

# ➤ Improving Enterprise Search with BA Insight and Azure Cognitive Services



BA  
**INSIGHT**

# Azure Services Improve Search

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- Azure Text Analytics – Metadata Creation
  - Entity Extraction
  - Language Detection
  - Sentiment Analysis
  - Summary Generation
- Azure Computer Vision – Image Analysis and Tagging
  - Object Identification
  - Text Extraction

# Azure Services (Cont.)

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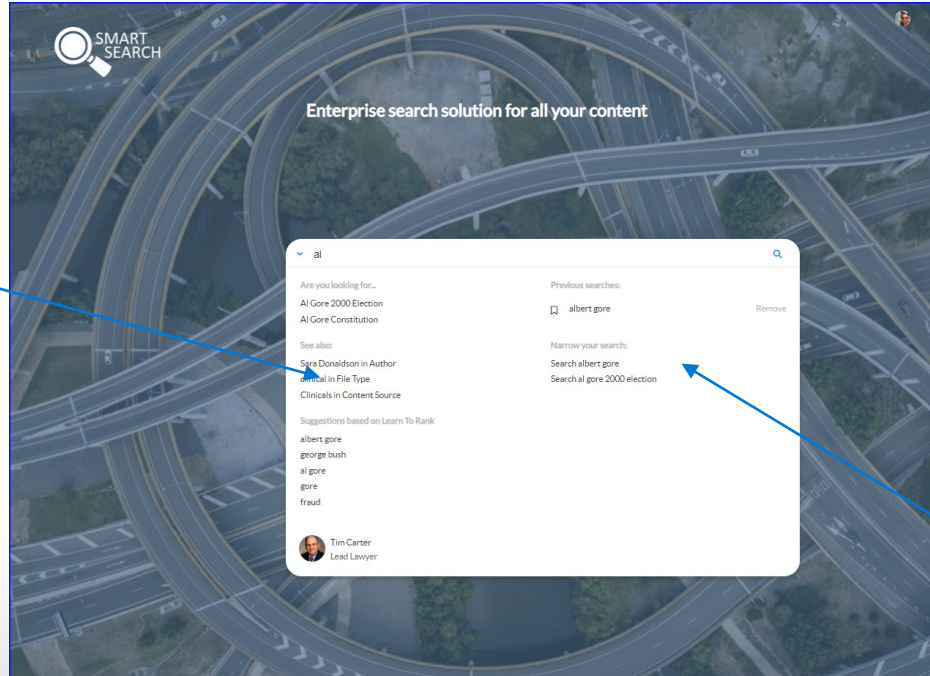
- Azure Video Indexer – Video Analysis and Tagging
  - Transcript Generation for Audio and Video files
  - Object Identification
- Azure Machine Learning
  - Taxonomy Training and Tagging
- Azure LUIS for Natural Language Query
  - Language Understanding
  - Intent Detection

# Suggestions As You Type

As the user types in the search box, a variety of suggestions are provided.

In this column there are:

- Suggestions from the search engine
- Metadata matches
- Learn to Rank suggestions generated by applying ML to Analytics data
- Results – People in this example

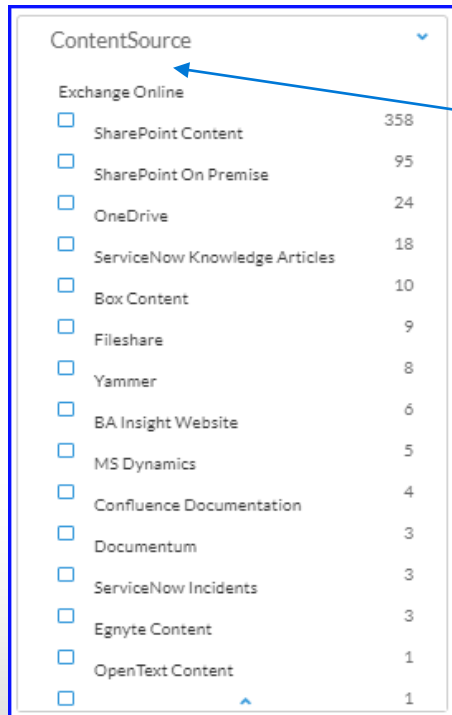


Here you see:

- Previous searches by the current user
- Previous successful searches by other users

# Connectivity

Connectors enable secure indexing of content from over 80 sources to provide a unified search experience. Users will only receive search results to which they have access in the underlying source system.

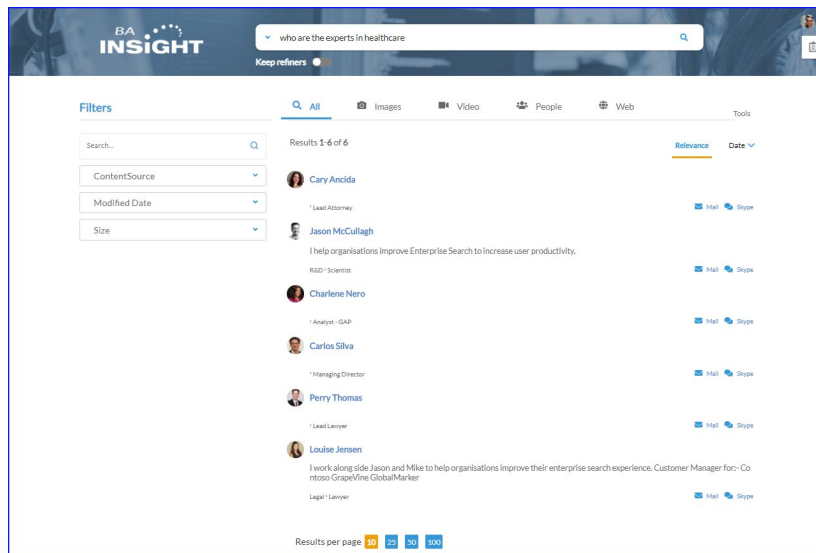


ContentSource	
Exchange Online	
<input type="checkbox"/> SharePoint Content	358
<input type="checkbox"/> SharePoint On Premise	95
<input type="checkbox"/> OneDrive	24
<input type="checkbox"/> ServiceNow Knowledge Articles	18
<input type="checkbox"/> Box Content	10
<input type="checkbox"/> Fileshare	9
<input type="checkbox"/> Yammer	8
<input type="checkbox"/> BA Insight Website	6
<input type="checkbox"/> MS Dynamics	5
<input type="checkbox"/> Confluence Documentation	4
<input type="checkbox"/> Documentum	3
<input type="checkbox"/> ServiceNow Incidents	3
<input type="checkbox"/> Egnyte Content	3
<input type="checkbox"/> OpenText Content	1
<input type="checkbox"/>	1

The expanded “Content Source” facet shows a list of all the source from which results match the current search criteria.

# Natural Language Query

In conjunction with the Azure LUIS service, SmartHub enables users to search in natural language. The request is transformed into a query which is processed by Azure Cognitive Search.



The view below is an expanded view of what was entered in the search box. Note that it is all based in natural language rather than search syntax.



# Document Preview

Smart Previews enables users to quickly locate relevant information inside documents returned by search.

The Hit Map shows all pages where any of the user's search terms appear. The preview opens automatically to the page with the most hits.

The screenshot displays a document titled "Nebraska Diabetes Consensus Guidelines". On the left, a "Search inside" sidebar shows search results for "diabetes (81)" and "treatment (7)". Below this is a "Hit Map" bar chart showing the number of hits per page. The chart has a y-axis labeled p7, p5, p4, p3, p2, p1, p0. The bars show that page p7 has the highest number of hits, followed by p5, p4, p3, p2, p1, and p0. The main document preview area shows the text of the guidelines, with search terms highlighted in red. The text includes sections on Nephropathy Screening, Hypertension (High Blood Pressure), and Diagnosis of Pre-diabetes and Prevention/Delay of Type 2 Diabetes. The document is displayed in a window with a search bar and a close button.

Search inside Nebraska Diabetes Consensus Guidelines

Search results:

- x diabetes (81)
- x treatment (7)

Order by: Hits Pages

Hit Map:

- p7
- p5
- p4
- p3
- p2
- p1
- p0

10. Nephropathy Screening

Diabetic nephropathy occurs in 20-40% of patients with diabetes and is the single leading cause of End Stage Renal Disease. Annual screening for microalbuminuria is recommended. Either a spot urine for microalbumin/creatinine ratio or a 24-hour urine test for microalbumin is acceptable. Treatment with an Angiotensin Converting Enzyme (ACE) Inhibitor should be considered for Type 1 patients with any degree of microalbuminuria and for Type 2 patients with microalbuminuria. ARB's (angiotensin receptor blocker) may be used alternatively where the patient experiences intolerance to or hyperkalemia from ACE-1 therapy. Annual testing should be continued after ACE or ARB therapy in order to monitor effectiveness and titrate dosage of medication. Patients with Glomerular Filtration Rate of <60 ml/min should be referred to a nephrologist.

11. Hypertension (High Blood Pressure)

Blood pressure should be measured at every diabetes-related visit. Hypertension (blood pressure at or above 140/90) affects the majority of patients with diabetes. Hypertension is a major risk factor for heart attack and stroke, as well as diabetic complications such as retinopathy and nephropathy. Randomized clinical trials have demonstrated reduced risk for these conditions when the blood pressure is lowered below 130/80. Many different medications may be used to treat hypertension. Most patients with diabetes will need to take at least two medications in order to achieve blood pressures below 130/80. Almost all patients with diabetes and hypertension should be treated with a medication regimen that includes either an angiotensin-converting enzyme inhibitor ("ACE") or an angiotensin receptor blocker ("ARB"), as these agents have been shown to reduce the risk of complications more than other classes of medications. ACE inhibitors and ARBs are contraindicated during pregnancy. Diuretics, beta-blockers, and calcium channel blockers are also beneficial for patients with diabetes and hypertension. In addition to medications, lifestyle modifications can help lower blood pressure. These modifications include increased consumption of fruits, vegetables, and low-fat dairy products; reduced intake of sodium and alcohol; increased physical activity; weight loss (when indicated); and quitting tobacco use.

12. Diagnosis of Pre-diabetes and Prevention/Delay of Type 2 Diabetes

(ADA Diabetes Care Vol 32, Supp. 1 2009)

Hyperglycemia not sufficient to meet the diagnostic criteria for diabetes is categorized as either impaired fasting glucose (IFG) or impaired glucose tolerance (IGT), depending on whether it is identified through the fasting plasma glucose (FPG) or the oral glucose tolerance test (OGTT):

- IFG = FPG 100 mg/dl (5.6 mmol/l) to 125 mg/dl (6.9 mmol/l)
- IGT = 2-h plasma glucose 140 mg/dl (7.8 mmol/l) to 199 mg/dl (11.0 mmol/l)

IFG and IGT have been officially termed "pre-diabetes". Both categories of pre-diabetes are risk factors for future diabetes and for cardiovascular disease (CVD).

Prevention/delay of type 2 diabetes

- Patients with IGT or IFG should be given counseling on weight loss of 5-10% of body weight, as well as on increasing physical activity to at least 150 minutes per week of moderate activity such as walking.
- Follow-up counseling appears to be important for success.
- Based on potential cost savings of diabetes prevention, such counseling should be covered by third-party payers.
- In addition to lifestyle counseling, metformin may be considered in those who are at very high risk (combined IFG and IGT plus other risk factors) and who are obese and under 60 years of age.
- Monitoring for the development of diabetes in those with pre-diabetes should be performed every year.

Search terms are automatically highlighted in the preview, so the user does not have to search inside the document.

# Personalization

Content is proactively delivered to users, reducing or eliminating the need to search.

This is administratively promoted information such as links to commonly used systems. All users see the same links

The screenshot shows the SmartHub interface. At the top, there's a header with the SmartHub logo and a search bar. Below the header, there are four promoted topics: Corporate calendar, Social, Policies, and Human resources. Each topic has a brief description and links to related content. Below these topics is a table with columns: My Interests, My Department, My Projects, and My Office. The table lists several items, each with a date, a link to a document, and a link to the document's details. A blue arrow points from the 'My Office' column header to the 'Human resources' topic, and another blue arrow points from the 'Human resources' topic to the 'My Office' column header.

My Interests	My Department	My Projects	My Office
Form 4 April 15 2019 SharePoint Co...	April 23	SharePoint Content	EDGAR Online, a division of R.R...
Form 25 March 14 2019 SharePoint Co...	April 23	SharePoint Content	EDGAR Online, a division of R.R...
Form 3 February 7 2019 SharePoint Co...	April 23	SharePoint Content	EDGAR Online, a division of R.R...
Form 8-A March 14 2019 SharePoint Co...	April 23	SharePoint Content	EDGAR Online, a division of R.R...
Form 8-K April 30 2019 SharePoint Co...	April 23	SharePoint Content	EDGAR Online, a division of R.R...

These tabs represent content that is personalized to the user based on aspects of their persona such as Interests, Department, and Job Role. Users can be allowed to set Preferences to control what information is presented.