

IBA Java Workshop V.2.0

Week #0 Activities (10.01.2023 - 17.01.2023)

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OS to be used on developer machines -- **Windows 10 / Windows 11**. Other OSes (e.g. Mac OS) might work, but not be supported by the instructor.

You must have access to the **IBA intranet** (either via CheckPoint VPN or from the office network)

Install the following software on your machine (skip if you have particular software already installed) and configure it:

1. **Java SE 17** (preferably) or greater for **x64 architecture**. Reasons - (1) the latest Long Term Support release (2) we use Spring Boot 2.7.5 (which support from Java SE 8 up to Java SE 19)

Link: <https://adoptium.net/temurin/releases/>

Test command: `java -version`

2. **IntelliJ IDEA Community Edition** (other Java IDE might work but will not be supported by the instructor)

- Install **EnvFile** plugin to support environment files (i.e. set environment variables from files).

Open menu: **File > Settings > Plugins**, make sure **Marketplace** is selected, search **EnvFile** plugin,

Link: <https://www.jetbrains.com/idea/download/#section=windows>

3. Git SCM (add binaries to the `%PATH%` environment variable)

Link: <https://git-scm.com/downloads>

Test command: `git version`

4. You will need `curl` utility which supports SSL certificates.

IMPORTANT NOTE: built-in in Windows `curl` does not properly support SSL certificates.

Windows version (wrong):

C:\Windows\System32\curl.exe

Git version (correct)

C:\Program Files\Git\mingw64\bin\curl.exe

You will need to provide full path to correct `curl` utility to override default Windows `curl`

You can check the version, correct output will be similar:

```
C:\Program Files\Git\mingw64\bin>curl.exe -V
curl 7.81.0 (x86_64-w64-mingw32) libcurl/7.81.0 OpenSSL/1.1.1m
(Schannel) zlib/1.2.11 brotli/1.0.9 zstd/1.5.2 libidn2/2.3.1
libssh2/1.10.0 nghttp2/1.46.0
Release-Date: 2022-01-05
Protocols: dict file ftp ftps gopher gophers http https imap
imaps ldap ldaps mqtt pop3 pop3s rtsp scp sftp smb smbs smtp
smtps telnet tftp
Features: alt-svc AsynchDNS brotli HSTS HTTP2 HTTPS-proxy IDN
IPv6 Kerberos Largefile libz MultiSSL NTLM SPNEGO SSL SSPI
TLS-SRP zstd
```

5. OpenSSH for Windows client (built-in in Windows 10 / Windows 11)

Install instruction link:

https://docs.microsoft.com/en-us/windows-server/administration/openssh/openssh_install_firstuse

Test command: `ssh -V`

Test command: `ssh-keygen.exe`

6. MongoDB Compass (add binaries to the `%PATH%` environment variable)

Link: <https://www.mongodb.com/try/download/compass>

7. (Optional) Far Manager (to navigate the filesystem and edit ASCII files)

Link: <https://www.farmanager.com/download.php?l=en>

8. Docker Desktop for Windows and run

Link: <https://docs.docker.com/desktop/windows/install/>

Test command: `docker run --rm hello-world`

Troubleshooting: if Docker command does not start, try to switch engine: use Hyper-V engine, not WSL-2 engine or vice versa.

Troubleshooting 2: sockets reset on Windows may help:

```
netsh winsock reset
```

9. You will need Docker Compose. For Windows and Mac it is included as a plugin in Docker Desktop.

Test commands:

```
where docker-compose  
docker-compose version
```

Output similar to:

```
docker-compose version 1.29.2, build 5becea4c  
docker-py version: 5.0.0  
CPython version: 3.9.0  
OpenSSL version: OpenSSL 1.1.1g  21 Apr 2020
```

10. Telegram Messenger for Desktop

Link: <https://desktop.telegram.org/>

11. Any screenshot capturing tool. You can use Windows 10 / Windows 11 built-in “**Snipping Tool**” application

Test key combination for built-in Snipping Tool: `Win + Shift + S`

Accounts and accesses:

1. Telegram Messenger account.

Ask the instructor to add you in group chat which will be used as the main method of communication.

2. OPTIONAL: Create an account on Docker Hub (free)

Link: <https://hub.docker.com/>

Test command: `docker login -u <YOUR_USERNAME> -p <YOUR_PASSWORD>`

3. Login to corporate GitLab (use IBA email and web password from IBA Lotus Notes)

Link: <https://code.iby.scdc.io/>

4. Share with the instructor your GitLab user name (namespace)

`https://code.iby.scdc.io/<YOUR _GIT_NAME_IS_HERE>/`

So your ID can be added to the GitLab group with proper access.

5. Configure ssh access to corporate GitLab with RSA SSH keys

NOTE: a prerequisite to the “clone” test command is **Step #3** (create a corporate GitLab account) and **Step #4** (you need to share your GitLab ID with the instructor to be added to the participants’ group).

Instructions link: <https://code.iby.scdc.io/help/ssh/README.md>

Sections:

- Generating a new SSH key pair > RSA SSH keys
- Adding an SSH key to your GitLab account

Test command:

```
cd %TEMP%
git clone git@code.iby.scdc.io:mzaikin/access-test-project.git
```

NOTE: if the git client keeps asking for a password, please specify explicitly the private key via the `~/.ssh/config` file (example)

```
Host code.iby.scdc.io
  HostName code.iby.scdc.io
  IdentityFile C:\Users\<USERNAME>\.ssh\XXX_rsa
  User git
```

6. Register a new Telegram Bot using the name/username provided in the Google Docs spreadsheet and save your bot API key in a secret place

Bot registration link: <https://t.me/botfather>

Test: open the new bot in web browser `https://t.me/<YOUR_TG_BOT_USERNAME>`

Once you complete all steps: send proofs (screenshots) of these commands to the instructor's telegram (not the common chat):

1) From any directory:

```
docker run --rm hello-world
```

2) From `access-test-project\` directory):

```
git status
```

Any questions: ask in the workshop group chat or in personal messages to the instructor.

Have fun!