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## **Celebros SiteSearch Pro V8 API and XML Overview**



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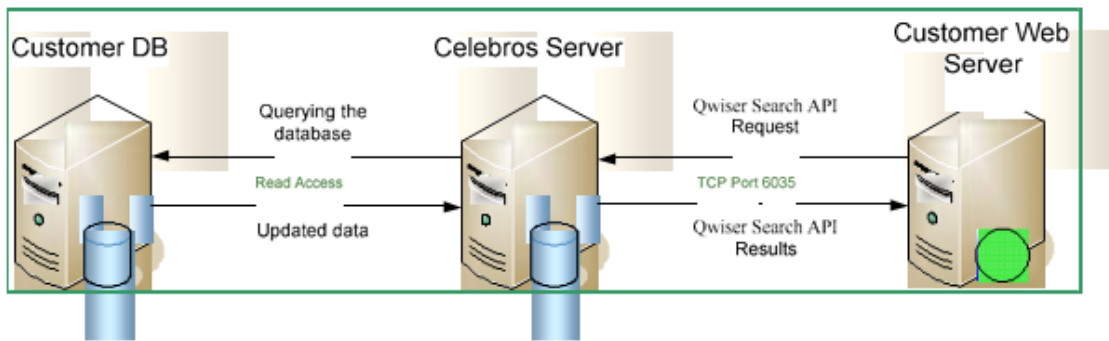


# Qwiser Salesperson Search Overview

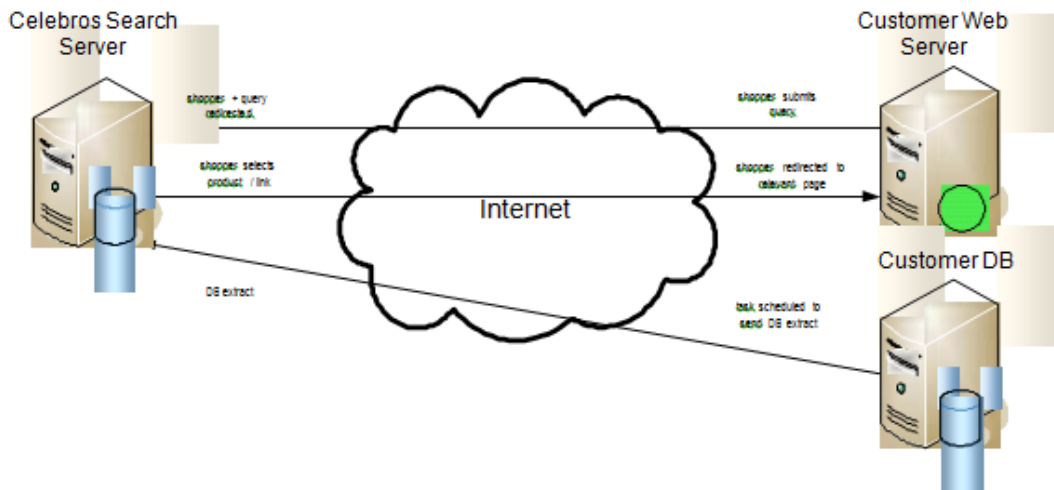
Qwiser™ search pages connect to the Qwiser Search Server in order to send the shopper’s input and receive search results. The search results returned by the Qwiser Search Engine contain relevant products, as well as relevant Refinement Options, or Questions and Answers.

The Qwiser Search Server communicates with the site's web server(s) using an XML Web Service, which provides a common interface for running search operations and retrieving the search results in the form of an XML document. Communication with the Web Service may be established via the Qwiser Search API, which allows easier manipulation of the XML results, or by directly using the Qwiser Search Engine Web Service.

Direct communication:



XML Communication



## 1. Refinement Options (Questions and Answers)

One of the strongest features of the Qwiser Salesperson is providing relevant Refinement Options (RO) to the shopper, along with the products that are relevant to the shopper's query.

The Refinement Options in Qwiser Salesperson are built in a "Question - Answer" structure. A shopper submits a query, and relevant Questions are displayed as Refinement Options. Each relevant Question comes with its own set of relevant Answers. For instance:

- A shopper visits an apparel e-commerce site running Qwiser Salesperson.
- The shopper looks for a shirt and types the word "shirt" in the search box.
- The query "shirt" is processed and all products that are found to be "shirts" are displayed.
- The Search Engine wants to make it easier for the shopper to find the right shirt from an endless list of shirts and therefore it will also offer relevant Questions, such as the Color Question.
- The Color Question, titled "Which color?" would then have 3 relevant Answers – red, blue and black because the store carries shirts only in these colors (there may be pants in other colors, but those colors would not be relevant).

The refinements support a single-select option and a multi-select option that act differently:

A. **Single-select option:**

If the color question is defined as a single select question this will be the scenario. The shopper clicks on the red color Answer. Now the new results returned are all products that are red shirts.

A new set of relevant Questions and Answers is then offered. The color Question would probably not be relevant now, because the shopper already selected a color (unless, for example, the Answers for the color Question are built in such a way that under the color "Red" there are different shades of red and they would now appear for fine tuning).

B. **Multi-select option:**

If the color question is defined as a multi select question this will be the scenario. The shopper selects the red Answer. Now the new results returned are all products that are red shirts.

A new set of relevant Questions and Answers is now offered including the color question so the shopper will be able to select another color (let's say green). Now the new results returned are all products that are red and green shirts.

The refinement options are declared in the site parameters Table. It can be defined in the Celebros studio account setting page. The type of question that will return is a dynamic property named "IsHierarchical", so that for each and every question there will be a definition if it is a multi-select or single-select question.

When this property is true then the question will be defined as a single-select question, otherwise it will be defined as multi-select type implementation.

Implementing the refinements section is simple. All we need is to create a user interface that will show the question and the related answers according to the question type (single, multi).

A. **Single-select option:**

Each answer should invoke the search engine API method "AnswerQuestion" Described in section 4.2 and refresh the refinements view according to the new set of questions.

B. **Multi-select option**

Each answer should use a check box option to select and unselect requested answers.



When selecting the answer we should invoke the search engine API method “AnswerQuestion” Describes in section 4.2. When unselecting it we should invoke the search engine API method “RemoveAnswer” as Describes in section 4.2.1

As we are getting a new set of questions and answer in each interaction with the search engine we need to refresh the refinements view to reflect the new set of questions.

In this case we need to select the remaining selected items again so we can use the “AnsweredAnswer” as describes in section 3.0 or save the select list on the UI side.

### 1.1. The Lead Question

Every search result set contains 0, 1 or more relevant Questions. When asked for a “shirt,” a live salesperson in a brick and mortar store would also have some questions to ask the shopper to help him pinpoint the “shirt” the shopper is looking for. The salesperson would have to quickly sort these questions, in order of importance, in his mind and then ask the most important/relevant one. Qwiser Salesperson uses the same approach by running algorithms that sort the relevant Questions from ‘most relevant’ to ‘least relevant’. According to this sorting method, the first question is the most appropriate Question to ask. That Question is called the Lead Question (LQ).

A real salesperson would actually ask that Question, whereas what Qwiser Salesperson does is usually give this Question more page space on the search page so more information can be presented.

#### 1.1.1. Understanding search concepts:

A Search Concept is an entity that denotes a group of products that have a certain element in common. A Search Concept could be a department, category, type, color, brand, occasion, recipient, or any type of element that exists in store’s knowledge base.

Each Search Concept has its own list of search variants that may trigger it. For example, the Search Concept Red has the search variants Red, Burgundy and Scarlet. When the Search Engine receives a request to process the query Red Shirt, all the products in the Red Search Concept are returned, given that they are also shirts. What are shirts? To get the best results, a Search Concept for Shirt is also created, having a search variant of Shirt and all products that we find to be associated with the definition of ‘Shirt’.

A Search Concept has several more settings, determining factors such as whether the concept is a commodity, an attribute or a theme. These additional settings further enhance Qwiser's versatility. Refer to the SPD (Salesperson Desktop) Manual for further information on Search Concepts.





### 1.1.2. Textual Analysis

Textual analysis, the traditional method of retrieving search results, is also used by Qwiser Salesperson, but has significantly less weight compared to Search Concepts. Qwiser Salesperson always prefers products that were found using Search Concepts.

## 2. The Search Session

### 2.1. Overview

While most traditional search engines offer the basic capability of sending a search query and returning search results, the Qwiser Salesperson search experience is a multi-staged operation of refining the search results to the extent the shopper finds necessary until the desired product is located.

Naturally, due to the precision of the Qwiser search, it is also quite likely that the shopper will find the product he is searching for immediately, at the beginning of the result set. In such a case, there would obviously be no need for the shopper to refine further, making it a single-stage process.

The process that starts by submitting the query, and continues as the shopper uses the Refinement Options and buys a product, is called a Search Session.

### 2.2. State and Search Handle

It is important to understand that the Search Engine itself does not hold Search Session information (i.e. it is "stateless"). All Search Session information is represented by a safe, URL- encoded string, referred to as the Search Handle.

#### 2.2.1. The Search Handle String

A URL-encoded string holding all of the Search Session information, which is passed with each call to the Search Engine in order to maintain the flow of the Search Session. An example of a Search Handle:

```
QT1UZXN0fkI9VGVzdH5EPTIwfkk9UHJpeF9WZW50ZX5LPTR_TD0xfk09NH4
```

## 3. The Qwiser Search Results XML Model

This section describes the Qwiser Search Results XML model including all nodes and their attributes.

The XML tree structure that creates the Qwiser Search Results is presented in the next page as a tree diagram. The XML tree contains nodes constructed from Qwiser objects. Different nodes in the tree diagram have different colors.

A node that appears more than once on the same level, under the same parent is placed in an intermediate node that represents the collection of these nodes. For example, under the Search



Results node there is more than one Product node; the Products node is added right under the Search Results to contain all the single Product nodes. (In the diagram it's not right under the search results node.)

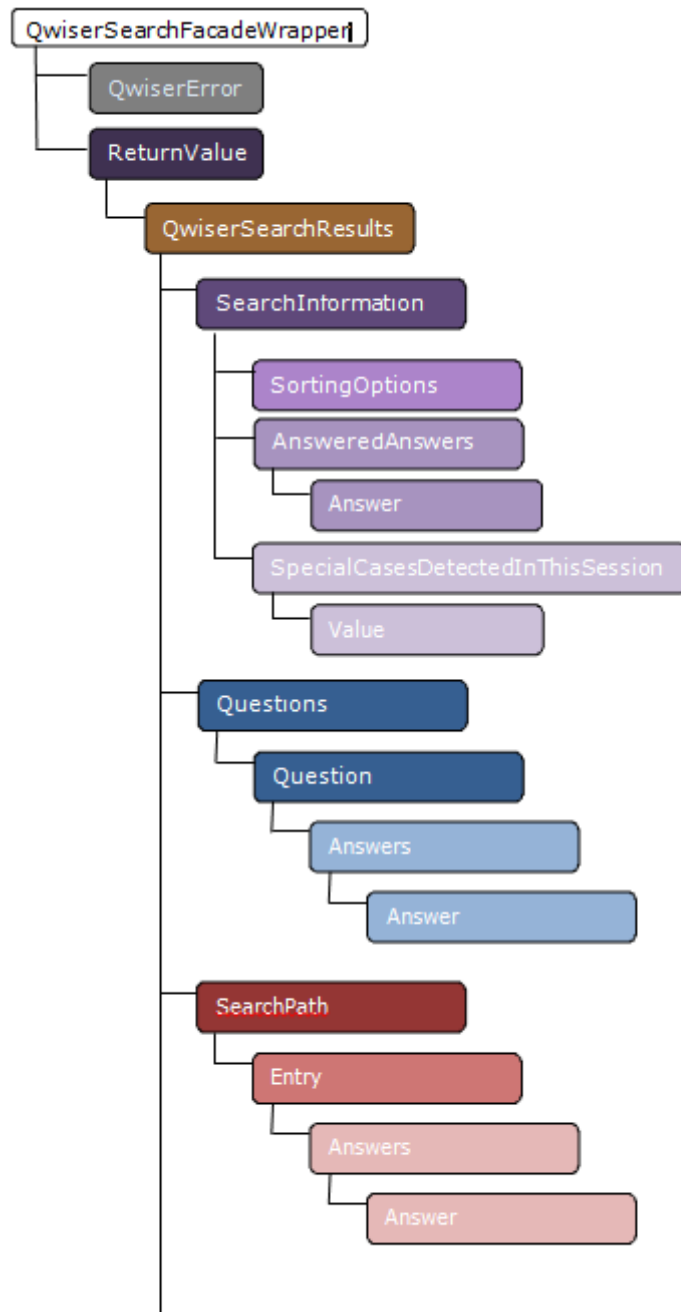
The different colors used for nodes in the tree may help you distinguish between types of nodes (the type of Qwiser object used to create this node). For instance, the Answer node that appears two levels under Question is of type Qwiser Answer and its color is blue. The AnsweredAnswer node under AnsweredAnswers is also blue because it is also of the type Qwiser Answer. A container node will have the same color as the nodes it contains. For instance, the Answers node that contains Answer nodes is blue, the same as each Answer node.

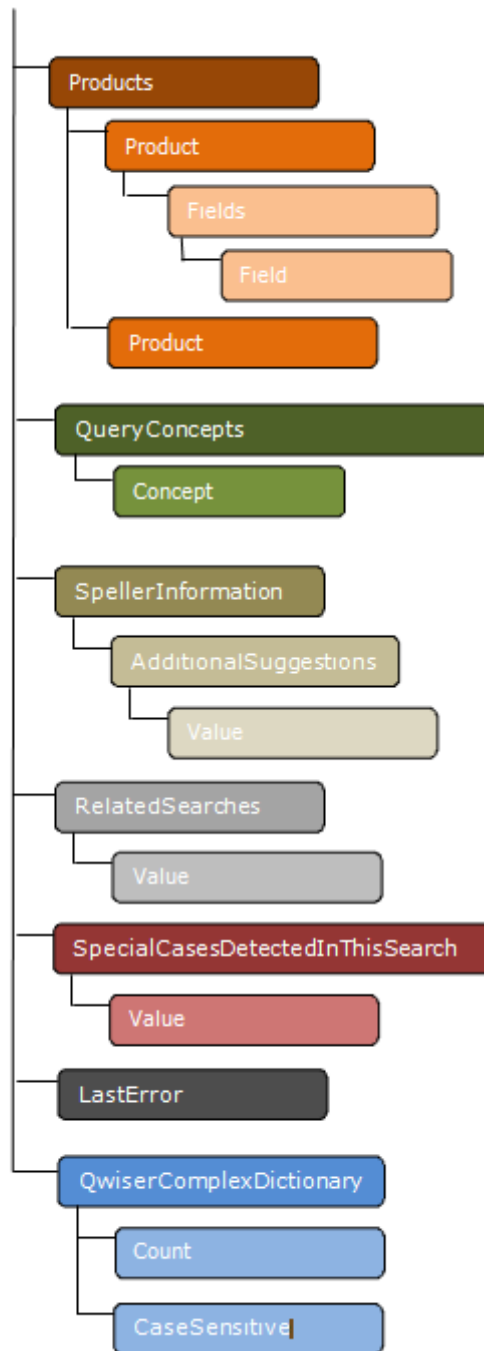
Following the tree diagram is a list of all types of nodes that have any sort of attributes, each with details about its own set of attributes.



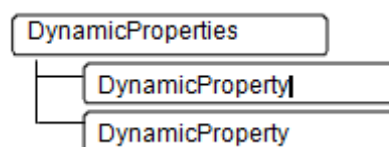


### 3.1. The Search Results XML Document Structure





Each Question, Answer and Concept node also contains these sub-nodes:





### 3.2. Node Descriptions

#### 3.2.1. QwiserSearchFacadeWrapper

Attribute	Value Type	Description
ErrorOccurred	Boolean	

#### 3.2.2. QwiserError

Attribute	Value Type	Description
MethodName	String	
ErrorMessage	String	

#### 3.2.3. QwiserSearchResults

Attribute	Value Type	Description
MaxMatchClassFound	Enumeration	Max extent of match between products returned and query.
MinMatchClassFound	Enumeration	Min extent of match between products returned and query.
RelevantProductsCount	Integer	Total number of products in the results set (on all pages).
NumberOfPages	Integer	The total number of pages in the results set
ExactMatchFound	Boolean	Whether or not the products returned are an exact match. This attribute will have the value of false in any of the following special cases: <ul style="list-style-type: none"> <li>✓ No Results Found</li> <li>✓ Alternative Products</li> <li>✓ Partial Match</li> </ul> See information about the special cases Enumeration
RedirectionURL	String	The URL the user should be redirected to, if any.
SearchDataVersion		Latest search files version
RecommendedMessage	String	The message that should be displayed to the user, such as in the case of spelling errors, no results, and partial matches.
LogHandle	String	String used for analytics



SearchHandle	String	The search handle string holds all of the information related to a user's search session state, except for page parameters.
SearchStatus	String	Indicates whether communication with the Qwiser Search Engine and results retrieval were successful. "SearchOK" indicates a successful search.
SearchTimeDuration	Integer	
SearchEngineTimeDuration	Integer	
RelevantOffersCount	Integer	
BannerImage	String	The URL of the banner image that should be displayed above the search results, if any.

### 3.2.4. SearchInformation

Attribute	Value Type	Description
OriginalQuery	String	The exact query as initially submitted by the user.
Query	String	The query used in the search after any manipulation it may have undergone, such as misspelled original queries that the search engine is set to automatically correct.
SearchProfileName	String	Name of the profile used for the current search.
PriceFieldName	String	Name of the price field defined by the Qwiser as the price.
FirstQuestionID	String (GUID)	
NumberOfPages	Integer	Number of pages with the PageSize (see below) number of products per page.
CurrentPage	Integer	The zero based number of the user's current search results page.
PageSize	Integer	The maximum number of products returned in a search results page. All pages in the results set will contain this number of products, except for the last page that may contain less.
IsDefaultPageSize	Boolean	Does the current amount of products on the page equal the default page size?



IsDefaultSearchProfileName	Boolean	Self-explanatory
SKUsearchOccured	Boolean	Whether or not the user searched for a SKU.
DeadEndOccured	Boolean	If no products were found for the current query
SessionID	String	ID for current search session
Stage		

### 3.2.5. Sorting Options

Attribute	Value Type	Description
Ascending	Boolean	Indicates whether the current sorting of products is performed by ascending or descending order of values.
NumericSort	Boolean	When sorting by a product field, indicates whether the search engine performed a numerical sort on the values of this field.
FieldName	String	The name of the field that is used for products sorting, if the method was set to sort products by a field.
Method	Enumeration	The sorting method that is used in the current search state.

### 3.2.6. Entry (Under Search Path)

Attribute	Value Type	Description
QuestionID		ID of the question that the answer answered.
AnswerIndex	Integer	Index of answer in the answers collection.

### 3.2.7. Answer (Under AnsweredAnswers)

Attribute	Value Type	Description
AnswerID	String (GUID)	The answer's ID
EffectOnSearchPath	Enumeration	See AnswerInSearchPath enumeration section for a list of all possible values.

### 3.2.8. Question



Attribute	Value Type	Description
QuestionID	String (GUID)	The ID of the question
Text	String	The text of the question when the question is the Lead Question
Side Text	String	The text of the question when the question is as additional (side) Question
Rank	String	The rank of a Question is determined by the effectiveness of the Question in leading the customer to the product he is looking for.
Type	Enumeration	The type of the question

### 3.2.9. Answer (Under Answers)

Attribute	Value Type	Description
AnswerID	String (GUID)	The answer's ID
Text	String	The text to display for this answer
Type	Enumeration	The type of this answer
ImageURL	String	The URL of an image relevant to the answer
ImageSKU		The image representing the Answer if from the SKU
ImageHeight	Integer	The height of the image for the Answer
ImageWidth	Integer	The width of the image for the answer
OffersCount	Integer	

### 3.2.10. Product

Attribute	Value Type	Description
Product SKU	String	The SKU of the product
Rank	Float	The rank of this product within the results
Price		Product's price
MatchClassFound	Enumeration	How relevant this product is to the user's query
FoundInAnswerID	String (GUID)	The path above can be clickable to show the user all products from that category only. To implement it, use this ID with the BrowseTo() method
FoundInAnswerPathString		The "Found In" feature allows you to show the user in what category a product was found
IsBetterSeller	Boolean	If the product defined as best seller in Qwisser



### 3.2.11. Field (Under Product)

Attribute	Value Type	Description
Name	String	The name of the product field
Value	String	The value of the product field

### 3.2.12. Concept

Attribute	Value Type	Description
Concept ID	String (GUID)	The ID of the search concept
Concept Name	String	The name of the search concept
Rank	Float	The rank of concepts is determined by the level of confidence that the user was indeed searching for this concept.
Type	Enumeration	

### 3.2.13. Dynamic Property

Attribute	Value Type	Description
Name	String	The name of the dynamic property relevant to this object
Value	String	The value of the dynamic property

### 3.2.14. Last Error

Attribute	Value Type	Description
MethodName	String	
ErrorMessage	String	

## 3.3. Enumerations

### 3.3.1. Sort methods

Numeric Value	Name	Description
1	By rank	The products are sorted by their relevancy to the user's



		query
2	By price	The products are sorted by their price
3	By field	The products are sorted by one of their data fields

### 3.3.2. Product Match Classes

Numeric Value	Name	Description
0	None	No match was found for the query
1	Low	Poor match, very low confidence that the product matches the query
2	Medium	Partial match, the product may match the query to some extent
3	High	Partial match, but still high confidence the product matches the query
4	Perfect	Perfect match

### 3.3.3. Answer Types

Numeric Value	Name	Description
0	None	None
1	Normal	Normal
2	Price	Price
3	NoneOfTheAboveAnswers	None of the displayed answers
4	Answered	An answer that the user had already answered
5	Replace	An answer that replaced another answer

### 3.3.4. Question Types

Numeric Value	Name	Description
0	Normal	The question is a normal question
1	Price	The question is the price question

### 3.3.5. Concept Types

Numeric Value	Name	Description
0	Commodity	The concept is a commodity concept
1	Attribute	The concept is an attribute concept
2	Thematic	The concept is a thematic concept





### 3.3.6. AnswerInSearch Path Types

<b>Numeric Value</b>	<b>Name</b>	<b>Description</b>
0	Exclude	Exclude the answer from the search path
1	ExactAnswerNode	Include only the specified answer in the search path
2	EntireAnswerPath	Include the specified answer and all its alternatives in the search path



## 4. The Qwiser Search API Public Methods

### 4.1. ActiveProfile Method

Sets the specified search profile as the active search profile

Parameter name	Description
Searchhandle	Search handle contains the current state of the search
Searchprofile	The name of the search profile activated
Sitekey	Site key supplied by Celebros

### 4.2. AnswerQuestion Method

Answers a question in the search

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
AnswerID	The ID of the QwiserAnswer
EffectOnSearchPath	The desired effect of the answer on the search path (See AnswerInSearchPath enumeration section for a list of all possible values).
Sitekey	Site key supplied by Celebros

### 4.3. ChangePageSize Method

Changes the page size (maximum displayed products per page) to the specified value

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Pagesize	The new page size
Sitekey	Site key supplied by Celebros

### 4.4. ChangePriceColumn Method

Changes the price column (field) used for the search to the specified price column

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Pricecolumn	The name of the new price column
Sitekey	Site key supplied by Celebros

### 4.5. DeactivateProfile Method

Sets the default search profile as the active search profile

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Sitekey	Site key supplied by Celebros



#### 4.6. FirstPage Method

Moves to the first page of the results

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Sitekey	Site key supplied by Celebros

#### 4.7. ForceQuestionAsFirst method

Forces the search server to allow the specified question to appear first

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Questionid	The ID if the QwiserQuestion to be asked first
Sitekey	Site key supplied by Celebros

#### 4.8. GetAllProductFields Method

Gets all fields of a product in the search server database

Parameter name	Description
Sitekey	Site key supplied by Celebros

#### 4.9. GetAllQuestions Method

Gets all questions in the search server database

Parameter name	Description
Sitekey	Site key supplied by Celebros

#### 4.10. GetAllSearchProfiles Method

Gets all the search profiles in the search server database

Parameter name	Description
Sitekey	Site key supplied by Celebros

#### 4.11. GetCustomResults Method

Gets custom search results using the supplied QwiserSearchHandle

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Newsearch	Boolean signifying whether this is a new search
Previoussearchhandle	The search handle to use if results cannot be returned using the provided search handle
Sitekey	Site key supplied by Celebros



**4.12. GetEngineStatus Method**

Gets the current status of the search server

Parameter name	Description
Sitekey	Site key supplied by Celebros

**4.13. GetProductAnswers Method**

Gets all the answers that match the specified product in the search server database

Parameter name	Description
Sku	The SKU of the requested product
Sitekey	Site key supplied by Celebros

**4.14. GerProductSearchPath Method**

Gets the search path of the best answer that match the product

Parameter name	Description
Sku	The SKU of the requested product
Sitekey	Site key supplied by Celebros

**4.15. GetQuestionAnswers Method**

Gets all the answers of the specified question in the search server database

Parameter name	Description
Questionid	The ID of the requested QwiserQuestion
Sitekey	Site key supplied by Celebros

**4.16. GetServeralProductsAnswers Method**

Gets an intersection of all the answers matching the specified products in the search server's database.

Parameter name	Description
Sku	A string containing the SKU's of the requested products separated by a delimiter
Sitekey	Site key supplied by Celebros

**4.17. LastPage Method**

Moves to the last page of the search results

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Sitekey	Site key supplied by Celebros



**4.18. MoveToPage Method**

Moves to the specified page of the results

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Page	The zero-based index of the page
Sitekey	Site key supplied by Celebros

**4.19. NextPage Method**

Moves to the next page of the results

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Sitekey	Site key supplied by Celebros

**4.20. PreviousPage Method**

Moves to the previous page of the results

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Sitekey	Site key supplied by Celebros

**4.21. RemoveAnswer Method**

the specified answer from the answered answer of the search

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Answerid	The ID of the QwiserAnswer to remove
Sitekey	Site key supplied by Celebros

**4.22. RemoveAnswerAt Method**

Removes an answer at the specified index in the answered answers of the search

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Answerindex	The index of the QwiserAnswer to remove in the QwiserAnswers
Sitekey	Site key supplied by Celebros

**4.23. RemoveAnswers Method**

Removes the specified answers from the answered answers of the search





Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Answerid	A string containing the ID's of the QwiserAnswer objects separated by a delimiter.
Sitekey	Site key supplied by Celebros

#### 4.24. RemoveAnswersFrom Method

Removes answers from a specified index to the end of the answered answers of the search.

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Startrindex	The index of the first QwiserAnswer in the sequence to remove
Sitekey	Site key supplied by Celebros

#### 4.25. RemoveProductFromStock Method

Remove a product from stock and mark it as disabled

Parameter name	Description
Sku	The SKU of the requested product
Sitekey	Site key supplied by Celebros

#### 4.26. RestoreProductToStock

Returns a product to stock and marks it as enabled

Parameter name	Description
Sku	The SKU of the requested product
Sitekey	Site key supplied by Celebros

#### 4.27. Search Method

Gets the results for the specified search query

Parameter name	Description
Query	The user's query to search for
Sitekey	Site key supplied by Celebros

#### 4.28. SearchAdvance Method

Gets the results for the specified search query

Parameter name	Description
Query	The user's query to search for
Searchprofile	The name of the search profile to use in the search
Answerid	The ID of the QwiserAnswer to answer



Effectonsearchpath	The desired effect of the answer on the search path (see answersInSearchPath enumeration section for a list of all possible values).
Pricecolumn	The name of the new price column to use in the search
Pagesize	The size of the page to use in the search
Sortingfield	The name of the field the results will be sorted by
Numericsort	Indicated whether to use numeric or alphabetical sorting
Ascending	Indicated whether the results should be sorted in ascending or descending order
Sitekey	Site key supplied by Celebros

#### 4.29. SortByField Method

Changes the sorting method of the results by the specified field

Parameter name	Description
Query	The user's query to search for
Fieldname	Specify the name of the field to sort by
Numericsort	Indicated whether to use numeric or alphabetical sorting
Ascending	Indicated whether the results should be sorted in ascending or descending order
Sitekey	Site key supplied by Celebros

#### 4.30. SortByPrice Method

Changes the sorting method of the results to "by price"

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Sitekey	Site key supplied by Celebros

#### 4.31. SortByRelevancy Method

Changes the sorting method of the results to "By relevancy"

Parameter name	Description
Searchhandle	Search handle containing the current state of the search
Sitekey	Site key supplied by Celebros

#### 4.32. UpdateProductPrice Method

Update product price

Parameter name	Description
SKU	The SKU of the requested product
Price	The new product price
FieldName	The product field as defined in the catalog



ProfileName	The site profile
Sitekey	Supplied by Celebros