

# **Point to Point or BaRS Proxy**

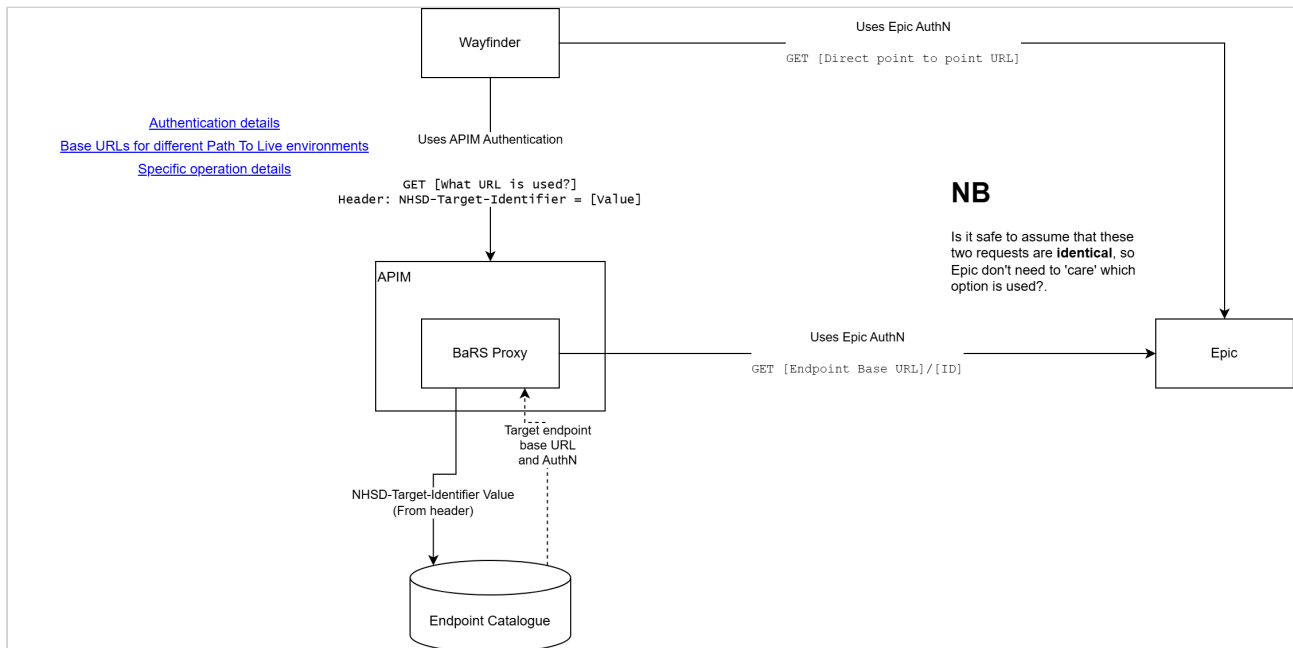
Wayfinder

Exported on 01/21/2025

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Opportunity to capture the differences (if any) at the server end for these two patterns.



# 1 Examples

## 1.1 Wayfinder → Proxy

```
GET "https://api.service.nhs.uk/booking-and-referral/FHIR/R4/Appointment/c3f6145e-1a26-4345-b3f2-dccbcb62049" \
```

```
-H "accept: application/fhir+json, -header 'Accept: application/fhir+json; version=1.2.0'" \
-H "nhsd-target-identifier: eyJ2YWx1ZSI6ICJOSFMwMDAxliwgInN5c3RlbSI6ICJ0ZXN0cyJ9" \
-H "x-correlation-id: 9562466f-c982-4bd5-bb0e-255e9f5e6689" \
-H "x-request-id: c1ab3fba-6bae-4ba4-b257-5a87c44d4a91"
```

## 1.2 Proxy → Epic

BaRS Proxy uses nhsd-target-identifier to look up the EPIC URL in the Endpoint Catalog.

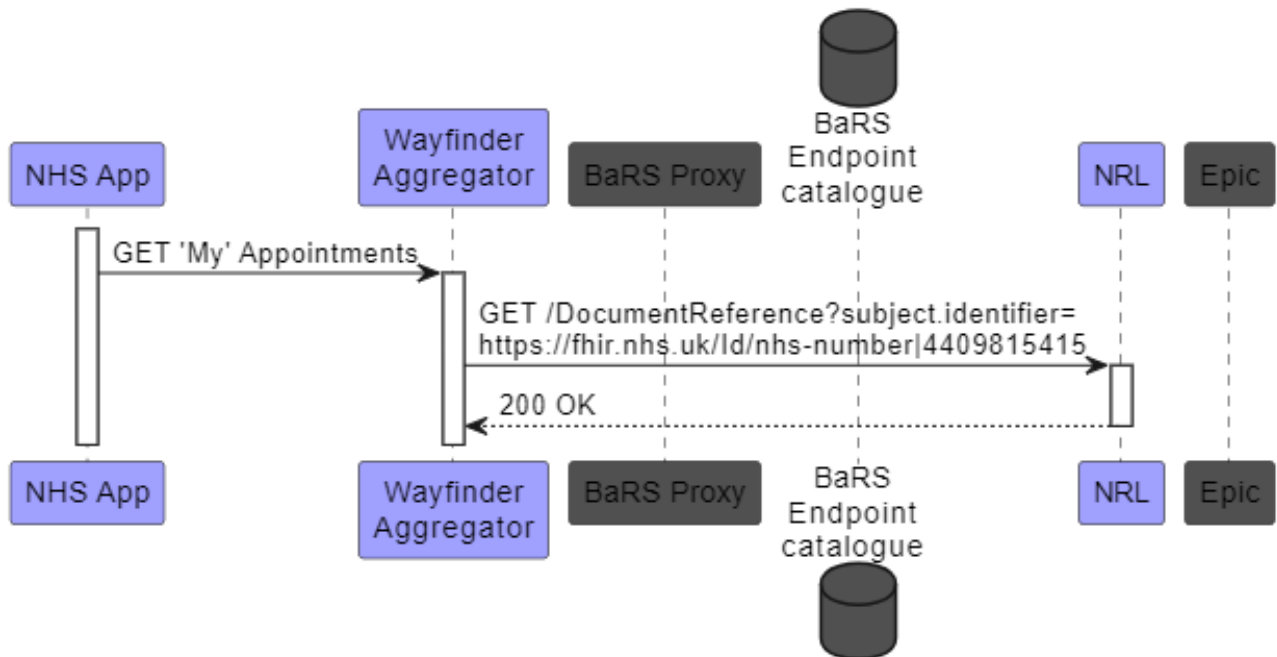
The URL would have been added as part of the BaRS EPIC onboarding process where we take the Service Id and pair it with a target URL.

This is a old diagram but shows the full flow, just swap Registry for NRLF and Receiver with EPIC



## 2 Overall flow for BaRS option

### 2.1 Call from Aggregator to NRL looks like this



### 2.2 Response payload

```

{
  "resourceType": "Bundle", // Containing Bundle
  "type": "searchset",
  "total": 1, // Only one DocumentReference was found for this patient
  "entry": [ // Array holding the DocumentReferences
    {
      "resource": {
        "resourceType": "DocumentReference",
        "id": "182a7ee3-9959-4c37-8438-84647d928748", // ID of this
        DocumentReference
        "meta": {
          "profile": [
            "http://fhir.nhs.net/StructureDefinition/nrls-
            documentreference-1-0" // Is this profiled - need a link/details?
          ]
        }
      }
    }
  ]
}

```

```

    },
    "identifier": [
      {
        "system": "urn:ietf:rhc:3986",
        "value": "urn:oid:1.3.6.1.4.1.21367.2005.3.7.1234" // This is
// for the DocumentReference / do we get an identifier
      }
    ],
    "status": "current",
    "type": {
      "coding": [
        {
          "system": "http://snomed.info/sct", // This needs
validating
          "code": "749001000000101",
          "display": "Appointment (record artifact)"
        }
      ]
    },
    "category": [
      {
        "coding": [
          {
            "system": "http://snomed.info/sct", // This needs
validating
            "code": "419891008",
            "display": "Record artifact (record artifact)"
          }
        ]
      }
    ],
    "subject": {
      "identifier": {
        "system": "https://fhir.nhs.uk/Id/nhs-number", // The patient
        "value": "4409815415"
      }
    },
    "date": "2024-12-20T09:45:41Z",
    "author": [
      {
        "identifier": {
          "system": "https://fhir.nhs.uk/Id/ods-organization-code",
// Author [of the Appointment]
          "value": "Y05868"
        }
      }
    ],
    "custodian": {
      "identifier": {
        "system": "https://fhir.nhs.uk/Id/ods-organization-code",
        "value": "Y05868"
      }
    }
  }

```

```

    },
    "description": "Appointment",
    "content": [
      {
        "attachment": {
          "contentType": "application/fhir+json",
          "language": "en-GB",
          "url": "https://cambridge.epic.nhs.uk/Appointment/
ed4decdd-d33a-4d7e-81d1-531ac2ce2cfe", // Point to Point URL for the Appointment
        }
      }
    ],
    "context": {
      "period": { // Appointment start and end times
        "start": "2025-12-20T09:00:00Z",
        "end": "2025-12-20T09:45:00Z"
      },
      "practiceSetting": { // Required? Specialty the appointment is
for/with/from
        "coding": [
          {
            "system": "http://snomed.info/sct",
            "code": "788002001",
            "display": "Adult mental health service"
          }
        ]
      }
    }
  }
]
}

```

## 2.3 NRL BaRS Response

Taken from [INV0022 - BaRS Appointment Pointers](#)<sup>1</sup>

### DocumentReference

```

{
  "resourceType": "Bundle",
  "type": "searchset",
  "total": 1,
  "entry": [
    {
      "resource": {

```

<sup>1</sup> <https://nhsd-confluence.digital.nhs.uk/display/PAAB/INV0022+-+BaRS+Appointment+Pointers>

```

"resourceType": "DocumentReference",
"id": "Yorkshire Ambulance Service|423456781055",
"masterIdentifier": [
  {
    "system": "urn:ietf:rhc:3986",
    "value": "urn:uuid:27e2b1c8-ecd8-48f8-9958-8e614cc7ad73"
  }
],
"identifier": [
  {
    "system": "https://fhir.nhs.uk/Id/BaRS-Identifier",
    "value": "8c63d621-4d86-4f57-8699-e8e22d49935d"
  },
  {
    "value": "2000072491",
    "system": "https://fhir.nhs.uk/Id/dos-service-id"
  },
  {
    "system": "https://fhir.nhs.uk/Id/product-id",
    "value": "0B475C"
  }
],
"status": "current",
"type": {
  "coding": [
    {
      "system": "https://snomed.info/ict",
      "code": "749001000000101",
      "display": "Appointment (booking)"
    }
  ]
},
"category": [
  {
    "coding": [
      {
        "system": "http://ihe.net/xds/connectathon/
classCodes",
        "code": "History and Physical",
        "display": "History and Physical"
      }
    ]
  }
],
"subject": {
  "identifier": {
    "system": "https://fhir.nhs.uk/Id/nhs-number",
    "value": "$nhs-number"
  }
},
"custodian": {
  "identifier": {

```



```

        "system": "https://fhir.nhs.uk/Id/ods-organization-code",
        "value": "$ods-code"
    },
    },
    "relatesTo": [
        {
            "code": "replaces",
            "target": {
                "type": "DocumentReference",
                "identifier": {
                    "value": "Yorkshire Ambulance Service|42345678105"
                }
            }
        }
    ],
    "content": [
        {
            "attachment": {
                "language": "en-UK",
                "url": "http://fhir.nhs.uk/Id/dos-service-id|111111111",
                "creation": "2005-12-24T09:35:00+11:00"
            },
            "format": [
                {
                    "coding": [
                        {
                            "system": "https://fhir.nhs.uk/CodeSystem/
message-events-bars",
                            "code": "booking-request"
                        },
                        {
                            "system": "https://fhir.nhs.uk/CodeSystem/
message-category-servicerequest",
                            "code": "referral",
                            "display": "Transfer of Care"
                        }
                    ]
                }
            ]
        }
    ],
    "context": {
        "period": {
            "start": "2020-11-10T19:57:26.961Z",
            "end": "2021-11-20T19:57:26.961Z"
        },
        "practiceSetting": {
            "coding": [
                {
                    "system": "http://www.ihe.net/xds/connectathon/
practiceSettingCodes",
                    "code": "General Medicine",

```

```

    }
  ]
}

"display": "General Medicine"
}
```

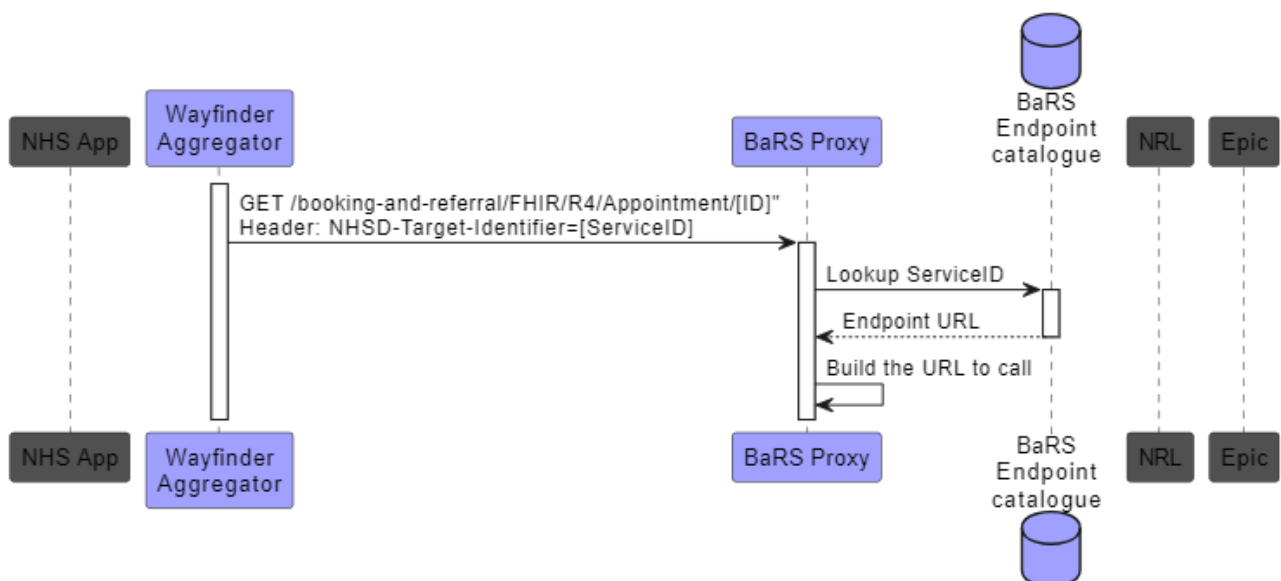
## 2.4 Aggregator call to BaRS Proxy

**QUESTION** What ID (from the above JSON) would be used here?

**ANSWER** The value 8c63d621-4d86-4f57-8699-e8e22d49935d, taken from the identifier section above would be passed as the Appointment id

**QUESTION** What ServiceID (from the above JSON) would be used here?

**ANSWER** That would be the Service Id of the healthcare service within the trust using EPIC, which in the example above would be 2000072491



## 2.5 BaRS Proxy builds the actual URL to call

**QUESTION** does it just use the `content[0].attachment.url` value?

**ANSWER** No, the root URL is predefined during the onboarding, the proxy just appends the operation and parameters.

**QUESTION** does the endpoint catalogue also give the TLS/MA certificate to use - if not where is that retrieved from?

**ANSWER** no, this is agreed during onboarding, the Trust/EPIC setup a trusted connection to the Proxy, see the Receiver section in <https://simplifier.net/guide/nhsbookingandreferralstandard/Home/Build/Testing-and-Environments/Onboarding?version=1.8.1>

## 2.6 BaRS Proxy calls target URL and retrieves the appointment

