

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



Demo Slide

(for demoing)



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



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



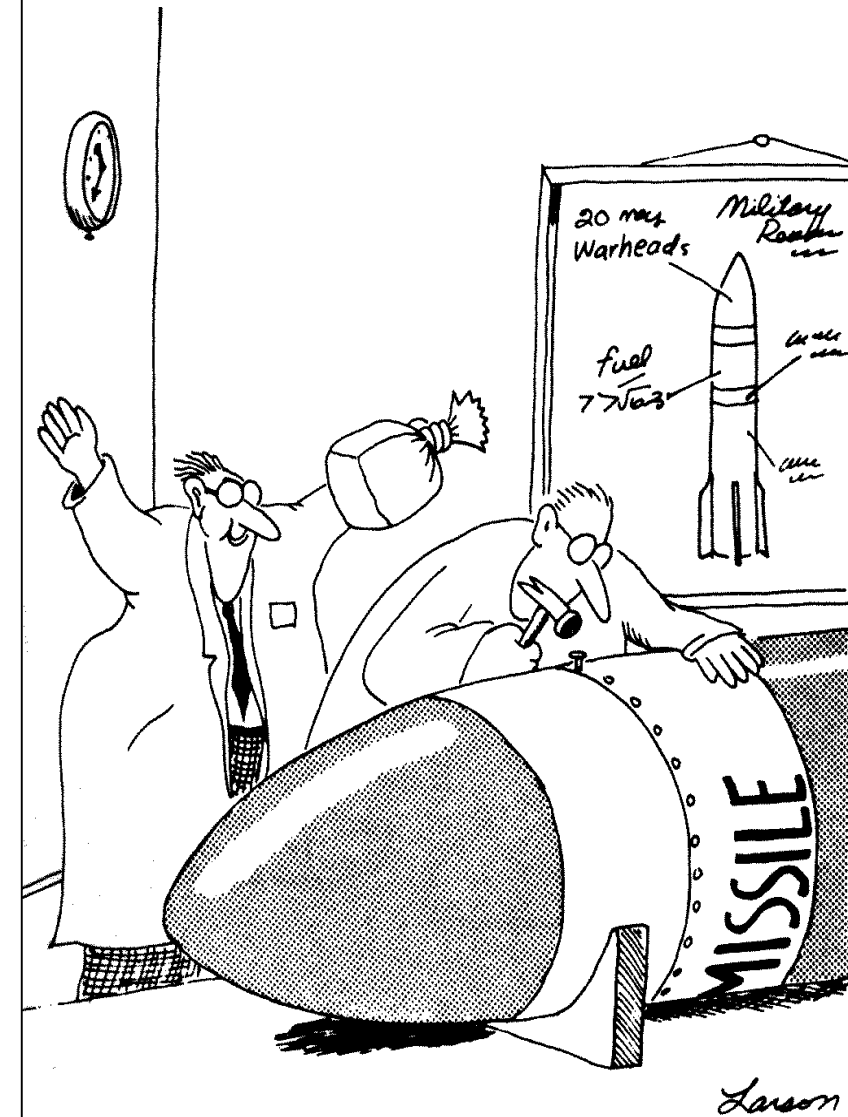
Pricing

| | 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
- [Microsoft Virtual Academy](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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