

# Unity

## Create/Open Project

Save new projects on the [Innovationlab Filer](#) or on the [ZHdK GIT Server](#) in your project folder.

## Import a Character

1. Drag and Drop FBX into project window
2. Select Character in project window and go to Inspector > Rig > Animation Type set to Humanoid

[Import Advanced Sceleton Charater from Maya into Unity](#)

## Install OptiTrack Unity Plugin

A full documentation about using the OptiTrack Unity Plugin can be found the OptiTrack page: [https://v20.wiki.optitrack.com/index.php?title=OptiTrack\\_Unity\\_Plugin](https://v20.wiki.optitrack.com/index.php?title=OptiTrack_Unity_Plugin)

1. Download Plugin from Optitrack Website <http://optitrack.com/downloads/plugins.html> or from the [Innovationlab Filer](#): Path 01\_assets/06\_plugins/Optitrack/
2. Install the Plugin in your unity project by doubleclicking the on the Plugin file or go to Asset > Import Pacakge > Import Custom Package... and select the Plugin package.



## Add OptiTrack Client to Scene

1. Open Asset Folder OptiTrack/Prefabs/
2. Drag & Drop *Client - OptiTrack* to the scene Hierarchy
3. Select *Client - OptiTrack* in Hierarchy and open Inspector window
4. Check oarameters of the *Optitrack Streaming Client (Script)* Component



### Parameters (Motive & Unity on same PC)

Connection Type	Multicast
Local Address	127.0.0.1
Server Address	127.0.0.1
Server Command Port	1510
Server Data Port	1510
Bone Naming Conv.	Motive



### Parameters (Motive on Mocap PC & Unity on Beamer PC)

Connection Type	Multicast
Local Address	10.128.96.102
Server Address	10.128.96.103
Server Command Port	1510
Server Data Port	1510
Bone Naming Conv.	Motive



Check [Network LAN IPs](#) for other configurations.

## Add Motion Caputre Stream for a Rigid Body

To add motion capture live data to a rigid body (e.g. camera), you need to add the *Optitrack Rigid Body* Script as a Component to your object:

1. Open Asset Folder *OptiTrack/Scripts/*
2. Drag & Drop *OptitrackRigidBody* to an object in Scene Hierarchy to connection object with motion capture data (e.g. Main Camera)
3. Open Inspector of Object and show *Optitrack Rigid Body (Script)* Component
4. Click on circle symbol next to Streaming Client and select *Client - OptiTrack* client of the scene
5. Set *Rigid Body Id* to StreamingID of corresponding Motive Rigid Body
6. Run Play Mode



## Add Motion Caputre Stream for a Character

Make sure you have a rigged character in unity (see [Import a Character from Maya](#) or Import a Character from Mixamo)

To add motion capture live data to a Character/Skeleton, you need to add the *OptitrackSkeletonAnimator* Script as a Component to your character:

1. Drag & Drop your character into Scene Hierarchy
2. Open Asset Folder *OptiTrack/Scripts/*
3. Drag & Drop *OptitrackSkeletonAnimator* to an character in Scene Hierarchy to connection skeleton with motion capture data
4. Open Inspector of character and show *Optitrack Skeleton Animator (Script)* Component
5. Click on circle symbol next to Streaming Client and select *Client - OptiTrack* client of the scene
6. Click on circle symbol next to Destination Avatar and select Avatar of the character

7. Set *Skeleton Asset Name* to Asset Name of corresponding Motive Skeleton
8. Run Play Mode



## Enable Background running

Run in Background in File > Build Settings > Player Settings activate

## Useful Shortcuts

Q	Pan
W	Move
E	Rotate
R	Scale
F	Focus on active selection
Ctrl+Alt+F	Move to view

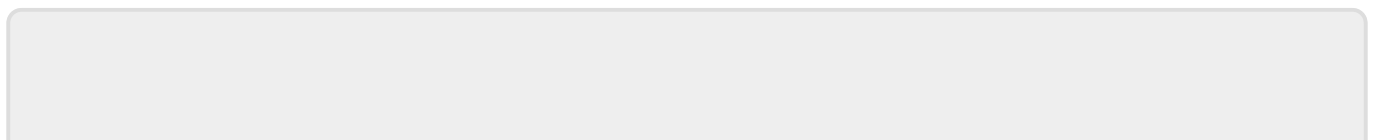
## Animation

1. Open Window > Animation
2. Add Property to Animate
3. Press record
4. Change values to animate > a keyframe will be added
5. Scrub in Timeline and change values again

## Animator

Use to create states. Each state has an animation. So there you can combine animations and connect it to conditions. Window > Animator

Different Layers can be used to make different animations at the same time. The lower the layer the higher priority it has.



From:

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Last update: **2018/05/16 16:36**

