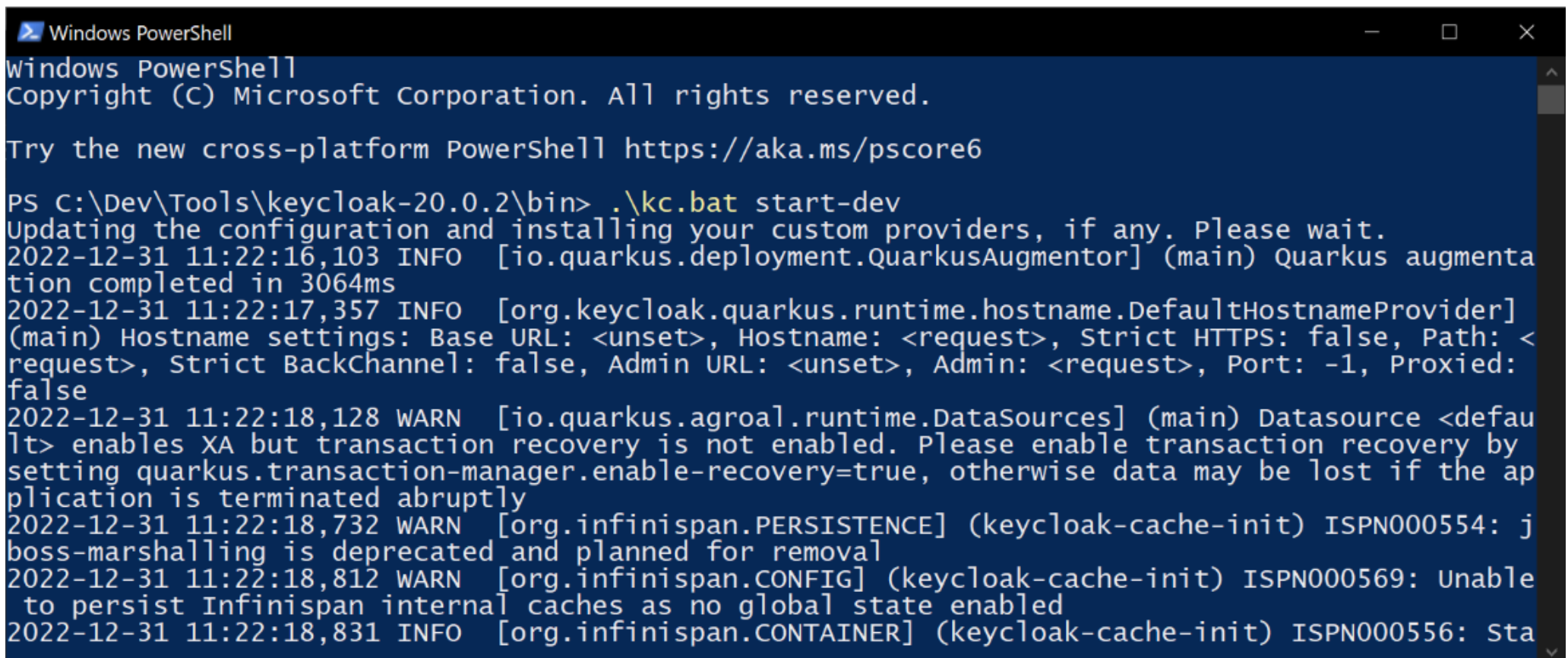


# Setup Keycloak

- Um Benutzer und Berechtigungen für unsere Applikation zu verwalten, verwenden wir die Software Keycloak. Beim Einrichten der Arbeitsumgebung sollte die Software bereits nach C:\Dev\Tools entpackt worden sein.
- Starten Sie die Applikation folgendermassen über Powershell (oder CMD).
  - cd C:\Dev\Tools\keycloak-20.0.1\bin
  - ./kc.bat start-dev
  - Achtung: Port 8080 muss frei sein!
- Nach dem Start kann die Administration über einen beliebigen Browser unter <http://localhost:8080> geöffnet werden.
- Beim ersten Mal muss ein Admin User erstellt werden. Für diesen Kurs empfehlen wir admin/admin zu verwenden - in der Vergangenheit haben Teilnehmer immer wieder komplizierte Passwörter vergessen was zu Problemen geführt hat. In der Praxis würden natürlich komplexe Passwörter verwendet werden.
- Anschliessend kann die Admin-Umgebung mit einen Klick auf Administration Console gestartet werden.
- Zuerst erstellen wir unseren ILV Realm.
- Anschliessend erstellen wir einen Client für unsere Applikation. Die ID muss demoapp lauten. Bei allen anderen Einstellungen können die Standardwerte übernommen werden.
- Anschliessend müssen die Redirect/Web Origin Einstellungen angepasst werden.
- Was jetzt noch fehlt sind Rollen und Benutzer um mit unserer Applikation arbeiten zu können.
- Die Rollen werden innerhalb unseres Clients angelegt. Wir benötigen die folgenden Rollen:
  - ROLE\_read
  - ROLE\_update
  - ROLE\_admin
- Wir legen jetzt noch 2 Benutzer an. Unser Benutzer *user* hat die *read* und *update* Rollen. Der Benutzer *admin* hat zusätzlich noch die *admin* Rolle.
- Um einloggen zu können, muss ein Passwort gesetzt werden.




```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Dev\Tools\keycloak-20.0.2\bin> .\kc.bat start-dev
Updating the configuration and installing your custom providers, if any. Please wait.
2022-12-31 11:22:16,103 INFO [io.quarkus.deployment.QuarkusAugmentor] (main) Quarkus augmentation completed in 3064ms
2022-12-31 11:22:17,357 INFO [org.keycloak.quarkus.runtime.hostname.DefaultHostnameProvider] (main) Hostname settings: Base URL: <unset>, Hostname: <request>, Strict HTTPS: false, Path: <request>, Strict BackChannel: false, Admin URL: <unset>, Admin: <request>, Port: -1, Proxied: false
2022-12-31 11:22:18,128 WARN [io.quarkus.agroal.runtime.DataSources] (main) Datasource <default> enables XA but transaction recovery is not enabled. Please enable transaction recovery by setting quarkus.transaction-manager.enable-recovery=true, otherwise data may be lost if the application is terminated abruptly
2022-12-31 11:22:18,732 WARN [org.infinispan.PERSISTENCE] (keycloak-cache-init) ISPN000554: jboss-marshalling is deprecated and planned for removal
2022-12-31 11:22:18,812 WARN [org.infinispan.CONFIG] (keycloak-cache-init) ISPN000569: Unable to persist Infinispan internal caches as no global state enabled
2022-12-31 11:22:18,831 INFO [org.infinispan.CONTAINER] (keycloak-cache-init) ISPN000556: Sta
```

# Welcome to Keycloak



## Administration Console

Please create an initial admin user to get started.

Username

admin


Password

•••••

Password confirmation

•••••

Create

KEYCLOAK

master

master

Create Realm

## Create realm

A realm manages a set of users, credentials, roles, and groups. A user belongs to and logs into a realm. Realms are isolated from one another and can only n

Resource file

Drag a file here or browse to upload

Browse...

Clear

1

Upload a JSON file

Realm name \*

ILV

Enabled

On

Create

Cancel

KEYCLOAK

ILV

Manage

Clients

Client scopes

Realm roles

Users

Groups

Sessions

Events

Configure

Realm settings

Clients

Clients are applications and services that can request authentication of a user.

Clients list

Initial access token

Q

Search for client

→

Create client

Import client

Client ID	Type
account	OpenID Connect
account-console	OpenID Connect
admin-cli	OpenID Connect
broker	OpenID Connect
realm-management	OpenID Connect
security-admin-console	OpenID Connect

Clients > Create client

### Create client

Clients are applications and services that can request authentication of a user.

1

General Settings

Client type ?

OpenID Connect

Client ID \* ?

demoapp

Name ?

Description ?

Always display in console ?

Off

Next

Back

Cancel

Access settings

Root URL ?

Home URL ?

Valid redirect URIs ?

http://localhost:9090/\*

http://localhost:4200/\*

+ Add valid redirect URIs

Valid post logout redirect URIs ?

+

+ Add valid post logout redirect URIs

Web origins ?

+

+ Add web origins

Admin URL ?

Clients > Client details

demoapp OpenID Connect

Clients are applications and services that can request authentication of a user.

- Settings
- Roles
- Client scopes
- Sessions
- Advanced



No roles for this client

You haven't created any roles for this client. Create a role to get started.

Create role

Clients > Client details > Create role

Create role

Role name \*

role\_read

Description

Save

Cancel

demoapp

OpenID Connect

Clients are applications and services that can request authentication of a user.

- Settings
- Roles
- Client scopes
- Sessions
- Advanced

🔍

Search role by name

→

Create role

Role name	Composite
<a href="#">ROLE_admin</a>	False
<a href="#">ROLE_read</a>	False
<a href="#">ROLE_update</a>	False

☰

KEYCLOAK

ILV

▼

Manage

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Realm settings

Authentication

Identity providers

User federation

Users > Create user

Create user

Username \*

user

Email

Email verified ⓘ

Off

First name

Tester

Last name

User

Required user actions ⓘ

Select action

Groups ⓘ

Join Groups

Create

Cancel

5 of 6

3/24/2024, 6:01 PM

KEYCLOAK

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Authentication

Identity providers

User federation

Users > User details

user

DetailsAttributesCredentialsRole mappingGroupsConsentsIdentity provider linksSessions

Search by name→☒ Hide inherited rolesAssign roleUnassign

☐ Name

☐ default-roles-ilm

Assign roles to user account

Filter by clients

ROLE

1-3

☐ Name

Description

☐ demoapp

ROLE\_admin

☒ demoapp

ROLE\_read

☒ demoapp

ROLE\_update

1-3

Assign

Cancel

Users > User details

user

DetailsAttributesCredentialsRole mappingGroupsConsentsIdentity provider linksSessions

No credentials

Set password for user

Password \*

Password confirmation \*

Temporary ?

Off

Save

Cancel