

Introduction

A Voxel Farm project is a collection of entities. Each entity is a collection of key-value pairs. Both key and value are strings. These pairs will be called “properties” in this document.

Each entity will have a special property “ID” which uniquely identifies the entity. This ID is often used in REST calls to identify the entity.

Entities also have a “name” property. This is a readable name that will be used in the UI for users to identify the entity.

Another special property, “type” describes the type of entity. The entity type can be one of these:

“PROJECT”	Specifies the entity is a Voxel Farm project. A project entity can contain other entities.
“FILE”	An entity that contains data, either data that was imported into the system or that was produced by the system
“REGION”	A special type of entity that describes a 3D scope

File entities can be placed inside Folder entities. The “file_folder” in the File entity property specifies the ID of the Folder that contains it.

Most entities in a project will be of “FILE” type, as these are the ones holding the source data and processed results. To differentiate them, the “file_type” property is used. These are the different file types that can appear in Voxel Farm projects:

“FOLDER”	A special type of file entity inside a project that can contain other file entities.
“RAWPC”	A raw point cloud, that is, a point cloud that has been uploaded by users and remains in an unprocessed format.
“IDXPC”	A point cloud that has been processed by the system and inserted into a spatial index.
“VOXSURF”	A Voxel Terrain entity, usually derived from a heightmap or raw point cloud.
“RAWHM”	A raw raster set defining heights, also known as a heightmap.

"RAWBM"	A raw Block Model, typically stores a CVS file and column metadata for the block model
"RAWMESH"	A raw mesh object.
"IDXMESH"	A mesh that has been processed and indexed into the project.
"VOXMESH"	A voxelized mesh set with attributes
"VOXBM"	A voxelized Block Model. This is the output of processing a "RAWBM" entity.
"RAWDH"	A raw drill hole dataset.
"IDXDH"	An indexed drill hole dataset.
"ORTHO"	A raw imagery raster set, typically used to apply ortho imagery to terrains. Includes images and world registration files.
"IDXORTHO"	An indexed imagery set. A single imagery set can supply different formats for the image, depending on what the clients can read.
"PROGRAM"	An entity that stores a Python program for a custom report, view or spatial object.
"VOXGEN"	An entity that generates volumetric content on-the-fly using a Python program that runs on the servers.
"VOXOP"	A real-time terrain operation layer.
"VIEW"	Describes a view in the project. A view is a mashup of different entities and viewing options used for rendering
"REPORT"	An entity that describes a report
"EXPORT"	An entity that holds data that can be downloaded out of the system.
"UNITY"	An entity that contains a Unity project already preconfigured for this Voxel Farm project
"VOXMT"	A Material Tracking Layer. See the Material Tracking API for additional REST calls available for this entity type.
"VOXPC"	A voxelized point cloud. This entity produces a volumetric model out of a set of spherical point cloud capture sets.
"RAWGEOCHEM"	A raw Geo-chemical samples dataset
"GEOCHEM"	A processed Geo-chemical samples dataset.

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