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# What's New in ArcGIS Business Analyst Server 9.3

*Last revised – January 2009*

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# Welcome to ArcGIS Business Analyst Server 9.3

## Overview

ArcGIS® Business Analyst Server 9.3 is the next major release of the extension. This release builds on previous releases and adds important new capabilities.

This document provides a summary of the key new features and capabilities of Business Analyst Server 9.3. Please consult the Business Analyst Server help system for more detailed information about these new features.

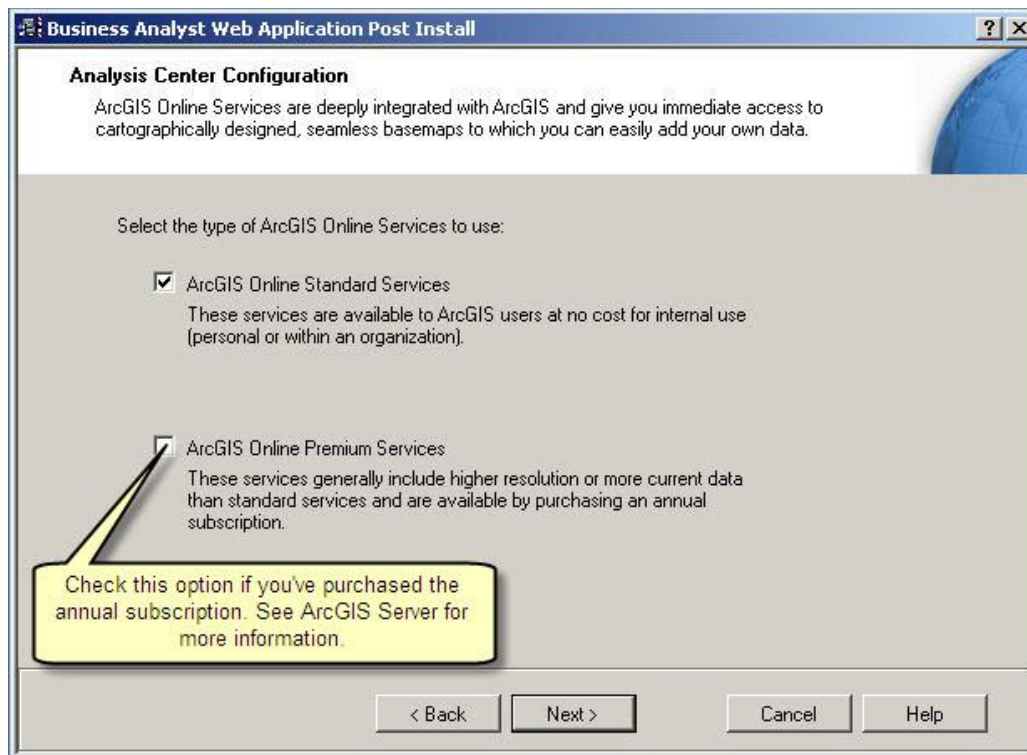
## Stateless application objects

Stateless connections have been implemented for the SOAP and REST APIs. This allows Business Analyst Server to support more simultaneous users with lower CPU and RAM resource consumption.

## Support for ArcGIS Online Map Services

If you've installed service pack 1 (SP1) for ArcGIS Server, Business Analyst Web Application Post Install process will show the following Analysis Center Configuration dialog box asking you to select the type of ArcGIS Online Services to use.

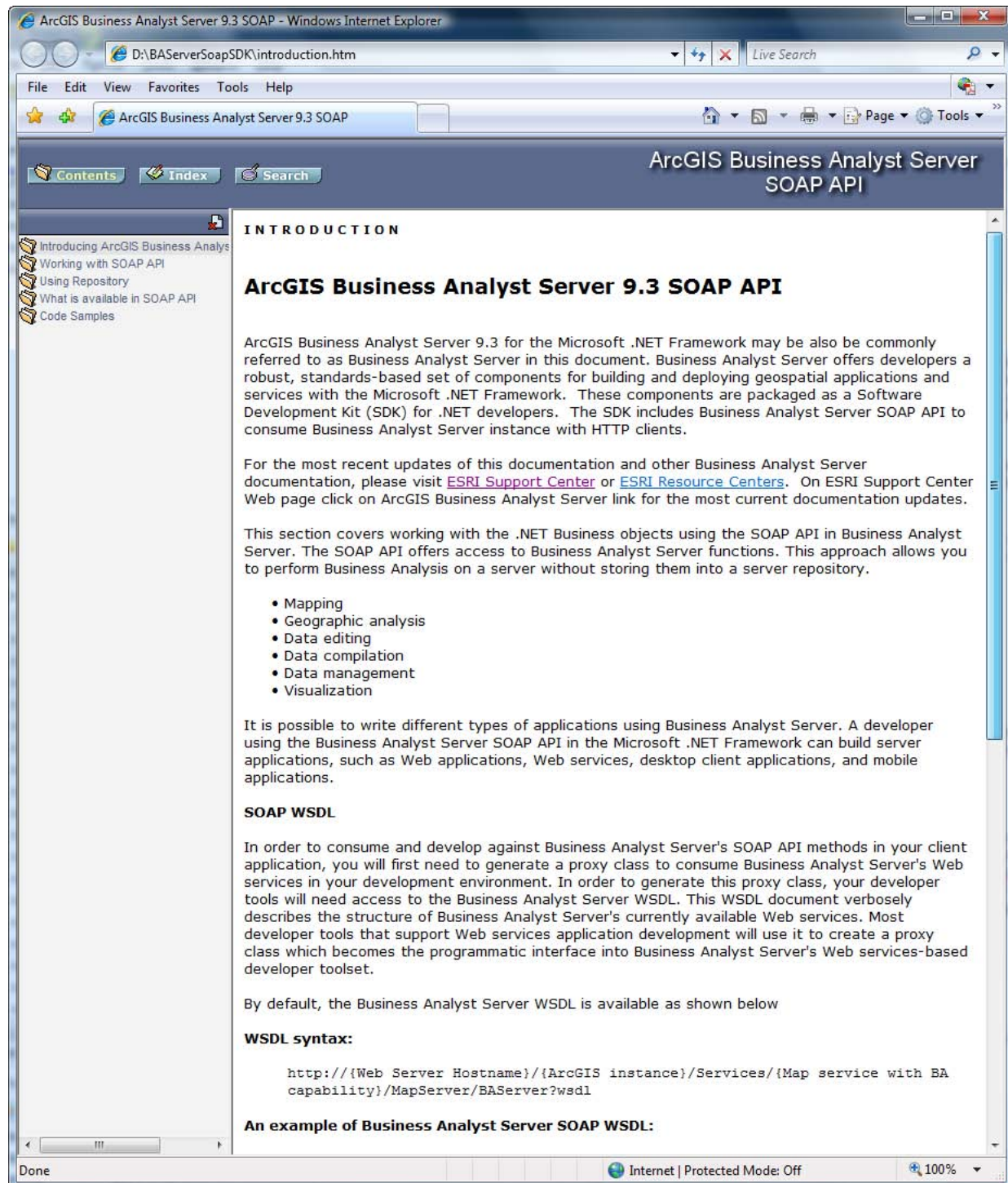
The default is ArcGIS Online Standard Services. Check ArcGIS Online Premium Services if you've purchased an annual subscription. Please see ArcGIS Server Help for more information.



## Integration and Custom Development

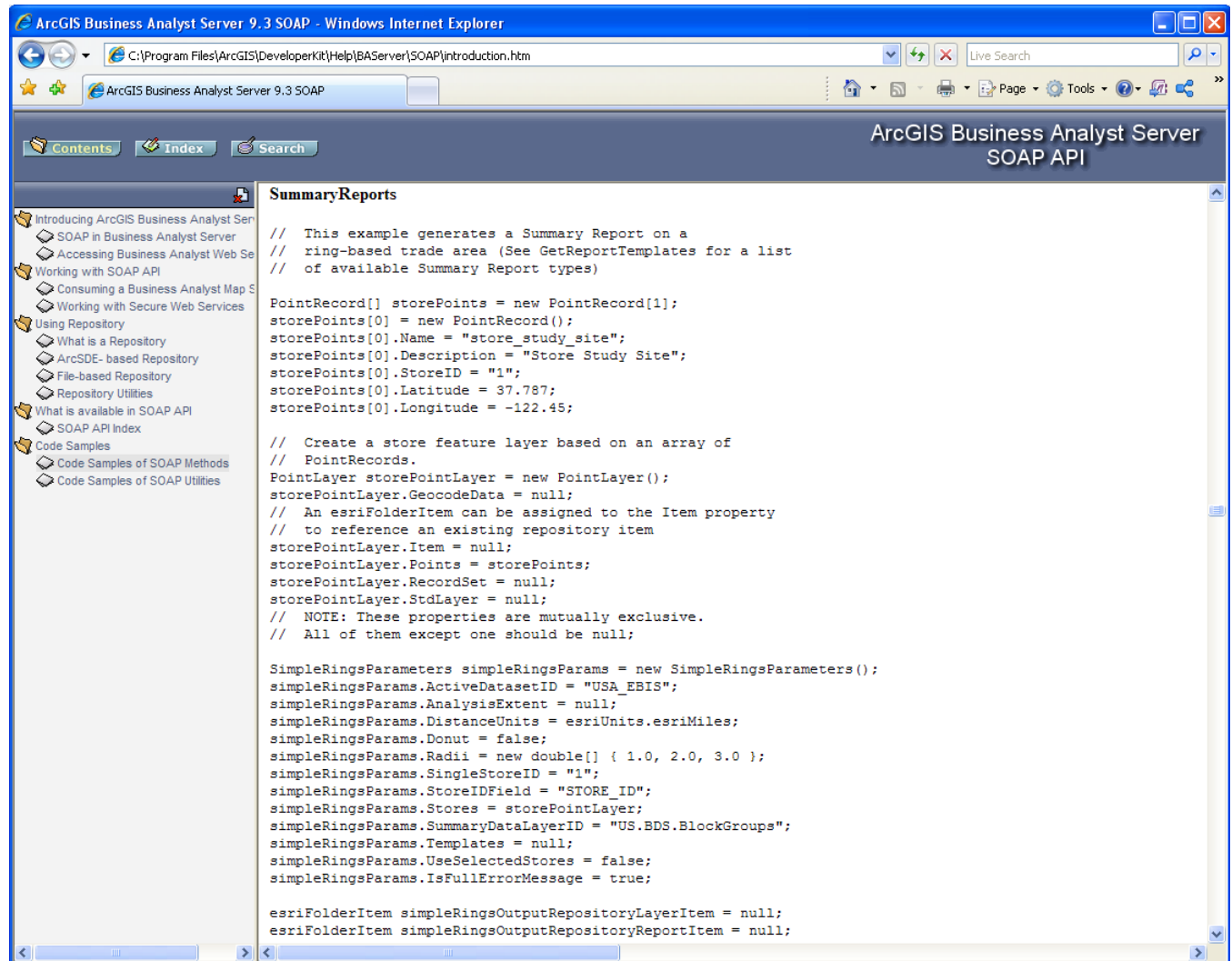
Several APIs are available to help reduce the complexity of implementing geospatial techniques within any application or platform. The SOAP API has been updated. A new API for REST has been developed.

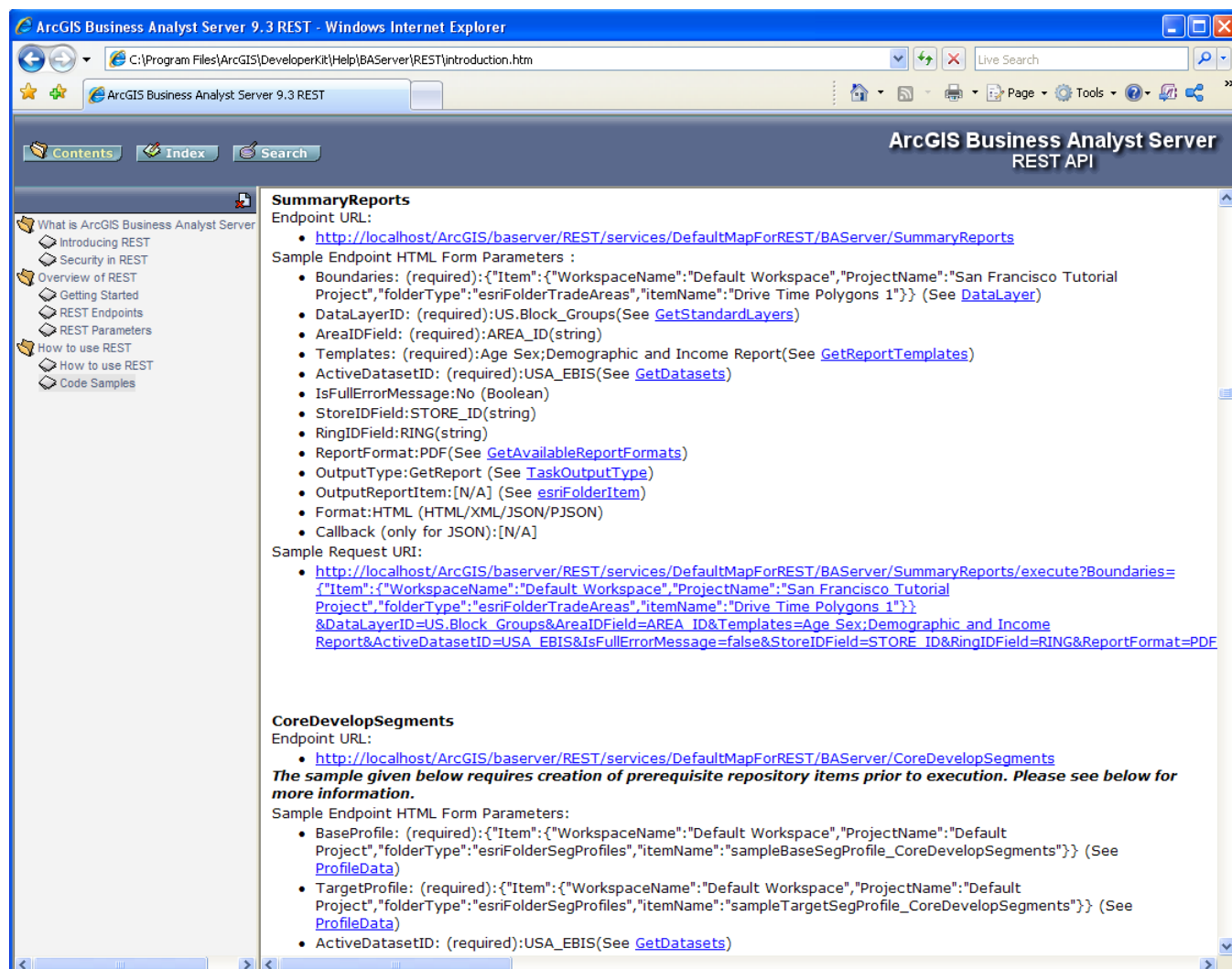
## SOAP API



## API example code

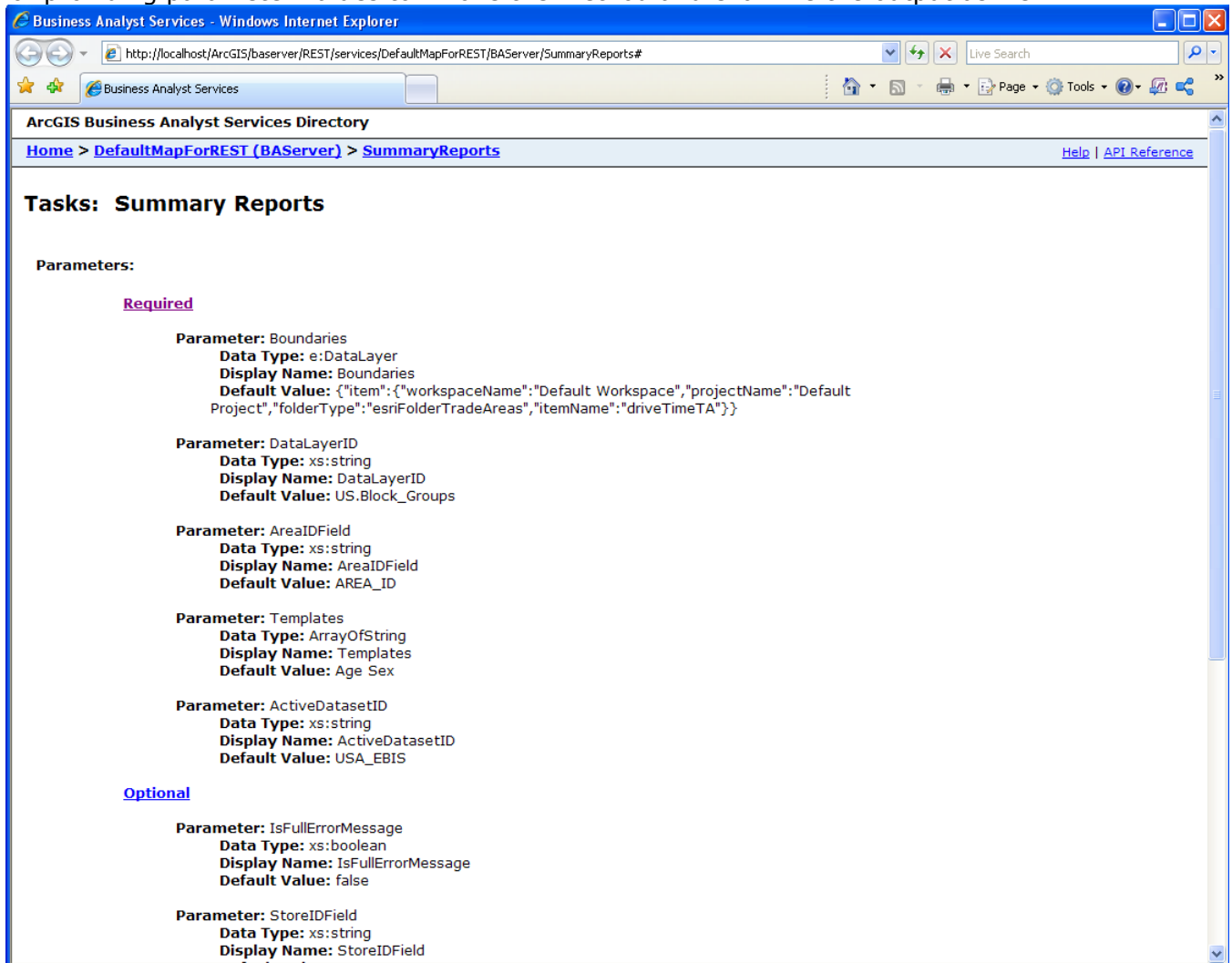
Whether it is an example for the SOAP methods or a sample URL for the REST methods, the code example that is provided is a complete set of calls to illustrate the usage of the particular method as well as show the context to other methods.





## REST endpoints

The REST API has a user interface experience that allows a developer to explore the options for providing parameter values to invoke the method and examine the output as well.



The screenshot shows a web browser window titled "Business Analyst Services - Windows Internet Explorer". The address bar displays the URL: `http://localhost/ArcGIS/baserver/REST/services/DefaultMapForREST/BAServer/SummaryReports#`. The browser's address bar also shows a "Live Search" field. The page content is titled "ArcGIS Business Analyst Services Directory" and includes a breadcrumb trail: [Home](#) > [DefaultMapForREST \(BAServer\)](#) > [SummaryReports](#). There are links for [Help](#) and [API Reference](#). The main heading is "Tasks: Summary Reports". Under the heading "Parameters:", there are two sections: "Required" and "Optional". The "Required" section lists five parameters: "Boundaries" (Data Type: e:DataLayer, Display Name: Boundaries, Default Value: {"item":{"workspaceName":"Default Workspace","projectName":"Default Project","folderType":"esriFolderTradeAreas","itemName":"driveTimeTA"}}), "DataLayerID" (Data Type: xs:string, Display Name: DataLayerID, Default Value: US.Block\_Groups), "AreaIDField" (Data Type: xs:string, Display Name: AreaIDField, Default Value: AREA\_ID), "Templates" (Data Type: ArrayOfString, Display Name: Templates, Default Value: Age Sex), and "ActiveDatasetID" (Data Type: xs:string, Display Name: ActiveDatasetID, Default Value: USA\_EBIS). The "Optional" section lists two parameters: "IsFullErrorMessage" (Data Type: xs:boolean, Display Name: IsFullErrorMessage, Default Value: false) and "StoreIDField" (Data Type: xs:string, Display Name: StoreIDField).

**ArcGIS Business Analyst Services Directory**

[Home](#) > [DefaultMapForREST \(BAServer\)](#) > [SummaryReports](#) [Help](#) | [API Reference](#)

### Tasks: Summary Reports

**Parameters:**

**Required**

**Parameter:** Boundaries  
**Data Type:** e:DataLayer  
**Display Name:** Boundaries  
**Default Value:** {"item":{"workspaceName":"Default Workspace","projectName":"Default Project","folderType":"esriFolderTradeAreas","itemName":"driveTimeTA"}}}

**Parameter:** DataLayerID  
**Data Type:** xs:string  
**Display Name:** DataLayerID  
**Default Value:** US.Block\_Groups

**Parameter:** AreaIDField  
**Data Type:** xs:string  
**Display Name:** AreaIDField  
**Default Value:** AREA\_ID

**Parameter:** Templates  
**Data Type:** ArrayOfString  
**Display Name:** Templates  
**Default Value:** Age Sex

**Parameter:** ActiveDatasetID  
**Data Type:** xs:string  
**Display Name:** ActiveDatasetID  
**Default Value:** USA\_EBIS

**Optional**

**Parameter:** IsFullErrorMessage  
**Data Type:** xs:boolean  
**Display Name:** IsFullErrorMessage  
**Default Value:** false

**Parameter:** StoreIDField  
**Data Type:** xs:string  
**Display Name:** StoreIDField



Business Analyst Services - Windows Internet Explorer

http://localhost/ArcGIS/baserver/REST/services/DefaultMapForREST/BAServer

Business Analyst Services

ArcGIS Business Analyst Services Directory

[Home](#) > [DefaultMapForREST \(BAServer\)](#) > [SummaryReports](#) [Help](#) | [API Reference](#)

## Tasks: Summary Reports

Boundaries: (required)

DataLayerID: (required)

AreaIDField: (required)

Templates: (required)

ActiveDatasetID: (required)

IsFullErrorMessage: ☐ Yes ☒ No

StoreIDField:

RingIDField:

ReportFormat: HTML

OutputType: ☒ GetReport  
GetReport

OutputReportItem:

Format: HTML

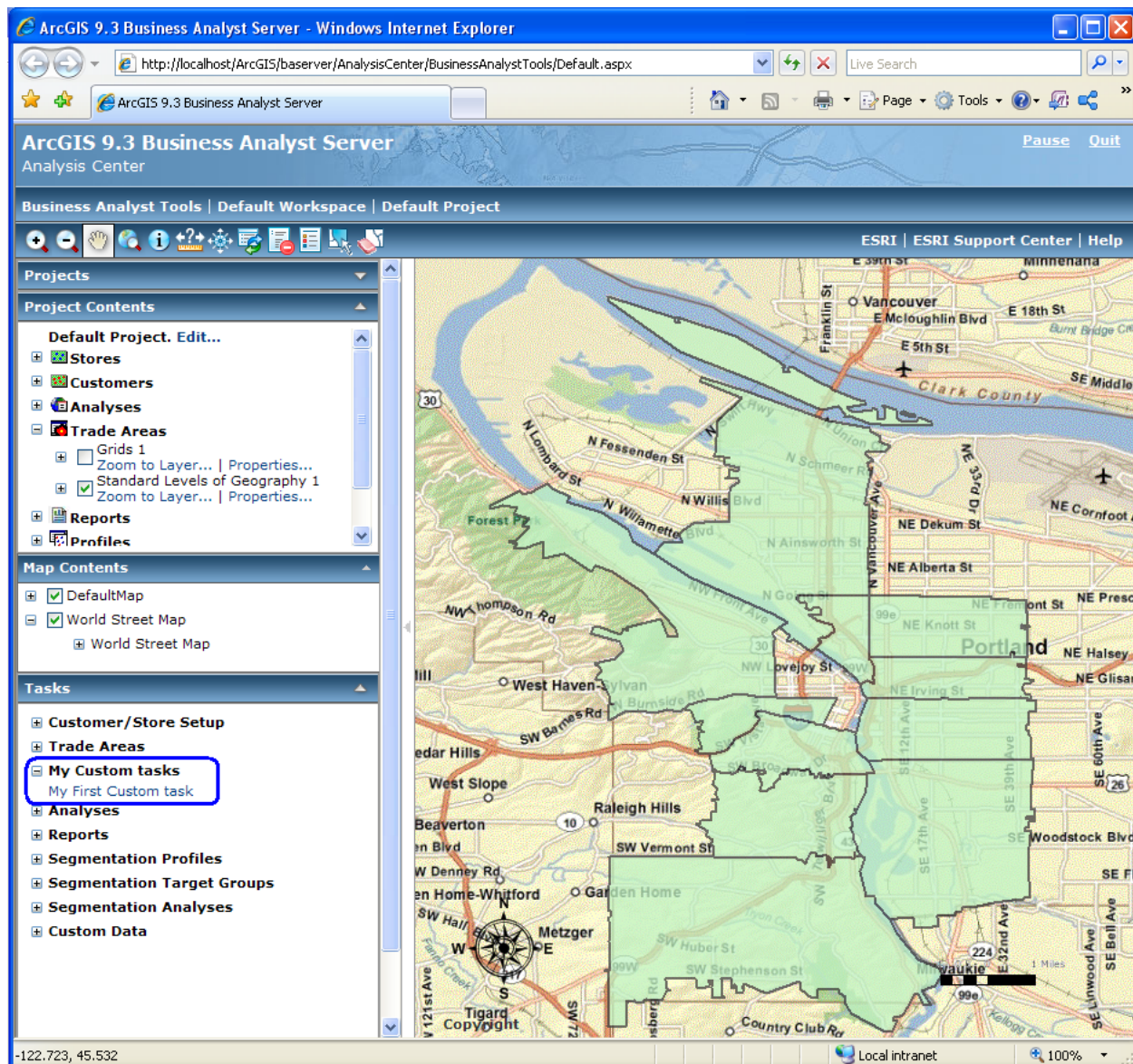
Callback (only for JSON):

Execute



## Custom task/tasks list

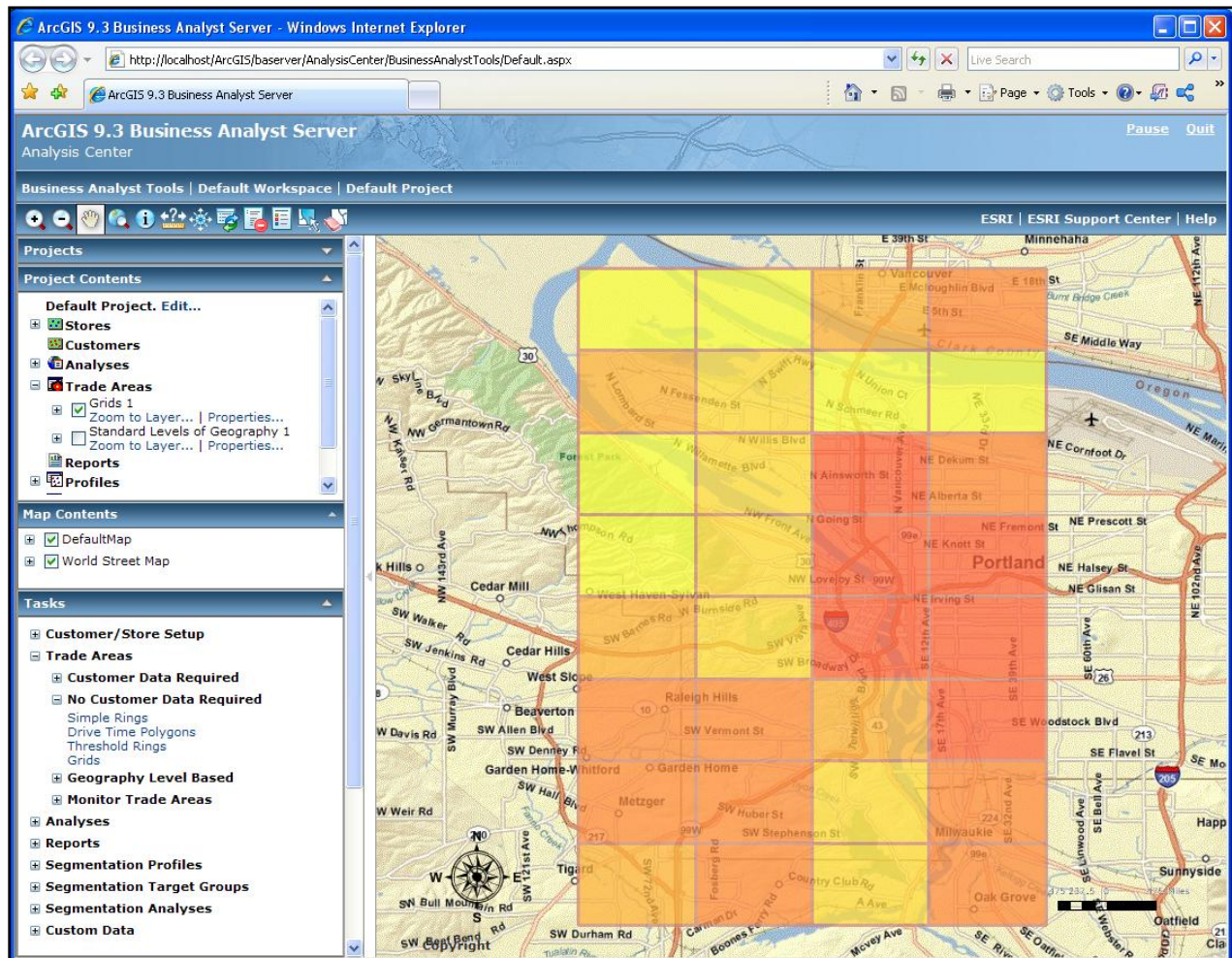
Developers are able to create custom functionality that will be available in the Tasks pane of the Business Analyst Server Tools application.



Two new ways have been added to evaluate and explore the area that your business operates in.

## Grids

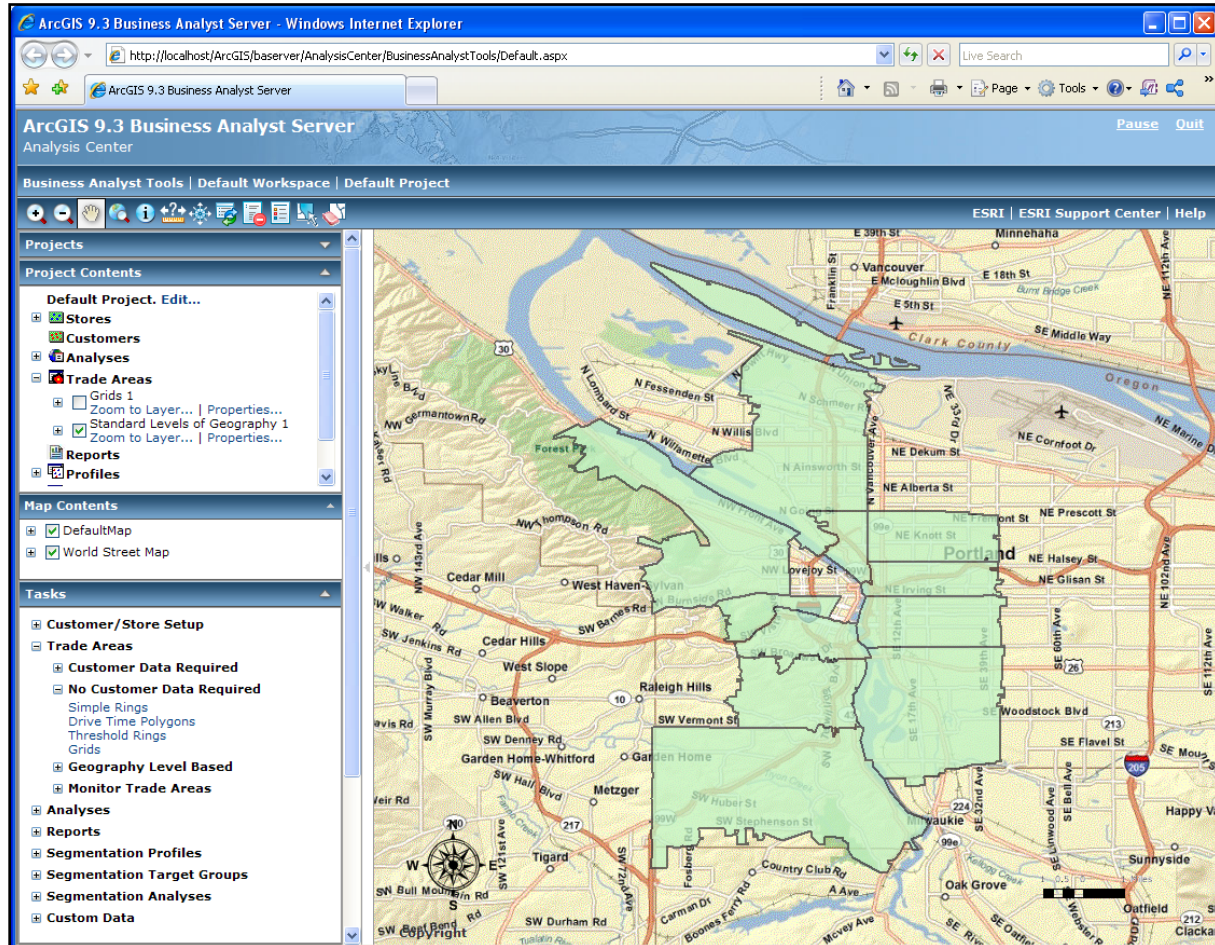
Grids trade area is created over the designated study area. You can create grid cells based on the current extent, study area extent, or extent of a feature in another layer. In addition, you can append demographic data to a grid cell to provide a normalized view of the data, identifying hot spots and areas of interest. Hot spot grid areas appear in red by default.





## Standard levels of geography

By using your own list of geography values you may define trade areas using generally recognized blocks such as states, counties, tracts, ZIP Codes, block groups, core-based statistical areas (CBSA), and designated market areas (DMA). Using this technique allows you to create individual trade areas for each unique geographic block. For example, you can create a trade area for each state and ZIP Code that you specify.



## New Analyses

Understanding your existing sites and customers is more easily achieved with the addition of two new analysis types, Find Similar and Customer Prospecting.

### Find Similar

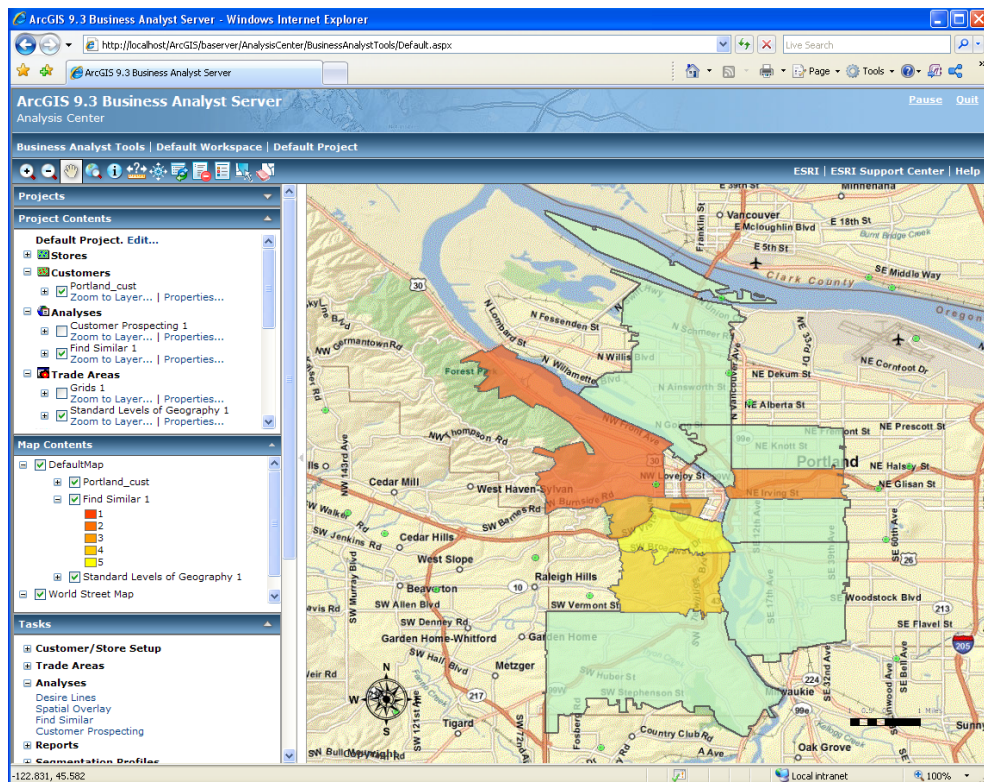
Find similar is a tool to score potential new sites against a known, well-performing site called a master site. This analysis is based on the idea that the characteristics of a master site (or better-performing site) can be used to find similar sites elsewhere. The master site might be based on your best location or a typical location.

For ranking your best potential sites, two methods are available:

**Principal Component Analysis:** Uses a series of multivariate statistic techniques to create groups (factors) of like variables. This approach will rank each potential site by comparing each of the scored group variables with the same group variables of the master site. You choose the number of sites you want to rank.

**Conventional Find Similar:** Compares values you define up to five variables, between the master site and the potential sites. This technique assumes that the variables you selected are significant measurements of similarity among your sites. A rank value for the variables selected (as +/- percentage) has to be entered for your master site values, then sites are assigned a score based on the number of variables that match the criteria you set.

Find Similar allows you to score any polygon data (simple rings, drive times, and any other form of trade areas such as customer prospecting layer or census tracts). Although not required, you should compare similar size areas around the master and potential sites.



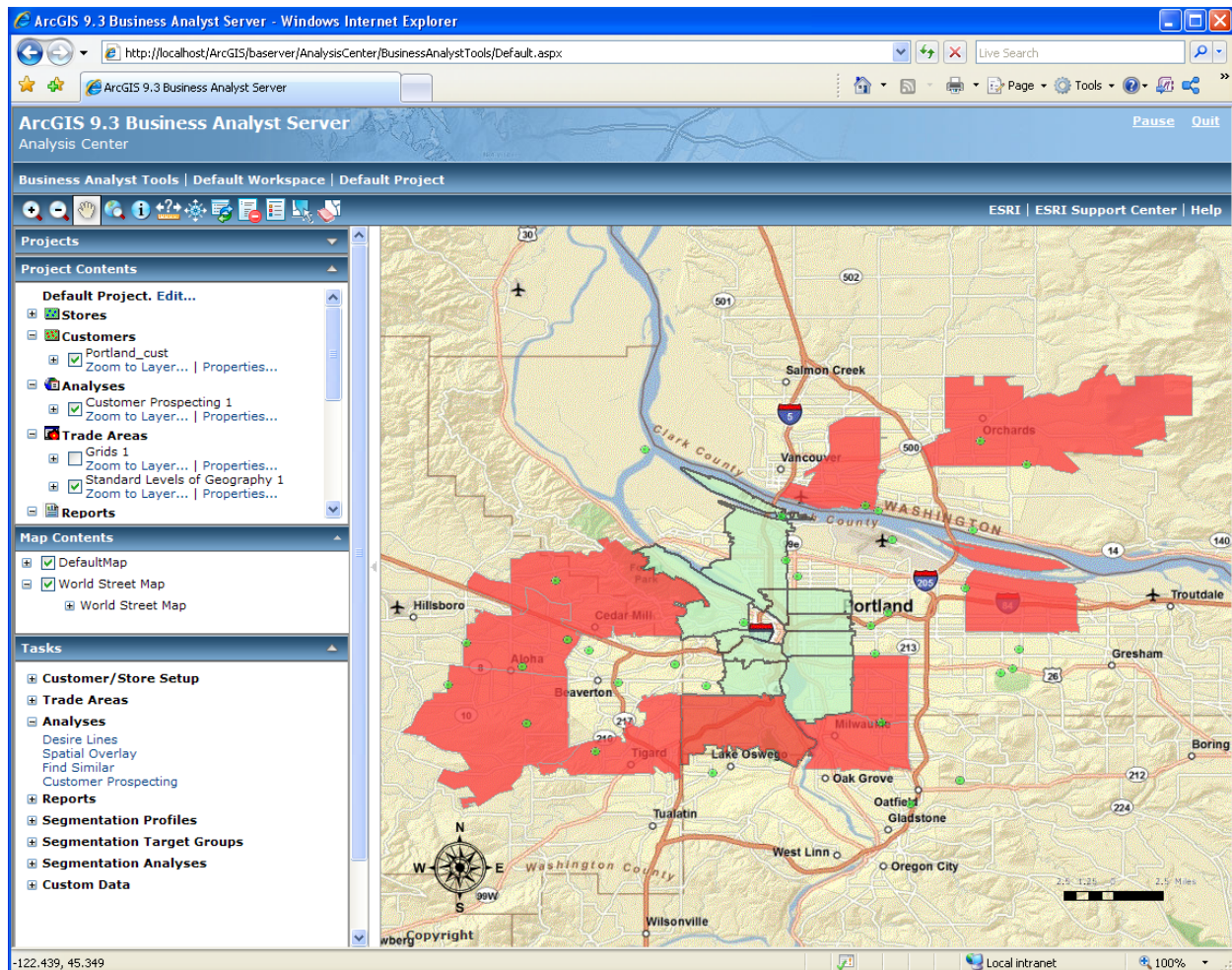


## Customer Prospecting

Customer Prospecting is a type of marketing analysis that helps identify with appropriate characteristics for targeting new customers by analyzing the demographic variables in the area that contain your current target customers.

You can locate these ideal areas in two ways:

- Principal Component Analysis
- Floor and Ceilings values



## New Reports


Enhancing the information generation capabilities is a high priority. Several reports have been added to Business Analyst Server to achieve this goal such as Customer Demographic Profile, Benchmark and Executive Summary.

## Benchmark Report

This report allows you to compare multiple trade areas against one another to determine the differences or similarities between two locations. You can easily measure the demographic characteristics of one area versus all other areas. The report shows statistical differences in raw number, percent, age and index values. Any demographic data variable can be benchmarked.

You can benchmark or compare against any of the following:

- An existing trade area
- The statistical average of all trade areas
- The statistical median of all trade areas

<div>  <div>Benchmark Report</div> <div>Benchmark Report</div> </div>												
TA/Var	Master Benchmark (Average)	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5	US.BDS.ZIP5
Area Id		97210	97212	97217	97227	97201	97202	97205	97214	97219	97232	97239
Store Name												
Area Desc												
2008 Total Population	19255	10012	23875	30468	3300	13640	37707	7378	23296	37805	11218	13102
Difference	0	-9243	4620	11213	-15955	-5615	18452	-11877	4041	18550	-8037	-6153
Percent %	0.00	-48.00	24.00	58.24	-82.86	-29.16	95.83	-61.68	20.99	96.34	-41.74	-31.95
2008 Household Population	18763	9905	23810	30302	3222	13036	36463	6655	22339	36779	10952	12930
Difference	0	-8858	5047	11539	-15541	-5727	17700	-12108	3576	18016	-7811	-5833
Percent %	0.00	-47.21	26.90	61.50	-82.83	-30.52	94.33	-64.53	19.06	96.02	-41.63	-31.09
2008 Total Households	9207	5814	10354	12731	1327	8568	17196	4939	11834	15846	6125	6547
Difference	0	-3393	1147	3524	-7880	-639	7989	-4288	2627	6639	-3082	-2660
Percent %	0.00	-36.85	12.45	38.27	-85.59	-6.94	86.76	-46.36	28.53	72.10	-33.48	-28.89
2008 Average Household Size	1.98	1.70	2.30	2.38	2.43	1.52	2.12	1.35	1.89	2.32	1.79	1.97
Difference	0.00	-0.28	0.32	0.40	0.45	-0.46	0.14	-0.63	-0.09	0.34	-0.19	-0.00
Percent %	0.00	-13.93	16.18	20.25	22.67	-23.13	7.13	-31.92	-4.63	17.26	-9.66	-0.22
Index	100.00	86.07	116.18	120.25	122.67	76.87	107.13	68.08	95.37	117.26	90.34	99.78
2013 Total Population	19777	10340	24471	31245	3379	14279	38615	7551	23741	38805	11511	13612
Difference	0	-9437	4694	11468	-16398	-5498	18838	-12226	3964	19028	-8266	-6165
Percent %	0.00	-47.72	23.73	57.99	-82.91	-27.80	95.25	-61.82	20.04	96.21	-41.80	-31.17
2013 Household Population	19286	10232	24406	31080	3302	13675	37371	6828	22784	37780	11244	13440
Difference	0	-9054	5120	11794	-15984	-5611	18085	-12458	3498	18494	-8042	-5846
Percent %	0.00	-46.94	26.55	61.16	-82.88	-29.09	93.78	-64.80	18.14	95.90	-41.70	-30.31
2013 Total Households	9485	5999	10638	13065	1362	9042	17652	5043	12089	16301	6308	6840
Difference	0	-3486	1153	3580	-8123	-443	8167	-4442	2604	6816	-3177	-2645
Percent %	0.00	-36.76	12.15	37.74	-85.64	-4.67	86.10	-46.83	27.45	71.85	-33.50	-27.89
2013 Average Household Size	1.98	1.71	2.29	2.38	2.42	1.51	2.12	1.35	1.88	2.32	1.78	1.96
Difference	0.00	-0.27	0.32	0.40	0.45	-0.46	0.14	-0.62	-0.09	0.34	-0.19	-0.01
Percent %	0.00	-13.68	16.10	20.39	22.69	-23.46	7.14	-31.48	-4.62	17.29	-9.79	-0.56
Index	100.00	86.32	116.10	120.39	122.69	76.54	107.14	68.52	95.38	117.29	90.21	99.44
TA_DESC		TA from geography Layer: 97210	TA from geography Layer: 97212	TA from geography Layer: 97217	TA from geography Layer: 97227	TA from geography Layer: 97201	TA from geography Layer: 97202	TA from geography Layer: 97205	TA from geography Layer: 97214	TA from geography Layer: 97219	TA from geography Layer: 97232	TA from geography Layer: 97239

## Customer Demographic Profile Report

This report allows you to contrast the demographic attributes of one set of customers against those of another. You can compare a selected subset of customers to the entire layer or compare two separate customer layers. The differences are shown by total number and percentage.



### Customer Demographic Profile Customer Demographic Profile Report

## Customer Demographic Profile

### Who are your current customers?

Now that you know where most of your current customers are, you can learn more about their lifestyles and demographic makeup. ESRI uses the geographic information obtained based on your customer's address information, to append demographic characteristics and a Tapestry segmentation code to each customer record. The results of this analysis are found in the *Customer Demographic Profile and Customer Tapestry Profile*.

The Demographic Profile summarizes the demographic makeup of geographies where your customers live. Based on the information in this report, you can get a sense of the demographic makeup of your customer base.

A. There is a 18.6% chance that two people in your area, chosen at random, will belong to different race or ethnic groups. A diversity index of 100% represents an area where a variety of races are evenly represented.

B. 38.8 is the ratio of the young population (<15 years) and the older population (65+ years) to the working age population (15-64 years) in your area.

C. 38.9% of all married couple families contain their own children age <18. Children under age 18 are classified as own children by birth, marriage (a stepchild), or adoption.

D. 0.0% of the housing units in your area are located in urban areas, as defined by the Census.

E. 92.9% of the housing units in your area are specified owner occupied housing units with a mortgage. Specified owner occupied housing units exclude mobile homes, houses with a business or medical office, houses on 10+ or more acres, and housing units in multiunit buildings.

F. 90.5% of the homes in your area are owner-occupied.

G. The median contract rent for Specified Renter Occupied HUs in your area is \$880. Specified Renter Occupied HUs exclude houses on 10+ acres. Contract rent is the monthly rent contracted for, regardless of furnishings, utilities, fees, meals, or services that may be included.

#### DEMOGRAPHIC CHARACTERISTICS

##### Annual Compound Growth Rates

	2000-2008	2008-2013
Population	2.3	2.2
Households	2.2	2.1
Families	2.1	1.9
Per Capita Income	2.7	2.2

##### 2008 Population by Race/Ethnicity

White Alone	94.7
Black Alone	0.4
American Indian Alone	0.7
Asian or Pacific Islander Alone	0.7
Some Other Race Alone	1.8
Population of 2+ Races	1.7
Hispanic Origin	4.9
Diversity Index	18.6

##### 2008 Population by Age

0-4	6.0
5-14	14.2
15-19	7.8
20-24	5.2
25-44	23.7
45-64	35.3
65-84	7.2
85+	0.6
Median Age	40.8
Age Dependency Index	38.8

#### HOUSING CHARACTERISTICS

##### 2000 Housing Units

Urban	0.0
Rural	100.0

##### 2000 Specified Owner Occupied Housing

Units with a Mortgage	92.9
-----------------------	------

##### 2008 Housing Units

Owner-Occupied	90.5
Renter-Occupied	5.4

##### 2000 Housing Units by Units in Structure

1 Unit - Detached	95.6
1 Unit - Attached	0.8
2-9 Units	0.7
10+ Units	0.4
Mobile and other	2.5

##### 2000 Housing Units by Year in Structure Built

Structure Built 1990 or Later	49.8
Structure Built 1989 or Earlier	50.2
Median Year Structure Built	1990

Source: ESRI, 2008 Estimates & Projections.

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1/7/2009

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## Executive Summary report

This report provides an executive summary, in paragraph form, of key demographic attributes in a trade area. The report includes current-year estimates, five-year forecasts, and Census 2000 demographic data. The report aids site selection, market analysis, and trend evaluation decisions.

			
<b>Executive Summary</b>			
<b>Portland, OR</b>			
Store ID: 1	TA from geography Layer: 97210	TA from geography Layer: 97212	TA from geography Layer: 97217
<b>2008 Total Population</b>			
Total Population	10,012	23,875	30,467
Male Population	50.4%	48.0%	49.9%
Female Population	49.6%	52.0%	50.1%
Median Age	37.2	39.8	37.7
<b>2008 Income</b>			
Median HH Income	\$60,105	\$67,684	\$51,460
Per Capita Income	\$56,765	\$38,353	\$24,923
Average HH Income	\$97,343	\$87,747	\$59,566
<b>2008 Households</b>			
Total Households	5,814	10,354	12,731
Average Household Size	1.7	2.3	2.4
1990-2000 Annual Rate	0.88%	0.46%	0.58%
<b>2008 Housing</b>			
Owner Occupied Housing Units	33.4%	62.3%	62.1%
Renter Occupied Housing Units	59.2%	32.5%	29.6%
Vacant Housing Units	7.4%	5.2%	8.3%
<b>Population</b>			
1990 Population	9,200	23,471	28,500
2000 Population	9,653	23,556	29,733
2008 Population	10,012	23,875	30,467
2013 Households	10,339	24,471	31,245
1990-2000 Annual Rate	0.48%	0.04%	0.42%
2000-2008 Annual Rate	0.44%	0.16%	0.30%
2008-2013 Annual Rate	0.64%	0.49%	0.51%
In the identified market area, the current year population is 10,012. In 2000, the Census count in the market area was 9,653. The rate of change since 2000 was 0.5 percent annually. The five-year projection for the population in the market area is 10,339, representing a change of 0.6 percent annually from 2008 to 2013. Currently, the population is 50.4 percent male and 49.6 percent female.			
<b>Households</b>			
1990 Households	5,109	9,609	11,615
2000 Households	5,576	10,061	12,302
2008 Total Households	5,814	10,354	12,731
2013 Total Households	5,999	10,638	13,065
1990-2000 Annual Rate	0.88%	0.46%	0.58%
2000-2008 Annual Rate	0.51%	0.35%	0.42%
2008-2013 Annual Rate	0.63%	0.54%	0.52%
The household count in this market area has changed from 5,576 in 2000 to 5,814 in the current year, a change of 0.5 percent annually. The five-year projection of households is 5,999, a change of 0.6 percent annually from the current year total. Average household size is currently 2, compared to 2 in the year 2000. The number of families in the current year is 1,757 in the market area.			
Currently, 33.3 percent of the 6,293 housing units in the market area are owner occupied; 59.1 percent, renter occupied; and 7.3 are vacant. In 2000, there were 5,974 housing units - 31.8 percent owner occupied, 61.6 percent renter occupied, and 6.4 percent vacant. The rate of change in housing units since 2000 is 0.6 percent. Median home value in the market area is \$701,016, compared to a median home value of \$192,285 for the U.S. In five years, median value is projected to change by 1.8 percent annually to \$765,152. From 2000 to the current year, median home value change by 8.1 percent annually.			

## New Output format

Another report data format has been added for analysts who are comfortable with Microsoft Excel spreadsheets. Export to CSV will allow all of the detailed report data to be available for use by any spreadsheet function.

	A	B	C	D	E	F	G
1	Executive Summary						
2	Portland, OR						
3							
4	Store ID:	1					
5		TA from geography Layer: 97210	TA from geography Layer: 97212	TA from geography Layer: 97217			
6	2008 Total Population						
7	Total Population	10,012	23,875	30,467			
8	Male Population	50.40%	48.00%	49.90%			
9	Female Population	49.60%	52.00%	50.10%			
10	Median Age	37.2	39.8	37.7			
11							
12	2008 Income						
13	Median HH Income	\$60,105	\$67,684	\$51,460			
14	Per Capita Income	\$56,765	\$38,353	\$24,923			
15	Average HH Income	\$97,343	\$87,747	\$59,566			
16							
17	2008 Households						
18	Total Households	5,814	10,354	12,731			
19	Average Household Size	1.7	2.3	2.4			
20	1990-2000 Annual Rate	0.88%	0.46%	0.58%			
21							
22	2008 Housing						
23	Owner Occupied Housing Units	33.40%	62.30%	62.10%			
24	Renter Occupied Housing Units	59.20%	32.50%	29.60%			
25	Vacant Housing Units	7.40%	5.20%	8.30%			
26							
27	Population						
28	1990 Population	9,200	23,471	28,500			
29	2000 Population	9,653	23,556	29,733			
30	2008 Population	10,012	23,875	30,467			
31	2013 Households	10,339	24,471	31,245			
32	1990-2000 Annual Rate	0.48%	0.04%	0.42%			
33	2000-2008 Annual Rate	0.44%	0.16%	0.30%			
34	2008-2013 Annual Rate	0.64%	0.49%	0.51%			
35							
36							
37	In the identified market area the current year population is "10,012".						
38	In 2000 the Census count in the market area was "9653".						

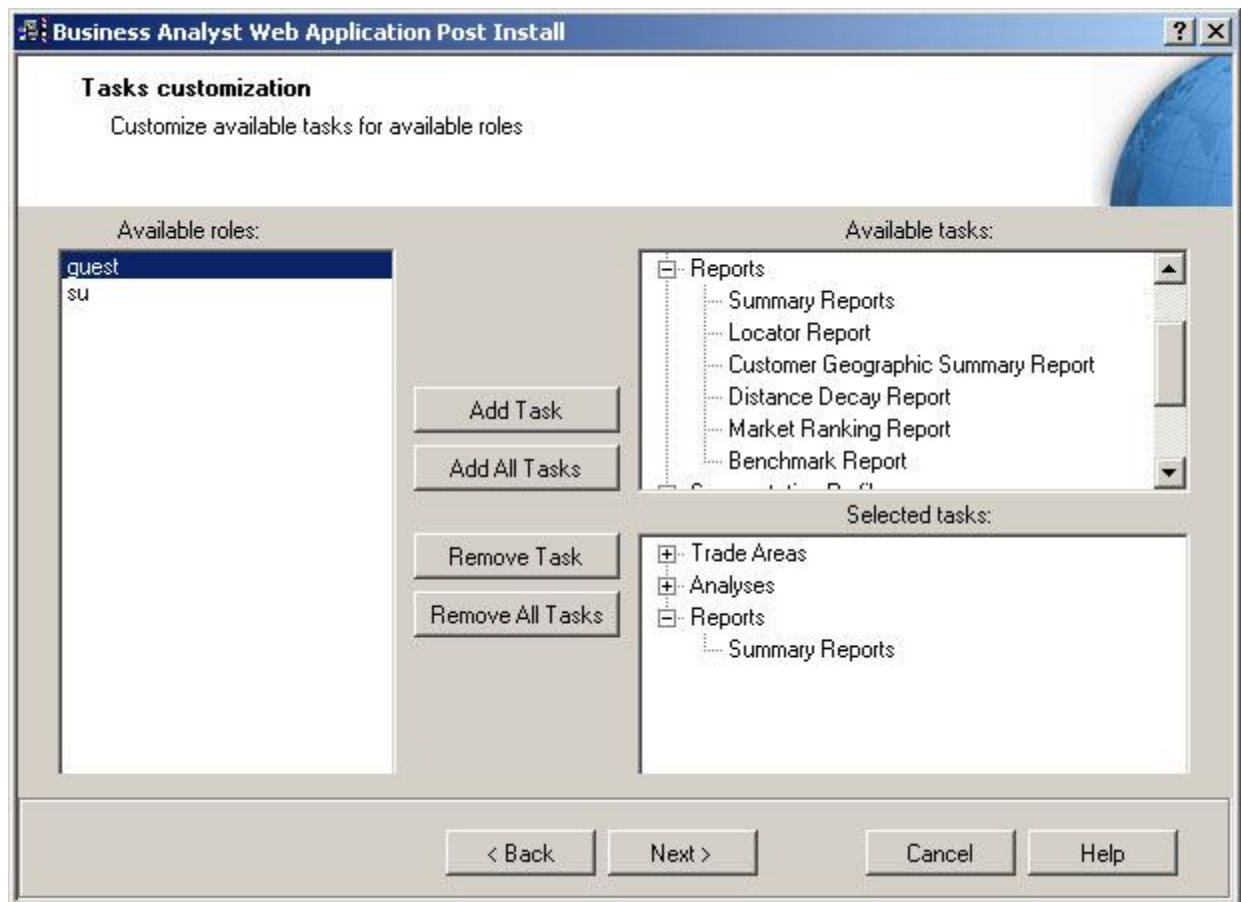
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## Security

Your server represents an investment of effort and resources that you want to protect. ArcGIS Server contains security mechanisms that can prevent unauthorized users from accessing your services and applications. Business Analyst provides the trusted security from ArcGIS Server that includes secure web applications, secure GIS Web services along with capabilities to manage users and their roles.

Business Analyst Server supports a user role based security scheme. Business Analyst Web Application Post Install process allows an administrator to configure security for the Analysis Center.

An administrator will be able to define which tasks are available to different user roles to streamline the choices available within the applications. An administrator can also secure the repositories and workspaces that are accessed by Business Analyst Server.



## 2008 Data Update

The 2008 data update is the demographic foundation for ArcGIS Business Analyst Server 9.3. The 2008 data include current-year estimates and five-year projections for key demographic data. With the exception of the Community™ Tapestry™ segmentation data, which is not available at the block group level of geography in the standard product, all data is available at census block group, census tract, county, state, USA, CBSA, DMA, and ZIP Code levels of geography. The data update is as of July 1, 2008.