# **CPR BROKER**

### Release notes

### MAGENTAaps

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# **INTRODUCTION**

This document lists all the versions of CPR Broker that are released after the first release.

### **1VERSION 1.0.1**

This version is a minor enhancement for DPR data provider and data providers' configuration page.

The implementation is as follows

- Extra logging at key points in DPR to show decisions about using DPR diversion or skipping it.
- A new configuration property: DisableDiversion has been added to DPR data provider. The new property disables usage of DPR diversion (viderestilling) and thus using only the local DPR database records.
- The data providers configuration page now shows Boolean data provider properties as check boxed.

### **2VERSION 1.1.0**

This version contains some changes to the core engine, affecting List operation, and also some bug fixes in engine and DPR.

#### 2.1Interface changes

The interface now defines a new status code, 206. This code means that the interface method succeeded only partially. This status code can now only be returned from List operation, if not all requested person UUIDs have succeeded, but at least one UUID was read successfully.

In clear text, List operation will return status codes as follows

- 200 (OK) if all the UUIDs were found and successfully read.
- 206 (PARTIAL\_SUCCESS) if all UUIDs were mapped to CPR numbers, at least one person was retrieved and at least one person UUID not retrieved. The status text field will contain more details (including the UUIDs).
- 400 (BAD\_CLIENT\_REQUEST) if

The application token is invalid, or

Input validation fails for a well known reason, such as an invalid/unknown UUID.

500 (UNSPECIFIED) if

Input validation fails for an unknown reason

An exception has occurred and cannot be handled

503 (DATASOURCE UNAVAILABLE) if

There are no internal or external data providers defined in the system that can process the request, or

All the UUIDs did not match any known person data

The above description applies to all other interface methods, except for the parts that are specific to List()

### 2.2Changed Dlls

#### 2.2.1CprBroker.Engine

Sub methods can now be greater than maximum wait handles supported by the

system. This affects the List method at the moment.

 The ability for methods to partially success, implemented through the enumeration AggregationFailOption. This only affects List() at the moment.

#### 2.2.2CprBroker.Schemas

- New return code : 206 (PARTIAL SUCCESS)
- Code refactoring and some new construction methods

#### 2.2.3CprBroker.Providers.DPR

 Bug fix for conversion from decimal to date where month or day is zero. A zero is converted to one, which assumes that a zero month means beginning of the year (January)

### **3VERSION 1.1.1**

The List operation no longer completely fails if one or more UUID is not mapped to a CPR number. Instead, this case is treated in a similar way as if there is no data provider that has data for the CPR number, although the error message is different.

In clear text, List operation will return status codes as follows

- 200 (OK) if all the UUIDs were found and successfully read
- 206 (PARTIAL\_SUCCESS) if at least one person was retrieved and at least one person UUID not mapped to a CPR number or whose data could not be retrieved.
   The status text field will contain more details (including the UUIDs). The error message would be like this:

Partial success. Failed = Unknown UUID : <uuid1,uuid1,...>;Data provider failed : <uuid3,uuid4,...>

- 400 (BAD\_CLIENT\_REQUEST) if
  - o The application token is invalid, or
  - o Input validation fails for a well known reason, such as an invalid UUID.
- 500 (UNSPECIFIED) if
  - o Input validation fails for an unknown reason
  - o An exception has occurred and cannot be handled
- 503 (DATASOURCE UNAVAILABLE) if
  - There are no internal or external data providers defined in the system that can process the request, or
  - o All the UUIDs did not match any known CPR number or person data

The above description applies to all other interface methods, except for the parts that are specific to List()

### 3.1Changed Dlls

#### 3.1.1CprBroker.Engine

- UUID mapping to CPR numbers is now part of the actual read operation logic rather than input validation.
- New method SubMethodInfo. PossibleErrorReason().



### 3.1.2CprBroker.Schemas

- Handling of different failure reasons in partial success.
- New method : TilstandVirkningType.ToVirkningType()
- Bug fix for calculation of effect dates for a person registration whole effect (RegistreringType1. Virkning). The new calculation takes into account all TilstandVirkningType objects in the RegistreringType1 object.
- ToLifeStatus() now throws an exception if the given status is invalid. This is determined through the new method IsValidCivilRegistrationStatus() which relies on a new enumeration: PersonCivilRegistrationStatusCode.
- New method : UnikIdType.Clone()

#### 3.1.3CprBroker.Utilities

New method: Utilities.Dates.DateRangeIncludes()

### **4VERSION 1.1.2**

This version includes 2 main changes, the implementation of the E&M database as a data provider and a newer version of the installer itself.

### 4.1E&M Database implementation

This implementation has started some time ago, but only included since this version. This implementation has been done in the file "CprBroker.Providers.E\_M.dll".

The implementation made use of extensive unit testing for almost every single method, covering almost all the possible test cases.

#### 4.2New installer version

#### 4.2.1Custom actions

The number of custom actions has been significantly reduced. Database operations are performed in 1 action per operation type. The same applies for web custom actions.

#### 4.2.2Silent installations

It is possible now to deploy CPR Broker without having user interface at all (and all other UI levels in windows installer).

#### 4.2.3Easier upgrades

It is now possible to upgrade an existing installation by simply running the installer of the new version. This is easier than the previous use of patches.

### **5VERSION 1.2**

The main purpose of this release is to introduce the ability of DPR data providers to be configured so that they always return CprBorgerType for all people regardless for their nationality. A new property called AlwaysReturnCprBorgerType was added. Default value is false, thus allowing existing installations to behave as they already do.

#### **5.1DPR**

- Unit tests for most of DPR code.
- Code refactoring of DPR code, isolated many of the object creation code into separate methods.
- Church membership indicator returns true only if the DPR is 'F'.
- Mother/Father CPR number retrieval no longer depends on mother/father marker.
- It is now possible to configure DPR data providers to always return CprBorgerType for citizens of all nationalities. This means that all returned people will have an address.
- The system can now detect 'separated' persons and differentiate them from married/registered partners.

#### 5.2Website

Faster counting of number of rows in LogEntry table, based on table statistics.

### 5.3Engine

- Faster data provider allocation based on IEnumerable rather than List.
- Bug fix for the case where there are zero sub methods.
- Loading data providers from database is done only once per façade.
- Bug fix for reading of new data provider properties that were never set before.
- Bug fix: related persons throw an exception if could not be mapped to UUID's

#### 5.4Installer enhancements

- Bug fix for the case when database name contains an ampersand (&).
- Referenced libraries organization.

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- The installer now calls msizap.exe to force windows installer to forget previous versions of CPR broker (on a successful install).
- The installer now requires (and checks for) elevated privileges.
- The installer does not allow installation as virtual directory if there are no existing websites on the target machine.
- Progress text for most custom actions.
- Increased time out for the command that checks if the database login should be dropped during uninstall.

### **6VERSION 1.3**

The main change in this version is the beta version of CPR Direct data providers

#### 6.1CPR Direct

This version has a beta version of CPR direct. It comes in 2 data providers. Both use the 12170 format

#### **6.1.1Extract Data provider**

This is the main source used. It tracks a specified folder that receives daily change extracts from CPR office. The files are parsed and inserted in CPR broker's database to be later queried by CPR broker. The storage is made through Event Broker and is in both nanive and PART formats.

#### 6.1.2Client data provider

This source uses TCP/IP to communicate with CPR Direct Client service and get the data through TCP/IP. Data is then stored similarly to Extract Data provider.

### 6.2Engine

This version includes implementation of SourceObjectXml. This feature allows data providers to specify a certain XML string that represents the data it has read from the data provider in the provider's native format. This is useful when reading data from expensive sources (KMD). If we later find a bug in the conversion to the PART format, there is no need to re-read from KMD to generate PART objects again.

# **7VERSION 1.3.1**

This version has a small but important bug fix.

### 7.1Engine

 There was a bug that prevented List operation from getting a person's external data if more than one UUID is passed and the requested person has at least one relationship. This is a small but important bug fix.

#### 7.2Back end service

Synchronization of birth dates is now in batches of size 1000

#### 7.3Installer

 Installer can now handle trhe case when registry value EnableLUA (for UAC) is not found - considers it as 0 (false)

# **8VERSION 1.3.2**

This is the production release of CPR Direct.

#### 8.1CPR Direct

- Fixes for FTP connection
- Separate encodings for extracts and TCP
- Fixes for TCP/IP communication with CPR bureau
- Isolated extraction from person data refresh
- Introduced source objects for CPR Direct

#### 8.2Installer

- The installer has been renamed to CprBroker.msi / CprBroker.exe
- Generic database and website patching code and SQL

### **9VERSION 1.4**

This version mainly contains a fix to include city name in returned addresses. This is included in DistrictName field. This applies to all 4 data sources (DPR, E&M, KMD and CPR Direct). E&M is now set to return null in this field.

To implement a smarter fix, this version introduces the concept of match rules. They are some rules that can detect whether a changed person data is due to a bug fix or due to a real change in the data.

#### **9.1DPR**

- AddressPostal.DistrictName now contains city name.
- SpecialVejKode added.

### 9.2KMD & CPR Direct

AddressPostal.DistrictName now contains city name.

#### 9.3E&M

AddressPostal.DistrictName is now always null.

### 9.4Engine

Inclusion of match rules framework and a match rule for fixing city names.

#### 9.5Database

PersonProperties.BirthRegistrationAuthority is now of length 60.

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### 10VERSION 2.1

The main features of this version are

- CprBorgerType is returned from all data sources
- City name is now returned in DistrictSubdivisionIdentifier

### 10.1Part person interface

Read() and List() operations are now capable of accepting an optional SOAP header that specifies usage of local cache. Possible options are (LocalOnly, ExternalOnly and LocalThenExternal)

#### 10.2DPR

- Removed the property 'Always Return CprBorgerType. This property was kept for historical compatibility for a while, but now DPR will now always return person data of type CprBorgerType.
- City name now goes into DistrictSubdivisionIdentifier, postal district goes into DistrictName.
- Calls to DPR Diversion are now capable of timing out, and use disposable objects to avoid blockings.

#### 10.3KMD

- DistrictName = PostDistrict20, DistrictSubdivisionIdentifier = CityName34.
- Isolated KMD calls from conversion to PART format.

#### 10.4E&M

- Zero, stateless and similar country codes are no longer treated as errors, and are returned as they are in the source.
- Date values of minimum & maximum date are treated as null.
- CprBorgerType is always returned even for people of foreign nationalities.
  UkendtBorgerType and UdenlandskBorgerType are no longer used.
- Address fixes:
  - Only active addresses are retrieved
  - Addresses now come from CitizenReadyAddress (JY67800V)

- Addresses now include DistrictSubDivisionIdentifier
- StreetName, post code and district all come from CitizenReadyAddress (JY67800V)
- Postal district now goes into DistrictName and DistriktTekst

#### 10.5CPR Direct

- Country code no longer validated
- Date values of min & max date are treated as null
- Postal district now goes into DistrictName and DistriktTekst.
- Error records are now read by the system
- Removed uncertainty flag from the calculation of citizenship.
- Implemented ISeparation in CPR Direct (current and history)

#### 10.6Database schema

The database schema has been changed to that it allows multiple objects of PersonProperties (Egenskab) and person attributes (RegisterOplysning) per person. To fully update the database, batch client is needed to regenerate the database tables from the Contents field in PersonRegistration table.

### **11VERSION 2.1.1**

This version is mainly about allowing more freedom of communication between CPR Broker and Person Master.

- It is now possible to call Person Master via https, and also possible to read a Windows Communication Foundation (WCF) end point configuration from the web.config file in CPR Broker for ultimate flexibility.
- Also, the client for person master no longer adds "/PersonMasterService12" to the address of person master data provider behind the scenes.

#### Note

Due to the change the address is handled, the installer will automatically add "/PersonMasterService12" suffix to existing person master data providers. It is always a good idea to ping these data providers after upgrading from a version older than this one.

# **12VERSION 2.1.2**

- Calls to CPR FTP site are now only one per hour.
- Communication over HTTP between CPR Broker and Event broker now carries default credentials when calling CPR Broker
- Log page (LogEntries.aspx) now has filtration capabilities for date, type and application.

### **13VERSION 2.2**

This update is mainly focused on the implementation of historical data features and subscription based on criteria.

#### 13.1Historical data

- Support of historical data extract from the CPR office.
- Added the service method ReadSnapshot, which will return the status of a person at a given date
- Added the service method ListSnapshot, which is the list version of ReadSnapshot and thus takes a list of UUIDs and returns the statuses of theses persons on a given date
- Added the service method ReadPeriod, which will return a sequence of statuses of a person within a given timespan
- Added the service method ListPeriod, which is the list version of ReadPeriod and thus takes a list of UUIDs and returns a sequence of statuses of these persons within a given timespan

### 13.2Subscriptions based on criteria

 Added the service method SubscribeOnCriteria, which takes a criterion and adds subscriptions to persons meeting this criterion

### **14VERSION 2.2.1**

This version release was triggered by the need to support foreign addresses in DPR databases.

#### 14.1DPR

- Can now return foreign and Greenlandic addresses
- Address effect data only uses start date.

### 14.2Budget control

This version controls a simple and immature version of data provider budget control

- Ability to set costs for online operations
- Tracking of calls to expensive sources

#### 14.3Modulus 11 check

Modulus 11 check is performed on CPR numbers when calling GetUuid() and GetUuidArray(). It is also temporarily performed before calling expensive data sorces to avoid extra costs.

#### 14.4Database tables

This version completely uses less database space by removing all the child person tables that point to PersonRegistration and are no longer used.

### 14.5Logging

An extra hidden column ActivityId added to log entries, to help group all logs belonging to the same context.

### 14.6Bug fixes

- Fix for initialization of Authority object that was making error
- Installer can now detect multiple previous versions

### **15VERSION 2.2.2**

#### 15.1Budget control

- Separate page for displaying external calls.
- External calls are now guaranteed to not be implemented if database files are full.
- Page to set budget limits (calls/cost)
- Back end detection of over budget: Warnings written to log

### 15.2Subscriptions

Bug fix for registration of creation and removal dates for subscriptions

#### 15.3Performance enhancements

- New search data provider that uses a separate search table.
- Add data providers now make use of cached and grouped UUID assignment for related persons.

### 15.4Code re-factoring

- Isolation of CPR code in new project: PartInterface.
- Separate code file for each XSD file.

#### 15.5Installer

- Exceptions are shown as message boxes
- No unnecessary database users are created
- IIS 8 is now accepted
- Correct detection of user account control Windows 2012

### 15.6CPR Direct

- Handling of new format in change extracts
- Handling of FTP access over SSL

### **16VERSION 2.2.3**

#### 16.1Search

- New operation: SearchList(): Like Search(), but the return value contain person data rather than just the UUIDs.
- New data source: CPR Services, currently implementing Search() and SearchList()
- Local data provider supports search by all address attributes

### 16.2Hostable engine

- All configuration readings now go through new class ConfigManager, to ease rapid creation of test environments.
- Full creation and dropping of test database
- Order on intervals in Read, RefreshRead and List is now configurable and applies regardless of the order of the data

#### 16.30ther fixes

- Retrieval of names from CPR Direct now ignores the uncertainty markers on the source data.
- new: Extraction of Greenlandic addresses from CPR Direct & DPR
- Implementation of Foraeldremyndighedsindehaver and Foraeldremyndighedsboern in DPR
- Elimination of SOAP communication between CPR Broker and Event Broker for pulling data changes
- Restructuring of stored procedures in Event broker, elimination of unused tables and SP's
- Unfinished isoaltion of installer TSQL create scripts in 1 file per object
- Bugfix: KMD now always returns CprBorgerType

#### 16.4DBR

- New configuration page for DBR
- New queuing engine for handling of CPR Direct updates and pushing them to DBR

# 16.5Integrated Updates

- Built-in update pulling from DPR (no need for DPR update service)
- Extra DPR configuration property (Auto Update)
- GUI to show SQL script to initialise DPR Updates

# 16.6Configurable backend tasks

 All backend tasks (update detection, FTP extraction, notifications, etc.) are now configurable from the configuration file of Backend service

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