

Azuren yleiskatsaus

eli mistä on kyse ja miten vertautuu esim. AWS:ään

AWS User Group Helsinki, 2011-04-27

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Petri Raitio

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 - Tekla Oyj, 1987-2010, CTO
 - Digium Oy, hallituksen jäsen

Sulava Oy

Sulava on erikoistunut edistämään uudenlaista digiajan työkulttuuria, jonka ytimessä ovat pilvipalveluiden ja sosiaalisten teknologioiden tehokas hyödyntäminen.

marraskuu 2010, 12 + 2, Microsoft-teknologiat

Microsoft Cloud Computing Continuum

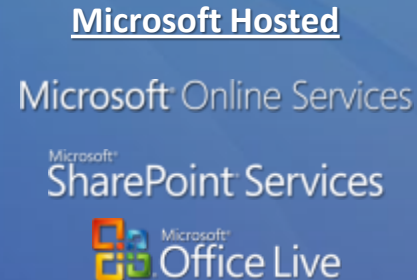
Private

Public

IT as a Service



Software as a Service (SaaS)



Partner Hosted



Platform as a Service (PaaS)



Infrastructure as a Service (IaaS)



Microsoft | Dynamic Data Center Toolkit For Enterprises

Microsoft | Dynamic Data Center Toolkit For Hosters

IaaS vs. PaaS

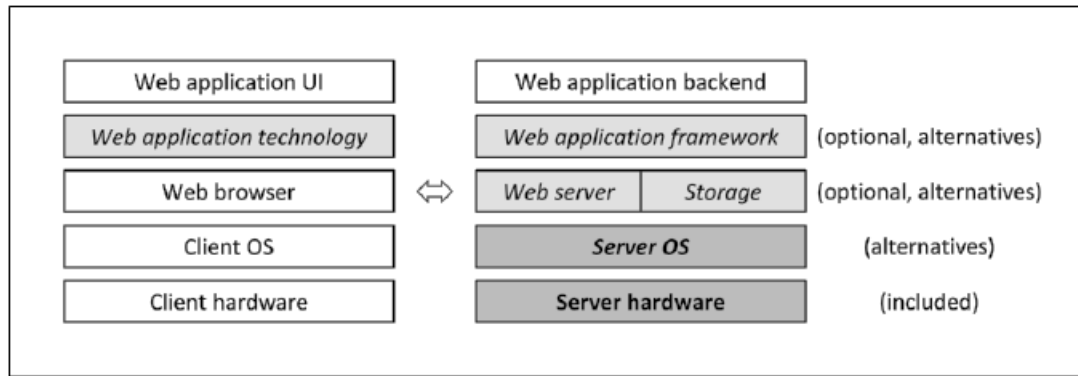


Figure 8. Amazon Server Architecture

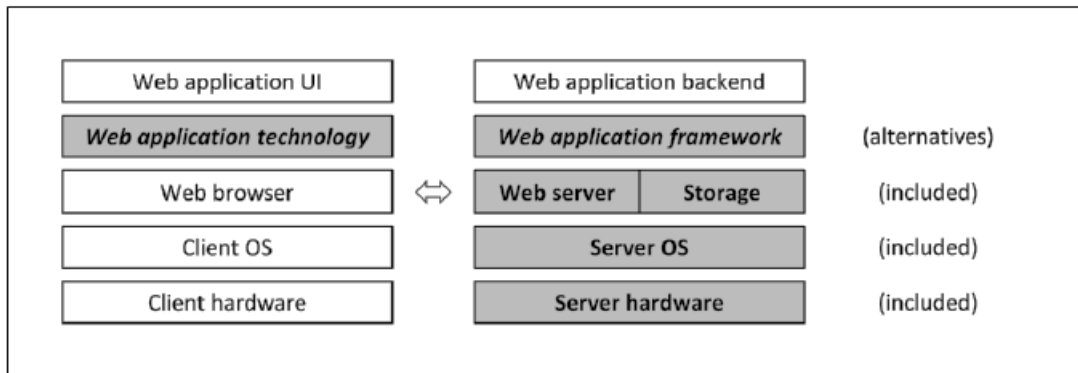


Figure 9. Azure Server Architecture

Windows Azure -palvelualusta

Sovellukset



Muut palvelualustat



Tuetut kehitysympäristöt



Microsoft
Visual Studio



python



Windows Azure™



Laskenta



Tallennus



Hallinta



Microsoft
SQL Azure™



Relaatiokannat



Hallinta



Windows Azure™
AppFabric



Palveluväylä



Pääsynhallinta

Koontisovellukset

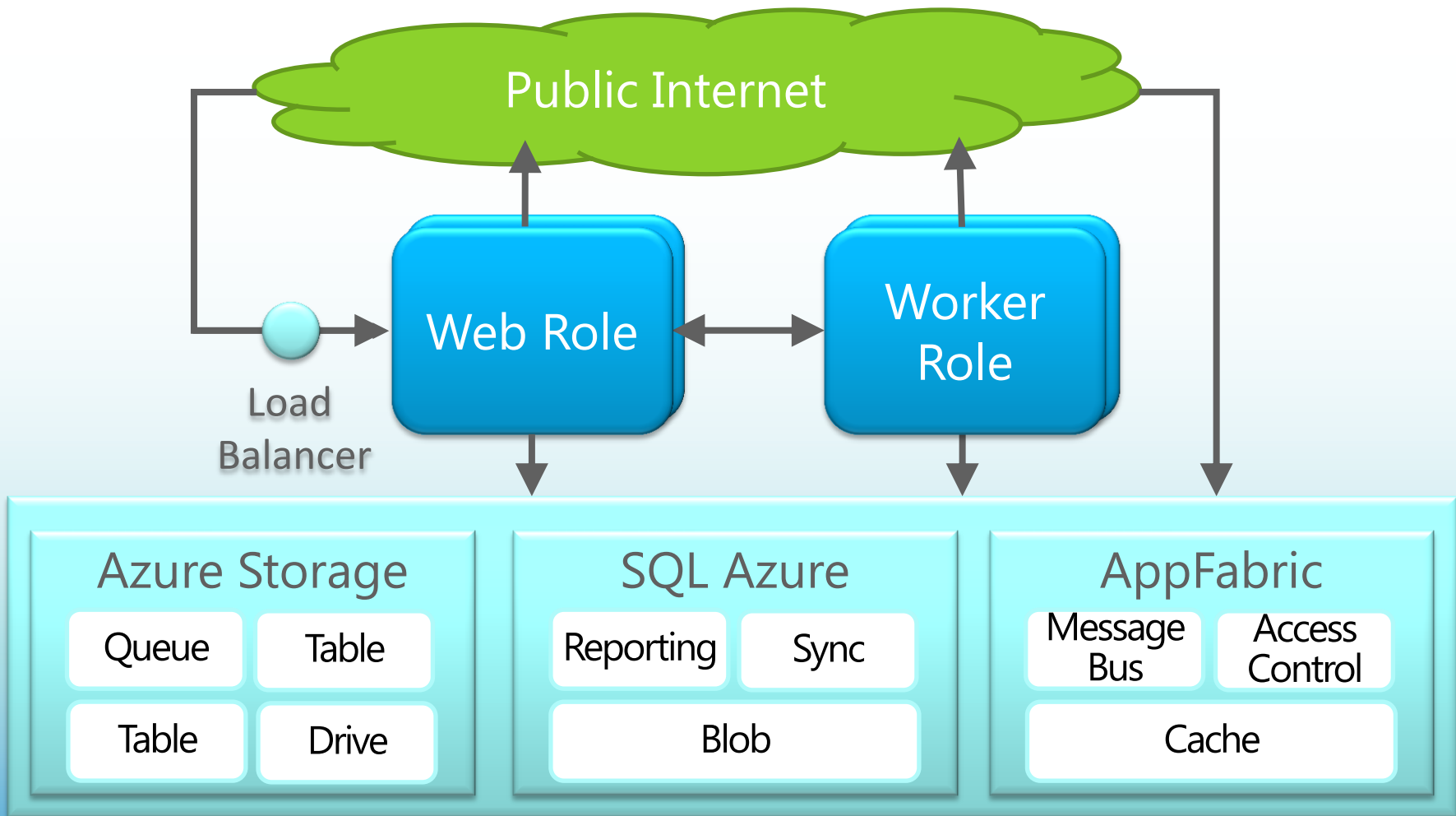


Liiketoimintasovellukset

Windows Azure -teknologiat

	Windows Azure PaaS
Applications	Windows Azure Service Model
Runtimes	.NET 3.5/4, ASP .NET, PHP
Operating System	Windows Server 2008-Compatible OS
Virtualization	Windows Azure Hypervisor
Server	Microsoft Blades
Database	SQL Azure
Storage	Windows Azure Storage (Blob, Queue, Table)
Networking	Windows Azure-Configured Networking

Windows Azure Application



Comparison of Role Types

- *Web Role* : The role is hosted on **IIS**
- *Worker Role* : The role is an **executable** (you can create your own web server, host a database, ...)
- *Admin Mode: Scripted admin level tuning at startup*
- *VM Role* : The role is the **VM**.
 - Use Windows services, scheduled tasks, etc.
 - **You configure and maintain the OS.**



Windows Azure instanssikoot

X-Small (XS) \$0.05 käyttötunnilta	Small (S) \$0.12 käyttötunnilta	Medium (M) \$0.24 käyttötunnilta	Large (L) \$0.48 käyttötunnilta	X-Large (XL) \$0.96 käyttötunnilta
Extra Small 1 x 1.0GHz 5Mbps IO 768 MB muistia 20 GB levyä (paikallista työtila)	Small 1 x 1.6GHz 100Mbps IO 1.75 GB muistia 225 GB levyä (transient storage)	Medium 2 x 1.6GHz 200Mbps IO 3.5 GB muistia 500 GB levyä (transient storage)	Large 4 x 1.6GHz 400Mbps IO 7.0 GB muistia 1000 GB levyä (transient storage)	X-Large 8 x 1.6GHz 800Mbps IO 14.0 GB muistia 2000 GB levyä (transient storage)

Laskutus alkaa, kun ympäristö käynnistetään ja loppuu, kun se sammutetaan!

Laskutusperusteet [vs. AWS]

- Käynnissä oleva instanssi \$0.12 /h [0.12]
- Tietoliikenne sisään \$0.10 /GB [0.10]
- Tietoliikenne ulos \$0.15 /GB [0.15]
- Tallennus \$0.15 /GB-mo [0.14]

Azure tallennuskapasiteetti

BLOBIT:

Yksinkertainen rajapinta tiedostojen käsittelyyn (max 1TB / tiedosto)

TAULUT:

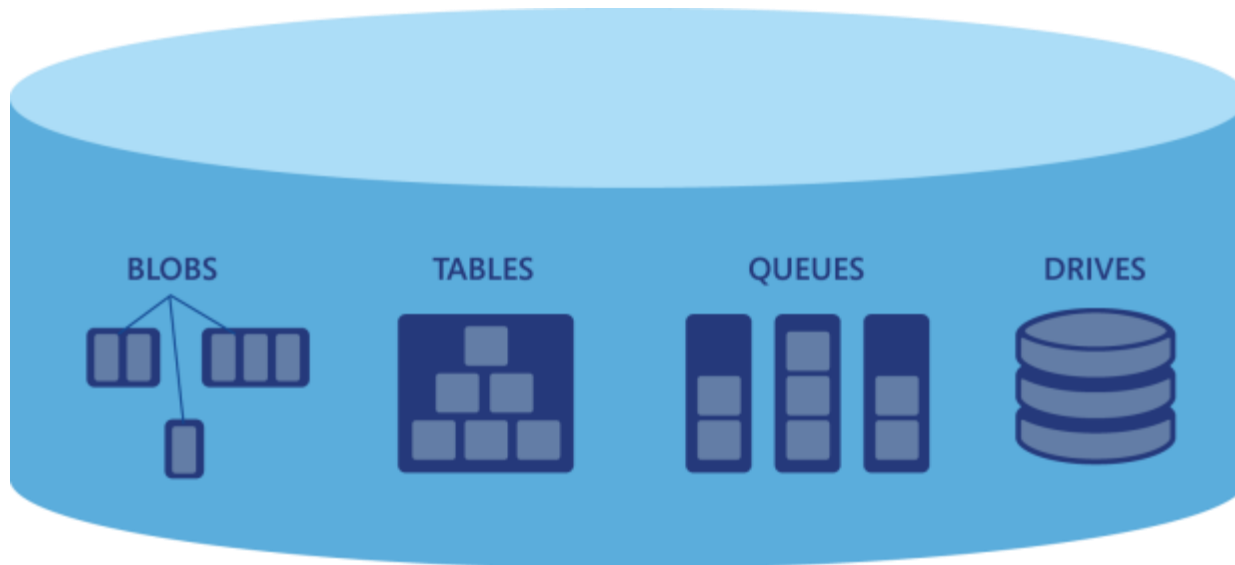
Strukturoitu tallennustila datalle. Ei relaatiomallia

JONOT:

Azure sovellusten viestinvälitykseen.

LEVYT:

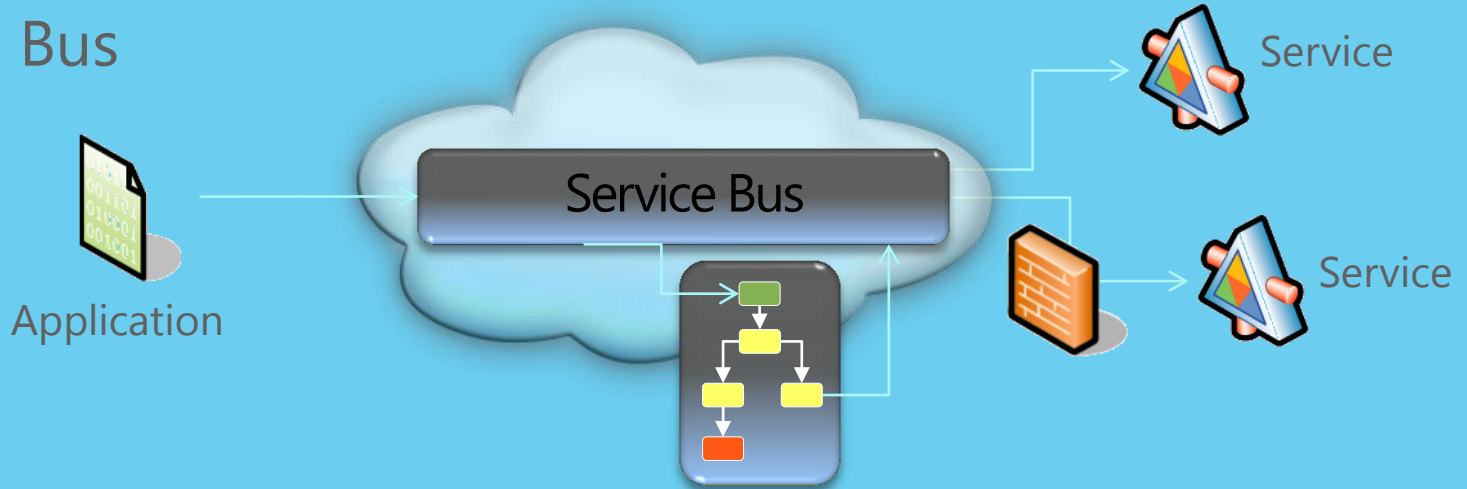
Pysyvä NTFS järjestelmälevy. Jaettavissa instanssien kesken.



Massiivisesti skaalautuva tallennusmekanismi

AppFabric

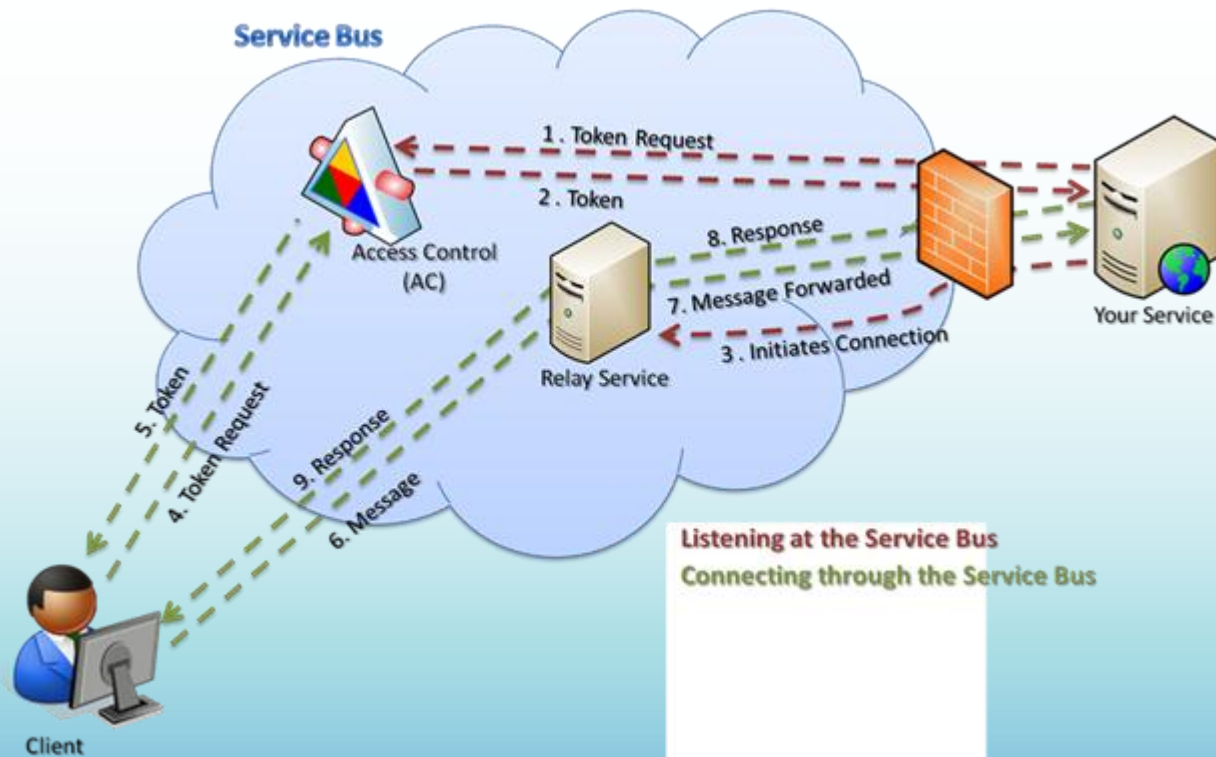
Service Bus



Access Control



Using Service Bus



AppFabric Caching

- Highly scalable caching solution with low latency and high throughput
- Simple administration
 - No need to build, deploy, or manage your own distributed cache
 - Provision what you need, pay for what you use (pricing TBD)
- Roadmap
 - Public release to AppFabric LABS today
 - Additional features (e.g. HA, regions, notifications, etc.)
 - Commercial launch in the first half of 2011
- To get started:
 - For more information:
<http://www.microsoft.com/windowsazure/appfabric/>
 - Start using today: <https://portal.appfabriclabs.com/>

Windows Azure Connect

- Secure network connectivity between Windows Azure & on-premise resources
 - Quickly connect on-premise computers with the cloud, no networking configuration required
 - Supports standard IP protocols; secured using end-to-end IPSec
 - Integrated with the Windows Azure Service Model; all role types supported
- Example use cases:
 - **Enterprise Resources:** Enable Windows Azure applications to connect directly to on-premises resources without re-designing to be Internet accessible (e.g., SQL Server)
 - **Domain-Join:** Join Windows Azure apps to on-premises Active Directory; control access to Windows Azure roles based on existing AD accounts and groups
 - **Simplified Development:** Directly connect from your development machines to your Windows Azure instances, use your favorite tools for configuring and debugging
 - **Remote Administration:** Use your existing tools for remote administration tasks directly against your Windows Azure instances (e.g., remote PowerShell)

Windows Azure DataMarket: Easily Discover And Explore Datasets

Windows Azure Marketplace DataMarket

Learn Browse Partners My Data Help Search the Marketplace

One stop shop for Data.

Get all data you need for your insights; trusted commercial and premium public domain data.

LEARN MORE EXPLORE THE MARKETPLACE

Categories

- Entertainment and Media
- Financial
- Health and Wellness
- Location Based Services
- Mathematics
- Movies and Events
- News
- Points of Interest
- Real Estate
- Retail and Merchandise
- Statistics
- Transportation and Navigation

Datasets

European Greenhouse Gas Emissions
Data on greenhouse gas emissions and removals, sent by European countries to the United Nations Framework Convention on Climate Change and the European Union Greenhouse Gas Monitoring Mechanism (EU Member States).
[view details](#)

STATS Sports Database - MLB year-to-year...
The STATS Sports Database will provide users with MLB year-to-date season stats, dating back to 1980.
[view details](#)

Millennium Development Goals Database...
The Millennium Development Goals Database presents official data for more than 60 indicators to measure progress towards the Millennium Development Goals.
[view details](#)

Announcements
New version of LINQPad shipped with support for "Dallas"
10/22/2010
"Dallas" and PHP
10/22/2010

DATA.GOV

2006 - 2008 Crime in the United States
Extraction of offense, arrest, and clearance data as well as law enforcement staffing information from the FBI's Uniform Crime Reporting (UCR) Program.

Service root URL: <https://api.datamarket.azure.com/Data.ashx/data.gov/Crimes>
Current query URL (Refresh): <https://api.datamarket.azure.com/Data.ashx/data.gov/Crimes/City/Crime>

Service parameters

Series: CityCrime [City/Crime]

ROWID: []

State: []

City: []

Year: []

Paging

☐ Enable paging

Start page: []

Items per page: []

Execute Query

Table	Atom Pub
ViolentCrime	22
MurderAndNonNegligentManslaughter	257
ForcibleRape	453

ROWID	State	City	Year	Population	Violent Crime	MurderAndNonNegligentManslaughter	Forcible Rape	Rob
115856	Alaska	Anchorage	2007	284142	2405	22	15	0
115857	Alaska	Bethel	2007	6488	61	2	0	0
115858	Alaska	Bristol Bay Borough	2007	1028	8	0	0	0
115859	Alaska	Cordova	2007	2322	9	0	0	0
115860	Alaska	Craig	2007	1186	41	0	0	0
115861	Alaska	Dillingham	2007	2494	76	1	24	3
115862	Alaska	Fairbanks	2007	31287	258	5	43	42
115863	Alaska	Haines	2007	2260	16	0	1	0
115864	Alaska	Homer	2007	5629	52	0	2	1
115865	Alaska	Houston	2007	1992	3	0	0	0

22 17

2 3

9 1

5 1

1 1

15 7

4 1

0 0

1 0

2010 Key US Demographics by ZIP Code, Place and County - Esri

Published by: [esri](#)
Categories: [Location Based Services](#), [Statistics](#)
Date added: [October 25, 2010](#)
Get support for this dataset:

Esri 2010 Key US Demographics by ZIP Code, Place and County Data is a selected offering of the demographic data required to understand a market. Esri 2010 key Demographics contains current-year updates for 14 key demographic variables. Esri has a team of demographers, statisticians, and economists who use a wide variety of public and private data sources to develop a uniquely accurate and detailed picture of local population, economic, housing, and business characteristics. Using Geographic Information System tools and our strong demographic estimating experience, Esri captures the effects of significant events that occur between decennial censuses. Esri provides a proven track record of accuracy and agility. Current year variables ensure that analysts and the public alike can conduct their research with the most accurate information available which is especially critical in fast changing areas.

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