

# Doing Awesome Things With Azure Search

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# Agenda

- Overview
- Indexes
- Searching
- Advanced Features
- Analyzing Data
- Pricing
- Learn more



# Why Azure Search?

- Search can be complex
- Requires constant rebuilding
- Requires constant tuning
- Needs to be industry / site / context specific
- Difficult to predict load
- If it doesn't work, you'll know really fast



# Azure Search

- SaaS Platform
- Released in 2014
- HTTPS / API-only service
  - API Keys
- Cloud hosted indexes
- Low administration
  - All systems maintained by Microsoft
- Plans
  - Free/ Basic / Standard S1,S2,S3
- Availability
  - 12 Regions / Data Centers
- Scalable
  - Multiple tiers
  - Configurable via Preview portal
- Analytics



# Indexes

- Data must be hosted in Azure
- Push / Pull Model
  - Push – SDK / REST APIs
  - Pull = Indexers (SQL Database / VM SQL / Document DB)
- Can have up to 1000 fields in each index
- Field Properties
  - Key
  - Searchable
  - Sortable
  - Filterable
  - Retrievable
  - Suggestions
  - Analyzer

```
#region IndexActions
1 reference | KenticoBSoltis, 16 days ago | 1 author, 1 change
public string CreateIndex()
{
    // Create the Azure Search index based on the
    try
    {
        //Create the index definition
        var definition = new Index()
        {
            Name = _indexName,
            Fields = new[]
            {
                new Field ( "DocumentID", DataType.Str
                new Field ( "NodeAliasPath", DataType
                new Field ( "QuoteAuthor", DataType.S
                new Field ( "QuoteText", DataType.Str
                new Field ( "QuoteDate", DataType.Str
            }
        };

        definition.Suggesters = new List<Suggester
        {
            new Suggester()
            {
                Name = "quoteauthor",
                SearchMode = SuggesterSearchMode.
                SourceFields = new List<string> {
            }
        };

        List<ScoringProfile> lstScoringProfiles =
        TextWeights twauthor = new TextWeights();
        twauthor.Weights.Add("QuoteAuthor", 100);
        TextWeights twtext = new TextWeights();
        twtext.Weights.Add("QuoteText", 100);

        lstScoringProfiles.Add(new ScoringProfile
        {
            Name = "QuoteAuthor",
            TextWeights = twauthor
```

# Searching

- Single index only
- Full-text queries
  - Prefix matching
- Syntax
  - OData syntax for Boolean
  - Simple query syntax for full-text
- Search=\* (all fields) / Specific columns
- Scoring
  - Scoring Profiles
  - Field weighting
  - Custom functions
- Azure Search SDK / REST API



# Advanced Features

- Highlighting
  - highlight=[field name]
- Facets
  - Schema-driven
  - Define columns to categorize
    - Facet=Rating,value:1|2|3|4
- Filters
  - Used with facets
  - Operators
- Suggestions
  - Auto-complete
  - Fuzzy / Infix
- Analyzers
- Synonym Maps
- CORS
  - None / All / Custom



# Other Awesome Things

- Geo-Location
- Media Files
  - Transcripts
- Azure-hosted Data
  - Azure Database
  - Azure Tables
- GitHub Samples
- Custom Analyzers
  - Phonetic
  - Search / Index Specific
  - Prefixes
- Scoring Profiles
  - Tag boosting





# Demo Slide

*(for demoing)*



# Analyzing Your Data

- Power BI Content Pack
  - Free!
  - Contains major data points
- Search Reports
  - Most Common Search Queries
  - Searches Over Time
  - Number of Searches
- Indexing Reports
  - Indexing Requests
  - Documents Indexed
  - 503s Report
- Service Reports
  - Results Over Time



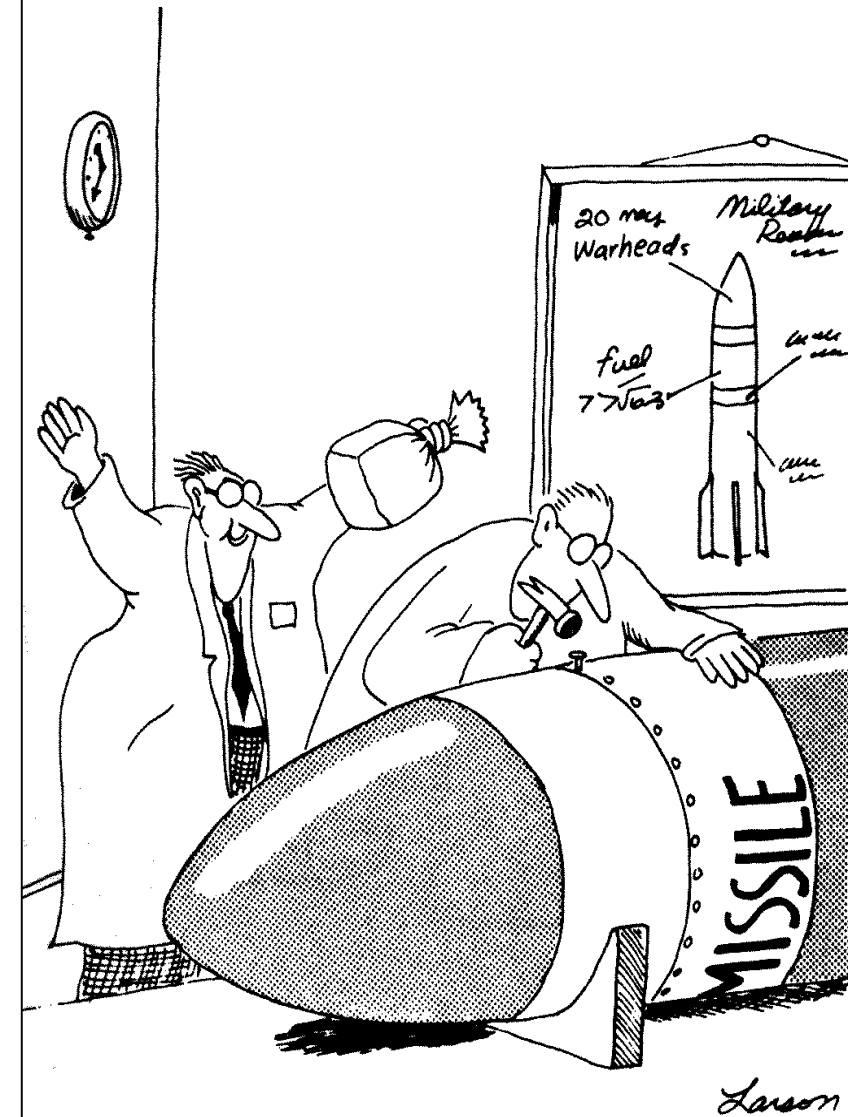
# Pricing

	FREE	BASIC	STANDARD S1	STANDARD S2	STANDARD S3
Storage	50 MB	2GB / per service	25 GB / partition	100 GB / Partition	200 GB / Partition
Indexes	3	5	50	200	200
Documents Hosted**	10,000 Documents	1 Million 5 Index Limit	15 million / partition	60 million / partition	120 million / partition
Scale Out Limits	N/A	Up to 3 units	Up to 36 units	Up to 36 units	Up to 36 units
Price per Unit per Hour	Free	\$0.0505/hr (~\$38/mo)	\$0.336/hr (~\$250/mo)	\$1.344/hr (~\$1,000/mo)	\$1.344/hr (~\$1,000/mo)



# Learn More

- [What is Azure Search?](https://azure.microsoft.com/en-us/documentation/articles/search-what-is-azure-search/)  
<https://azure.microsoft.com/en-us/documentation/articles/search-what-is-azure-search/>
- [Azure search – Helpful resources](http://devslice.net/2015/01/azure-search-helpful-resources/)  
<http://devslice.net/2015/01/azure-search-helpful-resources/>
- [Service limits in Azure Search](https://azure.microsoft.com/en-us/documentation/articles/search-limits-quotas-capacity/)  
<https://azure.microsoft.com/en-us/documentation/articles/search-limits-quotas-capacity/>
- [Azure Search Service REST API](https://msdn.microsoft.com/en-us/library/azure/Dn798927.aspx)  
<https://msdn.microsoft.com/en-us/library/azure/Dn798927.aspx>
- [Channel 9 Azure Search Videos](https://channel9.msdn.com/Search?term=Azure_Search)  
[https://channel9.msdn.com/Search?term=Azure\\_Search](https://channel9.msdn.com/Search?term=Azure_Search)
- [Microsoft Virtual Academy](https://www.microsoftvirtualacademy.com/search/SearchResults.aspx?q=Azure_Search)  
[https://www.microsoftvirtualacademy.com/search/SearchResults.aspx?q=Azure\\_Search](https://www.microsoftvirtualacademy.com/search/SearchResults.aspx?q=Azure_Search)
- [PostMan](https://www.getpostman.com/)  
<https://www.getpostman.com/>
- [Azure Search Power BI](http://blogs.msdn.com/b/powerbi/archive/2016/01/19/visualizing-azure-search-data-with-power-bi.aspx)  
<http://blogs.msdn.com/b/powerbi/archive/2016/01/19/visualizing-azure-search-data-with-power-bi.aspx>



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