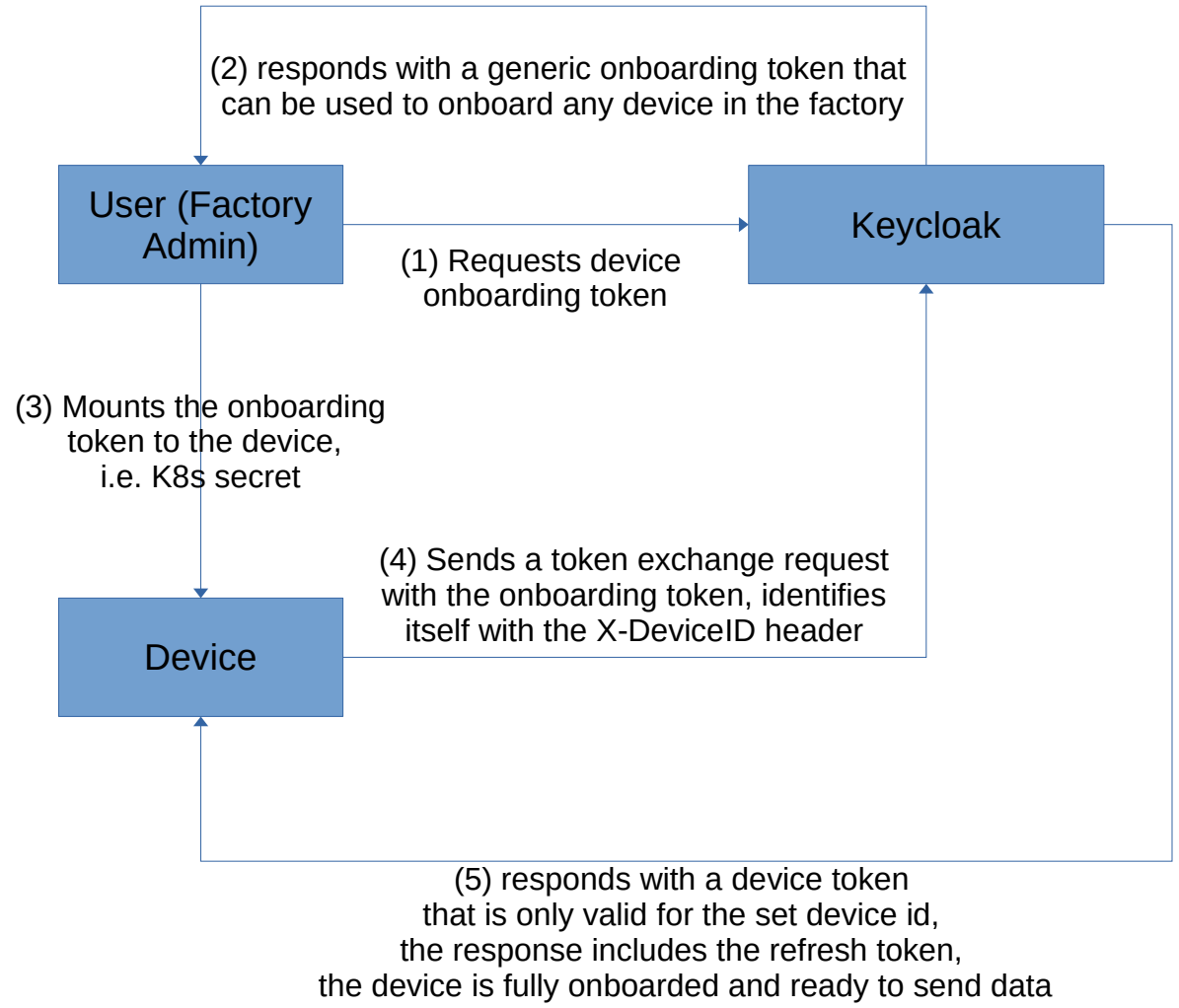
# New Device Authentication Flow with Onboarding Token




Example onboarding token:

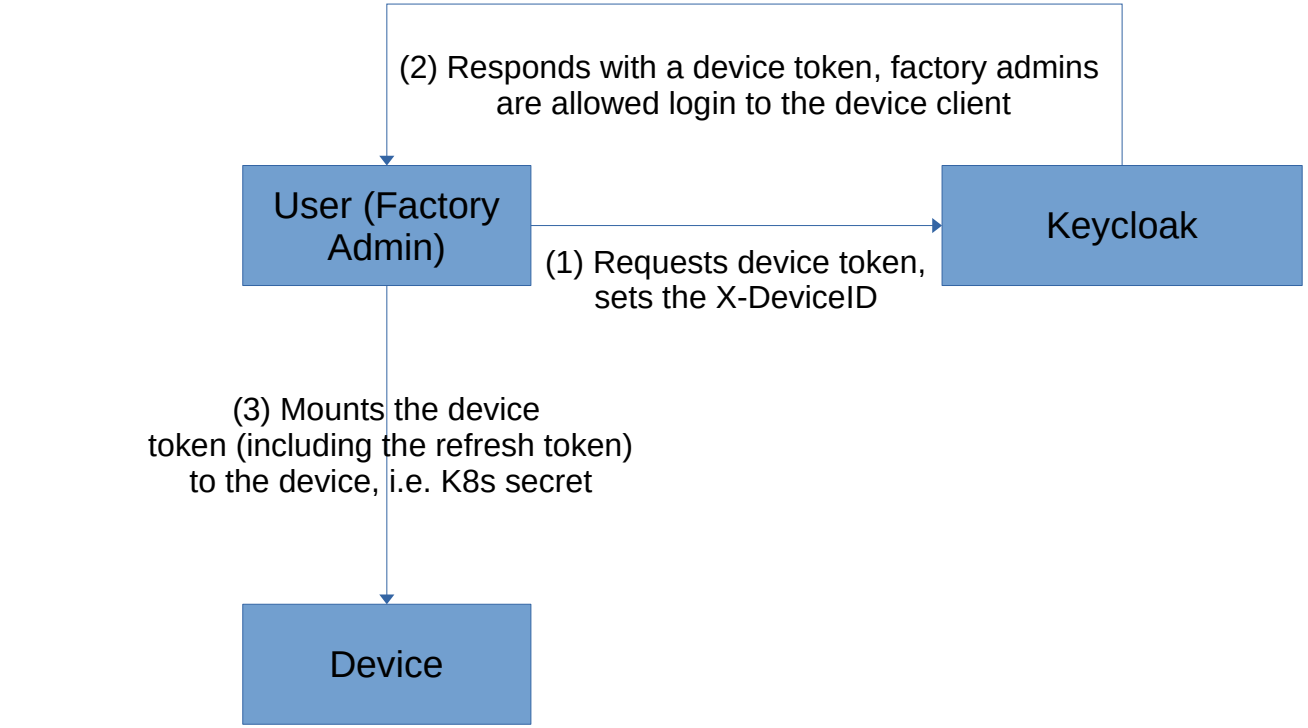

```
{
  "iat": 1689336564,
  "jti": "10da8068-795a-4ed1-8e43-ff8de460bdff",
  "iss": "http://keycloak.local/auth/realms/iff",
  "aud": "http://keycloak.local/auth/realms/iff",
  "sub": "testdevice",
  "typ": "Bearer",
  "azp": "device-onboarding",
  "session_state": "2242f745-ce19-46dd-9441-7a95d6f04cde",
  "scope": "oisp-frontend device_id gateway mqtt-broker
offline_access type",
  "sid": "2242f745-ce19-46dd-9441-7a95d6f04cde"
}
```


Example device token:


```
{
  …,
  "aud": [
    "oisp-frontend",
    "mqtt-broker",
    "device"
  ],
  "sub": "testdevice",
  "typ": "Bearer",
  "azp": "device-onboarding",
  "session_state": "2242f745-ce19-46dd-9441-7a95d6f04cde",
  "scope": "oisp-frontend device_id gateway mqtt-broker
offline_access type",
  "sid": "2242f745-ce19-46dd-9441-7a95d6f04cde",
  "device_id": "testdevice",
  "type": "device",
  "gateway": "testgw",
  "accounts":  [
    "id":  "c6c1c8fe-5e22-4e88-881e-1103fe07e85b",
    "role": "device"
  ]
}
```

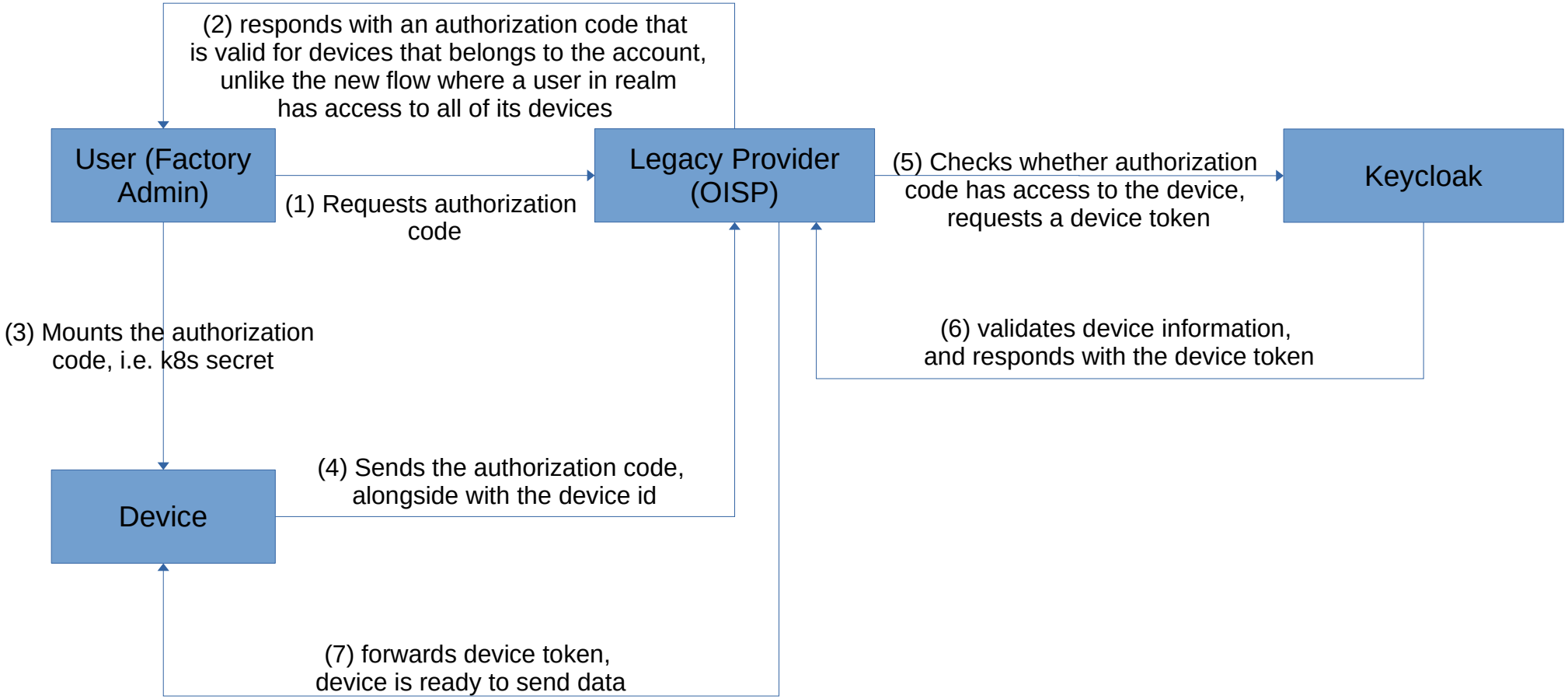

Full implementation details at: https://github.com/IndustryFusion/DigitalTwin/issues/400

# New Device Authentication Flow with Direct Onboarding




Device is fully onboarded and ready to send data.
This flow can be used to manually onboard devices.
For full automation, device onboarding approach suits better.

# Legacy Authentication Flow for Comparison




The main benefit of the new flow is the elimination of the legacy provider, which was the backend for the devices. In the new flow, all communication is done directly with Keycloak, because there is no longer a need to abstract device services. Every factory has its own realm, and its factory admin can onboard these devices.