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Intern (Team – Web).

Task: Getting Started with Integration of ONDC.

- ONDC is a network, not an application/website.
- In order to use the network, one has to register with ONDC Registry.
- ONDC uses Async APIs.
- ONDC communication happens from server to server.
- ONDC specification has APIs (/search, /init, /track) and Callback APIs (/on_search, /on_init, /on_track).
- The participants of the network have to implement the APIs on their backend.
- Buyer apps will call the APIs and will get results on Callback APIs.
- Seller apps will respond to the call received on APIs.

So once all the participants have implemented the APIs on their backends, the applications can communicate with each other as the servers have common APIs and a common schema for the payload.

Try it first will be a buyer side app initially. These factors are very important for a buyer side app:

1. *Marketing.*
2. *Acquire Customers.*
3. *Payments.*
4. *Website.*
5. *Customer Service.*
6. *Customer Refund.*

ONDC depends on beckn protocol.

List of Transaction APIs:

1. search < > on_search.
2. select < > on_select.
3. init < > on_init.
4. confirm < > on_confirm.
5. status < > on_status.
6. track < > on_track.
7. update < > on_update.
8. cancel < > on_cancel.
9. rating < > on_rating.
10. support < > on_support.

Discovery – { search < > on_search }

Order – { select < > on_select, init < > on_init, and confirm < > on_confirm }
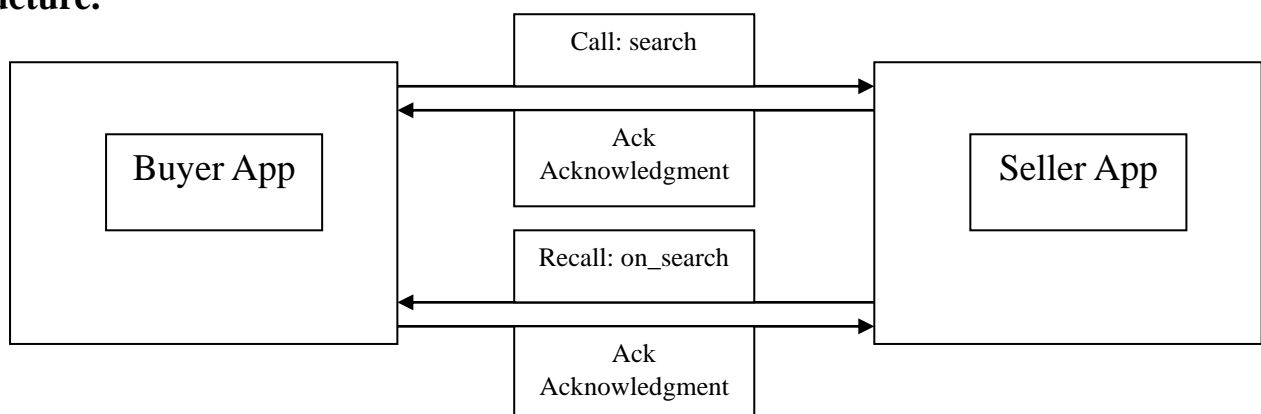
Fulfilment – { status < > on_status, track < > on_track, and update < > on_update, cancel < > on_cancel }

Support – { rating < > on_rating and support < > on_support }

List of Network Infrastructure APIs.

1. search < > on_search.
2. subscribe < > on_subscribe.
3. Lookup.

Structure.

Gateway is required in case of search < > on_search only. Other all APIs are P2P i.e., Peer to Peer.

Detailed Information about APIs.

API	Relevance	Group
/search	Searching a particular product from a buyer side app through a gateway.	Discover
/select	Adding a particular searched product into the cart on the buyer side app.	Order
/init	Initializing payment. (Paying the money.)	Order
/confirm	Confirming an order after a payment.	Order
/status	To get the status of the order. (Ordered, Delivered, and Cancelled.)	Fulfilment
/track	To track the order. (Details of the product/products in transition.)	Fulfilment
/update	To update the order status.	Fulfilment
/cancel	To cancel the order which is confirmed and sent.	Fulfilment
/rating	Feedback. (Customer → Buyer Side App → Seller Side App)	Support
/support	Customer Support.	Support

The search API uses gateway and the flow is as shown below:

/search → gateway (request to get a list of relevant suppliers) → Registry (Provides a list of relevant suppliers) → call seller side app → /on_search.

Other all calls and recalls take place directly without any gateway.

API Schema:

Auth Header:

Creating Key Pairs → Auth Header Signing → Auth Header Verification.

Context:

Message.

Error.

Important:

BAP = Backend Application Participant.

BPP = Backend Provider Participant.

/search

Search for services by intent.

Buyer searches for products and services.

https://app.swaggerhub.com/apis/blezDev/ondc-protocol_api_for_retail_grocery_f_b/1.0.29#/ONDC%20Seller%20App/post_search

Request URL.

https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/search

Response Body.

```
{
  "message": {
    "ack": {
      "status": "ACK"
    }
  },
  "error": {
    "type": "CONTEXT-ERROR",
    "code": "string",
    "path": "string",
    "message": "string"
  }
}
```

access-control-allow-credentials: true

 access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

 access-control-allow-methods: *

 access-control-allow-origin: *

 cache-control: no-cache

 content-encoding: gzip

 content-length: 126

 content-type: application/json;charset=utf-8

 date: Tue,08 Aug 2023 02:53:16 GMT

 etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

 expires: -1

 status: 200 OK

Response Time.

1893 ms

/select

Select items from the catalog and build your order.

Buyer selects one or more catalog items.

https://app.swaggerhub.com/apis/blezDev/ondc-
protocol_api_for_retail_grocery_f_b/1.0.29#/ONDC%20Seller%20App/post_select

Request URL.

https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/select

Response Body.

{
  "message": {

```
  "ack": {
    "status": "ACK"
  }
 },
 "error": {
  "type": "CONTEXT-ERROR",
  "code": "string",
  "path": "string",
  "message": "string"
 }
}
```

Response Headers.

access-control-allow-credentials: true

 access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

 access-control-allow-methods: *

 access-control-allow-origin: *

 cache-control: no-cache

 content-encoding: gzip

 content-length: 126

 content-type: application/json;charset=utf-8

 date: Tue,08 Aug 2023 05:14:12 GMT

 etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

 expires: -1

 status: 200 OK

Response Time.

708 ms

/init

Initialize an order by providing billing and/or shipping details.

Buyer initializes order checkout.

https://app.swaggerhub.com/apis/blezDev/ondc-protocol_api_for_retail_grocery_f_b/1.0.29#/ONDC%20Seller%20App/post_init

Request URL.

https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/init

Response Body.

```
{
  "message": {
    "ack": {
      "status": "ACK"
    }
  },
  "error": {
    "type": "CONTEXT-ERROR",
    "code": "string",
    "path": "string",
    "message": "string"
  }
}
```

Response Headers.

access-control-allow-credentials: true

 access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

 access-control-allow-methods: *

 access-control-allow-origin: *

 cache-control: no-cache

 content-encoding: gzip

 content-length: 126

content-type: application/json;charset=utf-8

date: Tue,08 Aug 2023 05:21:18 GMT

etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

expires: -1

status: 200 OK

Request Duration.

2026 ms

/confirm

Initialize an order by providing billing and/or shipping details.

Buyer confirms an order.

https://app.swaggerhub.com/apis/blezDev/ondc-protocol_api_for_retail_grocery_f_b/1.0.29#/ONDC%20Seller%20App/post_confirm

Request URL.

https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/confirm

Response Body.

```
{
 "message": {
  "ack": {
   "status": "ACK"
  }
 },
 "error": {
  "type": "CONTEXT-ERROR",
  "code": "string",
  "path": "string",
  "message": "string"
```

```
    }
}
```

Response Headers.

access-control-allow-credentials: true

 access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

 access-control-allow-methods: *

 access-control-allow-origin: *

 cache-control: no-cache

 content-encoding: gzip

 content-length: 126

 content-type: application/json;charset=utf-8

 date: Tue,08 Aug 2023 05:30:23 GMT

 etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

 expires: -1

 status: 200 OK

Request Duration.

1316 ms

/status

Fetch the latest order object.
Buyer checks for status of order.

https://app.swaggerhub.com/apis/blezDev/ondc-protocol_api_for_retail_grocery_f_b/1.0.29#/ONDC%20Seller%20App/post_status

Response Snippets. (cURL bash)

curl -X 'POST' \

 'https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/status' \

 -H 'accept: application/json' \

```
 -H 'Content-Type: application/json' \
 -d '{
 "context": {
   "domain": "nic2004:52110",
   "country": "string",
   "city": "string",
   "action": "search",
   "core_version": "string",
   "bap_id": "string",
   "bap_uri": "string",
   "bpp_id": "string",
   "bpp_uri": "string",
   "transaction_id": "string",
   "message_id": "string",
   "timestamp": "2023-08-08T05:37:33.991Z",
   "key": "string",
   "ttl": "string"
 },
 "message": {
   "order_id": "string"
 }
}'
```

Request URL.

https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/status

Response Body.

```
{
 "message": {
  "ack": {
    "status": "ACK"
   }
```

```
  },
  "error": {
   "type": "CONTEXT-ERROR",
   "code": "string",
   "path": "string",
   "message": "string"
  }
}
```

Response Headers.

access-control-allow-credentials: true

 access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

 access-control-allow-methods: *

 access-control-allow-origin: *

 cache-control: no-cache

 content-encoding: gzip

 content-length: 126

 content-type: application/json;charset=utf-8

 date: Tue,08 Aug 2023 05:37:42 GMT

 etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

 expires: -1

 status: 200 OK

Request Duration.

1295 ms

/track

Track an active order.
Buyer tracks fulfillment of an order.

Response Snippets. (cURL bash)

```
curl -X 'POST' \
  'https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/track' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
  "context": {
    "domain": "nic2004:52110",
    "country": "string",
    "city": "string",
    "action": "search",
    "core_version": "string",
    "bap_id": "string",
    "bap_uri": "string",
    "bpp_id": "string",
    "bpp_uri": "string",
    "transaction_id": "string",
    "message_id": "string",
    "timestamp": "2023-08-08T05:47:18.798Z",
    "key": "string",
    "ttl": "string"
  },
  "message": {
    "order_id": "string",
    "callback_url": "string"
  }
}'
```

Request URL.

Response body.

```json
{
  "message": {
    "ack": {
      "status": "ACK"
    }
  },
  "error": {
    "type": "CONTEXT-ERROR",
    "code": "string",
    "path": "string",
    "message": "string"
  }
}
```

Response Headers.

access-control-allow-credentials: true

access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

access-control-allow-methods: *

access-control-allow-origin: *

cache-control: no-cache

content-encoding: gzip

content-length: 126

content-type: application/json;charset=utf-8

date: Tue,08 Aug 2023 05:47:27 GMT

etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

expires: -1

status: 200 OK

Request Duration.

975 ms

/cancle

Cancel an order.

Buyer cancels an order.

Response Snippet. (cURL bash)

```bash
curl -X 'POST' \
 'https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/cancel' \
 -H 'accept: application/json' \
 -H 'Content-Type: application/json' \
 -d '{
 "context": {
  "domain": "nic2004:52110",
  "country": "string",
  "city": "string",
  "action": "search",
  "core_version": "string",
  "bap_id": "string",
  "bap_uri": "string",
  "bpp_id": "string",
  "bpp_uri": "string",
  "transaction_id": "string",
  "message_id": "string",
  "timestamp": "2023-08-08T05:57:01.648Z",
  "key": "string",
  "ttl": "string"
 },
```

```
   "message": {
    "order_id": "string",
    "cancellation_reason_id": "string",
    "descriptor": {
     "name": "string",
     "code": "string",
     "symbol": "string",
     "short_desc": "string",
     "long_desc": "string",
     "images": [
       "string"
     ],
     "audio": "string",
     "3d_render": "string"
    }
   }
}'
```

Request URL.

https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/cancel

Response Body.

```
{
  "message": {
   "ack": {
     "status": "ACK"
   }
  },
  "error": {
   "type": "CONTEXT-ERROR",
   "code": "string",
   "path": "string",
```

```
  "message": "string"
  }
}
```

Response Headers.

access-control-allow-credentials: true

access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

access-control-allow-methods: *

access-control-allow-origin: *

cache-control: no-cache

content-encoding: gzip

content-length: 126

content-type: application/json;charset=utf-8

date: Tue,08 Aug 2023 05:57:09 GMT

etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

expires: -1

status: 200 OK

Request Duration.

966 ms

/update

Update an order.
Buyer updates an order.

https://app.swaggerhub.com/apis/blezDev/ondc-protocol_api_for_retail_grocery_f_b/1.0.29#/ONDC%20Seller%20App/post_update

Request URL.

https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/update

Response Body.

```json
{
 "message": {
  "ack": {
   "status": "ACK"
  }
 },
 "error": {
  "type": "CONTEXT-ERROR",
  "code": "string",
  "path": "string",
  "message": "string"
 }
}
```

Response Headers.

access-control-allow-credentials: true

 access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

 access-control-allow-methods: *

 access-control-allow-origin: *

 cache-control: no-cache

 content-encoding: gzip

 content-length: 126

 content-type: application/json;charset=utf-8

 date: Tue,08 Aug 2023 06:03:39 GMT

 etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

 expires: -1

 status: 200 OK

Request Duration.

1356 ms

/rating

Provide feedback on a service.

Buyer rates for one or more rating categories.

https://app.swaggerhub.com/apis/blezDev/ondc-protocol_api_for_retail_grocery_f_b/1.0.29#/ONDC%20Seller%20App/post_rating

Response Snippet. (cURL bash)

```
curl -X 'POST' \
 'https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/rating' \
 -H 'accept: application/json' \
 -H 'Content-Type: application/json' \
 -d '{
 "context": {
  "domain": "nic2004:52110",
  "country": "string",
  "city": "string",
  "action": "search",
  "core_version": "string",
  "bap_id": "string",
  "bap_uri": "string",
  "bpp_id": "string",
  "bpp_uri": "string",
  "transaction_id": "string",
  "message_id": "string",
  "timestamp": "2023-08-08T06:07:56.583Z",
  "key": "string",
  "ttl": "string"
 },
 "message": {
  "rating_category": "string",
```

```
    "id": "string",

    "value": 5,

    "feedback_form": [

      {

        "id": "string",

        "parent_id": "string",

        "question": "string",

        "answer": "string",

        "answer_type": "radio"

      }

    ],

    "feedback_id": "string"

  }

}'
```

Request URL.

Response Body.

```
{

 "message": {

  "ack": {

    "status": "ACK"

  }

 },

 "error": {

  "type": "CONTEXT-ERROR",

  "code": "string",

  "path": "string",

  "message": "string"

 }

}
```

Response Headers.

access-control-allow-credentials: true

access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

access-control-allow-methods: *

access-control-allow-origin: *

cache-control: no-cache

content-encoding: gzip

content-length: 126

content-type: application/json;charset=utf-8

date: Tue,08 Aug 2023 06:08:04 GMT

etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

expires: -1

status: 200 OK

Request Duration.

1031 ms

/support

Contact support.

Buyer searches for Support Contact details.

https://app.swaggerhub.com/apis/blezDev/ondc-protocol_api_for_retail_grocery_f_b/1.0.29#/ONDC%20Seller%20App/post_support

Response Snippet. (cURL bash)

curl -X 'POST' \

 'https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/support' \

 -H 'accept: application/json' \

 -H 'Content-Type: application/json' \

 -d '{

```
 "context": {
  "domain": "nic2004:52110",
  "country": "string",
  "city": "string",
  "action": "search",
  "core_version": "string",
  "bap_id": "string",
  "bap_uri": "string",
  "bpp_id": "string",
  "bpp_uri": "string",
  "transaction_id": "string",
  "message_id": "string",
  "timestamp": "2023-08-08T06:13:09.168Z",
  "key": "string",
  "ttl": "string"
 },
 "message": {
  "ref_id": "string"
 }
}'
```

Request URL.

<https://virtserver.swaggerhub.com/ONDC/ONDC-Protocol-Retail/1.0.29/support>

Response Body.

```
{
 "message": {
  "ack": {
   "status": "ACK"
  }
 },
 "error": {
```

```
    "type": "CONTEXT-ERROR",

    "code": "string",

    "path": "string",

    "message": "string"

  }

}
```

Response Headers.

access-control-allow-credentials: true

 access-control-allow-headers: X-Requested-With,Content-Type,Accept,Origin

 access-control-allow-methods: *

 access-control-allow-origin: *

 cache-control: no-cache

 content-encoding: gzip

 content-length: 126

 content-type: application/json;charset=utf-8

 date: Tue,08 Aug 2023 06:13:16 GMT

 etag: W/"7e-gO/DcSPnFt9bieLHNwblIinsCBE"

 expires: -1

 status: 200 OK

Request Duration.

1007 ms

Reference: https://app.swaggerhub.com/apis/blezDev/ondc-protocol_api_for_retail_grocery_f_b/1.0.29#/info