

Core Development 32 and 64 bit

See [Developing Environment](#) how to set up the (virtual) machine required for BPS development.

Copying from medium

In case you have BPS on a medium (Memory stick, CD, DVD) you have to copy the bps folder from there to C:\dev.

Checkout from mercury

Within IBK the central Mercury repository of BPS is stored on server *Alderaan*.

- Create folder C:\dev\bps
- Go to C:\dev\bps in Windows Explorer
- Right click somewhere in folder
 - TortoiseHg - Clone...
 - Source: [\\ALDERAAN\IBK-Entwicklung\hg\bps](#)
 - Destination: C:\dev\bps
 - Options: all unchecked
 - *Show Detail*
 - *Clone*
 - Wait until message *command completed successfully* Shows and *TortoiseHg Workbench* opens.
 - Close clone dialog and workbench

First steps

- Run C:\dev\bps\MakeLinks.bat to create required file and folder links.
- Delete C:\dev\bps\src\bps.pro.user* in case they exist.
- Start Qt Creator
- Open Project C:\dev\bps\src\bps.pro
- Switch to *Projects* to adjust settings:

[Projects / Build & Run / Desktop 32bit](#)

Manage Kits...

Active Project

bps

Import Existing Build...

Build & Run

Desktop 32bit

Build

Run

Desktop 64bit

Build

Run

Project Settings

Editor

Code Style

Dependencies

Clang Code Model



Build Settings

Edit build configuration: Release Add Remove Rename... Clone...

General

Shadow build:

Build directory: C:\dev\bps\Release32 Browse...

Build Steps

qmake: qmake.exe bps.pro -spec win32-msvc "CONFIG+=release" Details

Make: jom.exe in C:\dev\bps\Release32 Details

Add Build Step

Clean Steps

Make: jom.exe clean in C:\dev\bps\Release32 Details

Add Clean Step

Build Environment

Use **System Environment** Details

Manage Kits...

Active Project

bps

Import Existing Build...

Build & Run

Desktop 32bit

Build

Run

Desktop 64bit

Build

Run

Project Settings

Editor

Code Style

Dependencies

Clang Code Model

Run Settings

Deployment

Method: Deploy Config Add Remove Rename...

No Deploy Steps

Add Deploy Step

Run

Run configuration: Custom Execut Add... Remove Rename... Clone...

Executable: Browse...

Command line arguments:

Working directory: Browse... ↺

Run in terminal

Run Environment

Use **Build Environment** Details

Debugger settings

- Enable C++
- Enable QML [What are the prerequisites?](#)

Additional startup commands:

[Projects / Build & Run / Desktop 64bit](#)

Manage Kits...

Active Project

bps

Import Existing Build...

Build & Run

Desktop 32bit

Build

Run

Desktop 64bit

Build

Run

Project Settings

Editor

Code Style

Dependencies

Clang Code Model



Build Settings

Edit build configuration: Release Add Remove Rename... Clone...

General

Shadow build:

Build directory: C:\dev\bps\Release64 Browse...

Build Steps

qmake: qmake.exe bps.pro -spec win32-msvc "CONFIG+=release" Details

Make: jom.exe in C:\dev\bps\Release64 Details

Add Build Step

Clean Steps

Make: jom.exe clean in C:\dev\bps\Release64 Details

Add Clean Step

Build Environment

Use **System Environment** Details

Manage Kits...

Active Project

bps

Import Existing Build...

Build & Run

Desktop 32bit

Build

Run

Desktop 64bit

Build

Run

Project Settings

Editor

Code Style

Dependencies

Clang Code Model

Run Settings

Deployment

Method: Deploy Config Add Remove Rename...

No Deploy Steps

Add Deploy Step

Run

Run configuration: Bps Workplace Add... Remove Rename... Clone...

Executable:	<input type="text" value="C:\dev\bps\Release64\bin\workplace.exe"/>	Browse...
Command line arguments:	<input type="text"/>	
Working directory:	<input type="text" value="C:\dev\bps\Release64\bin"/>	Browse...
	<input type="checkbox"/> Run in terminal	

Run Environment

Use **Build Environment** Details

Debugger settings

Enable C++

Enable QML [What are the prerequisites?](#)

Additional startup commands:

[Projects / Project Settings / Code Style](#)

The screenshot shows the 'Code Style' dialog in Qt Creator. The language is set to C++. The current settings are 'IBK'. There are buttons for 'Copy...', 'Edit...', 'Remove', 'Export...', and 'Import...'. A red callout box points to the 'Import...' button with the text 'Import from C:\dev\bps\lbkCodeStyle.xml'. The preview window shows the following code snippet:

```
#include <math.h>

class Complex
{
public:
    ... Complex(double re, double im)
    ... ::_re(re), _im(im)
}
```

Below the preview, there is a note: *Edit preview contents to see how the current settings are applied to custom code snippets. Changes in the preview do not affect the current settings.*

On the left sidebar, the 'Project Settings' section is visible, with 'Code Style' selected under the 'Project Settings' category.

- Switch to *Edit* to build
 - Click on bps
 - *Build - Build Project „bps“*
 - Wait until all built
- Run BPS Workplace by clicking the green arrow

Edit Translations

- Open the BPS project in Qt Creator
- Open the .pro file of a sub-project, for example src/apps/bps/bps.pro
- Press Ctrl+Alt+T to start the translate script
- After updating the .ts files, Qt Linguist starts
 - When translating the subproject first time, make sure the dictionaries in C:\dev\bps\src\translations are opened (bps_de.qph, bps_fr.qph, bps_it.qph).
 - Edit the translations as desired
 - *File - Release all*
 - Close Qt Linguist

Update C++ and script documentation

- Double-click C:\dev\bps\src\docs\bps2cpp\bps2cpp.doxyfile
 - When asked what program to use for .doxyfile, select C:\Program Files\doxygen\bin\doxywizard.exe
 - In DoxyWizard, select tab *Run*
 - *Run doxygen*

- *Show HTML Output*
- Repeat with `C:\dev\bps\src\docs\bps2js\bps2js.doxyfile` for script reference.

Release Checklist

Rebuild Code

- Open project `C:\dev\bps\src\bps.pro` in Qt Creator.
- Edit `bps - Other Files - features - bps_init.prf`:
 - `VERSION`: new version (major.minor.micro.fix)
 - `QMAKE_TARGET_COPYRIGHT`: years (from-to)
- Edit `bps - libs - bpscore - Headers - bpsglobals.h`:
 - `BPS_RELDATE`
 - `BPS_COPYRIGHT_YEARS`
 - `BPS_COPYRIGHT_TEXT`: years (from-to)
 - `BPS_DATASTORE_LEVEL_MIN`
 - `BPS_DATASTORE_LEVEL_MAX`
 - `BPS_VERSION_MAJOR`
 - `BPS_VERSION_MINOR`
 - `BPS_VERSION_MICRO`
 - `BPS_VERSION_FIX`
- Select Desktop 32 Bit - Release
 - `bps`
 - *Build - Clean Project „bps“*
 - *Build - Run qmake*
 - *Build - Build Project „bps“*
- Select Desktop 64 Bit - Release
 - `bps`
 - *Build - Clean Project „bps“*
 - *Build - Run qmake*
 - *Build - Build Project „bps“*

Sign Code



This can only be done at IBK where the signing certificates of IBK are available. If you want to sign outside of IBK, you need get a code signing certificate for your own company.

- Run `C:\dev\bps\SignLibs.bat`
- Run `C:\dev\bps\SignCode.bat`

Create Installers

Creates .msifact clones with new GUID's

Skip this step when releasing a fix version!

- Open command line *BPS Release CMD*
 - `cd src\installer`
 - `msiclone bps32 bps64`
 - Generates new files:
 - `bps32-new.msifact`
 - `bps64-new.msifact`

Create 32 Bit Installers

- `C:\dev\bps\Release32\installer\bps32-new.msifact`
 - Open with MSI Factory (double click)
 - When releasing a base version:
 - *Build - Settings... - Variables*
 - Adjust `BpsVersion` and `BpsVersionService`
 - *Build - Settings... - Setup File*
 - Output name: `bps-$(var.BpsVersion).0-32`
 - *Project - Settings...*
 - Product version: `$(var.BpsVersion).0`
 - Find/remove related programs:
 - Delete all
 - When releasing a fix version (for example fix 3):
 - *Build - Settings... - Setup File*
 - Output name: `bps-$(var.BpsVersion).3-32`
 - *Project - Settings...*
 - Product version: `$(var.BpsVersion).3`
 - *Build - Build Installer (F7)*
 - Build the installer in all languages.
 - After each run rename the created file `bps\Release32\setup\bps-2.x.y.z-32.msi` to:
 - English: `bps-2.x.y.z-32-en.msi`
 - French : `bps-2.x.y.z-32-fr.msi`
 - German : `bps-2.x.y.z-32-de.msi`
 - Italian: `bps-2.x.y.z-32-it.msi`

Create 64 Bit Installers

- `C:\dev\bps\Release64\installer\bps64-new.msifact`
 - Open with MSI Factory (double click)
 - When releasing a base version:
 - *Build - Settings... - Variables*
 - Adjust `BpsVersion` and `BpsVersionService`
 - *Build - Settings... - Setup File*

- Output name: `bps-$(var.BpsVersion).0-64`
- *Project - Settings...*
 - Product version: `$(var.BpsVersion).0`
 - Find/remove related programs:
 - Delete all
- When releasing a fix version (for example fix 3):
 - *Build - Settings... - Setup File*
 - Output name: `bps-$(var.BpsVersion).3-64`
 - *Project - Settings...*
 - Product version: `$(var.BpsVersion).3`
- *Build - Build Installer (F7)*
 - Build the installer in all languages.
 - After each run, rename `bps\Release64\setup\bps-2.x.y.z-64.msi` to:
 - English: `bps-2.x.y.z-64-en.msi`
 - French : `bps-2.x.y.z-64-fr.msi`
 - German : `bps-2.x.y.z-64-de.msi`
 - Italian: `bps-2.x.y.z-64-it.msi`

Sign Installers



This can only be done at IBK where the signing certificates of IBK are available. If you want to sign outside of IBK, you need get a code signing certificate for your own company.

- Run `C:\dev\bps\SignInst.bat`

Cleanup .msifact Files

After successful builds:

- In `C:\dev\bps\src\installer\`
 - Delete `bps32.msifact`
 - Delete `bps64.msifact`
 - Rename `bps32-new.msifact` to `bps32.msifact`
 - Rename `bps64-new.msifact` to `bps64.msifact`

Create Documentation

C++ Reference

- `C:\dev\bps\src\docs\bps2cpp\bps2cpp.doxyfile`
 - Open with doxywizard (double click)
 - *Run - Run doxygen*
 - Generated docs are in `C:\docs\bps\docs\bps2cpp\`

Javascript Reference

- C:\dev\bps\src\docs\bps2js\bps2js.doxyfile
 - Open with doxywizard (double click)
 - Run - Run doxygen
 - Generated docs are in: C:\dev\bps\docs\bps2js\

Source Control Management

- In C:\dev\bps\
 - Right click on empty space, *Hg Commit...*
 - Enter note „Release x.x.x.x“
 - *Commit*
 - Right click on empty space, *TortoiseHg - Synchronize*
 - Push outgoing changes
 - Target: \\ALDERAAN\IBK-Entwicklung\hg\bps

Archive VM

- Shut down VMBPS2
- Close VMware Workstation
- Copy directory of VMBPS2 to VMBPS2xxy (xx=minor, y=micro)
- Start VMware Workstation
 - Open VMBPS2xxy/W764.vmx
 - Rename VM within VMware, change description
 - Start up VMBPS2xxy
 - Accept „I copied it“ in VMware start question
 - Disable Windows Update
 - Uninstall TortoiseHg to protect from accidental updates
 - Change network name and computer description in Windows

From:

<https://bps.ibk-software.com/> - **BPS WIKI**

Permanent link:

<https://bps.ibk-software.com/dok:cppcore3264>

Last update: **02.04.2021 20:57**

