Office365Mon Search Monitoring

In addition to monitoring SharePoint Online sites, Office365Mon can also monitor the Search Service in your SharePoint Online tenant. This document explains what can be monitored and the steps to enable Office365Mon to monitor the Search Service.

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What's Monitored

Office365Mon monitors four different aspects of your SharePoint Online Search Service. In each case except for crawl monitoring, notifications are sent out to whatever email, text and webhooks you have configured if the condition for which we are monitoring occurs. The different scenarios for which we provide monitoring are:

1. **Query latency** – you can enter a maximum query time for us to monitor. Any time a query takes longer to return results, we send out notifications.
2. **Changed Search Results** – when the query results that are returned differ from the last time we executed a query for you, we send out notifications. It's important to understand what "changed query results" means in this scenario. We only send out notifications if the search

results themselves change - it does not track the individual items contained in the search results. For example, if the search results include a Word document and you change the Word document, that doesn't trigger a notification that search results have changed.

However, if those changes cause the Word document to show up in a different order in the search results than it did previously, that **will** trigger a change notification. If the raw rank value of the document changes, but it doesn't affect the order of search results, then it **will not** trigger a change notification. This is because over time you will find that SharePoint Online can return rank values that vary slightly throughout a day, but the content and order of the search results haven't changed.

You should also be aware that sometimes you may have not changed any content whatsoever in your monitored SharePoint Online site, but you will still get notifications that search results have changed. **This is not an error with the Office365Mon Search Monitoring service.** We also see search results fluctuate from time to time – sometimes frequently, sometimes not very often – in the query results that Office 365 returns.

To determine if search results have changed, each time we execute a query, we create a one-way hash of the search results and store it. This hash cannot be reverse engineered in any way to reconstitute the original search results, so it is consistent with our policy of never storing user data or credentials. Even the smallest changes in the search results will result in the hash changing, and when that happens we send out notifications.

To help you parse through the changes, you can also elect to check the box to Include results in notifications when results change. When that option is selected, you'll get the actual search results we received in both emails and webhooks – just not text messages. Again – these results are not saved anywhere, we are simply forwarding to you what we received.

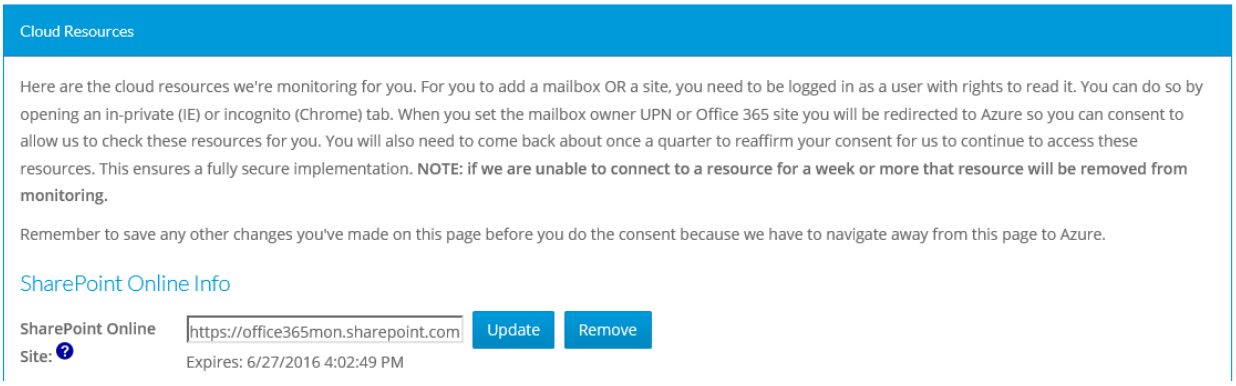
3. **No search results** – if the query returns no search results, we send out notifications.
4. **Crawl latency** – this is the only scenario that we don't issue notifications for. Crawl monitoring has a process of adding new content to the SharePoint Online site being monitored, and then issuing queries for the new content. Once the queries start returning results for the data that was added, we can be sure that a crawl has successfully completed. We then store how long each of these crawls take and you can examine your crawl latency using any of the reporting options that Office365Mon provides.

   The content that is written to test the crawl times is placed in a special list that is created in the site that is being monitored. In order to be able to create the list and write content to the site, we use a custom SharePoint App that was developed for this feature. The app asks for Manage and Search permissions when installed, and it is scoped to only have those permissions in the site where it is being installed – it **does not** apply to any other site in the site collection, or any other site collection in the tenant. You can find the app in the Office Store under the name Office365Mon Search Monitor, or you can download from our site at https://www.office365mon.com/Office365MonSpoSearchMon.zip.

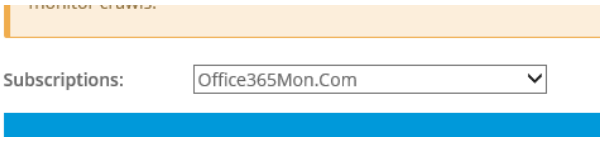
Configuring Search Monitoring

Use the following steps to configure monitoring for the Search Service in your SharePoint Online tenant.

1. If you haven't done so already, configure Office365Mon to monitor a SharePoint site for you. Explaining the steps for this is beyond the scope of this document, but you can complete this step as well as get additional information on how to do so on our site at https://www.office365mon.com/Signup/Status. You'll need to ensure that you've successfully configured this part of your subscription:

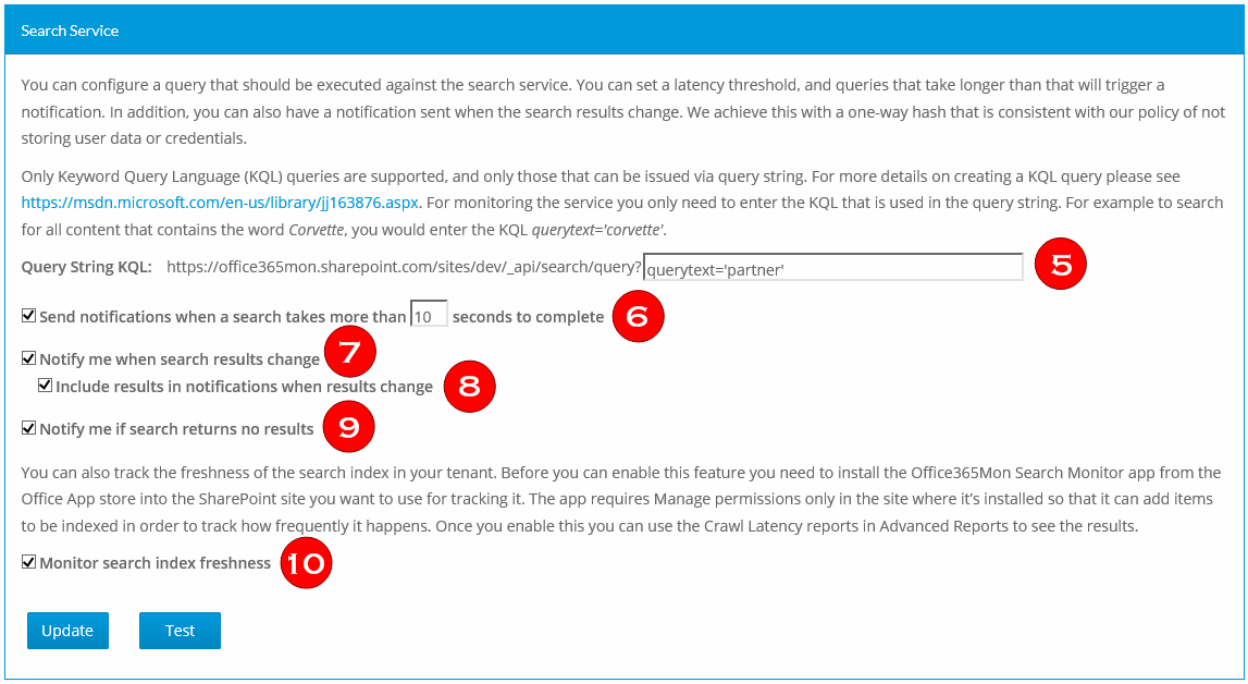


2. Install the Office365Mon Search Monitor app in the SharePoint Online site we are monitoring for you. You can find the app in the Office Store, or you can download it from our site using the link provided previously in this document.
3. Go to the Configure Office 365 Search Monitoring page on our web site at https://www.office365mon.com/Configure/SearchMon.
4. If you have more than one Office365Mon subscription, you will see a Subscription: drop down that looks like this:



   If you see this drop down then use it to select the Office365Mon subscription for which you wish to configure search monitoring.

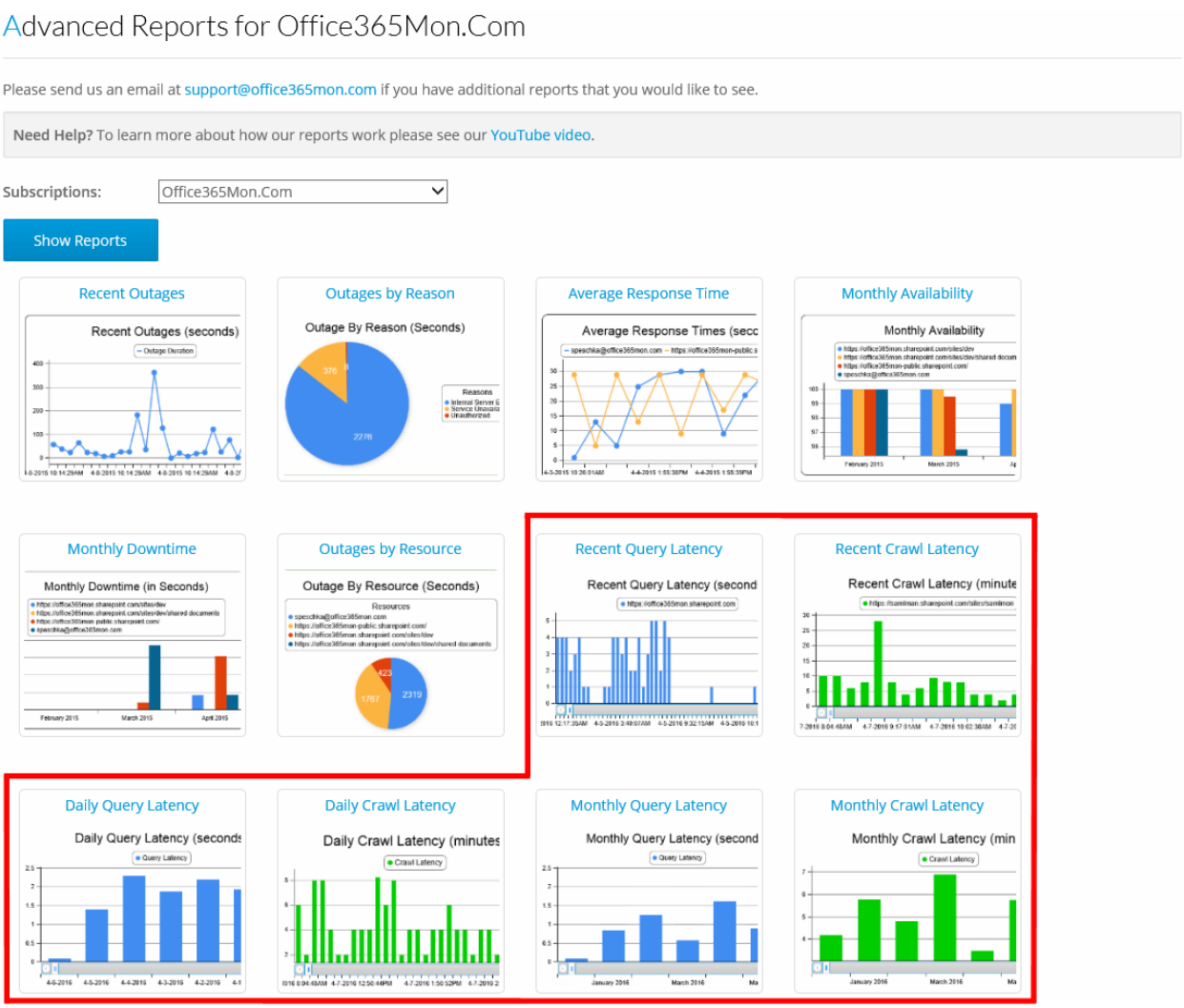
The remaining steps refer to the Search Service configuration section in the page. Below is a screen shot of that section, with numbers that correspond to the steps in this document.



5. Enter the Keyword Query Language (KQL) query that you want us to execute to test for query latency, changed search results, and no search results. The Search Monitoring feature only supports query string KQL – it does not support POST'ed KQL. For examples of KQL syntax please see https://msdn.microsoft.com/en-us/library/jj163876.aspx.
6. Check the "Send notifications…" checkbox if you wish to receive notifications when query results are taking longer than the threshold you define. You can input how many seconds a query may take before notifications are sent out. Any queries taking longer than that will result in notifications being sent to email, text and webhooks.
7. Check the "Notify me when search results change" checkbox if you want to get notifications anytime the set of results from your KQL query change. Please make sure to read the **What's Monitored** section above to understand how we track changes in the results.
8. Check the "Include results in notifications when results change" checkbox if you want the actual search results included in notifications for a changed set of search results. You will only get this if you have checked item #7 – Notify me when search results change.
9. Check the "Notify me if search returns no results" checkbox if you want to get notifications when your KQL query returns no search results at all.
10. Check the "Monitor search index freshness" checkbox if you want us to monitor crawl latency in your SharePoint Online tenant. Please note that this feature cannot work if you have not installed the Office365Mon Search Monitor app in the site being monitored.

Reporting Results

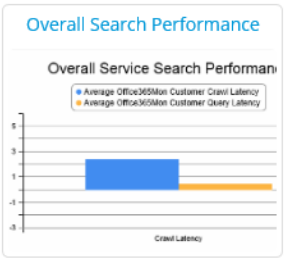
There are several reports in the Advanced Reports gallery in our site that provide information on the query and crawl latency details gathered by the Office 365 Search Monitoring feature.



You can view reports for the following information:

- Recent query and crawl latency – how it's performed over the last several hours.
- Daily query and crawl latency – an average of performance by day for up to the last 45 days.
- Monthly query and crawl latency – an average of performance by month.

When you view your monthly reports, you will also see the service-wide search latency numbers comprised from all of the Office365Mon customers whose search services we are monitoring. To see just the service wide numbers, you can go to the Basic Reports gallery and select the Overall Search Performance Report:



As with the other reports provided by Office365Mon, you can also get the raw data used in our reports to build your own as desired. You can get this data in one of three ways; please note that all of them require our Enterprise License to use:

- Power BI in Office 365 – the monthly search performance data is included in the Power BI reports on Office 365. For more details on this feature please see https://samlman.wordpress.com/2015/12/14/newly-released-analyze-your-office-365-outage-data-in-power-bi/.
- Download the data from our site – you can use the Report Data feature to download a CSV file for any of the reports from our site at https://www.office365mon.com/reports/reportdata.
- Programmatically download the data – you can use our REST APIs to download the data in either CSV or JSON format and incorporate it into your own systems. You can get the latest documentation on reporting data via our REST API from https://www.office365mon.com/Office365Mon_AccessToken_And_API.pdf.

Questions

As always, if you have any questions please email us at support@office365mon.com