ExtendCli

ⓘ **Summary**: Information about **ExtendCli**, a command line tool to create and manage bundles for **CAST Extend local server** / **CAST Extend Offline**.

What is ExtendCli?

CAST Extend local server and **CAST Extend Offline** (in v. 1.1.0) are delivered "empty" without any preconfigured extensions - you will therefore need to populate them with extensions before you can use them. In addition, you may want to update CAST Extend local server/Offline to add new extensions or to include more recent releases of extensions. The **ExtendCli tool** is designed to perform this job and will allow the integration of the following (see **Contributor types** for more information about the types of extensions that are available):

- Official Product extensions
- User Community and Labs extensions

ⓘ
- ExtendCli does not replace **CAST Extension Downloader** - a tool used to download Extensions from CAST Extend (live or offline).
- All dependent extensions of a given extension will be included when using ExtendCli.

What's new

See **ExtendCli - Release Notes** for more information.

Prerequisites

To use ExtendCli, the following is required:

Supported Operating Systems

Operating System	Supported	Supported by reference
Microsoft Windows 8 64-bit		✅
Microsoft Windows 8.1 64-bit	✅	
Microsoft Windows 10 64-bit	✅	
Microsoft Windows Server 2008 R2 SP1 64-bit (Standard edition)		✅
Microsoft Windows Server 2012 64-bit (Standard edition)		✅
Microsoft Windows Server 2012 R2 64-bit (Standard edition)		✅

Microsoft Windows Server 2016	✅	

Using ExtendCli

ExtendCli is provided as an executable (**ExtendCli.exe**) and must be used in **command line mode**. To do so, either:

- open a command prompt, and run the tool from where the downloaded tool has been unzipped
- create a re-usable batch script file

The required command line is as follows:

```
ExtendCli.exe [command][options]
```

Available commands

- **bundle**
- **config**
- **download**
- **install (available in 1.1.0-funcrel)**
- **uninstall (available in 1.1.0-funcrel)**

bundle

Technically, a bundle is a .json file in which information about the required extensions, any dependencies and other selection options are stored. The default value of "bundle" is **default.json**. You can create as many "bundles" as necessary. Available options are listed below:

> ⓘ You can determine the **<extension id>** of a given extension using the **CAST Extend website**:
>
>

Option	Description	Command line	Comment	Example of command line
add	Add extensions to the active bundle.	ExtendCli.exe bundle add <extension id> [options]	When no option is provided, the most recent stable release of the extension is taken. ⓘ Note that [options] can be cumulative.	ExtendCli.exe bundle add com.castsoftware.reactjs
		ExtendCli.exe bundle add <extension id> -D ExtendCli.exe bundle add <extension id> --skip-dependencies	Skip extension dependencies.	ExtendCli.exe bundle add com.castsoftware.reactjs -D
		ExtendCli.exe bundle add <extension id> -S ExtendCli.exe bundle add <extension id> --latest-stable	Add most recent stable version (LTS or Funcrel).	ExtendCli.exe bundle add com.castsoftware.reactjs -S

		ExtendCli.exe bundle add <extension id> -a ExtendCli.exe bundle add <extension id> --absolute-latest	Add absolute latest version (including alpha and beta releases).	ExtendCli.exe bundle add com.castsoftware.reactjs -a
		ExtendCli.exe bundle add <extension id> -f ExtendCli.exe bundle add <extension id> --latest-funcrel	Add latest funcrel release.	ExtendCli.exe bundle add com.castsoftware.reactjs --latest-funcrel
		ExtendCli.exe bundle add <extension id> -l ExtendCli.exe bundle add <extension id> --latest-lts	Add latest LTS release.	ExtendCli.exe bundle add com.castsoftware.reactjs --latest-lts
		ExtendCli.exe bundle add <extension id> -v ExtendCli.exe bundle add <extension id> --version	Add a specific release of the extension.	ExtendCli.exe bundle add com.castsoftware.reactjs --version 1.1.0-funcrel
clear	Clear your bundle.	ExtendCli.exe bundle clear	-	ExtendCli.exe bundle clear
download	Download extensions in the current bundle as .nupkg files	ExtendCli.exe bundle download [options]	-	ExtendCli.exe bundle download
		ExtendCli.exe bundle download -o | --outdir "<path>"	In < 1.1.0-funcrel, the specified folder must already exist. In 1.1.0-funcrel, the folder will be created if it does not exist.	ExtendCli.exe bundle download -o "C:\temp"
export	Export the content of the bundle into another .json file.	ExtendCli.exe bundle export <file path>	-	ExtendCli.exe bundle export "C:\mybundle.json"
import	Import the content of an existing exported .json file into your bundle.	ExtendCli.exe bundle import <file path>	-	ExtendCli.exe bundle import "C:\mybundle.json"
list	List the extension versions/releases in your bundle.	ExtendCli.exe bundle list	-	ExtendCli.exe bundle list
pack	Create an .extarchive file from your bundle that can be imported into CAST Extend Offline.	ExtendCli.exe bundle pack [options]	-	ExtendCli.exe bundle pack
		ExtendCli.exe bundle pack -o "<path>"	Target folder where the archive will be saved. This folder must already exist.	ExtendCli.exe bundle pack -o "C:\Temp\Bundles"
		ExtendCli.exe bundle pack -d	Only downloads missing extensions, will not create an archive.	ExtendCli.exe bundle pack -d
template	Manage predefined bundles.	ExtendCli.exe bundle template <command><options>	Manage predefined templates available in CAST Extend and include them in your extension.	-
		ExtendCli.exe bundle template add product	Allows the addition of all production extensions into a template bundle. Available in 1.1.0-funcrel.	ExtendCli.exe bundle template add product
		ExtendCli.exe bundle template add <template id>	The template id refers to one of the predefined bundles available in CAST Extend.	ExtendCli.exe bundle template add 14
		ExtendCli.exe bundle template list	Lists the seven predefined bundles: • Id = 1 All product extensions **(note that this is deprecated from 1.1.0-funcrel - you should use "product" instead)** • Id = 4 Microsoft .NET • Id= 5 Mobile • Id = 6 Web • Id = 14 Data • Id = 16 Java / JEE • Id = 17 Security (this bundle provides support for Security analysis for all technologies) • Id = product **(from 1.1.0-funcrel)** • Id = labs **(from 1.1.0-funcrel)** • Id = community **(from 1.1.0-funcrel)**	ExtendCli.exe bundle template list
		ExtendCli.exe bundle template content <template Id>	Displays the content of one predefined bundle.	ExtendCli.exe bundle template content 17

config

The config command configures the parameters to allow the tool to connect to CAST Extend over the internet to fetch the required extensions (extensions) for the bundle:

Option	Description	Command line	Comment		Example of command line
set	Setup the CAST Extend (online) connection parameters.	ExtendCli.exe config set <api-key>	**<api-key>** is specific to a login for CAST Extend (online). You can find this in your **profile**. ⓘ Note that this command only needs to be used once (unless you decide to use a different api-key for an alternative CAST Extend (online) login).		extendCli. exe config set api-key w9876xyz-d999-32ii-9fb0-0123cde45
		ExtendCli.exe config set [extend-url]	**[extend-url]** is optional. It refers to the URL to use for CAST Extend (online). When no option is provided, the default value is used: **https://extend.castsoftware.com**. ⓘ Note that this command only needs to be used once (unless you decide to use a different URL).		extendCli. exe config set extend-url "your URL"
		ExtendCli.exe config set [proxy]	**[proxy]** is optional. It should be used: • when your network environment uses a proxy for internet access. • when the machine you are running ExtendCli on does not have operating system level proxy settings enabled. The syntax is as follows: `ExtendCli.exe config set proxy <protocol://[user:password@]host [:port)>]` Note that if you are using the **Use setup script** option (1), CAST also recommends enabling the **Automatically detect settings** option (2): 		extendCli. exe config set proxy http://proxy_user: proxy_passw ord@proxy. corp.com: 8080

download

This option allows you to download an extension in .nupkg format:

ExtendCli.exe download [options] <extension id>

Option	Description	Command line	Example of command line
-d | --skip-dependencies	This option allows you to download an extension without any dependencies. CAST only recommends using this option if you understand the implication - an extension will not function correctly without its dependencies.	ExtendCli.exe download -d <extension id> ExtendCli.exe download --skip-dependencies <extension id>	ExtendCli.exe download -d com.castsoftware.reactjs
-s | --latest-stable <true|false>	This option allows you to configure whether to download the most recent stable release of an extension (-LTS or funcrel). The default behaviour (i.e. when the option is omitted) the action is set to true and the latest-stable release will be downloaded. Explicitly add the option and set it to false to ensure that the latest stable release is not downloaded.	ExtendCli.exe download -s false <extension id> ExtendCli.exe download --latest-stable false <extension id>	ExtendCli.exe download -s false com.castsoftware.reactjs
-a | --absolute-latest	This option allows you to download the most recent release of an extension including alpha and beta releases and all dependencies.	ExtendCli.exe download -a <extension id> ExtendCli.exe download --absolute-latest <extension id>	ExtendCli.exe download -a com.castsoftware.reactjs
-f | --latest-funcrel	This option allows you to download the most recent funcrel release of an extension and all dependencies.	ExtendCli.exe download -f <extension id> ExtendCli.exe download --latest-funcrel <extension id>	ExtendCli.exe download -f com.castsoftware.reactjs
-l | --latest-lts	This option allows you to download the most recent LTS release of an extension and all dependencies.	ExtendCli.exe download -l <extension id> ExtendCli.exe download --latest-lts <extension id>	ExtendCli.exe download -l com.castsoftware.reactjs
-v | --version	This option allows you to download a specific release of an extension and all dependencies.	ExtendCli.exe download -v <release><extension id> ExtendCli.exe download --version <release><extension id>	ExtendCli.exe download -v 1.1.4-funcrel com.castsoftware.reactjs

install

This option allows you to download an extension from CAST Extend and store it on the local machine in `%PROGRAMDATA%\CAST\CAST\Extensions` (or an alternative location if you have modified the **CAST_PLUGINS_ROOT_PATH** option in the **CastGlobalSettings.ini file**):

install	**<exte nsionI d>** **[-- versio n <versi on>]** **[-- ignor e- depen denci es]** **[-- usern ame <user name>]** **[-- pass word <pass word>]**	Use this option to specify an extension that you want to **download** on to your local machine. Note that you may also need to specify the **-- username** and **--password** options if the remote server requires authentication	
		Option	**Description**
		<extensi onId>	This option allows you to specify a particular extension for download using its ID - this is a mandatory option. The ID of a CAST AIP extension always takes the form **com.castsoftware.<name>**, without any version numbers. Note that the **most recent versions of an extension's dependencies** will always be downloaded alongside the extension, unless you are using the **[--ignore-dependencies]** option - see below.
		[-- version <version >]	This option allows you to specify a specific version of the extension for download using its version number. This option is not mandatory. When not included, the **most recent version** of the extension you require will always be downloaded.
		[-- ignore- depende ncies]	This option allows you to download an extension without any dependencies. CAST only recommends using this option if you understand the implication - an extension will not function correctly without its dependencies. This option is not mandatory. When not included, the **most recent versions of an extension's dependencies** will always be downloaded.
		[-- usernam e <userna me>] **[-- passwor d <passw ord>]**	When connecting to a server that requires authentication (for example **https://extend.castsoftware.com:443/api**) to download an extension (with the **install** option), use these two options to specify your credentials. You will require an account on the remote server to authenticate when using CAST Extend. You can find out about registering for an account in **CAST Extend website**.

uninstall

uni nst all	**extensio nId** **[-- version <version >]**	Use this option to specify an extension that you have downloaded to your machine and that you now want to **remove** from your machine:	
		Option	**Description**
		extensio nId	This option allows you to specify a particular extension for removal using its ID - this is a mandatory option. The ID of a CAST AIP extension always takes the form **com.castsoftware.<name>**, without any version numbers.
		[-- version <version >]	This option allows you to specify a specific version of the extension for download using its version number. This option is not mandatory. When not included, the **most recent version** of the extension you require will always be deleted from your machine.

Note that:

- removing an extension will only delete the extension files on the local machine. It does not remove the extension from any CAST AIP databases/schemas that it has been installed to.
- removing an extension only removes the specific extension. Any dependencies are left on the machine as other extensions may require them.
- removing an extension from your machine will cause the following log message to be displayed in CAST Server Manager when CAST AIP databases/schemas that use the extension are detected:

```
Extension com.castsoftware.test version : 1.2.0-funcrel is not present on this machine,
and some schemas are using it. Please use ExtensionDownloader to download it and rerun Servman.
```

Usage examples

Set the CAST Extend (online) connection properties

Set the api key:

```
extendCli.exe config set api-key w9876xyz-d999-32ii-9fb0-0123cde45
```

```
C:\PRODUCT\Extend Offline>extendcli.exe config set api-key w9876xyz-d999-32ii-9fb0-0123abcde45
Configuration Variable api-key set
```

Set the CAST Extend URL:

```
ExtendCli.exe config set extend-url "Your URL"
```

Define the extensions to package

Add one extension

The extension and any dependencies will be added to the list of extensions in the bundle with the following command:

```
extendCli.exe bundle add com.castsoftware.typescript
```

You can also use certain [options] as follows:

```
ExtendCli.exe bundle add com.castsoftware.typescript [options]
```

These options can be cumulative, for instance to download the absolute latest release (including alpha/beta) or the latest funcrel release or the latest LTS, use the following:

```
extendCli.exe bundle add com.castsoftware.typescript -a -f -l
```

To download the absolute latest release (including alpha/beta) or the latest LTS, use the following:

```
extendCli.exe bundle add com.castsoftware.typescript -a -l
```

E.g.:

```
C:\PRODUCT\Extend Offline>extendCli.exe bundle add com.castsoftware.typescript -a -l
Added com.castsoftware.typescript Absolute Latest version to active bundle.
Added com.castsoftware.typescript Latest LTS version to active bundle.
Added com.castsoftware.typescript Latest Stable version to active bundle.
Added com.castsoftware.reactjs Absolute Latest version to active bundle.
Added com.castsoftware.reactjs Latest LTS version to active bundle.
Added com.castsoftware.reactjs Latest Stable version to active bundle.
Added com.castsoftware.html5 Absolute Latest version to active bundle.
Added com.castsoftware.html5 Latest LTS version to active bundle.
Added com.castsoftware.html5 Latest Stable version to active bundle.
Added com.castsoftware.wbslinker Absolute Latest version to active bundle.
Added com.castsoftware.wbslinker Latest LTS version to active bundle.
Added com.castsoftware.wbslinker Latest Stable version to active bundle.
Added com.castsoftware.internal.platform Absolute Latest version to active bundle.
Added com.castsoftware.internal.platform Latest LTS version to active bundle.
Added com.castsoftware.internal.platform Latest Stable version to active bundle.
Added com.castsoftware.nodejs Absolute Latest version to active bundle.
Added com.castsoftware.nodejs Latest LTS version to active bundle.
Added com.castsoftware.nodejs Latest Stable version to active bundle.

C:\PRODUCT\Extend Offline>
```

Add extensions from predefined bundles

The "add template" command allows you to add extensions to your bundle that belong to a specific predefined bundle (predefined in CAST Extend (online)). The following command will add template number 14 to the bundle:

```
ExtendCli.exe bundle template add 14
```

```
C:\PRODUCT\Extend Offline\ExtendCli>ExtendCli.exe bundle template add 14
Added com.castsoftware.nodejs Absolute Latest version to active bundle.           Id = 14 --> Data
Added com.castsoftware.nodejs Latest Stable version to active bundle.
Added com.castsoftware.html5 Absolute Latest version to active bundle.
Added com.castsoftware.html5 Latest Stable version to active bundle.
Added com.castsoftware.wbslinker Absolute Latest version to active bundle.
Added com.castsoftware.wbslinker Latest Stable version to active bundle.
Added com.castsoftware.internal.platform Absolute Latest version to active bundle.
Added com.castsoftware.internal.platform Latest Stable version to active bundle.
Added com.castsoftware.nodejs Absolute Latest version to active bundle.
Added com.castsoftware.nodejs Latest Stable version to active bundle.
Added com.castsoftware.html5 Absolute Latest version to active bundle.
Added com.castsoftware.html5 Latest Stable version to active bundle.
Added com.castsoftware.wbslinker Absolute Latest version to active bundle.
Added com.castsoftware.wbslinker Latest Stable version to active bundle.
Added com.castsoftware.internal.platform Absolute Latest version to active bundle.
Added com.castsoftware.internal.platform Latest Stable version to active bundle.
Added com.castsoftware.nosqldotnet Absolute Latest version to active bundle.
Added com.castsoftware.nosqldotnet Latest Stable version to active bundle.
Added com.castsoftware.nodejs Absolute Latest version to active bundle.
Added com.castsoftware.nodejs Latest Stable version to active bundle.
Added com.castsoftware.html5 Absolute Latest version to active bundle.
Added com.castsoftware.html5 Latest Stable version to active bundle.
Added com.castsoftware.wbslinker Absolute Latest version to active bundle.
Added com.castsoftware.wbslinker Latest Stable version to active bundle.
Added com.castsoftware.internal.platform Absolute Latest version to active bundle.
Added com.castsoftware.internal.platform Latest Stable version to active bundle.
Added com.castsoftware.nosqldotnet Absolute Latest version to active bundle.
Added com.castsoftware.nosqldotnet Latest Stable version to active bundle.
Added com.castsoftware.nosqljava Absolute Latest version to active bundle.
Added com.castsoftware.nosqljava Latest Stable version to active bundle.
Added com.castsoftware.nodejs Absolute Latest version to active bundle.
Added com.castsoftware.nodejs Latest Stable version to active bundle.
Added com.castsoftware.html5 Absolute Latest version to active bundle.
Added com.castsoftware.html5 Latest Stable version to active bundle.
Added com.castsoftware.wbslinker Absolute Latest version to active bundle.
Added com.castsoftware.wbslinker Latest Stable version to active bundle.
Added com.castsoftware.internal.platform Absolute Latest version to active bundle.
Added com.castsoftware.internal.platform Latest Stable version to active bundle.
Added com.castsoftware.nosqldotnet Absolute Latest version to active bundle.
Added com.castsoftware.nosqldotnet Latest Stable version to active bundle.
Added com.castsoftware.nosqljava Absolute Latest version to active bundle.
Added com.castsoftware.nosqljava Latest Stable version to active bundle.
Added com.castsoftware.sqlanalyzer Absolute Latest version to active bundle.
Added com.castsoftware.sqlanalyzer Latest Stable version to active bundle.

C:\PRODUCT\Extend Offline\ExtendCli>
```

The following commands will add all "**product**", "**user community**" and "**labs**" extensions:

```
ExtendCli.exe bundle template add product
ExtendCli.exe bundle template add community
ExtendCli.exe bundle template add labs
```

Save the bundle

Once you have defined the content of your bundle using the **bundle add** or **template** add commands, you can save it to a .json file, so that you can use the same bundle in the future:

```
C:\PRODUCT\Extend Offline\ExtendCli>ExtendCli.exe bundle export "C:\PRODUCT\Extend Offline\ExtendCli\save_test\mylastbundle"
Bundle configuration exported to C:\PRODUCT\Extend Offline\ExtendCli\save_test\mylastbundle.json

C:\PRODUCT\Extend Offline\ExtendCli>
```

Generate the package

When you generate the package, it will create the .extarchive file **<last package name|default package name>.extarchive** which can then be uploaded into your CAST Extend local server/Offline instance. You must define a folder where the archive file will be placed and the folder must exist already:

```
ExtendCli.exe bundle pack -o "C:\PRODUCT\Extend Offline\My package"
```
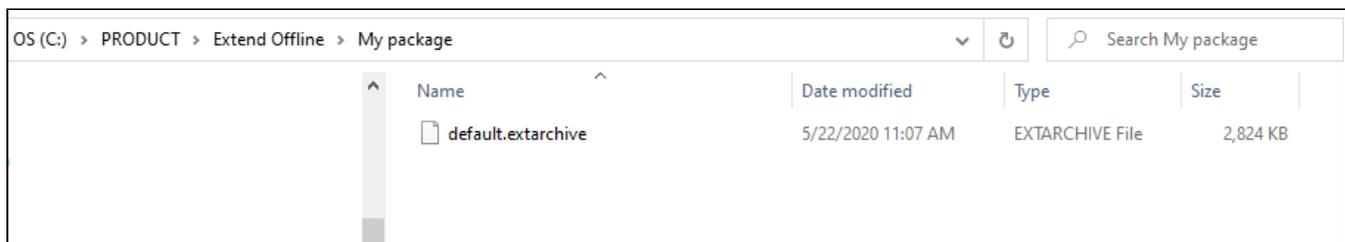
```
C:\PRODUCT\Extend Offline>extendCli.exe bundle pack -o "C:\PRODUCT\Extend Offline\My package"
Output directory does not exist

C:\PRODUCT\Extend Offline>extendCli.exe bundle pack -o "C:\PRODUCT\Extend Offline\My package"
Resolving Package versions (this may take a few seconds).
100.00% Downloading com.castsoftware.typescript 1.5.0-beta1                    00:00:00

100.00% Downloading com.castsoftware.typescript 1.4.0-funcrel                  00:00:00

100.00% Downloading com.castsoftware.reactjs 1.1.4-funcrel                     00:00:00

100.00% Downloading com.castsoftware.html5 2.0.16-funcrel                      00:00:00

100.00% Downloading com.castsoftware.html5 1.7.6                               00:00:00

100.00% Downloading com.castsoftware.wbslinker 1.6.10                          00:00:00

100.00% Downloading com.castsoftware.internal.platform 0.9.0-beta1            00:00:00

100.00% Downloading com.castsoftware.internal.platform 0.8.6                   00:00:00

100.00% Downloading com.castsoftware.nodejs 2.3.0-beta3                        00:00:00

100.00% Downloading com.castsoftware.nodejs 2.2.2-funcrel                      00:00:00

100.00% Downloading com.castsoftware.nodejs 1.6.0                              00:00:00

100.00% Downloading mapping tmngr                                              00:00:00

100.00% Downloading mapping dmp                                                00:00:00

100.00% Downloading mapping pubk                                               00:00:00

Creating Archive, this may take a few seconds ...
Archive successfully created at : C:\PRODUCT\Extend Offline\My package

C:\PRODUCT\Extend Offline>
```

Navigate to the folder you have defined as output (in the above example the path is C:\PRODUCT\Extend Offline\My package) - it will contain the generated **.extarchive file** that you can upload into your CAST Extend local server/Offline instance by following the steps described in **Upload the bundle to CAST Extend local server** or **Upload the bundle to CAST Extend Offline**:

OS (C:) › PRODUCT › Extend Offline › My package				
Name		Date modified	Type	Size
default.extarchive		5/22/2020 11:07 AM	EXTARCHIVE File	2,824 KB

Advanced configuration settings - appsettings.json

Some additional advanced settings can be configured using the following file which can be edited with a text editor:

```
<extend_cli_unzip_folder>\appsettings.json
```

Timeout

```
"Timeout": 10800
```

This setting (available in **2.1.1-funcrel**) is specifically for those with very slow network connections. The value is in **seconds** (the default value is 10800, or 3 hrs) and should only be increased if you are facing timeouts when fetching data from CAST Extend, i.e. when the total time required for CAST Extend to build the bundle and then for ExtendCli to download it exceeds 3 hrs. CAST does NOT recommend decreasing this value.

SettingsPath

```
"SettingsPath": null
```

This setting (available in **2.1.1-funcrel**) is set by default to **%PROGRAMDATA%\CAST\ExtendCLI** and defines where the current instance of ExtendCli will store configuration settings and cache files. If you need to run multiple instances of ExtendCli on one machine, and you want to ensure clear separation of data between each instance, you can define a custom path for the configuration data using this option. For example to set the path to **D:\CAST\temp\ExtendCli**:

```
"SettingsPath": "D:\\CAST\\temp\\ExtendCli"
```

ⓘ   Paths must conform to the following syntax:

- Enclosed in double quotes
- Absolute path (not relative)
- Back slashes are required (forward slashes not accepted) and must be escaped with a back slash