Online Check PRO

Stay connected

Documentation

Date: 15.03.2024

Version: 2024.1.1

https://www.crosstales.com

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Thank you for buying our asset "Online Check PRO"!

If you have any questions about this asset, send us an email at
onlinecheck@crosstales.com. Please don't forget to rate it or write a little review – it
would be very much appreciated.

1. Overview

Online Check is a **simple**, **configurable** tool to **reliably** check your **connection to the
Internet** (aka "captive portal detection") – in the editor as well as at **runtime**, where you
need it, when you need it.

Unity's internal reachability check returns the type of Internet reachability possible on the
current device.
As mentioned in their documentation, this does not check for your actual connectivity –
it only determines whether the device can, for example, connect to a hot spot. That's
not very helpful if it the actual route to the network is unavailable.

Its main purpose is to gain a little bit more comfort by keeping track of your connection
state, without consulting your browser or the OS display which both usually cause an
unnecessary delay. This tool doesn't check if you're connected to a specific network. It
checks if you have access to the Internet, which, for example, comes in handy when
you're on the road connected to a public WiFi.

The asset also provides functions for **ping check**, **speed test** and **network information**
like the public IP.

2. Features

2.1. Internet connectivity

- **Reliably** check for **Internet connectivity**:
    - **Run on Start**: Run the check as soon as the scene loads
    - **Manual Mode**: Check whenever you need it
    - **Endless Mode**: Automatically check continuously between intervals
    - **Fallback check**: Keeps checking in case of connection loss
- Freely **configurable** intervals
- Detect the kind of Internet connection (carrier or local network)
- Less than 300 KB of data downloaded per hour (at 10 checks per minute)
- Industry grade **captive portal detection** methods:
    - Google204
    - GoogleBlank
    - Microsoft NCSI
    - Apple (HTTPS)
    - Ubuntu
- Verify a **custom URL** (e.g. to check if a server is alive)
- **Ping** check to determine the **round-trip-time**
- **Speed test** to measure the **download** and **upload** speed
- **Network information**, like public/local IPs, MACs etc.
- **Specialized** checks for each platform:
    - Windows / WSA (UWP)
    - macOS / iOS
    - Linux / Android
    - Generic for **all** other platforms and devices

2.2. Documentation & control

- **Test** all **checks** in the **editor**
- Powerful **API** for **maximum control**
- **Proxy manager** for **Internet connections**
- Detailed **demo scenes**
- Comprehensive **documentation** and **support**
- Full **C# source code**

2.3. Compatibility

- Supports **all build platforms**
- Works with **Windows**, **Mac** and **Linux** editors
- Compatible with **Unity 2019.4 – 2023**
- **C# delegates** and **Unity events**
- **PlayMaker** actions

3. Demonstration

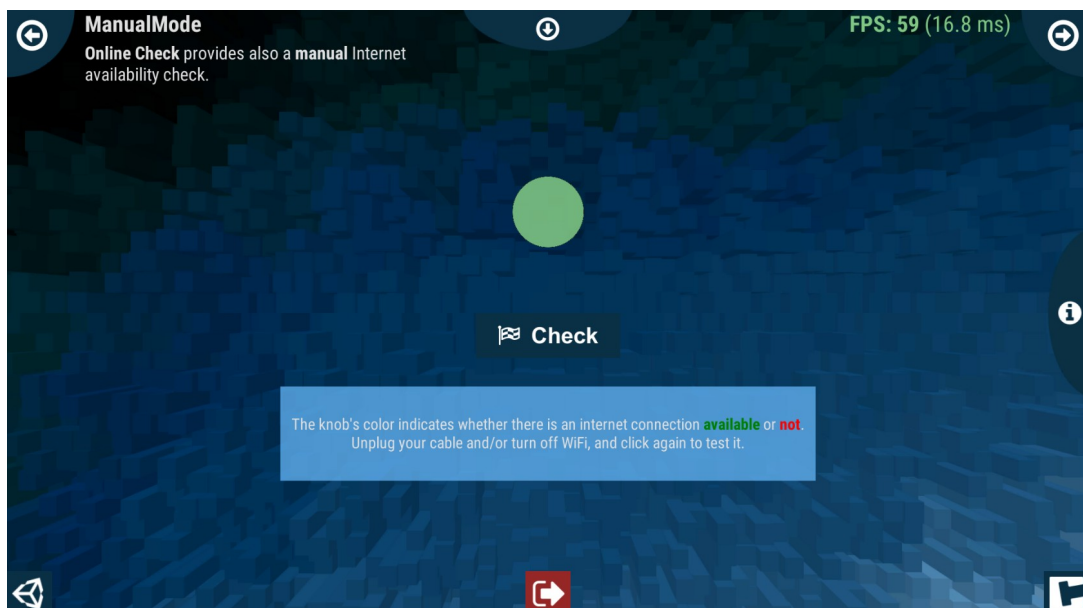The asset comes with two simple demo scenes to show its functionality.

3.1. Endless Mode

This demo scene shows how intervals work when checking automatically.
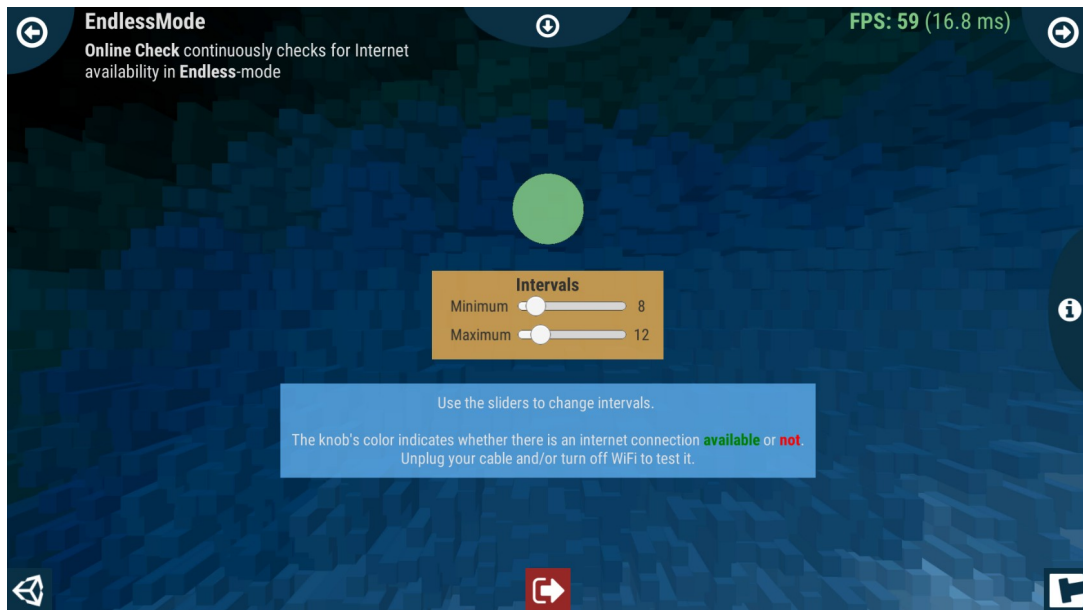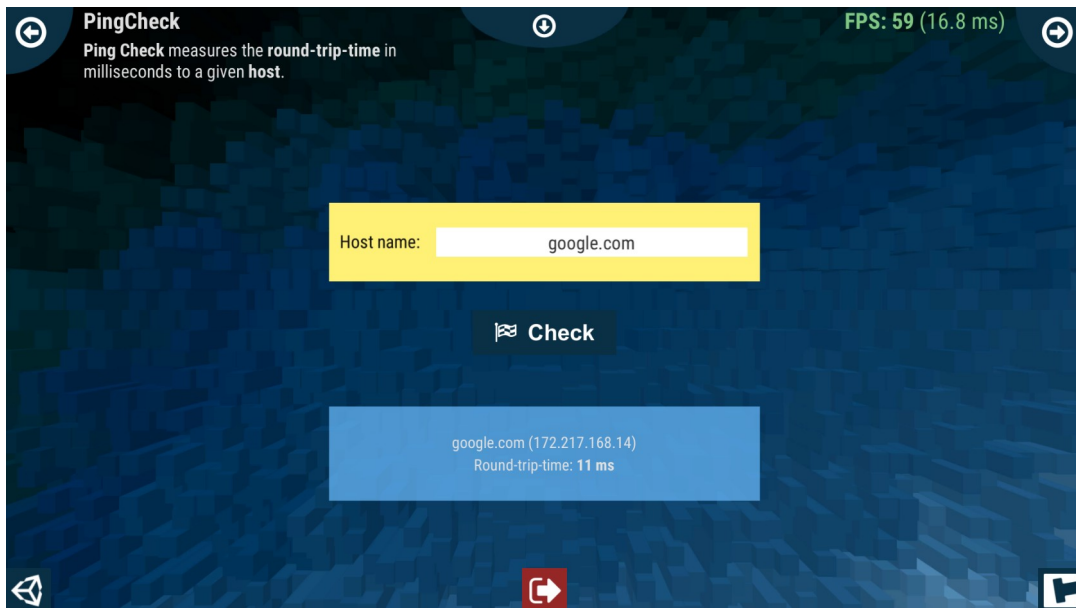

3.2. Manual Mode

This one shows an example on how to manually check using a GUI button.
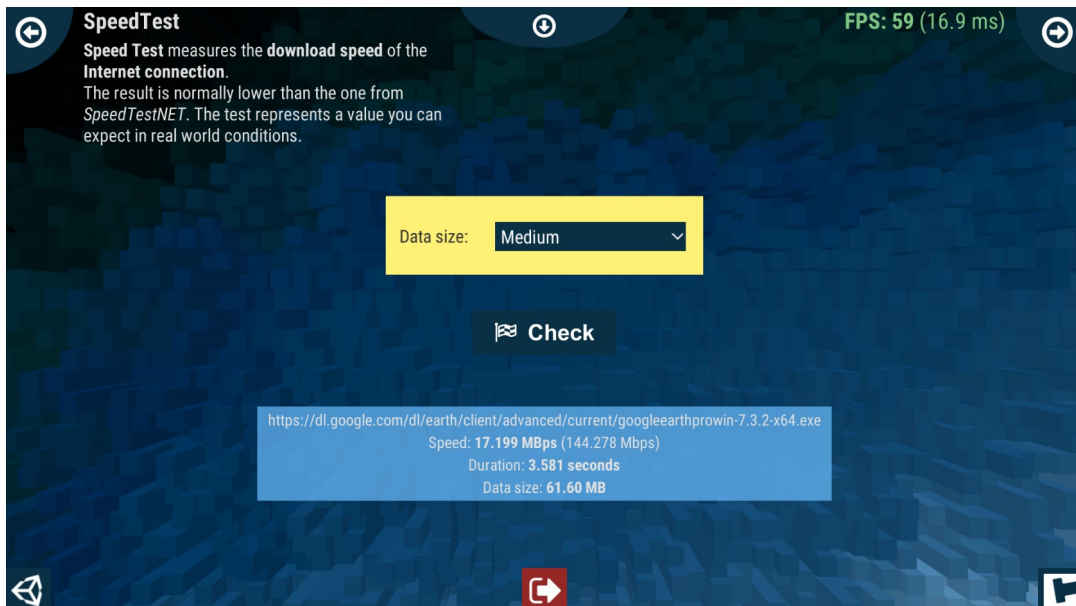
3.3. PingCheck

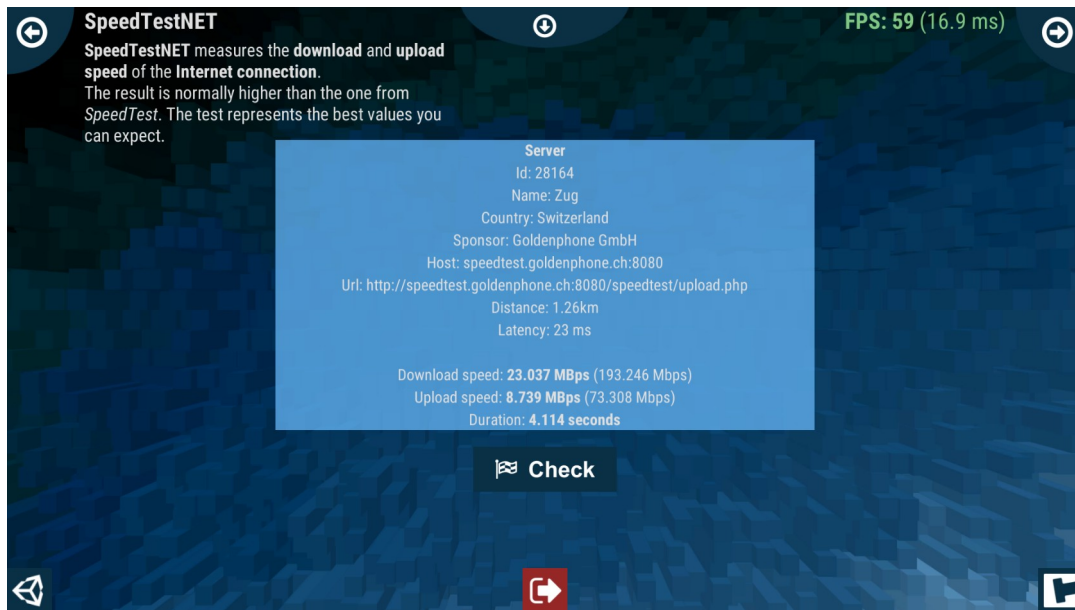This scene shows the round-trip-time in milliseconds.

3.4. SpeedTest

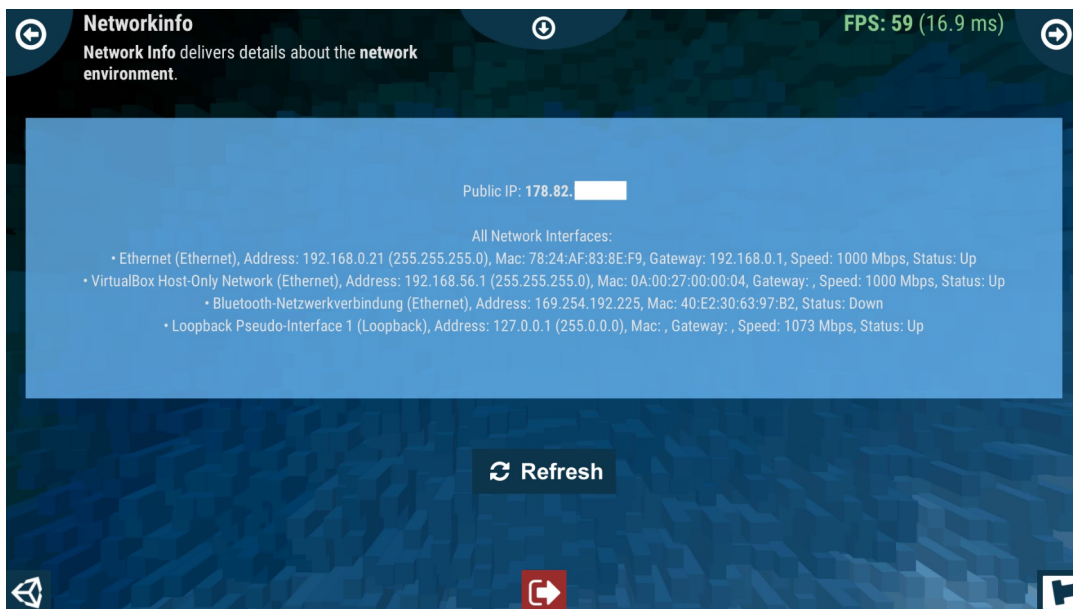This scene measures the download speed of the Internet connection.

3.5. SpeedTestNET

This scene measures the download and upload speed of the Internet connection.

3.6. NetworkInfo

This scene delivers details about the network environment.

4. Setup

To access Online Check's global settings go to Edit\Preferences… and Tools\OC PRO\ Configuration…

4.1. Add Online Check

There are two ways to add Online Check manually to the project.

Just drag and drop the prefab **OnlineCheck** from **Assets/Plugins/crosstales/OnlineCheck/Resources/Prefabs** into the scene. Or:

1. Go to **Tools → OC PRO → Prefabs → OnlineCheck**

2. Right-click in the hierarchy window → **OC PRO → OnlineCheck**

3. Finally, add it from the **Prefabs** tab:
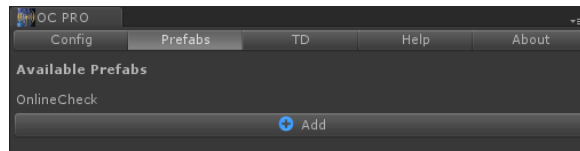
The **OnlineCheck script** looks like this in the inspector:
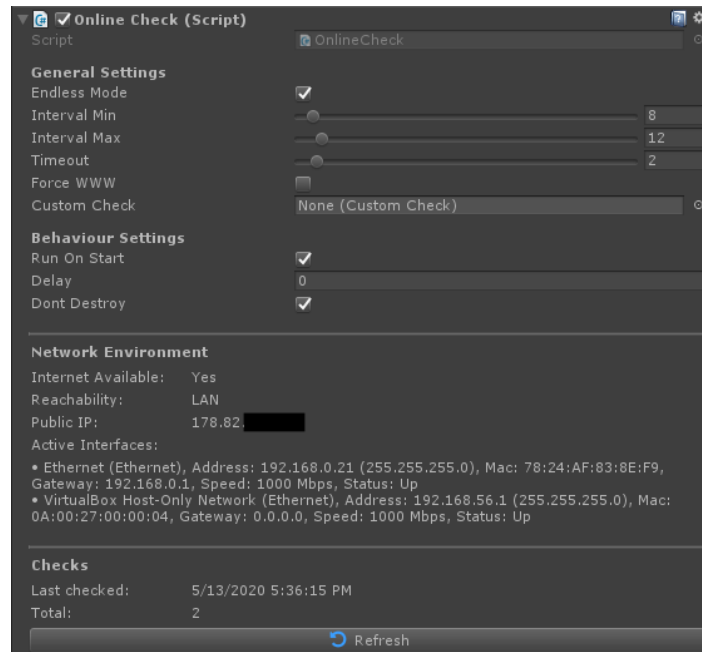
Hint: Some values are only displayed in play mode.

4.1.1. Custom Check

"Custom Check" is needed for WebGL and can also be used as custom detection method.

To create a custom check: right-click in "OnlineCheck" on the field "Custom Check" and set the correct values:
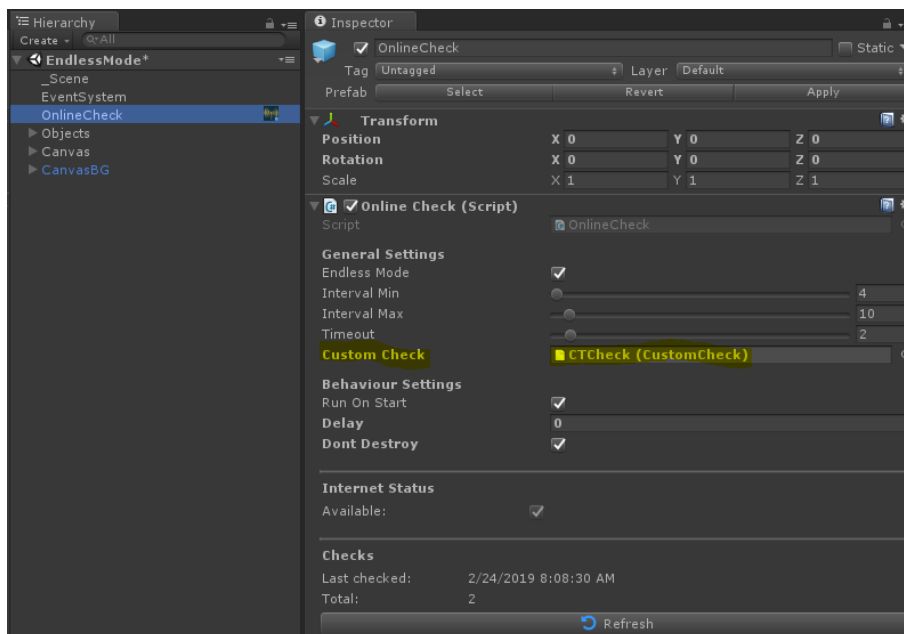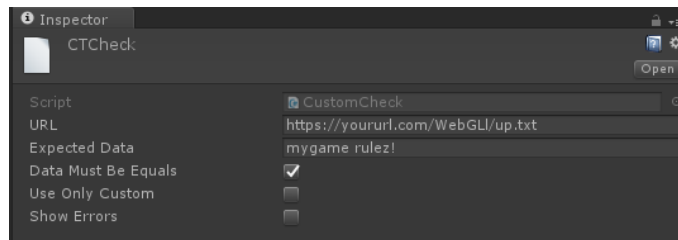
The text-file should contain some content, e.g. a unique detection string, like "**<mygame> rulez**".

This text-file must correspond to the "URL" and "Expected Data" in the **Custom Check**.

Important:

The host should be **https**-based and provide an "**Access-Control-Allow-Origin**" header.

4.2. Proxy

Handles HTTP/HTTPS Internet connections via proxy server.

5. API

The asset contains various classes and methods. The most important ones are explained here.

Make sure to **include** the **name space** in the relevant source files:

```
using Crosstales.OnlineCheck;
```

5.1. OnlineCheck

The "OnlineCheck.cs" is a singleton and contains the following important methods.

5.1.1. Refresh

```
void Refresh()
```
Checks for Internet availability. It's a static method that can be called from anywhere.

5.2. Callbacks

There are three callbacks available. Subscribe them in the "Start"-method and unsubscribe in "OnDestroy".

5.2.1. OnlineStatusChange

```
OnlineStatusChange(bool isConnected);
OnlineStatusChange OnOnlineStatusChange;
```

Triggered whenever the status changes (connected / disconnected).

5.2.2. OnlineCheckComplete

```
OnlineCheckComplete(bool isConnected, NetworkReachability networkReachability);
OnlineCheckComplete OnOnlineCheckComplete;
```

Triggered whenever all checks are completed.

5.2.3. NetworkReachabilityChange

```
NetworkReachabilityChange(NetworkReachability networkReachability);
NetworkReachabilityChange OnNetworkReachabilityChange;
```

An event triggered whenever the network reachability changes.

5.2.4. Example

```
public void OnEnable() {
 // Subscribe event listeners
 OnlineCheck.Instance.OnOnlineStatusChange += changeColor;
 OnlineCheck.Instance.OnOnlineCheckComplete += checkComplete;
}

public void OnDisable() {
 // Unsubscribe event listeners
 OnlineCheck.Instance.OnOnlineStatusChange -= changeColor;
 OnlineCheck.Instance.OnOnlineCheckComplete -= checkComplete;
}

private void changeColor(bool isConnected, NetworkReachability
networkReachability) {
 if(isConnected)
 {
     Image.color = green;
 }
 else
 {
     Image.color = red;
 }
}

private void checkComplete(bool isConnected, NetworkReachability
networkReachability) {
 if(isConnected)
 {
     Debug.Log("Check completed!");
 }
}
```

5.3. Complete API

Please read the OnlineCheck-api.pdf for more details.

6. Always enable/disable

Override the checks by setting the following complie defines:

- OC_AVAILABLE: set the result of the Internet connection to available
- OC_UNAVAILABLE: set the result of the Internet connection to unavailable

7. Third-party support (PlayMaker etc.)

"DJ PRO" supports various assets from other publishers. Please import the desired packages from "Assets/Plugins/crosstales/OnlineCheck/3rd party".

8. Verify installation

Check if Online Check is installed:

```
#if CT_OC
    Debug.Log("Online Check installed: " + Util.Constants.ASSET_VERSION);
#else
    Debug.LogWarning("Online Check NOT installed!");
#endif
```

9. Update to latest version

Follow this steps to upgrade the version of " Online Check PRO":

1. Update "Online Check PRO" to the latest version from the "Unity AssetStore"

2. Inside the project in Unity, go to menu "File" => "New Scene"

3. Delete the "Assets/Plugins/crosstales/OnlineCheck" folder from the Project-view

4. Import the latest version downloaded from the "Unity AssetStore"

10. Problems, improvements etc.

If you encounter any problems with this asset, just [send us an email](#) with a problem description and the invoice number and we will try to solve it.

We are doing our best to continuously update and improve our assets.

11.Release notes

See "VERSIONS.txt" under "Assets/Plugins/crosstales/OnlineCheck/Documentation" or online:

https://crosstales.com/media/data/assets/OnlineCheck/VERSIONS.txt

12. Credits

The icons are based on Font Awesome.

SpeedTestNet is partially based on:
https://github.com/JoyMoe/SpeedTest.Net

13. Contact and further information

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CH-8002 Zürich

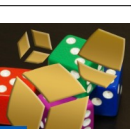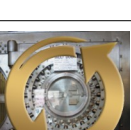|	
Homepage:	https://www.crosstales.com/en/portfolio/OnlineCheck/
Email:	onlinecheck@crosstales.com
AssetStore:	https://assetstore.unity.com/lists/crosstales-42213
Forum:	https://forum.unity.com/threads/online-check-pro-verify-internet-reachability.472558/
Documentation:	https://www.crosstales.com/media/data/assets/OnlineCheck/OnlineCheck-doc.pdf
API:	https://crosstales.com/media/data/assets/OnlineCheck/api
WebGL-Demo:	https://www.crosstales.com/media/data/assets/OnlineCheck/webgl/
Windows-Demo	https://drive.google.com/file/d/1J_aOJn2UeYR9Vg2Pa_gNVv676xxXDooW/view?usp=sharing
Mac-Demo:	https://drive.google.com/file/d/1JYQ8QhmG7yTTtiX1K9LzYrUxtVkSjuAy/view?usp=sharing
Linux-Demo:	https://drive.google.com/file/d/1JcYfIIjaNdxxQkZI-iy1eDbT2Z5BaWYO/view?usp=sharing
Android-Demo:	https://drive.google.com/file/d/1JiY96hHyvyNF4COwZu5erIhuAlGWsJtH/view?usp=sharing

14. Our other assets

3D Skybox	Those beautiful packages contain professional 8k, HDR, stereoscopic 360° real-world skyboxes for your projects.
Bad Word Filter	The "Bad Word Filter" (aka profanity or obscenity filter) is exactly what the title suggests: a tool to filter swearwords and other "bad sentences".
DJ	DJ is a player for external music-files. It allows a user to play his own sound inside any Unity-app. It can also read ID3-tags.
File Browser	File Browser is a wrapper for native file dialogs on Windows, macOS, Linux and UWP (WSA).
Radio	Radio allows implementing free music from Internet radio stations into your project..
RT-Voice	RT-Voice uses the computer's (already implemented) TTS (text-to-speech) voices to turn the written lines into speech and dialogue at run-time! Therefore, all text in your game/app can be spoken out loud to the player.
True Random	True Random can generate "true random" numbers for you and your application. The randomness comes from atmospheric noise, which for many purposes is better than the pseudo-random number algorithms typically used in computer programs.
Turbo Backup	Turbo Backup is the fastest and safest way to backup your Unity project. It only stores the difference between the last backup, this makes it incredible fast.
Turbo Builder	Turbo Builder creates builds for multiple platforms in one click. It works together with Turbo Switch to offer an incredible fast build pipeline.

	Turbo Switch is a Unity editor extension to reduce the time for assets to import during platform switches. We measured speed improvements up to 100x faster than the built-in switch in Unity.
Turbo Switch	