System integration & server monitoring examples
- Use of modern technology with existing systems
- Member suggestions

Interactive discussion – hot topics

- Atelier
- Security
- ...

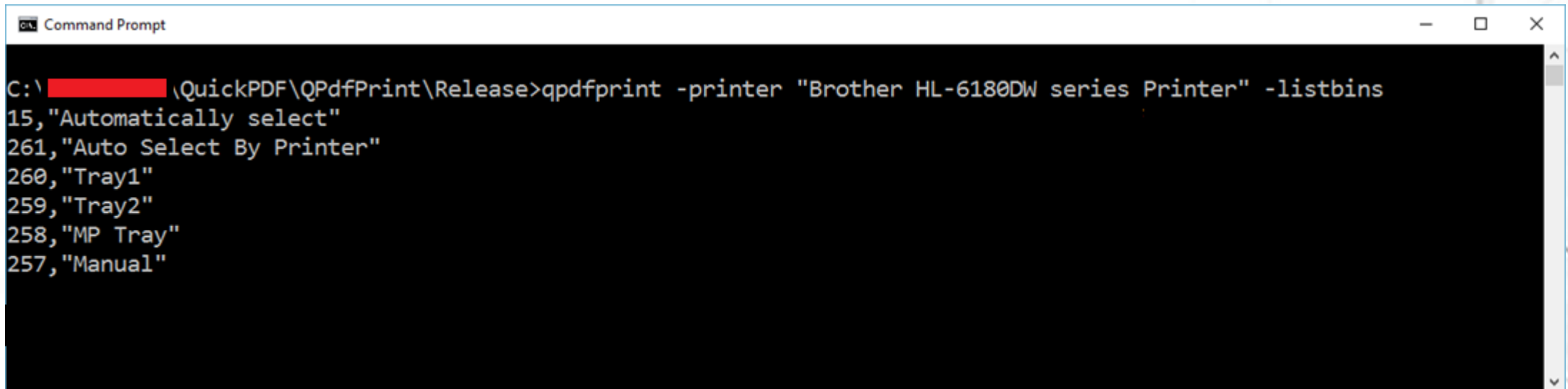
System Integration & server monitoring

- Integration:
 - PDF utility for background printing (Windows), library for creating and editing PDF's (Quick PDF Library)
 - With devices using IoT modules (supporting HTTP e.g. KMTronic)
- Server monitoring: experiences with Node.js modules and online services (PushOver, UptimeRobot, StatusCake)
 - System alive tests using ping, http, smtp, ... from outside (internet)
 - Custom monitoring of services using module from inside (intranet)

PDF printer utility (list printers & bins)

- Starts where your reporting engine stops ...
- E.g. get Windows printer names and bin numbers using commandline:

QPdfPrint -printer <printername> -listbins

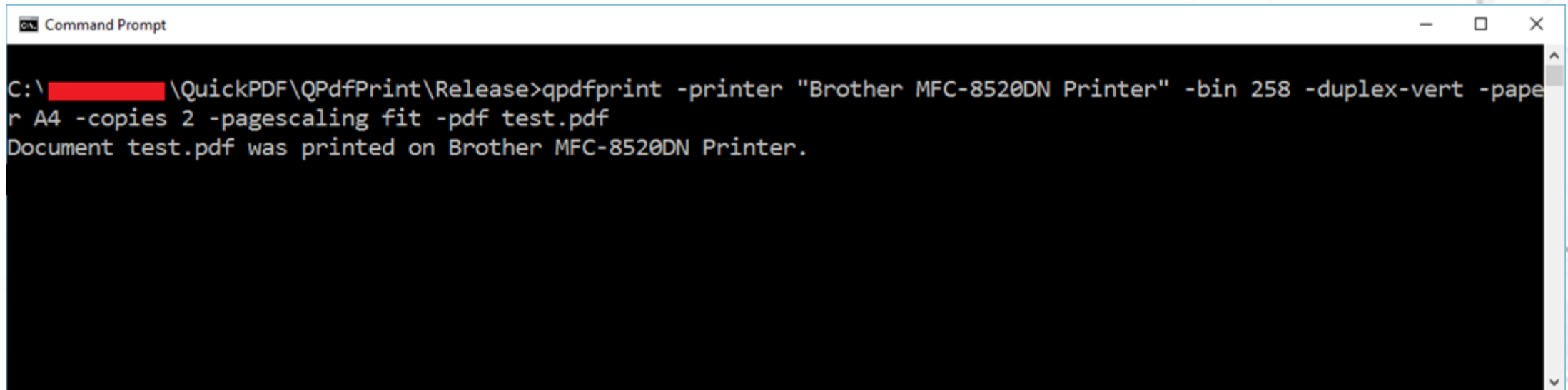


```
Command Prompt
C:\[redacted]\QuickPDF\QPdfPrint\Release>qpdfprint -printer "Brother HL-6180DW series Printer" -listbins
15,"Automatically select"
261,"Auto Select By Printer"
260,"Tray1"
259,"Tray2"
258,"MP Tray"
257,"Manual"
```

PDF print utility (print pdf in background)

- Print in background via commandline using \$ZF(-2, ...)
(always in separate process for safety!):

```
QPdfPrint -printer <printrname> -bin 258 -duplex-vert -paper A4 -copies 2  
-pagescaling fit -pdf <pdf file>
```

A screenshot of a Windows Command Prompt window. The title bar reads "Command Prompt". The command prompt shows the following text:

```
C:\[redacted]\QuickPDF\QPdfPrint\Release>qpdfprint -printer "Brother MFC-8520DN Printer" -bin 258 -duplex-vert -paper A4 -copies 2 -pagescaling fit -pdf test.pdf  
Document test.pdf was printed on Brother MFC-8520DN Printer.
```

The command prompt has a scroll bar on the right side, and the text is displayed in white on a black background.

PDF library (other possibilities)

- Creating and manipulating pdf's is easy to do from Caché with external PDF library (Quick PDF Library) at affordable price, see <http://www.debenu.com/products/development/debenu-pdf-library/>
- Split, merge, extract, ... pdf's from Caché
- Prepopulate pdf form fields with values
- Add signing & secure a pdf
- Inject JavaScript code in pdf to run on open pdf or triggered on form events
- Create pixel-precise pdf's in COS (using Caché Callout interface wrapper DLL for Quick PDF Library DLL) is also possible, but much easier using reporting engines as demoed at earlier meetings
- Create your own "reader" to preview the pdf in your own application

Using IoT devices with Caché

- Control external devices from Caché using IoT LAN modules (KMTronic)
- “Web Relay” module for LAN controlled with `##class(%Net.HttpRequest)`
- Switch 3rd relay on:
`http://<ip>/FF0301`
- Switch 3rd relay off:
`http://<ip>/FF0300`
- Caché can open the door ...
- Or light up your brain ...
- Beware: use a password! 😊



Using IoT devices with Caché – cont'd

- KMTronic, see <http://www.kmtronic.com/lan-relays.html>
- You can also control external devices from Caché using other IoT LAN modules from Advantech: remote I/O modules for LAN controlled with REST calls (input & output)
- See http://www.advantech.com/products/ethernet-i-o-modules-with-daisy-chain/sub_7447e150-338d-402d-b5a1-c9ce6d98816e

Server monitoring: system alive tests

Pushover

- Uptime Robot** 10 jun. 05:28
Monitor is UP: KLP PXS router (). It was down for 2 minutes and 58 seconds.
- Uptime Robot** 10 jun. 05:25
Monitor is DOWN: KLP PXS router ()
- Innovaphone fault at Staut Sint-Niklaas PBX** 9 jun. 15:40
clear: Registration down on RELAY/SIP2
- Innovaphone fault at Staut Sint-Niklaas PBX** 9 jun. 15:40
alarm: Registration down on RELAY/SIP2
- StatusCake** 9 jun. 14:22
LG TN router is now back up!, Total Downtime: 02:57:51
- Uptime Robot** 9 jun. 13:47
Monitor is UP: LG TN router (). It was down for 2 hours, 21 minutes and 43 seconds.
- Innovaphone fault at Terbeke Aalst DECT-M** 9 jun. 11:39
clear: Master registration of device IP1902.25.02.49 is missed on GW DECT

List of monitors
All accounts

Monitor Name	Status	Uptime
KLP PXS router	UP	100.0
LG TN router	UP	99.98
DCO Filiberke SMTP	UP	100.0
MS EDP router	UP	100.0
LG EDP router	UP	100.0
PLK EDP router	UP	100.0
TB DCH router	UP	99.55
TB EDP router	UP	99.51

KLP PXS router

OVERVIEW DETAILS EVENTS RESPONSE TIM

Status

Since 10-6-2016 05:28 **Up**

Checked 0 min. geleden **Success**

Outages

Last 24 hours

0 times	none	100.0 %
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Last 7 days

1 times	3 min	99.97 %
---------	-------	---------

Last 30 days

1 times	3 min	99.99 %
---------	-------	---------

Server monitoring: system alive tests

- Send events to PushOver from Caché with `#class(%Net.HttpRequest)`:
 - Create a (free) account on PushOver (see <https://pushover.net/>)
 - Register your application, set its name and upload an icon, and get an API token in return.
 - POST an HTTPS request to <https://api.pushover.net/1/messages.json> with the following parameters:
 - token (required) - your application's API token
 - user (required) - the user/group key (not e-mail address) of your user (or you), viewable when logged into our dashboard (often referred to as USER_KEY in our documentation and code examples)
 - message (required) - your message
 - title - your message's title, otherwise your app's name is used
 - ...

Member suggestions

- Which topics or questions came to your mind during this meeting?
- What are your current needs/ideas?
- ...

Thank you!

CUG Benelux

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