



**BKAD-Avtalemottak-OCR  
Rest Web Service  
Specification Document**

## Revision Log

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09-12-2014	1.01	Incorporated comments of Leikny and Francois. OCR communication to be pre-defined for each vendor.	Amit Kumar
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## 1. Introduction

### 1.1. Document Purpose

The purpose of this document is to describe technical specification for consuming rest web services for registering OCR in BKAD by external users using client certificate.

### 1.2. Business Goals/Objectives to be achieved

- Should be able to register OCR agreement externally [Without having access to Nets online / Portal User Interface].

## 2. Rest Web Specification

### 2.1. Register OCR

#### 2.1.1 Request

Specification – Register OCR	
<b>Method</b>	POST
<b>URL</b>	Pre-Prod: <a href="https://ajour-test.nets.no/avtalemottak-ws/external/ocr">https://ajour-test.nets.no/avtalemottak-ws/external/ocr</a>  PROD: <a href="https://ajour.nets.no/avtalemottak-ws/external/ocr">https://ajour.nets.no/avtalemottak-ws/external/ocr</a>
<b>Require Certificate</b>	Yes. Client certificate is required to register OCR externally. The certificate will be generated by NETS.
<b>Type</b>	Json
<b>Request Body</b>	Must send Json Object containing following fields. Agreement Type [Must have fixed value 'OCR'] Organization Number Account Number Contact Person [Customer Name, Customer Email] KID Setup [Length and modulus. Max 3 allowed] Receiver of OCR-data [Kundeenhet-id, only for Bank-ERP] Period [Optional, if not filled, NETS-default is used (Daily, once a day) Max 3 period allowed]

<b>Pre-requisite</b>	Bank email must be setup in BKAD for which OCR agreement will be registered.
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### 2.1.2 Json format of request body

Below table describes the OCR input Json format for each attributes.  
 In below, <<enter value>> must be replaced with the actual input value.

OCR agreement Json format of each attributes	
<b>Agreement Type</b>	"agreementType":"OCR"
<b>Organization Number</b>	"organisationNumber":{"value":"<<enter value>>"}
<b>Account Number</b>	"accountNumber":{"value":"<<enter value>>"}
<b>Contact Person</b>	<pre>"contactPerson":{   "name":{     "value":"&lt;&lt;enter value&gt;&gt;"   },   "email":{     "value":"&lt;&lt;enter value&gt;&gt;"   } }</pre>
<b>KID Setup</b>	<pre>"kidSetup": {   "kidParameters": [     {       "length": {"value": "&lt;&lt;Enter value&gt;&gt;"},       "modulus": {"value": "&lt;&lt;Enter value&gt;&gt;"}     }   ] }</pre> <ul style="list-style-type: none"> <li>Maximum of 3 KID is allowed.</li> </ul>
<b>KM-datareceiver</b>	<p><b>NB</b> Only for <b>BANK-ERP</b>            Should be a valid 8 digit kundeenhet-id. Must have communication agreement for receiving data from NETS</p> <pre>kundeenhetidKM":{"value":"00123456"}</pre>

<p><b>Period</b></p>	<p>Mandatory, if not filled, NETS-default (Daily every 4<sup>th</sup> oppgjør)                  Could be 3 different periods                  For UKENTLIG and MAANEDLIG you may have max 3 periods.                  If DAGLIG, only one period should be filled. (But you may have until 4 periodParameters with DAGLIG)</p> <pre>                 "periodSetup":{                   "periods":[{                     "periodCode":{                       "value":"UKENTLIG"},                     "periodParameter":[{"value":"1"}]}, {                     "periodCode":{                       "value":"UKENTLIG"},                     "periodParameter":[{"value":"5"},,]}]},                 </pre>

### 2.1.3 Validations and examples

Below list describe about the valid values that are acceptable as a part of OCR registration.

OCR agreement validation	
<b>AgreementType</b>	"agreementType":"OCR"
<b>Organization Number</b>	Should contain valid 11 digit Org number and must exist in BKAD. "organisationNumber":{"value":"00987456321"}
<b>Account Number</b>	Should be valid 11 digit active account number. "accountNumber":{"value":"70013698745"}
<b>Contact Person</b>	Contact person must contain <ol style="list-style-type: none"> <li>1. Name of customer must be of minimum length 3 and max length 25.</li> <li>2. Valid email can be more than 1. Each mail must be separated by semicolon (;). Total length of all emails must not be more than 100 characters.</li> </ol>

	<p><b>Example</b></p> <pre>"contactPerson":{   "name":{     "value":"Test name"   },   "email":{     "value":<a href="mailto:abc@email.com">abc@email.com</a>   } }</pre>
<p><b>KID Setup</b></p>	<ol style="list-style-type: none"> <li>1. Maximum of 3 KID is allowed.</li> <li>2. At least 1 KID with valid length and modulus must be provided.</li> <li>3. Length of KID must be between 3 and 25.</li> <li>4. KID Modulus can be either 10 or 11.</li> </ol> <p><b>Example : With 2 KID setup</b></p> <pre>"kidSetup": {   "kidParameters": [{     "length": {"value": "12"},     "modulus": {"value": "11"}   },   {     "length": {"value": "15"},     "modulus": {"value": "10"}   } ]</pre>
<p><b>KM-datareceiver</b></p>	<p><b>NB Only for BANK-ERP</b></p> <p>Should be a valid 8 digit kundeenhet-id. Must have communication agreement for receiving data from NETS</p> <pre>kundeenhetidKM":{"value":"00123456"}</pre>
<p><b>Period</b></p>	<p>Mandatory, if not filled, NETS-default (Daily every 4<sup>th</sup> oppgjør)</p> <p>Could be 3 different periods</p> <p>Valid Values for periodCode :</p> <ul style="list-style-type: none"> <li>DAGLIG - Daily receive ocr-data until 4 times a day</li> <li>UKENTLIG - Ocr-data sent once a week</li> <li>MAANEDLIG - Ocr-data sent once a month.</li> </ul> <p>(You may combine UKENTLIG and MAANEDLIG, if you wish t.ex every Monday, and every last in month.)</p> <p>Valid Values for periodParameter, If DAGLIG period, digit from 1 - 4 (1 = first avregning during th</p>

	<p>day, 2 = second avregning ...)                  If UKENTLIG period value 1 - 5 (1=Monday, 2=Tuesday ...)                  If MAANEDLIG period value 1 - 31 (1 = first day in month, 2 = second day in month .... 31 = last day in month)</p> <p>This example gives ocr-data every Monday + the 15<sup>th</sup> in every month</p> <pre>"periodSetup":{   "periods":[{"periodCode":{"value":"UKENTLIG"},     "periodParameter":[{"value":"1"}]}, {     "periodCode":{"value":"MAANEDLIG"},     "periodParameter":[{"value":"15"},],}],},</pre> <p>This example gives ocr-data twice a day, every day. Avr 1 and avr 4</p> <pre>"periodSetup":{   "periods":[{"periodCode":{"value":"DAGLIG"},     "periodParameter":[{"value":"1"}]}, {     "value":"4"},],}],},</pre>

### 2.1.4 Response (json)

Status	Status Code	Response
Success	201	OCR Json object with status code 201 will be returned. Agreement will be registered.
Validation Error	400	OCR Json object containing validation errors for each field will be returned. Agreement will be rejected.
Server Error	500	A string response with status code 500 will be returned. A log Id will be part of the string, contact BKAD for further investigation of the error.



### 2.1.4.1 Validation error messages

errorCode	message
account.number.invalid.length	Kontonummer må ha 11 siffer.
account.number.unknown	Kontoeier eksisterer ikke i Nets.
access.denied	Kundens bankforbindelse tillater ikke registrering av avtale via denne kanalen.
avtale.kontonummer.ikkeNumerisk	Kontonummer må være numerisk.
avtale.kontonummer.mandatory	Kontonummer må være fylt ut.
Missing.bank.agreement	Banken tilbyr ikke denne tjenesten
avtale.organisasjonsnummer.feilLengde	Det må enten angis et organisasjonsnummer på 9 siffer, eller et fødselsnummer på 11 siffer.
avtale.organisasjonsnummer.ikkeNumerisk	Organisasjonsnummer må være numerisk.
avtale.organisasjonsnummer.ikkeKontoeier	organisasjonsnummer tilhører ikke kontoeier
avtale.kidoppsett.max3	Det skal ikke være flere enn 3 KID-parametre.
avtale.kidoppsett.kidparameter.lengde.wrongLength	KIDLengde må være i intervallet 3 - 25
avtale.kidoppsett.kidparameter.lengde.notNumeric	KIDLengde må ha en numerisk verdi
avtale.kidoppsett.kidparameter.modulus.notValid	Moduluskode må være 10 eller 11.
avtale.kidoppsett.kidparameter.modulus.notNumeric	Moduluskode må ha en numerisk verdi
avtale.kontonummer.avtalefinnes	Det finnes allerede en OCR avtale på konto
Kid.agreement.already.exist	KID finnes allerede for dette kontonummeret.
avtale.kontonummer.omnummereringfinnes	Det finnes en omnummerering fra denne konto
contact.person.name.empty	Navn på kontaktperson må fylles ut.
contact.person.email.empty	E-post må være fylt ut.

<code>Avtale.kontaktperson.navn.maxSiZe</code>	Navn på kontaktperson kan ikke ha lengde > 25.
<code>Avtale.kontaktperson.navn.minSiZe</code>	Navn på kontaktperson kan ikke ha lengde < 3.
<code>Avtale.kontaktperson.navn.invalId</code>	Navn på kontaktperson kan ikke inneholde semikolon (;).
<code>Epost.invalid</code>	E-post er ikke gyldig. Det er mulig å legge inn flere e-poster ved å skille med semicolon (;).
<code>invalid.communication.type.ocr</code>	Ugyldig kommunikasjon type for OCR
<code>avtale.konteringsdatamottaker.kundeenhetid.notFilled</code>	KundeenhetId må fylles ut
<code>avtale.konteringsdatamottaker.kundeenhetid.doNotExist</code>	Det finnes ingen kundeenhet med angitt ID
<code>avtale.periodiseringoppsett.mandatory</code>	Minst én periodisering må være fylt ut
<code>avtale.periodiseringoppsett.max3</code>	Det skal ikke finnes flere enn 3 periodiseringer
<code>avtale.periodiseringoppsett.fle reDaglig</code>	Det skal ikke være flere daglige periodiseringer

### 2.1.4.2 Validation error example

In case there are validation errors, a new attribute called errors will be appended to each field indicating the error message along with error Id.

OCR agreement validation errors	
<b>Organization Number</b>	<pre>"organisationNumber":{   "value":"87456321",   "errors":[{"message":"Det må enten angis et organisasjonsnummer på 9 siffer, eller et fødselsnummer på 11 siffer.",     "errorCode":"avtale.organisasjonsnummer.feilLengde"}   ] }</pre>
<b>Account Number</b>	<pre>"accountNumber":{"value":"700136745",   "errors":[{"message":"Kontonummer må ha 11 siffer.",     "errorCode":"account.number.invalid.length"}   ] }</pre>

	<pre>     }}   }    "accountNumber":{"value":"70013698755",     "errors":[{"message":"Kontoeier eksisterer ikke i Nets.",       "errorCode":"account.number.unknown"}]} }</pre>
<b>Contact Person</b>	<pre> "contactPerson":{   "name":{"value":"","     "errors":[{"message":"Navn på kontaktperson må fylles ut.",       "errorCode":"contact.person.name.empty"}]} }, "email":{"value":"","   "errors":[{"message":"E-post må være fylt ut.",     "errorCode":"contact.person.email.empty"}]} }</pre>
<b>KID Setup</b>	<pre> "kidParameters": [{   "length": {"value": "29",     "errors": [{       "message": "Kidlengde må være i intervallet 3 - 25",       "errorCode":         "avtale.kidoppsett.kidparameter.lengde.wrongLength"}]} }, "modulus": {"value": "A",   "errors": [{     "message": "Moduluskode må ha en numerisk verdi",     "errorCode":       "avtale.kidoppsett.kidparameter.modulus.notNumeric"}]} }]</pre>
<b>KM-datareceiver</b>	<pre> kundeenhetsidKM":{"value":"00000100","errors":[]}</pre>

### 2.1.1 Complete Json OCR agreement input object

```
{
  "agreementType": "OCR",
  "organisationNumber": {"value": "00987456321"},
  "accountNumber": {"value": "70013698745"},
  "contactPerson": {
    "name": {"value": "Test name"},
    "email": {"value": "abc@email.com"}
  },
  "kidSetup": {
    "kidParameters": [{
      "length": {"value": "12"},
      "modulus": {"value": "11"}
    },
    {
      "length": {"value": "15"},
      "modulus": {"value": "10"}
    }
  ]
}
}
```

### 2.2. Get OCR Status

#### 2.2.1 Request

Specification – Get OCR Status	
<b>Method</b>	GET
<b>URL</b>	Pre-Prod: <a href="https://ajour-test.nets.no/avtalemottak-ws/external/ocr/?accountNumber={accountNumber}">https://ajour-test.nets.no/avtalemottak-ws/external/ocr/?accountNumber={accountNumber}</a>  PROD: <a href="https://ajour.nets.no/avtalemottak-ws/external/ocr/?accountNumber={accountNumber}">https://ajour.nets.no/avtalemottak-ws/external/ocr/?accountNumber={accountNumber}</a>
<b>Require Certificate</b>	Yes. Client certificate is required to verify OCR externally. The certificate will be generated by NETS.
<b>Type</b>	Json
<b>Request</b>	Account Number must be sent in request.

<b>Parameter</b>	Parameter name : <b>accountNumber</b>
------------------	---------------------------------------

### 2.2.2 Response (Json)

Status	Response description
OK - Waiting for activation	<p>OCR field values which has been used while registering. Waiting for agreement to be activated.</p> <p>Example :</p> <pre> {   "agreementType": "OCR",   "organisationNumber": {"value": "00987456321"},   "accountNumber": {"value": "70013698745"},   "contactPerson": {     "name": {"value": "Test name"},     "email": {"value": "abc@email.com" },     "telephone": {"value": "789620145"},     "bankEmail": {"value": "bank@somebank.com"}   },   "kidSetup": {     "kidParameters": [{       "length": {"value": "12"},       "modulus": {"value": "11"}     },     {       "length": {"value": "15"},       "modulus": {"value": "10"}     }   ] }, </pre>
OK - Active	<p>Agreement is ok and active in Nets and mail has been sent to customer and bank.</p> <p>Normally, all netbanks are aware of the agreement after midnight the 1st working day. (Assuming that the ABA-UT routine works normally in Nets and in Bank)</p>
No agreement registered with given information.	<p>In case account number is invalid / no OCR agreement with this account number is registered by the client sending this request. Account number and clients user-Id will be part of the status text.</p>
Internal server error.	<p>A string response with status code 500 will be returned. A log Id will be part of the string, contact BKAD for further investigation of the error.</p>

### 2.2.3 Example responses

1. Response on a valid, but not yet active, agreement:
 

```

      {"status":"OK - Waiting for activation.",
      "ocrAgreement":{"agreementType":"OCR","organisationNumber ..... }
      (HTTP response code 200)
      
```
2. Response on a valid and active agreement:
 

```

      {"status":"OK - Active.,"agreementId":"<agreement Id>"}
      (HTTP response code 200)
      
```
3. Response on an unknown account:
 

```

      {"status":"No agreement registered with given information.
      AccountNumber=<accountnumber>, userId=<userId> }
      (HTTP response code 200)
      
```

## 3. Configuration prerequisites

The web-service makes configuration assumptions:

1. The ERP company must have a valid certificate issued by Nets which ensures the identity of the ERP company.
2. That the ERP company is associated in Nets with a Kundeenhet that can receive files. I.e:
  - i. The ERP is configured in the Nets part of the web-service with a “Kundeenhet”
  - ii. That kundeenhet have an operating communication agreement.  
(This are prerequisites for the Webservice to create an “overføringsavtale” of type 7002 (Datamottaker) for the OCR agreement)