



# *Scalable Access Management in Digital Twin Registry*

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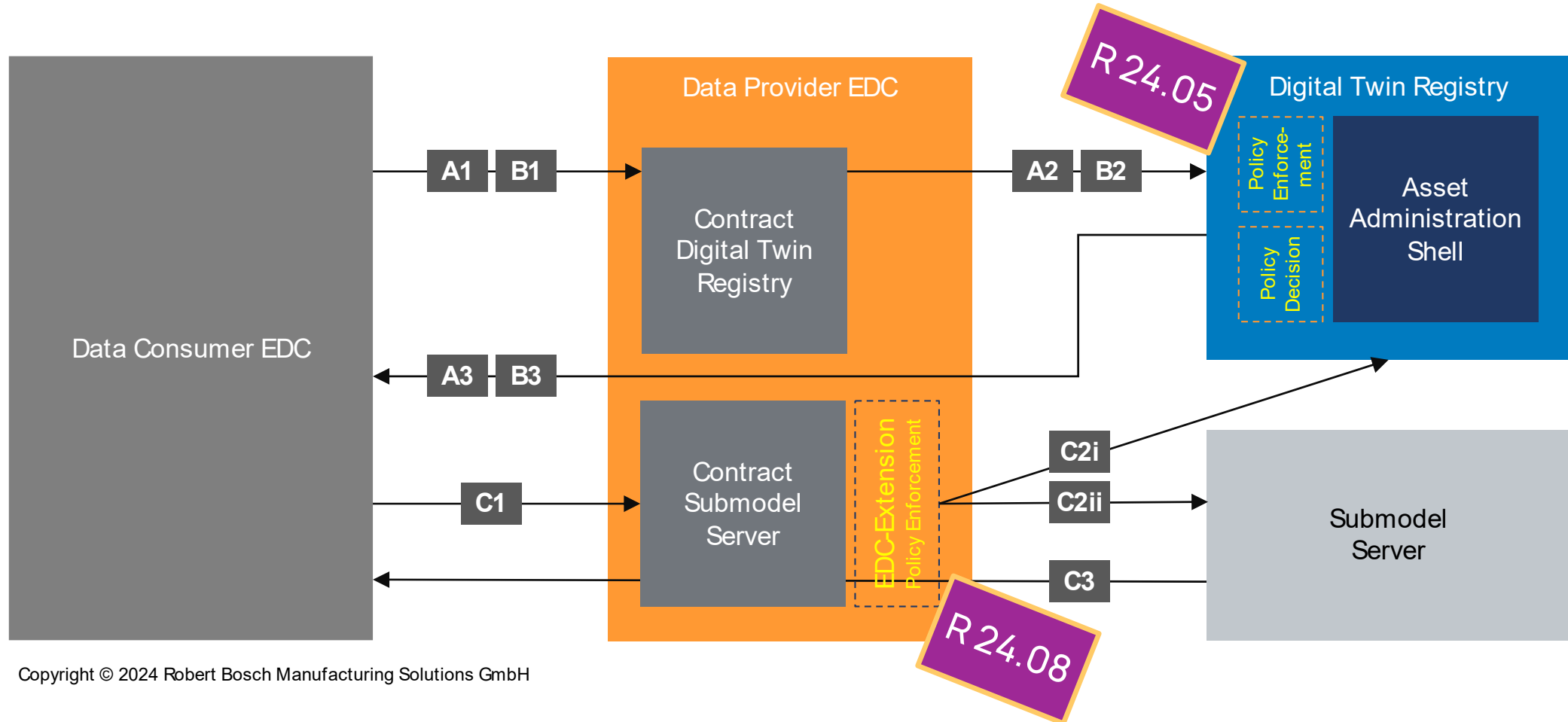
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# Simplified Architecture

Concept published under: <https://github.com/eclipse-tractusx/sig-release/issues/417>



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# Example of Access Rules

Business Partner Number (BPNL) of the defined data consumer where an access rule applies to	<b>(Ω)</b> : Definition of subset of Asset Administration Shells via specific asset identifier(s) which are overall allowed to be requested by the defined data consumer (→ BPNL)	<b>(σ)</b> : Definition of visible specific asset identifier(s) within the predefined subset of Asset Administration Shells (Ω), which are allowed to be filtered by and visible to the defined data consumer (→ BPNL)	Definition of Submodel(s) which are visible to the defined data consumer (→ BPNL) via semantic identifier(s)
BPNL000000123ABC	[manufacturerPartId = 4711, customerPartId = 1111_A]	[manufacturerPartId, customerPartId, partInstanceId]	[urn:samm:io.catenax.item_stock:2.0.0#ItemStock, urn:samm:io.catenax.planned_production_output:2.0.0#PlannedProductionOutput]
BPNL000000567DEF	[manufacturerPartId = 4711, customerPartId = B222]	[manufacturerPartId, customerPartId, partInstanceId]	[urn:samm:io.catenax.serial_part:3.0.0#SerialPart]



# Code Example of Access Rule

```
{
  "id": 1,
  "tid": "00000000-1111-2222-3333-444444444444",
  "policyType": "AAS",
  "policy": {
    "accessRules": [
      {
        "attribute": "bpn",
        "operator": "eq",
        "value": "BPNL000000000000A"
      },
      {
        "attribute": "mandatorySpecificAssetIds",
        "operator": "includes",
        "values": [
          {
            "attribute": "manufacturerPartId",
            "operator": "eq",
            "value": "4711"
          },
          {
            "attribute": "customerPartId",
            "operator": "eq",
            "value": "1111_A"
          }
        ]
      }
    ]
  }
},
```

```
{
  "attribute": "visibleSpecificAssetIdNames",
  "operator": "includes",
  "values": [
    {
      "attribute": "name",
      "operator": "eq",
      "value": "manufacturerPartId"
    },
    {
      "attribute": "name",
      "operator": "eq",
      "value": "customerPartId"
    },
    {
      "attribute": "name",
      "operator": "eq",
      "value": "partInstanceId"
    }
  ]
},
```

```
{
  "attribute": "visibleSemanticIds",
  "operator": "includes",
  "values": [
    {
      "attribute": "modelUrn",
      "operator": "eq",
      "value": "urn:samm:io.catenax.item_stock:2.0.0#ItemStock"
    },
    {
      "attribute": "modelUrn",
      "operator": "eq",
      "value": "urn:samm:io.catenax.planned_production_output:2.0.0
#PlannedProductionOutput"
    }
  ]
},
"description": "Access rule description.",
"validFrom": "2024-07-12T03:04:05Z",
"validTo": "2024-07-25T08:09:10Z"
}
```



# API Description

Open API Documentation: [here](#)

Developer Documentation: [here](#)

## Access Rule ^

GET	<code>/access-controls/rules</code> Returns a list of Access Rule <span>🔒</span> <span>▾</span>
POST	<code>/access-controls/rules</code> Creates a new Access Rule <span>🔒</span> <span>▾</span>
GET	<code>/access-controls/rules/{ruleId}</code> Returns a single Access Rule by Rule Id <span>🔒</span> <span>▾</span>
PUT	<code>/access-controls/rules/{ruleId}</code> Updates an Access Rule by Rule Id <span>🔒</span> <span>▾</span>
DELETE	<code>/access-controls/rules/{ruleId}</code> Deletes an Access Rule by Rule Id <span>🔒</span> <span>▾</span>

## **\_PRIVATE\_** Submodel Access Control Registry API ^

POST	<code>/submodel-descriptor/authorized</code> Private endpoint that verifies whether the caller has access to the specified submodel endpoint or not. <span>🔒</span> <span>▾</span>
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