Application: **Tax Parcel Viewer – HTML 5/ ArcGIS 10.1**
Version: **3.2**
Document: **Readme**
Date: **April 5, 2013**
Author: **CyberTech Systems and Software Ltd.**

Description

The Tax Parcel Viewer is a HTML 5 application and configuration of ArcGIS Server 10.1 that can be used to provide public access to tax parcel, related assessment and tax data. It provides relevant base maps, series of information pop-ups and reports, so that concise geographic content can be visualized and used to support access to land records information.

Package Contents

TaxParcelViewer: Package root folder

- TaxParcelViewer : Folder containing web application and configuration file
- **TaxParcelViewer_PythonScript**: Folder containing python script for property report

Readme.pdf : Deployment and configuration guide.

Minimum System Requirements

- ***Application Web Server***
  - P-IV with 1 GB RAM and 40 GB Hard Disk
  - IIS 5.0 or higher
  - Win 2K Server or above
- ***GIS Server***
  - P-IV with 1 GB RAM and 40 GB Hard Disk
  - IIS 5.0 or higher
  - ArcGIS Server 10.1 and ArcSDE 10.1
    - ArcGIS Server 10.1 requires a 64-bit operating system
  - .NET framework 3.5 with Service Pack 1
- ***Network Requirements***
  - LAN connectivity
  - Broadband internet connection
- ***Client Requirements***
  - Web browser with JavaScript enabled
- ***Screen Resolution***
  - 1024 x 768 high color, 32-bit or higher

Configuration

You can configure the Tax Parcel Viewer Template in your environment. To complete the configuration, you will need experience with Microsoft's Internet Information Server (IIS). If you are new to JavaScript Viewers, this template will demonstrate a pattern you can use to deploy your own HTML5 application.

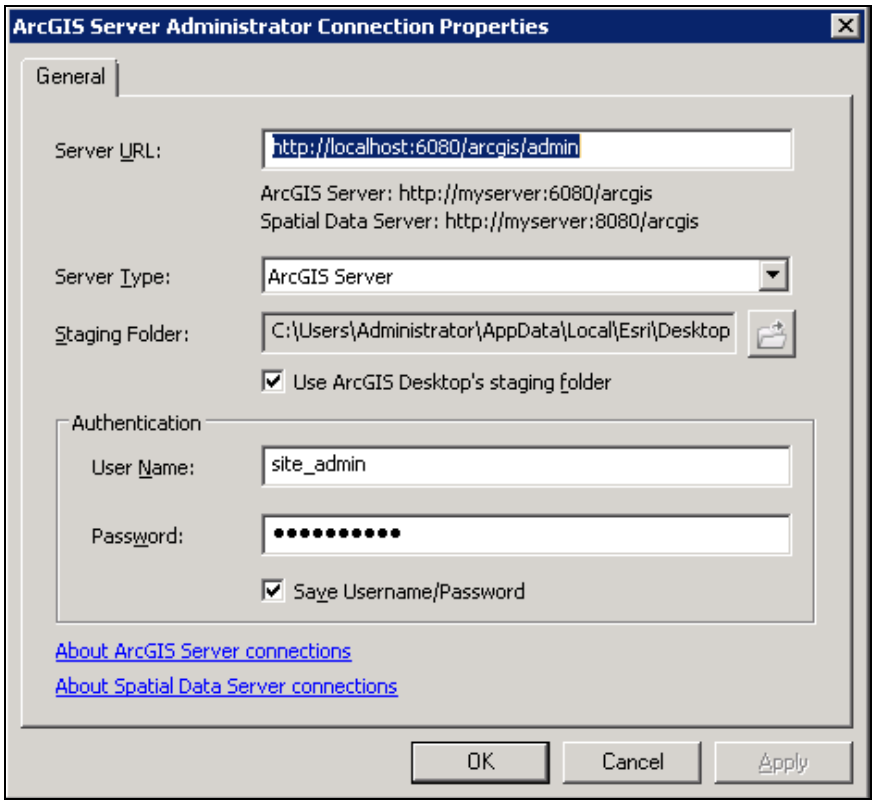
1. Copy the "TaxParcelViewer" directory on to your web server so that it can be accessed as a website or virtual directory.
   Example: Copy the "TaxParcelViewer" directory under C:\Inetpub\wwwroot for Microsoft IIS web servers.
2. This application uses a proxy file provided by ESRI. The proxy file is available in three different languages (ASP.NET, PHP and JSP). Current application uses ASP.NET proxy file. If you wish to use a different proxy file please click here. For ASP.NET proxy file, change the REST end point to the ArcGIS REST service URL in the proxy.config file.
3. Go to IIS, right-click on the parent directory of the copied files, select "Convert To Application" and set the application pool to ASP.NET v4.0.

   Note: If you want to use a different version of ASP.NET, please follow the steps below.
   1. Open the source folder as a website in Visual Studio
   2. Right-click on website, go to properties and change the .NET target framework to desired version
   3. Publish the website
4. The "TaxParcelViewer" directory contains config.js which is the main configuration file. To modify any configuration values, open config.js file using a text editor like Notepad. Make necessary changes to the JSON objects. See the "Description of Configuration Tags" section below for more information.
5. Test the application in a browser by entering the URL to the default.htm page.
   Example: http://<server>/TaxParcelViewer/default.htm
   Substitute "<server>" with name of your server. Please note: "default.htm" may not be defined as a default document on your web server.

GP Service Configuration for Property Report

This application makes use of a geoprocessing services to generate pdf for Property Report. The deliverable folder "ExportToPDF_PythonScript_10.1" contains "scripts" folder and the sample toolbox "TaxParcelReport.tbx" already created. Follow the steps below to publish the geoprocessing service.

1. Install ReportLab (reportlab-2.4.win-amd64-py2.7.exe) software for Windows to create Adobe's Portable Document Format (PDF) using the Python programming language. ReportLab is available for all other environments and the same can be downloaded from here.
2. Ensure that you have an administrative connection in ArcCatalog to your ArcGIS server. Follow the below mentioned steps to create administrative connection in ArcCatalog to your ArcGIS server if not already created:
    - Windows Start > All Programs > ArcGIS > ArcCatalog
    - ArcCatalog > Windows > Catalog Tree> GIS Server > Add GIS Server > Administer GIS Server.
    - Add the credentials as below:

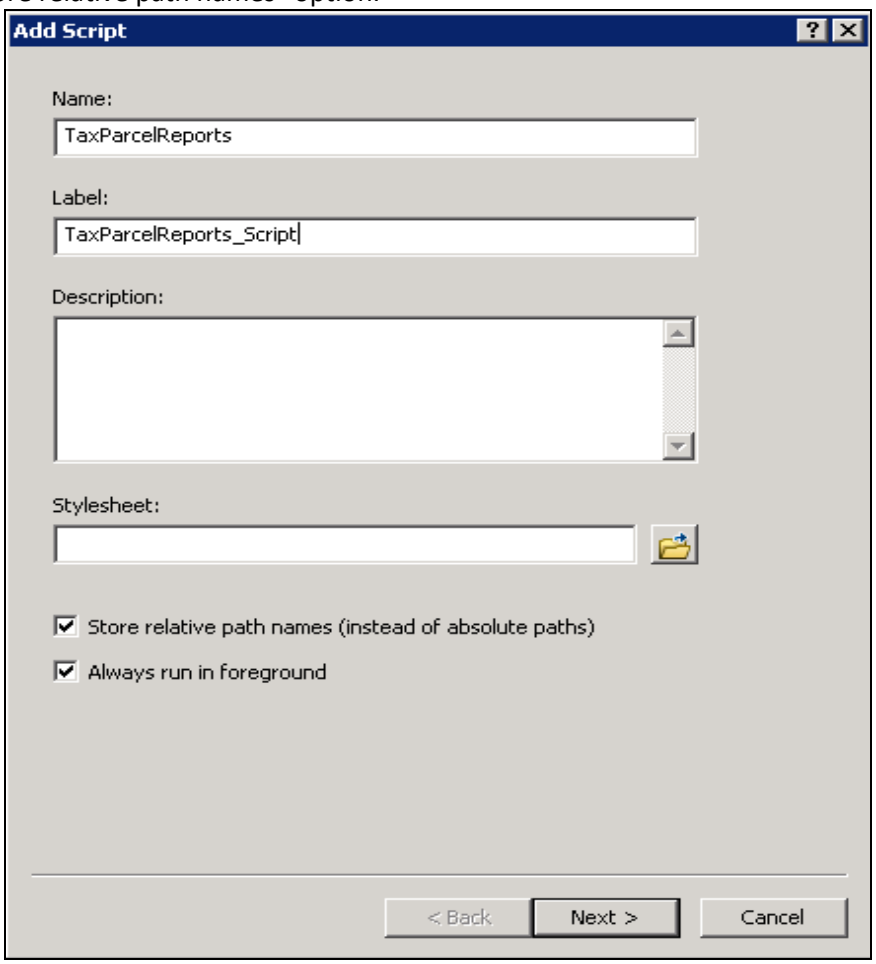


3. Create a new folder on the server to host the Geoprocessing data (toolbox). The deliverable folder contains already created toolbox along with the script that is to be published. Alternatively a new toolbox can be created following the below mentioned steps:
    a. Copy the scripts folder from the deliverables folder to this folder.
    b. Launch ArcCatalog.

c. Go to Catalog Tree and browse to the new folder to create a New toolbox by right-clicking on the folder and clicking **New >Toolbox**. Save the toolbox with name "TaxParcelReports".

d. Add a Python script to the toolbox by right-clicking the toolbox and clicking **Add > Script**.

e. This will open the Add Script dialog. Enter the name as "TaxParcelReports" and label of script as "TaxParcelReports_Script", as shown in the illustration below. Check "store relative path names" option.

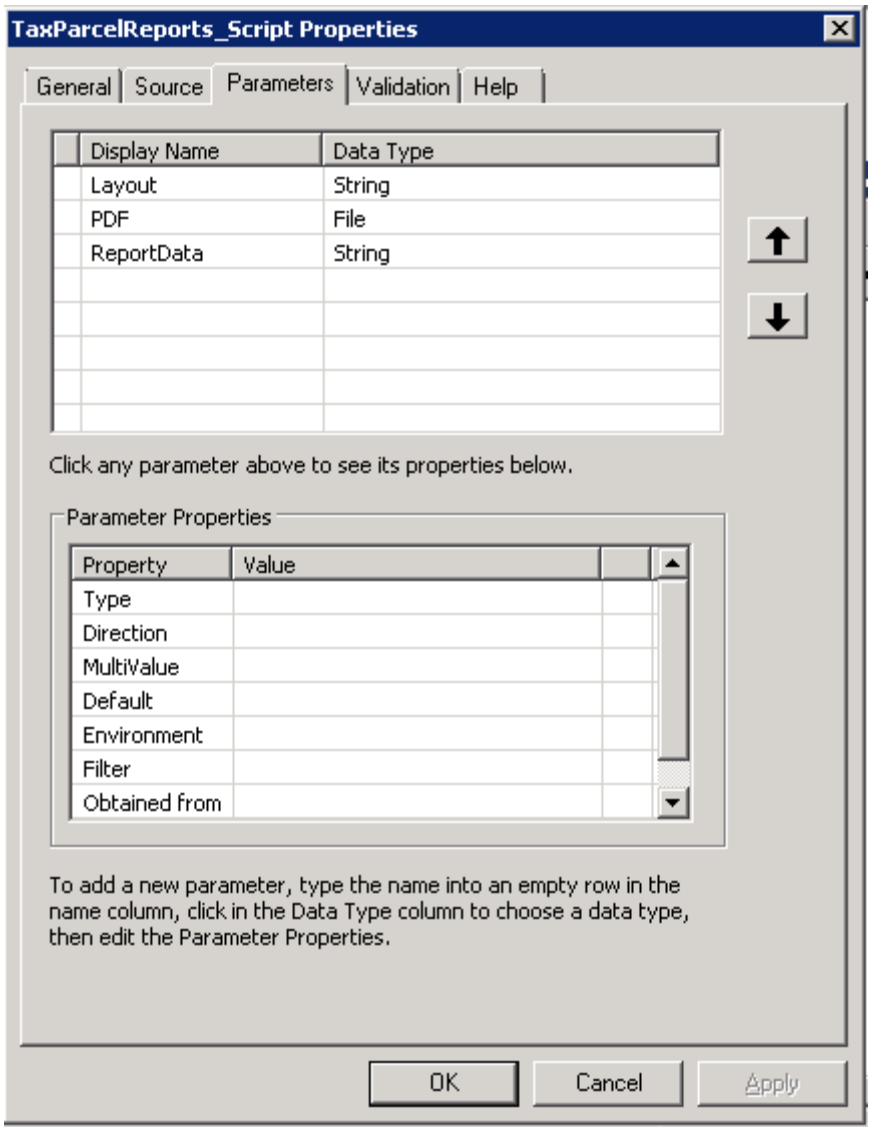


f. Click Next. Select the Python script "ExportToPDF.py" from the scripts folder.

g. Click Next to add the input and output parameters for this script. Add the following parameters in the given order by providing the displayname, datatype and direction.

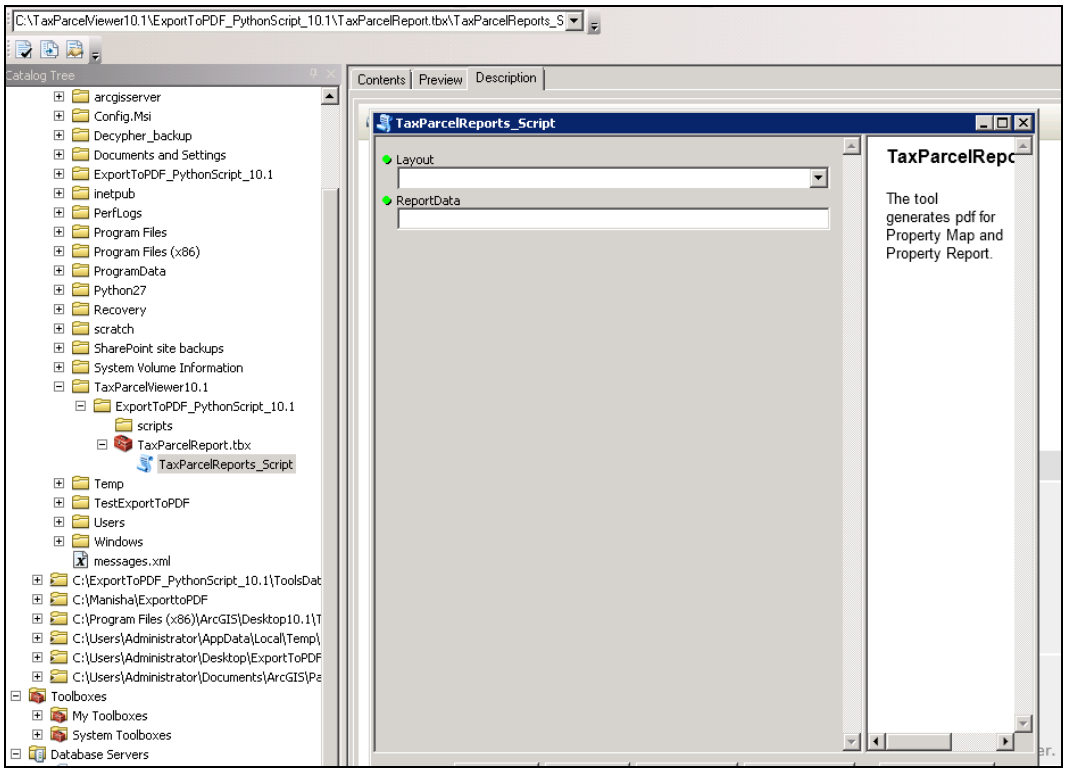
DisplayName	DataType	Direction	Type	Filter
Layout	String	Input	Required	Value List
PDF	File	Output	Derived	None
ReportData	String	Input	Required	None

h. Finish adding the script to toolbox. Please refer the illustration below.

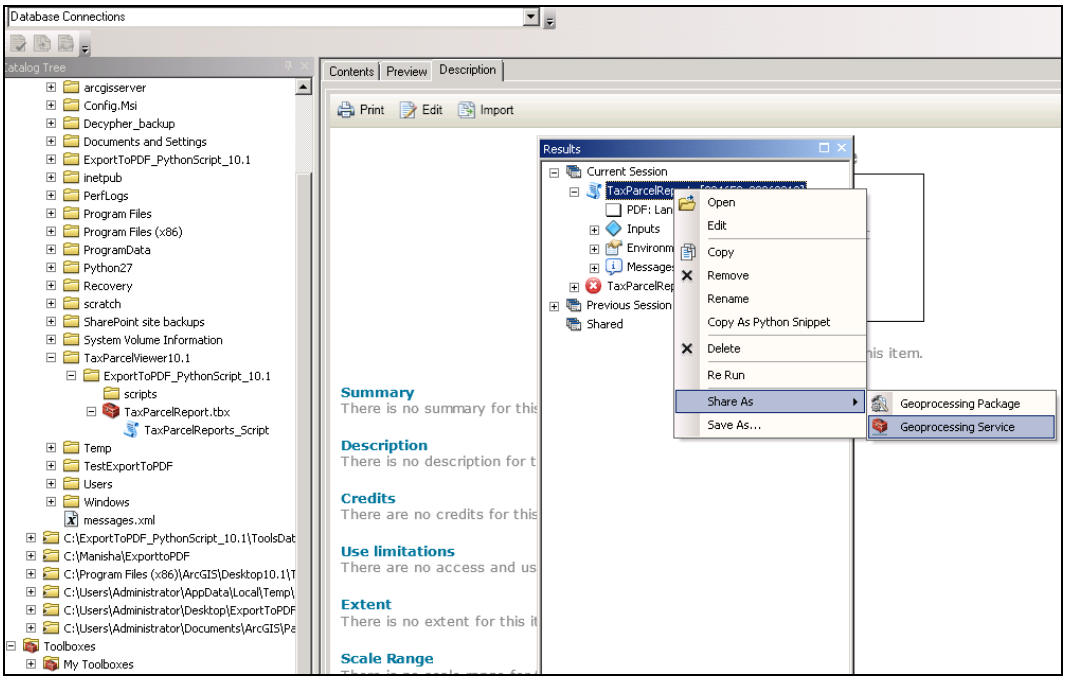


i. The configuration of TaxParcelReport script is complete.

4. Launch ArcCatalog and browse to the folder containing the toolbox.
5. Double click the script tool and add the input parameters (Layout and ReportData).



6. Hit on OK.
7. Go to Geoprocessing > Results.
8. Publish the result as Geoprocessing service by right clicking the result.



Sample Input Data for Testing:

Parameter	Data
Layout	Landscape8x11/Portrait8x11
reportData	1702 Brandywine Dr^1902226080^Shaker Heights Sub^N/A^Charter Township Of Bloomfield^Avondale Schools^Residential Improved^Kevin D Welsh^Colonial/2Sty^2918^$ 160,660^$ 156,890^$ 5,438.18~Exurbanites (7) is the predominant Tapestry segment in 261251500.001. See full description.^http://www.esri.com/data/esri_data/pdfs/tapestry/segment7.pdf~T-Mobile USA$N/A#Sprint Nextel Corporation$768kbps-1.5mbps#Verizon Communications Inc.$6-10mbps#AT&T Inc.$N/A#Comcast Corporation$N/A#AT&T Inc.$N/A

Following Input data can be used for testing PrintTask at AGS 10.1:

Parameter	Data

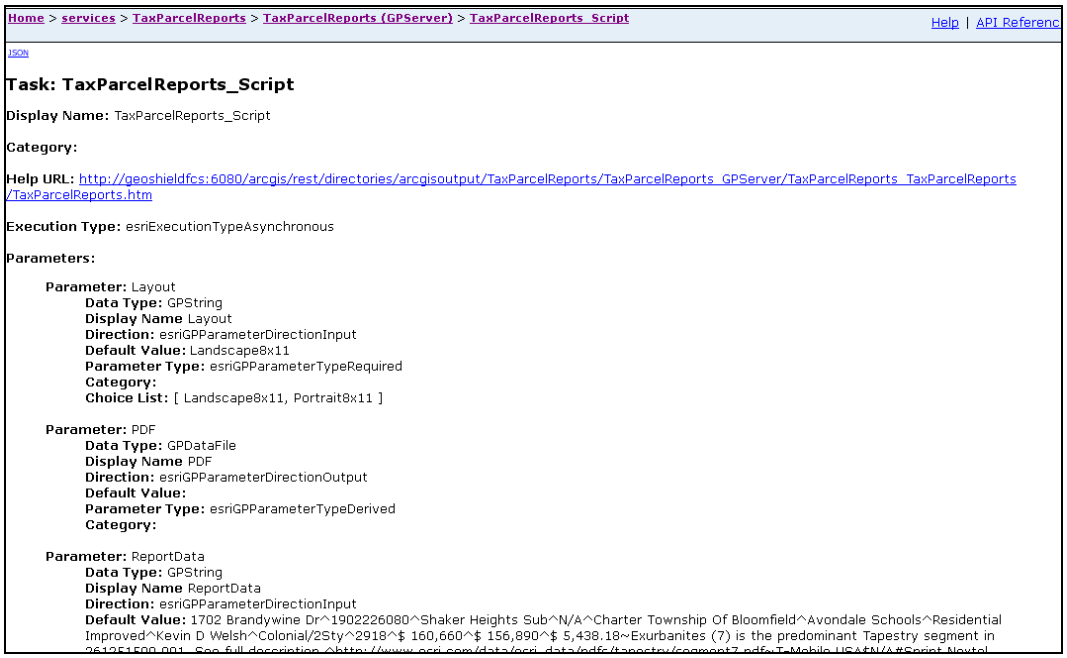
Web Map as JSON	{
	"mapOptions": {
	"extent": {
	"xmin": -9266161.374581505,
	"ymin": 5253745.650852448,
	"xmax": -9264529.92175918,
	"ymax": 5254316.539907404,
	"spatialReference": {
	"wkid": 102100
	}
	},
	"scale": 4000,
	"spatialReference": {
	"wkid": 102100
	}
	},
	"operationalLayers": [
	{
	"url":
	"http://localgovtemplates.esri.com/ArcGIS/rest/services/TaxParcelQuery/MapServer/0",
	"title": "Watershed",
	"opacity": 1,
	"layerDefinition": {
	"drawingInfo": {
	"renderer": {
	"type": "simple",
	"symbol": {
	"type": "esriSFS",
	"style": "esriSFSSolid",
	"color": [
	179,
	239,

```
                    167,
                    200
                  ],
                "outline": {
                  "type": "esriSLS",
                  "style": "esriSLSSolid",
                  "color": [
                    0,
                    100,
                    0,
                    200
                  ],
                  "width": 1.5
                }
              },
              "label": "",
              "description": ""
            },
            "transparency": 0,
            "labelingInfo": null
          },
          "objectIds": [
            25
          ]
        }
      }
    ],
      "baseMap": {
        "title": "Shared Imagery Basemap",
        "baseMapLayers": [
        {
"url":
"http://localgovtemplates.esri.com/ArcGIS/rest/services/ParcelPublicAccessforBloomfield/
MapServer"
        }
      ]
      },
      "exportOptions": {
        "dpi": 300,
        "outputSize": [
        500,
        500
      ]
      },
      "layoutOptions": {
        "titleText": " ",
```

	"scaleBarOptions": {
	"metricUnit": "kilometers",
	"metricLabel": "km",
	"nonMetricUnit": "miles",
	"nonMetricLabel": "mi"
	}
	}
	}

Format	PDF
Layout Template	"A4 Landscape" OR "A4 Portrait"

9. To publish a Geoprocessing service run the tool, right-click the result and choose Share As > Geoprocessing Service. The name of geoprocessing service should be "TaxParcelReports".
10. Go to REST Services Directory of your ArcGIS Server. Click on TaxParcelReports (GPServer). It should display an asynchronous GP Service with the following task:
    a. TaxParcelReports_Script
11. Please refer the illustration below.



Home > services > TaxParcelReports > TaxParcelReports (GPServer) > TaxParcelReports_Script

Help | API Referenc

JSON

Task: TaxParcelReports_Script

Display Name: TaxParcelReports_Script

Category:

Help URL: http://geoshieldfcs:6080/arcgis/rest/directories/arcgisoutput/TaxParcelReports/TaxParcelReports_GPServer/TaxParcelReports_TaxParcelReports/TaxParcelReports.htm

Execution Type: esriExecutionTypeAsynchronous

Parameters:

Parameter: Layout
Data Type: GPString
Display Name Layout
Direction: esriGPParameterDirectionInput
Default Value: Landscape8x11
Parameter Type: esriGPParameterTypeRequired
Category:
Choice List: [Landscape8x11, Portrait8x11]

Parameter: PDF
Data Type: GPDataFile
Display Name PDF
Direction: esriGPParameterDirectionOutput
Default Value:
Parameter Type: esriGPParameterTypeDerived
Category:

Parameter: ReportData
Data Type: GPString
Display Name ReportData
Direction: esriGPParameterDirectionInput
Default Value: 1702 Brandywine Dr^1902226080^Shaker Heights Sub^N/A^Charter Township Of Bloomfield^Avondale Schools^Residential Improved^Kevin D Welsh^Colonial/2Sty^2918^$ 160,660^$ 156,890^$ 5,438.18~Exurbanites (7) is the predominant Tapestry segment in 261251500.001. See full description.^http://www.esri.com/data/esri_data/pdfs/tapestry/segment7.pdf^T-Mobile USA^N/A^Sprint Nextel

Description of Configuration Tags (config.js)

ApplicationName: Application title.
ApplicationName : "Tax Parcel Viewer",

ApplicationIcon: Application icon source path.
ApplicationIcon: "images/logo.png",

SplashScreenMessage : Message that appears when the application starts.
SplashScreenMessage : "Tax Parcel Viewer
 <hr/>
The Tax Parcel Viewer provides the general public and other interested parties local government property tax and assessment information and supplements that information with lifestyle and internet broadband information for a given neighborhood.

To locate a parcel, simply click on the map or enter an address or parcel number in the search box and select a parcel from the list.

",

HelpURL: URL of help page/portal.
HelpURL: "help.htm",

BaseMapLayers: BaseMap Gallery,All the basemap's need to be in the same spatial reference. Base map declared first will be loaded on application start.

```
BaseMapLayers  [
            {
               Key: "parcelMap",
               ThumbnailSource: "images/Parcel map.png",
               Name: "Parcel Map",
               MapURL: "http://arcgis-tenone2012-1974758903.us-west-
1.elb.amazonaws.com/arcgis/rest/services/ParcelPublicAccessMI/MapServer",
```

```
            useForMobileDevice: true
        },
        {
            Key: "taxMap",
            ThumbnailSource: "images/Tax map.png",
            Name: "Tax Map",
            MapURL: "http://arcgis-tenone2012-1974758903.us-west-
1.elb.amazonaws.com/arcgis/rest/services/TaxParcelMI/MapServer"
        },
        {
            Key: "imageryMap",
            ThumbnailSource: "images/imageryHybrid.png",
            Name: "Hybrid Map",
            MapURL:
"http://server.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer"
        }
 ],
```

Key: Key for every map. This has to be unique in this collection.
ThumbnailSource: Source path of the image.
Name: Name of the layer.
MapURL: URL of the Map layer.

DefaultExtent: Initial map extent. To separate values use “,” symbol.

```
DefaultExtent: “-9273520,5249870,-9270620,5251510",
```

WebMapId: Specify WebmapId within quotes.

```
WebMapId: "4778fee6371d4e83a22786029f30c7e1",
```

FeedbackLayer: Feedback Layer details.

```
FeedbackLayer:
    {
       Key: "feedbackLayer",
       ServiceUrl:
"http://services.arcgis.com/b6gLrKHqgkQb393u/arcgis/rest/services/ParcelMarkupsTryitLive/FeatureSer
ver/0"
    },
```

Key: Used as an layerId while adding this layer to the map and has to be unique.
ServiceUrl: REST end point for the FeedbackLayer.

BroadBandService: BroadBandService details.

```
BroadBandService:
                [
        {
            Key: "wirelessServices",
            Title: "Wireless Broadband Providers for this Area",
```

```
            ServiceURL:
"http://www.broadbandmap.gov/broadbandmap/broadband/jun2011/wireless?latitude=${latitude}&lo
ngitude=${longitude}&format=jsonp"
          },
          {
            Key: "wirelineServices",
            Title: "Wireline Broadband Providers for this Area",
            ServiceURL:
"http://www.broadbandmap.gov/broadbandmap/broadband/jun2011/wireline?latitude=${latitude}&lo
ngitude=${longitude}&format=jsonp"
          }
 ],
```

ShowNullValueAs: Alternate string to be displayed for null or blank values.

```
ShowNullValueAs: "N/A",
```

LocatorDefaultAddress: Deafault Address to search.

```
LocatorDefaultAddress: "4014 Overlea Ct",
```

GeolocatedImage: Set the image for geolocated point

```
GeolocatedImage: "images/RedPushPin.png",
```

GeometryService: Geometry service URL.

```
GeometryService:
"http://localgovtemplates2.esri.com/ArcGIS/rest/services/Geometry/GeometryServer",
```

GeoProcessing Service: GeoProcessing service URL.

```
ReportGPServiceURL:
"http://203.199.47.171:6080/arcgis/rest/services/TaxParcelReportsNew/GPServer/TaxParcelReports_Sc
ript”,
```

PrintTaskURL: Print task service URL

```
PrintTaskURL:
"http://sampleserver6.arcgisonline.com/arcgis/rest/services/Utilities/PrintingTools/GPServer/Export%2
0Web%20Map%20Task/execute",
```

InfoWindowHeader: Title text / fields for info window.

```
InfoWindowHeader:"${SITEADDRESS}",
```

InfoWindowHeader: Content text / fields for info window.

```
InfoWindowContent: "${PARCELID}",
```

ParcelIdAttribute: Attribute for parcel ID.

```
ParcelIdAttribute: "${PARCELID}",
```

TaxParcelId: Specify the display text for parcel ID.

```
TaxParcelId: "Tax Parcel Id:"
```

DatePattern: Format for date.

```
DatePattern: "MMM dd, yyyy",
```

Layers: Information to be displayed for parcels, sales and foreclosures in the info window.

```
Layers:
        [
          {
            Key: "foreClosure",
            Title: "Foreclosures",
            ServiceURL:
"http://203.199.47.146/arcgis/rest/services/TaxParcelViewer/AssessmentOperations/MapServer/0",
            isVisible: false,
            isDynamicMapService: true,
            Fields:
          [
            {
              DisplayText: "Parcel Id:",
              FieldName: "${PARCELID}",
              DataType: "string"
            },
            {
              DisplayText: "Site Address:",
              FieldName: "${SITEADDRESS}",
              DataType: "string"
            },
            {
              DisplayText: "Tax District Code:",
              FieldName: "${CVTTXCD}",
              DataType: "string"
            },
            {
              DisplayText: "Date Recorded:",
              FieldName: "${RECORDDT}",
              DataType: "string",
              isDate: true
            },
            {
              DisplayText: "Transaction Date:",
              FieldName: "${TRANSDT}",
              DataType: "string",
              isDate: true
            },
            {
              DisplayText: "Liber:",
              FieldName: "${LIBER}",
              DataType: "string"
            },
```

```
            {
               DisplayText: "Page:",
               FieldName: "${PAGE}",
               DataType: "string"
            },
            {
               DisplayText: "Sale Amount:",
               FieldName: "${SALEAMNT}",
               DataType: "double"
            }

         ]
          },
   {
      Key: "parcelSale",
      Title: "Sales",
      ServiceURL:
"http://203.199.47.146/arcgis/rest/services/TaxParcelViewer/AssessmentOperations/MapServer/1",
      isVisible: false,
      isDynamicMapService: true,
      Fields:
          [
            {
               DisplayText: "Parcel Id:",
               FieldName: "${PARCELID}",
               DataType: "string"
            },
            {
               DisplayText: "Site Address:",
               FieldName: "${SITEADDRESS}",
               DataType: "string"
            },
            {
               DisplayText: "Tax District Code:",
               FieldName: "${CVTTXCD}",
               DataType: "string"
            },
            {
               DisplayText: "Transaction Date:",
               FieldName: "${TRANSDT}",
               DataType: "string",
               isDate: true
            },
            {
               DisplayText: "Grantor:",
               FieldName: "${GRANTOR}",
               DataType: "string"
            },
            {
```

```
                DisplayText: "Grantee:",
                FieldName: "${GRANTEE}",
                DataType: "string"
              },
              {
                DisplayText: "Liber:",
                FieldName: "${LIBER}",
                DataType: "string"
              },
              {
                DisplayText: "Page:",
                FieldName: "${PAGE}",
                DataType: "string"
              },
              {
                DisplayText: "Sale Amount:",
                FieldName: "${SALEAMNT}",
                DataType: "double"
              },
              {
                DisplayText: "Residential Structure Type:",
                FieldName: "${RESSTRTYPE}",
                DataType: "string"
              },
              {
                DisplayText: "Assessed Value:",
                FieldName: "${CNTASSDVAL}",
                DataType: "double"
              },
              {
                DisplayText: "Sales Ratio:",
                FieldName: "${SALESRATIO}",
                DataType: "string"
              }

          ]
      },
      {
        Key: "taxParcelLayer",
        ServiceURL:
"http://203.199.47.146/arcgis/rest/services/TaxParcelViewer/TaxParcelQuery/MapServer/0",
        OutFields: "PARCELID, SITEADDRESS, CNVYNAME",
        ParcelQuery: "UPPER(PARCELID) LIKE '%${0}%' OR UPPER(SITEADDRESS) LIKE '%${0}%' OR
UPPER(CNVYNAME) LIKE '%${0}%'",
        LocateParcelQuery: "PARCELID = '${0}'",
        DisplayFields: ["PARCELID", "SITEADDRESS"],
        UseColor: true,
        Color: "#00ff00",
        Alpha: 0.25,
```

```
Fields:
    [
      {
        DisplayText: "Tax Parcel ID:",
        FieldName: "${PARCELID}",
        DataType: "string",
        isLink: true,
        href: "Photo.htm?ParcelId=${PARCELID}&SiteAddress=${SITEADDRESS}"
      },
      {
        DisplayText: "Sub or Condo:",
        FieldName: "${CNVYNAME}",
        DataType: "string"
      },
      {
        DisplayText: "Building : Unit:",
        FieldName: "${UNIT}",
        DataType: "string"
      },
      {
        DisplayText: "Tax District:",
        FieldName: "${CVTTXDSCRP}",
        DataType: "string"
      },
      {
        DisplayText: "School District:",
        FieldName: "${SCHLDSCRP}",
        DataType: "string"
      },
      {
        DisplayText: "Structure Type:",
        FieldName: "${RESSTRTYP}",
        DataType: "string"
      },
      {
        DisplayText: "Floor Area:",
        FieldName: "${RESFLRAREA}",
        DataType: "string"
      },
      {
        DisplayText: "Assessed Value:",
        FieldName: "${CNTASSDVAL}",
        DataType: "double"
      },
      {
        DisplayText: "Taxable Value:",
        FieldName:  "${CNTTXBLVAL}",
        DataType: "double"
      },
```

```
            {
              DisplayText: "Current Taxes:",
              FieldName: "${TOTCNTTXOD}",
              DataType: "double"
            }

        ]
    }
 ],
```

Key: This will be the validation key and has to be unique in this section.
ServiceUrl: REST end point for the FeedbackLayer.
SearchFields: Fields to be searched for locating the parcel from the rest end.
UseColor: To override the default symbology defined in the mapservice.
Color: Used to define the renderer color of the symbol.
Alpha: Used to define the transparency of the renderer.

FeedbackAttributes : Attributes for feedback layer.

```
FeedbackAttributes:
      {
        PROBTYPE:
            {
              DataType: "string",
              DefaultValue: false,
              ControlId: "SelectedRequest",
              DomainNames: true
            },
        COMMENT:
            {
              DataType: "string",
              DefaultValue: false,
              ControlId: "txtComment"
            },
        SUBMITDT:
            {
              DataType: "string",
              DefaultValue: true,
              ControlId: ""
            },
        NAME:
            {
              DataType: "string",
              DefaultValue: false,
              ControlId: "txtName"
            },
        PHONE:
            {
              DataType: "string",
```

```
            DefaultValue: false,
            ControlId: "txtPhone"
        },
    EMAIL:
        {
            DataType: "string",
            DefaultValue: false,
            ControlId: "txtMail"
        }
},
```

DownloadSpeed: Download speed for broadband.

```
DownloadSpeed:
            {
              0: "N/A",
              1: "0-200kbps",
              2: "200kbps-768kbps",
              3: "768kbps-1.5mbps",
              4: "1.5-3mbps",
              5: "3-6mbps",
              6: "6-10mbps",
              7: "10-25mbps",
              8: "25-50mbps",
              9: "50-100mbps",
              10: "100mbps-1gbps",
              11: ">1gbps"
            },
```

PropertyReportPrice: Price for downloading property report.

```
PropertyReportPrice: 0,
```

PropertyMapPrice: Price for downloading property map.

```
PropertyMapPrice: 0,
```

Currency: Currency to be used for downloading property report/map.

```
Currency: "$",
```

PayPalCurrencyCode: Currency code used in PayPal

```
PayPalCurrencyCode: “USD”,
```

SelectedAddressColor: Color for selected address.

```
SelectedAddressColor: "#FF6600",
```

ParcelMarkups : Set configuration item to allow users to turn the "Parcel Markups" off and on.

```
ParcelMarkups: true,
```

ReportLayouts: Data to be displayed for layouts for reports.

```
ReportLayouts:
                    [
        {
           DisplayText: "Landscape",
           Value: "Landscape8x11"
        },
        {
           DisplayText: "Portrait",
           Value: "Portrait8x11"
        }
      ],
```

Value: Value field should be the name of the mxd document used in GP service.

MapSharingOptions: Share-URL for TinyURL service, URLs for Media feeds

```
MapSharingOptions:
                    {
            TinyURLServiceURL:
"http://api.bit.ly/v3/shorten?login=esri&apiKey=R_65fd9891cd882e2a96b99d4bda1be00e&uri=${0}&fo
  rmat=json",
            TinyURLResponseAttribute: "data.url",
            FacebookShareURL:
                        "http://www.facebook.com/sharer.php?u=${0}&t=Tax%20Viewer%20Map",
            TwitterShareURL:
           "http://mobile.twitter.com/compose/tweet?status= Tax%20Viewer%20Map ${0}",
            ShareByMailLink: "mailto:%20?subject= Tax%20Viewer%20Map&body=${0}"
 }
```

Description of Configuration Tags (web.config)

Environment: This is used to set the PayPal environment for Testing or Production. “T” will set the environment for Testing (PayPal SandBox environment).

ENVIRONMENT: “T”

AppName: Name to be displayed in the PayPal site wile purchasing
AppName: “Tax Parcel Viewer“

AppCode: Application Code to be displayed in the PayPal Site while purchasing
AppCode: “Tax Parcel Report”