# 3D Scene Service Rest Endpoint resources:

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| **Resource** | **URL** | **Returns** |
| ArcGIS Server Base URL | http://<hostname>/arcgis/rest/services/ | List of services |
| <http://3dcities.esri.com/arcgis/rest/services/> | |
| Scene Server | <ags-base-url>/<server-name>/SceneServer | Server info and list of available caches |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer> | |
| Cache | <scene-server-url>/caches/<cache-name>[[1]](#footnote-1) | Info about cache and list of layers |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings> | |
| Layer | <**cache-url**>/layers/<layer-name> | Info about single layer (see 3dSceneLayer.js) |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/layers/Public%20Buildings> | |
| Node[[2]](#footnote-2) | <**cache-url**>/nodes/<node-id> | Node file (json) |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/nodes/51> | |

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|  | **URL** | **Returns** |
| Shared Resources  (symbology and materials) | <**node-url**>/shared/ | Shared resource data bundle for a node |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/nodes/51/shared> | |
| Features | <**node-url**>/features/<feature-data-bundle-id> | Feature data bundle. |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/nodes/51/features/3> | |
| Geometries | <**node-url**>/geometries/<geometry-data-bundle-id> | Geometry data bundle. |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/nodes/51/geometries/3> | |
| Textures | <**node-url**>/textures/<texture-id> | Texture atlas |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/>nodes/51/textures/3 | |

# 3D Scene Service Rest Endpoint operations:

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| **Operation Name** | **Parent Resource** | **Parameters** | **Returns** |
| Search | Scene Server | Text query string | Search results |
| <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer>/Search?queryString=”technopark” | | |
| FindNode | Cache | Extent | The node id |
| [http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/FindNode?sphere=”{x:52.1,y:34.2,z:0,r:50}](http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/FindNode?sphere=)”  JSON fragment needs to be URL-encoded: http://<server-url>/caches/Buildings/FindNode?sphere=”%7Bx%3A52.1%2Cy%3A34.2%2Cz%3A0%2Cr%3A50%7D” | | |
| Query | Layer | Existing map server query parameters | Query results |
| [http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/layers/0/query?whereClause=”treeHeight](http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/layers/0/query?whereClause=) > 10” | | |
| GetFeature | Cache | Cache Feature ID | The complete feature (attributes + geom + sym/mat + textures) |
| http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Building/GetFeature?featureId=309432971018 | | |

# REST Interface Implementation

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| **Resource** | **Declaration** |
| Scene Server | DECLARE\_REST\_HANDLER(***HandleREST\_RootResource***); |
| Cache | DECLARE\_REST\_HANDLER(HandleREST\_CachesResource);  DECLARE\_REST\_HANDLER(***HandleREST\_CacheResource***); |
| Layer | DECLARE\_REST\_HANDLER(HandleREST\_LayersResource);  DECLARE\_REST\_HANDLER(***HandleREST\_LayerResource***); |
| Node | DECLARE\_REST\_HANDLER(HandleREST\_NodesResource);  DECLARE\_REST\_HANDLER(***HandleREST\_NodeResource***); |
| Features | DECLARE\_REST\_HANDLER(HandleREST\_FeatureResource); |
| Geometries | DECLARE\_REST\_HANDLER(HandleREST\_GeoemtryResource); |
| SharedResources | DECLARE\_REST\_HANDLER(HandleREST\_SharedResResource); |
| Textures | DECLARE\_REST\_HANDLER(HandleREST\_TextureResource); |

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| **Operation** | **Declaration** |
| Search | DECLARE\_REST\_HANDLER(HandleREST\_FindOperation); |
| FindNode | DECLARE\_REST\_HANDLER(HandleREST\_NodeSelectorOperation); |
| Query | DECLARE\_REST\_HANDLER(HandleREST\_QueryOperation); |
| GetFeature | DECLARE\_REST\_HANDLER(HandleREST\_GetFeatureOperation); |

// not needed: DECLARE\_REST\_HANDLER(HandleREST\_IdentifyOperation);

# Global parameters

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| --- | --- | --- |
| **Name** | **Values** | **Description** |
| f | *json, pjson, html* (default) | Output is formatted by default as html page, unless *f=json* is provided |
| expand | Json object names to be replaced, i.e. *styling* (within *featureData*). The specified json objects must include a *href* property. | For each of the json object names in the parameter values, replaces their content with the document that the specified object’s *href* property points to. |

1. Using cache name as part of the url requires unique cache names within a service and ascii characters only [↑](#footnote-ref-1)
2. In order to get the entire data ‘tile’ data for a specific node, the ‘expand’ url parameter is required, e.g.:  
   <http://3dcities.esri.com/arcgis/rest/services/zurich/SceneServer/caches/Buildings/nodes/51>?expand=featureData,geometryData,sharedData [↑](#footnote-ref-2)