INTRAFIND

iFinder Confluence Search

Technical Documentation

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1   Introduction

iFinder Confluence Search (1) is a Confluence plugin. It provides the integrated searchbar that enables users to search Confluence and if licensed also other data sources. It takes care of indexing Confluence content like spaces, pages, blog posts, comments as well as attachments including their access rights.

iFinder (2) on a separate server hardware or virtual machine provides the services and tools for indexing and searching.
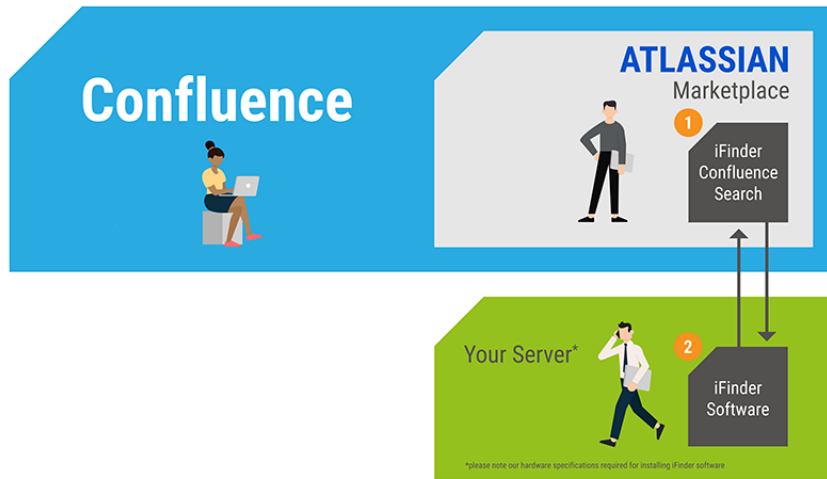
2   Prerequisites

2.1   Required knowledge

You must have deep technical knowledge in the following areas:

- Confluence administration and server configuration

- Linux administration if Confluence is running in a Linux environment

- Windows Server administration and installation

2.2   Confluence

- Atlassian Confluence versions 6.0.1 to 7.9.0.

- Administration permissions for Confluence

- Remote API access must be enabled in Confluence (**Confluence administration > Further configuration > Remote API (XML-RPC & SOAP)**).

- Default Confluence ports 8080 and 8090. If you use different ports, make sure that you configure them correctly when configuring the connection between the systems.

2.3   iFinder server

- Server on which you can set up iFinder services and tools (also see Hardware requirements below) with Microsoft Windows Server 2012 R2 , 2016, or 2019.

- ZIP file for iFinder server installation, available as edition for Confluence Server or Confluence Datacenter. The download link is available in the **iFinder Confluence Search** app.

- The firewall on the server needs to open the following ports for Confluence: 8080, 9605, and 9602. The **SET_Firewall_Rules.bat** script can help you with this, see Setting up iFinder server.

- Administration user for the server

- Make sure that there is enough disk space according to the following table:

2.3.1 Hardware requirements for iFinder server

iFinder Confluence Search – Hardware Sizing iFinder Server

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👤 Users	📄 Documents			
	< 1. Mio	< 10. Mio*	< 20. Mio*	< 50. Mio*
< 1.000	Server**: 1 Cores: 8 RAM p. Server: 16 GB Index Disk Size: SSDs: 120 GB Additional Disk Space#: 50 GB	Server**: 1 Cores: 12 RAM p. Server: 32 GB Index Disk Size: SSDs: 400 GB Additional Disk Space#: 50 GB	Server**: 1 Cores: 16 RAM p. Server: 48 GB Index Disk Size: SSDs: 800 GB Additional Disk Space#: 50 GB	Server**: 2 Cores: 24 RAM p. Server: 64 GB Index Disk Size: SSDs: 2.000 GB Additional Disk Space#: 50 GB
< 10.000	Server**: 1 Cores: 8 RAM p. Server: 16 GB Index Disk Size: SSDs: 120 GB Additional Disk Space#: 50 GB	Server**: 1 Cores: 12 RAM p. Server: 32 GB Index Disk Size: SSDs: 400 GB Additional Disk Space#: 50 GB	Server**: 1 Cores: 16 RAM p. Server: 64 GB Index Disk Size: SSDs: 800 GB Additional Disk Space#: 50 GB	Server**: 2 Cores: 24 RAM p. Server: 128 GB Index Disk Size: SSDs: 2.000 GB Additional Disk Space#: 50 GB
< 20.000	Server**: 1 Cores: 12 RAM p. Server: 24 GB Index Disk Size: SSDs: 120 GB Additional Disk Space#: 50 GB	Server**: 1 Cores: 16 RAM p. Server: 48 GB Index Disk Size: SSDs: 400 GB Additional Disk Space#: 50 GB	Server**: 1 Cores: 16 RAM p. Server: 64 GB Index Disk Size: SSDs: 800 GB Additional Disk Space#: 50 GB	Server**: 2 Cores: 24 RAM p. Server: 192 GB Index Disk Size: SSDs: 2.000 GB Additional Disk Space#: 50 GB
< 50.000	Server**: 1 Cores: 16 RAM p. Server: 32 GB Index Disk Size: SSDs: 120 GB Additional Disk Space#: 50 GB	Server**: 1 Cores: 16 RAM p. Server: 48 GB Index Disk Size: SSDs: 400 GB Additional Disk Space#: 50 GB	Server**: 1 Cores: 24 RAM p. Server: 128 GB Index Disk Size: SSDs: 800 GB Additional Disk Space#: 50 GB	Server**: 2 Cores: 32 RAM p. Server: 254 GB Index Disk Size: SSDs: 2.000 GB Additional Disk Space#: 50 GB
** iFinder Server requires OS Windows Server 2012 R2 or 2016 or 2019				

✉ For more users, more documents or extended technical requirements, please contact us: **atlassian@intrafind.com**

* iFinder Server license key is limited to 1 Million documents (sites, attachments, ...). Please contact us for a new free license key if you require more documents: atlassian@intrafind.com
# Additional Disk Space for iFinder Program Files and Logfiles

2.3.2 iFinder license

- The iFinder server includes a trial license key.

- The trial license key includes the language analyzers for English and German per default. If you need additional language analyzers, contact us at atlassian@intrafind.com.

- This trial license key is valid for 100 days. You will get a new valid key after purchasing **iFinder Confluence Search** in the Atlassian Marketplace.

- The license key for iFinder server is limited to one million index documents (for example sites, attachments). If you plan to index more documents, contact us for a new free license at atlassian@intrafind.com.

- You can retrieve the number of Confluence objects at: **Administration > System Information > Confluence Usage**. The sum of the following numbers is relevant: **Total spaces**, **Content (Current Versions)**

Confluence Usage	
Total Spaces	21
Site Spaces	12
Personal Spaces	9
Content (All Versions)	81171
Content (Current Versions)	3408
Local Users	141
Local Groups	226

- When you purchase a license you receive an additional license file. For this, we need the host ID of your iFinder server. To retrieve the host ID, start the **GET_HostID.bat** file as administrator: **Context menu > Start as administrator** and send it to atlassian@intrafind.com.

2.4 Network and ports

Make sure that the connection between your Confluence system and the iFinder server works.

- Reverse proxy: If you use a reverse proxy, add the iFinder server to the whitelist. iFinder connects to the Confluence server in several ways, for example like a user with a browser in order to create screenshots.

- If you use SSL for your Confluence server additional ports must be opened.

2.4.1 Default ports

INTRAFIND
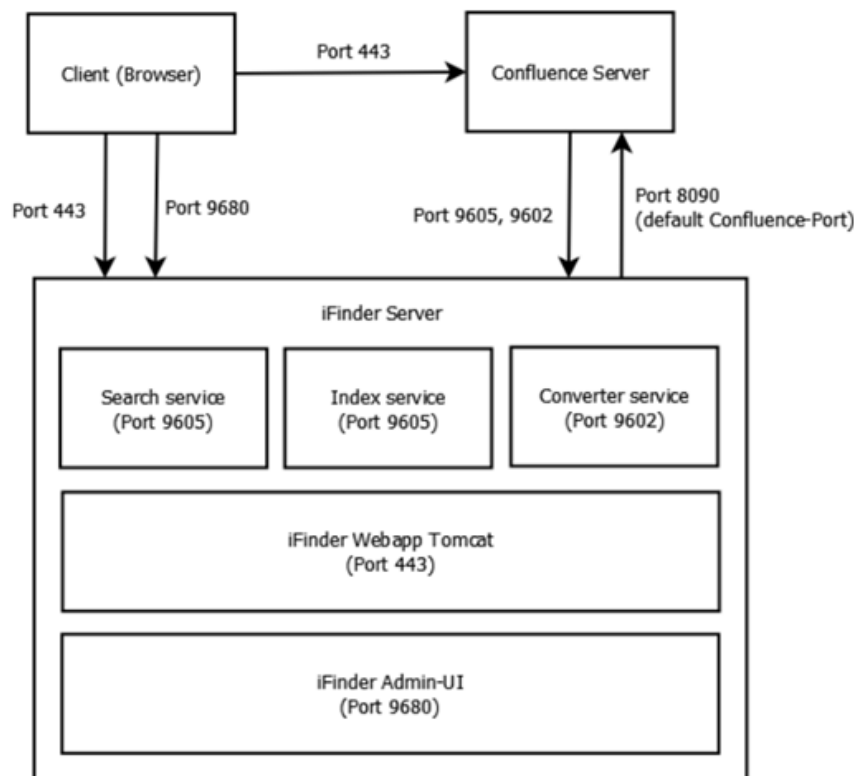
2.4.2   Ports with reverse proxy

INTRAFIND
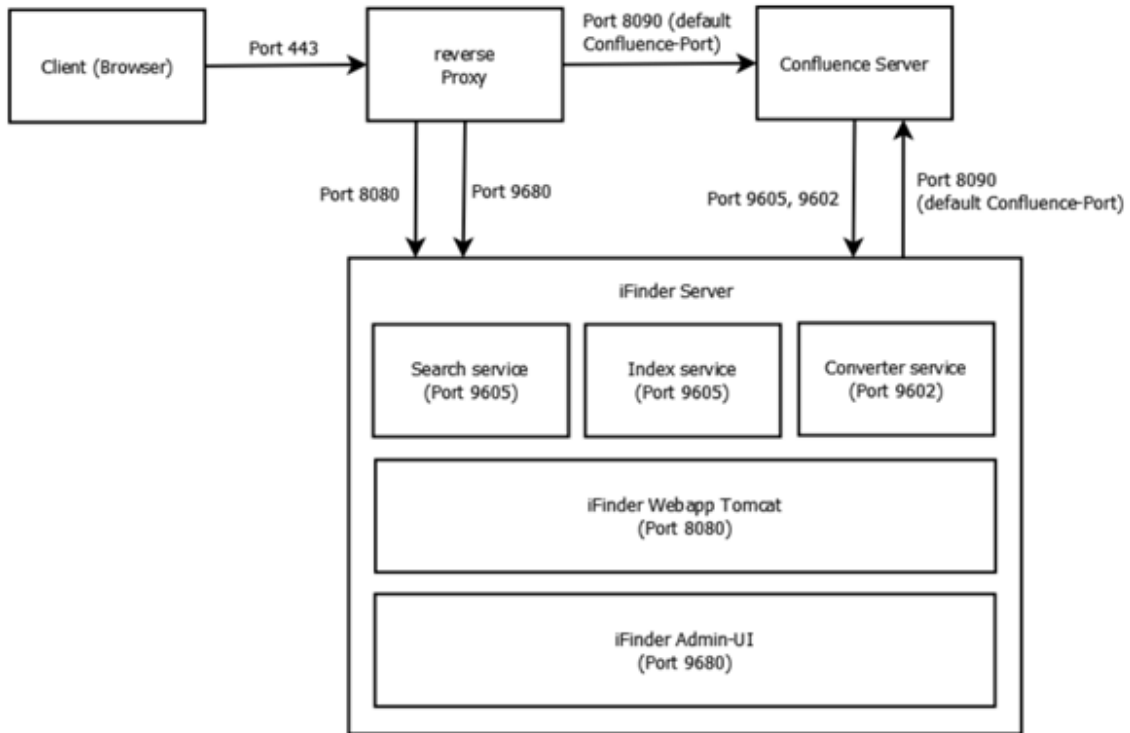
3 Installing iFinder Confluence Search

3.1 Installing the app in Confluence

1. In Confluence, open **Confluence Administration > Manage apps > Find new apps > Search in Marketplace**.

2. Search for *iFinder Confluence Search*, install it and license it (trial or purchase).

3.2 Downloading iFinder server software

1. In Confluence, navigate to **Administration > Manage Apps > iFinder Confluence Search > Configure**.

2. Under **Download iFinder**, click the link to download the iFinder software.

3. After registration, you will receive a link for downloading the ZIP file.

4. Come back to this configuration after the iFinder server is set up, see Getting started with iFinder Confluence Search.

4   Setting up iFinder server

The iFinder services and tools provide the index and the functionality for making Confluence contents searchable.

> Make sure that the ports 9605, 9602, and 8080 are open in the firewall of iFinder server! If they are not open, you can use the script **SET_Firewall_Rules.bat** to open them. Alternatively you can open them manually.
>
> The BAT files for installation are available in the installation directory.

4.1   Installing iFinder server

1. Download the ZIP file as described in Installing iFinder Confluence Search.

2. On the server, log on with a user who is in the Local Administrators group.

3. Copy the provided ZIP file and unzip it to a local folder, for example *C:\IntraFind.* **Do not install the software directly in C:/Windows**. Always create a subdirectory for the installation. In the following this directory is referred to as *<Installation directory>*. **The path must not contain any spaces.**

4. Start the *<Installation directory>***\1_INSTALL-iFinderIFCS.bat** file as administrator: **Context menu > Start as administrator**.

4.2   Configuring iFinder

After installation, **iFinder Administration** opens. If it does not open automatically, you can open it at http://my_ifinder_server:9680/resource/index.html.

1. Log in with the user **ifconfluence** and the default password **iFinderSuperAdmin**. It is recommended to change the password.

2. In **Tools > Password encryption**, enter the password of a Confluence user with full administration permissions. This user is used to connect to the Confluence system.

3. Click on **Encrypt**. Copy the encrypted password to the clipboard.

4. Open **Tools > Extended configuration**.
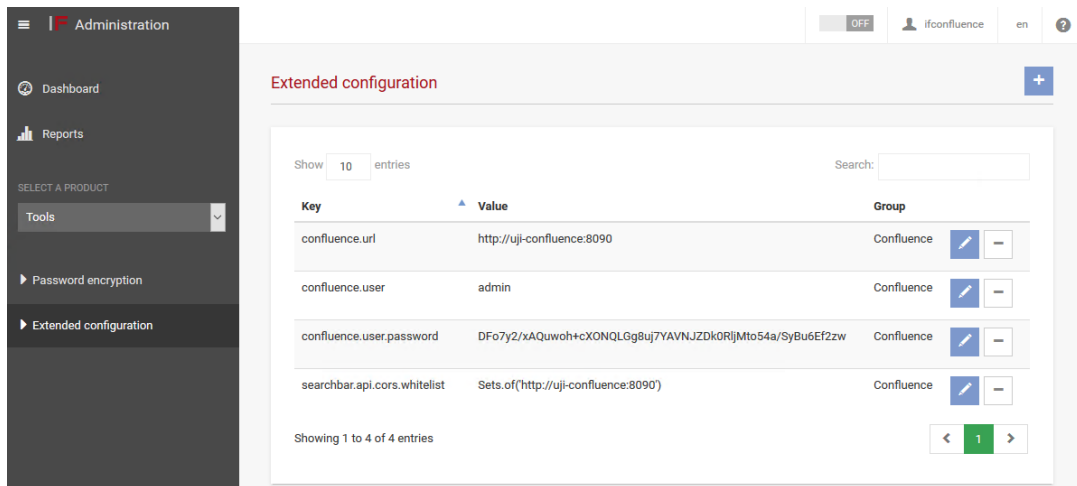
5. For the **confluence.user.password** key, click **Edit**.
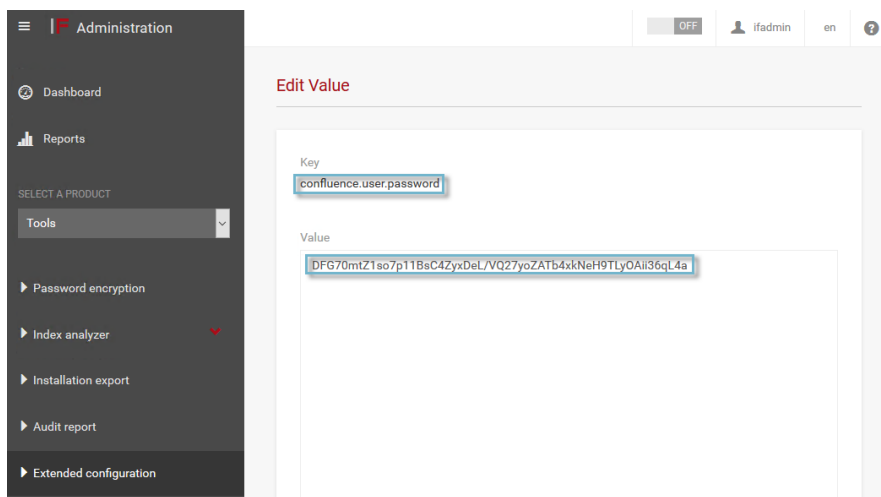
6. Paste the encrypted password from the clipboard to the **Value** field and click **Save settings**.

7. Also change the other keys and values listed in the following table according to your requirements. For each key, click **Edit**, change the setting, and click **Save settings**.

Key	Value
searchbar.api.cors. whitelist	Enter following with the value for your Confluence server here. If you add multiple values, separate them with a comma. **Sets.of('https://my-confluence-server.com:port')**
confluence.url	Enter the Confluence URL, for example https://my-confluence-server.com:port
confluence.user	Enter the Confluence administrator user name.

8. **Optional**: Per default, the user sees the preview. If you want to disable the preview for Confluence content only, add the following:

> In the preview, some special contents may appear that the users usually do not see. This may for example be hidden elements in macros. If you want to prevent users from seeing content in the preview that they are not allowed to see, you can change the setting to **false**.

    a.   Click **Add** to add a new key.

    b.   Enter **ifinder.confluence.preview.on** as key, and **false** as value.

    c.   Click **Save settings**.

4.3 Configuring Apache Tomcat server for CORS

The iFinder ZIP file includes an Apache Tomcat server. You must configure the Apache Tomcat server in order to enable access from your Confluence server. Modify the CORS settings in the *web.xml* file of the Apache Tomcat server on which iFinder is installed.

1. Open the *iFinder@Confluence\apache-tomcat-<version>\webapps\ifinderconfluence\WEB-INF* file with an editor.

2. Search for **allowed.origins** and add your Confluence server URL as **<param-value>**. Example: **https://my-confluence-server:port**
    You can also add more several addresses, separated with commas. Example: **https://my-confluence-server:port1,https://my-confluence-server:port2**

```
<filter>
          <filter-name>CorsFilter</filter-name>
          <filter-class>org.apache.catalina.filters.CorsFilter</filter-
class>
          <init-param>
               <param-name>cors.allowed.origins</param-name>
               <param-value>PROTOCOL://CONFLUENCE_SERVER:PORT</param-
value>
          </init-param>
```

3. To enable the settings, start the *<Installation directory>\2_RESTART_Tomcat.bat* file as administrator: **Context menu > Start as administrator**. If Tomcat does not start, refer to the Tomcat log files available at *<Installation directory>\services\tomcat\logs*.

4.4 Configuring the Converter service

On iFinder server, configure the settings for accessing Confluence. These settings are used, when the Converter service accesses Confluence via the same URL as a user.

1. Open the **config.cfg** file in *<Installation directory>\services\if-sv-converter-1* with an editor.

2. In the **urlConfigs** section, define the settings for the Confluence connection. You can use basic authentication **or** Windows authentication. If you want to use other authentication methods, e.g. SAML, contact us at atlassian@intrafind.com.

    o **regex**: Define a Java regular expression for the Confluence URL with the default port, for example **.*wiki\\.example\\.com.*** or **.*confluence:8090.***

o **loginUsername**: Confluence administrator user name

o **loginPassword**: Encrypted password that you generated before, see here.

o **authMethod**: WINDOWS or BASIC

o **screenshotHandlerBean**: Must be **confluence.screenshot** in order to create screenshots for the preview.

o **domain**: (Only Windows authentication) Domain of the Confluence user defined above, for example MUC.ACME.CORP.

Configuration for BASIC authentication:

```
converter.security.mapping:
            {
                    "urlConfigs": [
                        {
                          "regex" : ".*https://wiki.example.com.*",
                          "loginUsername" : "my_admin",
                          "loginPassword" : "Encrypted_Password",
                          "authMethod" : "BASIC"
                          "screenshotHandlerBean" :
"confluence.screenshot"
                        }
                    ]
            }
```

Configuration for WINDOWS authentication:

```
converter.security.mapping:
            {
                    "urlConfigs": [
                        {
                          "regex" : ".*https://wiki.example.com.*",
                          "loginUsername" : "my_admin",
                          "loginPassword" : "my_encrypted_Password",
                          "authMethod" : "WINDOWS",
                          "domain" : "my_domain"
                          "screenshotHandlerBean" :
"confluence.screenshot"
                        }
                    ]
            }
```

3. Save the file.

4. To enable the settings, start *<Installation directory>***3_RESTART_Converter.bat** as administrator.

> If Confluence is **not** configured for HTTPS, continue with Getting started with iFinder Confluence Search.

4.5 Optional: If Confluence is configured for HTTPS

If Confluence is configured for HTTPS, also the Tomcat server of the iFinder middleware must be configured for HTTPS. For configuring SSL you have to install a signed SSL certificate on the iFinder middleware Tomcat server.

> The following gives a simplified instruction. For detailed information, see the official Tomcat documentation at https://tomcat.apache.org/tomcat-9.0-doc/ssl-howto.html.

4.5.1 Generating a key and certificate

If you already have a private signed certificate available continue with Configuring Apache Tomcat for SSL.

1. Create a directory, where your certificate will be stored:
   <Installation directory>\cert

2. For SSL to function properly you will have to provide all the DNS Names that your server is setup with. This includes the fully qualified hostname of the machine.
   Example: If your corporate domain is **acme.corp** and your iFinder middleware is installed on server **machine101** and available under the DNS name **ifinder** your list of DNS names will include:
   machine101.acme.corp
   ifinder.acme.corp
   Also add any additional DNS names for the machine.

3. Create a Java Keystore with the command using the list of DNS names:

```
keytool -genkeypair -keyalg RSA -keysize 4096 -alias tomcat -ext
"SAN=dns:machine101.acme.corp,dns:ifinder.acme.corp" -keystore
<Installation directory>\cert\keystore.p12 -storetype PKCS12
```

4. Note down the password you used.

4.5.2 Generating a Certificate Signage Request (CSR)

The newly created certificate needs to be signed by your corporate certificate authority (CA) so browsers in your organisation will be able to navigate to the iFinder middleware.

1. Generate a CSR file with the following command. Again you will need the list of DNS Names:

```
keytool -certreq -file <Installation directory>\cert\ifinder.csr -keystore
<Installation directory>\cert\keystore.p12 -alias tomcat -ext "
SAN=dns:machine101.acme.corp,dns:ifinder.acme.corp "
```

2. On success the CSR file **ifinder.csr** is available in the *<Installation directory>\cert* folder.

3. Send this file to your corporate CA for signing.

4.5.3 Importing the signed certificate

1. After you have received your signed certificate from the CA place it in the *<Installation directory>\cert* folder under the name **ifinder.crt**.

2. Ask your CA for their root and intermediate certificates.

3. Place these in *<Installation directory>\cert* with the names **root.crt** and **intermediate.crt**.

4. Import the root and intermediate certificates using the following commands:

```
keytool -importcert -trustcacerts -keystore <Installation
directory>\cert\keystore.p12 -file root.crt -alias root
keytool -importcert -trustcacerts -keystore <Installation
directory>\cert\keystore.p12 -file intermediate.crt -alias intermediate
```

5. Import the certificate into your keystore using the following command:

```
keytool -importcert -trustcacerts -keystore <Installation
directory>\cert\keystore.p12 -file ifinder.crt -alias tomcat
```

6. If all went well, you have a complete keystore available under *<Installation directory>\cert\keystore.p12*.

4.5.4 Configuring Apache Tomcat for SSL

Configure the Tomcat server of iFinder for HTTPS.

1. Open the *apache-tomcat-<Version>\conf\server.xml* file.

2. Enter paths and file names of your keys and certificates. For detailed information, see
   https://tomcat.apache.org/tomcat-9.0-doc/ssl-howto.html#Certificate.

3. In the file this may for example look as follows:

```
<Connector
protocol="org.apache.coyote.http11.Http11NioProtocol"
port="443" maxThreads="200"
scheme="https" secure="true" SSLEnabled="true"
keystoreFile="<Installation directory>/cert/keystore.p12"
keystorePass="<yourpassword>"
clientAuth="false" sslProtocol="TLSv1.2+TLSv1.3" compression="on"/>
```

4.5.5 Finalizing Apache Tomcat configuration

To enable the settings, start the **2_RESTART_Tomcat.bat** file as administrator: **Context menu > Start as administrator**.

If it starts, you have successfully configured SSL Encryption. If Tomcat does not start, refer to the Tomcat log files available at *<Installation directory>\services\tomcat\logs*.

5 Getting started with iFinder Confluence Search

5.1 Finalizing configuration for iFinder Confluence Search

After setting up iFinder server, provide the connection settings and the group information in **iFinder Confluence Search**.

1. In Confluence, navigate to **Administration > Manage Apps > iFinder Confluence Search > Configure**.

2. Under **iFinder server base URL**, enter the URL for your iFinder server:
   http://**MY_IFINDER_SERVER:PORT**/ifinderconfluence
   The port is typically **8080**.

3. In the **Authenticated Confluence groups** field, add a comma-separated list of the groups that you want to enable to use iFinder Confluence Search.

   o Everyone who is a member of at least one group will see iFinder Confluence Search instead of the standard Confluence search.

   o You can add Confluence groups, and if your Confluence system is configured accordingly also Active Directory groups.

   o Alternatively or in addition, you can add single users to the **ifinder_group**.

   o **Note**: The **ifinder_universal_plugin** group is still available but will be removed with one of the next versions. Use **ifinder_group** instead.

4. Define where the iFinder services are located. In the fields **Index Service**, **Search Service**, and **Converter Service**, replace the URL with the URL of your iFinder installation. For information about additional settings for indexing, see Advanced configuration for indexing.

Field	Description	Example
Index service URL	URL at which the index service is accessible.	http://**my_ifinder_server**:9605/hessian/index
Search service URL	URL at which search service is accessible.	http://**my_ifinder_server**:9605/hessian/search
Converter service URL	URL at which converter service is accessible.	http://**my_ifinder_server**:9602/hessian/converter

5. Click on **Check connection** to perform a connection test. You can only start indexing after a successful connection test.

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5.2   Starting initial indexing

After the **iFinder Confluence Search** app is configured and you have performed a successful connection test you can index the Confluence contents.

> If you want to start indexing in Confluence independent of a connection to iFinder, you can disable the iFinder Confluence Search temporarily with **Manage apps > iFinder Confluence Search > Deactivate**.

If more than one million index objects are counted during indexing, you need a different license key. Contact atlassian@intrafind.com to request the free license key.

Warning: Initial indexing or re-indexing of the complete content can significantly affect the performance of your instance; for larger instances, the process can take hours.

1. In Confluence, navigate to **Administration > Content Indexing > Search Index**.

2. Click on **Create New**.

3. All selected content types are crawled and indexed into the iFinder fulltext index.

> After the first indexing, check that there is enough disk capacity on the iFinder server. If there is less than 20% free disk space, the system will not work anymore and indexing of new content cannot be performed. Also add the logfiles to your monitoring routines.

5.3   Searching Confluence with iFinder

After successful configuration you can see the new search option in Confluence:

> If you do not see **iFinder search** in the search field, you are not in a group that is allowed to use with iFinder Search for Confluence. Instead, you are searching with the default Confluence search.

To search with **iFinder Confluence Search**:

1. Click on the **iFinder search** field.

2. Enter a search term. For a quick overview of the documents, for which you have read permissions, you can enter an asterisk ***** instead of a search term.

3. Start searching with the **Enter** key or click on 🔍.

4. For detailed information, see the online help. To open it, click on ⑦ in the header bar.

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6 Checklists and troubleshooting

- Checklists
- Troubleshooting
  - ○ Confluence search instead of iFinder Confluence Search
  - ○ Empty search page
  - ○ Broken images, no preview function, missing content

6.1 Checklists

While installing and configuring, use the following checklist in order to make sure that you do not miss any important points.

Checking prerequisites	System	More information
Are the requirements for Confluence (version, permissions) met?	Confluence	iFinder Confluence Search
Is the app license key sufficient?	Confluence	iFinder Confluence Search
Are the hardware requirements for iFinder server met?	Server for iFinder server	iFinder Confluence Search
Are the software requirements for iFinder server met?	Server for iFinder server	iFinder Confluence Search

Installing the app	System	More information
iFinder Confluence Search is installed and licensed	Confluence	Installing iFinder Confluence Search
Is the access for users defined with **ifinder_group** or by adding groups?	Confluence	Getting started with iFinder Confluence Search
Is the app is configured with the correct base URL of iFinder server?	Confluence	Getting started with iFinder Confluence Search

Setting up iFinder server	System	More information
Have you downloaded the ZIP file for installation?	iFinder server	Installing iFinder Confluence Search
Is the ZIP file installed?	iFinder server	Setting up iFinder server

Setting up iFinder server	System	More information
Is iFinder server configured (password encryption, extended configuration)?	iFinder server - Administration	Setting up iFinder server
Is **Apache Tomcat** on iFinder server configured for CORS and restarted?	iFinder server - Apache Tomcat	Setting up iFinder server
If Confluence is configured for SSL: Is **Apache Tomcat** configured accordingly with signed certificates?	iFinder server - Apache Tomcat	Setting up iFinder server
Is the **Converter service** configured and restarted?	iFinder server	Setting up iFinder server

Finalizing configuration in Confluence	System	More information
Is the URL of iFinder and the services defined in Confluence in the **iFinder Confluence Search** configuration?	Confluence	Getting started with iFinder Confluence Search
Has initial indexing been started?	Confluence	Getting started with iFinder Confluence Search
Can Confluence be searched with iFinder?	Confluence	Getting started with iFinder Confluence Search

6.2   Troubleshooting

We are happy to help. If you have problems with the configuration, please contact us at atlassian@intrafind.com. Ideally with a short error description and a date proposal. We support from Germany, Munich in the time zone UTC +1.

First try a reboot of iFinder Server:

1. Log on to your iFinder server with a user with administration access.

2. Start the **<Installation directory>\RESTART.bat** file as administrator: **Context menu > Start as administrator**.

6.2.1   Error with status 503 code

Status 503 occurs in **atlassian-confluence.log.**

Possible reasons: Confluence server may be configured to communicate via a proxy.

Solution: Check if the Confluence server accesses the iFinder services via a proxy. If yes, configure the proxy in a way that communication with the iFinder services is possible by whitelisting the iFinder URL.

6.2.2   Confluence search instead of iFinder Confluence Search

Some Confluence users do not see iFinder Confluence Search but only the default Confluence search in the header bar.

Possible reasons: The users are either not logged on or do not have the permission to access iFinder Confluence Search.

Solution: Add the user to a group that has access to iFinder Confluence Search (**ifinder_group** or any defined group with access). Delete the browser cache manually. Instruct the users to log on to Confluence again.

6.2.3   Empty search page

Possible reasons: Communication between Confluence and iFinder does not work correctly.

Solution: Make sure that the all references to Confluence are configured with the correct ports that Confluence uses for communication.

6.2.4   Broken images, no preview function, missing content

Possible reasons: Converter service not configured correctly, for example the authentication method or the encrypted password. Alternatively, Microsoft Visual C++ Redistributable 2013 might not be installed coerrectly.

Solution: Make sure that the Converter service is configured correctly as described in Setting up iFinder server: Configuring the Converter service. Also make sure that Microsoft Visual C++ Redistributable 2013 is installed as described in Setting up iFinder server.

7 Advanced configuration for search integration

- [Customizing the layout for iFinder Confluence Search in Confluence](#)
- [Enabling user authentication with users from an LDAP directory](#)
- [Enabling encryption with private and public keys](#)

7.1 Customizing the layout for iFinder Confluence Search in Confluence

You can adapt the styling directly in Confluence:

1. Open the configuration in Confluence **Administration > Look and Feel > Stylesheet**. Add your own CSS file which will overwrite the searchbar CSS file.

2. For this, the search page has the selector **ifs-main**. You can use this selector to use the styling only for this page. This can for example be relevant if you want to use the styling only for some areas or if the layout is not correct due to Confluence themes and you have to style Confluence elements on this page. Replace the placeholders with your values.

```css
.ifs-main a,
.ifs-main a:visited,
.ifs-main a:focus,
.ifs-main a:hover,
.ifs-main a:active {
    color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .ifs-searchareas {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR;
}

.ifs-main .ifs-searchareas>.ifs-searchareas-wrapper .ifs-tab-link {
    color: white !important;
}

.ifs-main .ifs-searchareas>.ifs-searchareas-wrapper .ifs-tab-link.active,
.ifs-main .ifs-searchareas>.ifs-searchareas-wrapper .ifs-tab-link:hover {
    background-color: TAB_LINK_COLOR !important;
    color: white !important;
}

.ifs-main .ifs-searchareas>.ifs-searchareas-wrapper>.ifs-tabs>.ifs-move-tabs {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .typeahead__searchfield,
.ifs-main .ifs-sb .typeahead__container .ifs-button.ifs-extended-search-button,
.ifs-main .ifs-sb .ifs-extended-search,
.ifs-main .ifs-sb .ifs-searchbar-info {
    border-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}


.ifs-main .ifs-sb .ifs-sdrop-header {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}
```

```css
.ifs-main .ifs-rl .ifs-hitlist .ifs-media .match {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .ifs-globalnews .ifs-news-header {
    background-color: REPLACE_WITH_YOUR_LIGHT_COLOR !important;
}

.ifs-main .ifs-globalnews .ifs-news-btn {
    color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .ifs-globalnews .ifs-news-btn:hover {
    background-color: GLOBAL_NEWS_BUTTON_HOVER_COLOR !important;
}

.ifs-main .ifs-globalnews .ifs-news-title {
    color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .ifs-rl .ifs-hitlist .ifs-media>.ifs-media-left.ifs-preview-
available>a>.ifs-media-left-preview {
    background-color: REPLACE_WITH_YOUR_LIGHT_COLOR !important;
}

.ifs-main .ifs-rl .ifs-hitlist .ifs-media>.ifs-media-left.ifs-preview-
available>a>.ifs-media-left-preview-hover {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR54 !important;
}

.ifmodal-overlay .ifs-spinner>div,
.ifmodal-wrapper .ifs-spinner>div,
.ifs-main .ifs-rl .ifs-spinner>div,
.ifs-main .ifs-sb .ifs-spinner>div,
.ifs-main .ifs-searchareas .ifs-spinner>div {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifmodal-overlay .ifs-page-seperator,
.ifmodal-wrapper .ifs-page-seperator,
.ifs-main .ifs-rl .ifs-page-seperator,
.ifs-main .ifs-sb .ifs-page-seperator,
.ifs-main .ifs-searchareas .ifs-page-seperator {
    background-color: REPLACE_WITH_YOUR_LIGHT_COLOR !important;
}

.ifmodal-overlay .ifs-button.primary,
.ifmodal-wrapper .ifs-button.primary,
.ifs-main .ifs-bottom-tabs .ifs-button.primary,
.ifs-main .ifs-rl .ifs-button.primary,
.ifs-main .ifs-sb .ifs-button.primary,
.ifs-main .ifs-searchareas .ifs-button.primary {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifmodal-overlay .ifs-button.selected,
.ifmodal-wrapper .ifs-button.selected,
.ifs-main .ifs-bottom-tabs .ifs-button.selected,
.ifs-main .ifs-rl .ifs-button.selected,
.ifs-main .ifs-sb .ifs-button.selected,
.ifs-main .ifs-searchareas .ifs-button.selected {
    background-image: linear-gradient(to right,
REPLACE_WITH_YOUR_MAIN_COLOR 0, REPLACE_WITH_YOUR_MAIN_COLOR 20px,
transparent 20px) !important;
```

```css
    border-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .ifs-range .ifs-range-row.active .ifs-range-circle,
.ifs-main .ifs-range .ifs-range-row.active .ifs-range-active-bar {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .entries-selected.ifs-folder-facet header,
.ifs-main .ifs-facet.entries-selected header {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .ifs-facet .ifs-facet-more,
.ifs-main .ifs-folder-facet .ifs-facet-more {
    color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}



.ifs-main.ifs-displaymode-knowledgemap .ifs-rl .ifs-rl-wrapper .ifs-naming
.ifs-filterbar-hook {
    background-color: REPLACE_WITH_YOUR_LIGHT_COLOR !important;
}



.ifs-main .ifs-timeline .ifs-bar {
    fill: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}



.ifs-main .ifs-timeline .ifs-timeline-breadcrumb li:last-child span {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .ifs-timeline .ifs-timeline-breadcrumb li:last-child span:after
{
    border-left-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifs-main .ifs-timeline .ifs-timeline-breadcrumb li:last-child span:before
{
    border-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
    border-left-color: transparent !important;
}

.ifs-main .ifs-rl .ifs-rl-header>.ifs-rl-header-right {
    border-left-color: transparent;
}

.ifs-toaster {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}

.ifmodal-overlay .ifs-dropdown>.ifs-dropdown-menu>li.active,
.ifmodal-wrapper .ifs-dropdown>.ifs-dropdown-menu>li.active,
.ifs-bottom-tabs .ifs-dropdown>.ifs-dropdown-menu>li.active,
.ifs-rl .ifs-dropdown>.ifs-dropdown-menu>li.active,
.ifs-sb .ifs-dropdown>.ifs-dropdown-menu>li.active,
.ifs-searchareas .ifs-dropdown>.ifs-dropdown-menu>li.active {
    background-color: REPLACE_WITH_YOUR_MAIN_COLOR !important;
}
```

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For more advanced settings, you can use the advanced iFinder configuration.

7.2 Enabling user authentication with users from an LDAP directory

If the user is authenticated against an LDAP server, you must define the domain settings and also configure iFinder accordingly.

7.2.1 Defining domain settings in Confluence

1. In Confluence, navigate to **Administration > Manage Apps > iFinder Confluence Search > Configure**.

2. Enter the user domain.

7.2.2 Configuring iFinder users LDAP connection

In iFinder Administration configure the following:

- LDAP connection at **User administration > LDAP connection > LDAP credentials**

- Groups assignment at **User administration > LDAP connection > Group administration**

For more information, see online help in iFinder Administration.

7.3 Enabling encryption with private and public keys

If you want to encrypt the authentication data with your own keys, you can generate keys and refer to them in iFinder Administration and in the configuration of the plugin. The keys are exchanged between iFinder backend and Confluence based on JSON Web Token (JWT). With this, users are passed on to iFinder. The search is performed with the name of the user who is logged on in Confluence.

7.3.1 Generating keys

You can for example generate the keys using **openssl**:

Private key

```
openssl genpkey -algorithm RSA -out if_rsa_private.pem -pkeyopt
rsa_keygen_bits:2048
```

Public key

```
openssl rsa -in if_rsa_private.pem -pubout -outform DER -out
if_rsa_public.der
```

7.3.2   Configuring the private key in Confluence

1. In Confluence, navigate to **Administration > Manage Apps > iFinder Confluence Search > Configure**.

2. Enter the path to the key for transferring the authentication data.
    Sample for Windows path: **C:\Confluence\JWTprofile\if_rsa_public.der**

7.3.3   Configuring Apache Tomcat for JWT tokens

For other elements that need to be exchanged between the systems, you must enable the respective CORS filter settings in the web.xml file for Tomcat. Use the IP address or host name of the integrating portal.

apache-tomcat-<Version>\conf\web.xml

```xml
    <filter>
        <filter-name>CorsFilter</filter-name>
        <filter-class>org.apache.catalina.filters.CorsFilter</filter-
class>
        <init-param>
            <param-name>cors.allowed.origins</param-name>
            <param-value><SERVER></param-value>
        </init-param>
        <init-param>
            <param-name>cors.allowed.methods</param-name>
            <param-value>GET,POST,HEAD,OPTIONS,PUT</param-value>
        </init-param>
        <init-param>
            <param-name>cors.allowed.headers</param-name>
            <param-value>Content-Type,X-Requested-
With,accept,Origin,Access-Control-Request-Method,Access-Control-Request-
Headers, Authorization</param-value>
        </init-param>
        <init-param>
            <param-name>cors.exposed.headers</param-name>
            <param-value>Access-Control-Allow-Origin,Access-Control-Allow-
Credentials, Authorization</param-value>
        </init-param>
        <init-param>
            <param-name>cors.support.credentials</param-name>
            <param-value>true</param-value>
        </init-param>
        <init-param>
            <param-name>cors.preflight.maxage</param-name>
            <param-value>10</param-value>
        </init-param>
    </filter>
    <filter-mapping>
        <filter-name>CorsFilter</filter-name>
        <url-pattern>/*</url-pattern>
    </filter-mapping>
```

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7.3.4 Configuring JWT tokens in iFinder Administration

1. Save the generated public keys to the iFinder server, for example
   to *C:\IntraFind\keys\if_rsa_public.der.*

2. In iFinder Administration, navigate to **Tools > Advanced configuration**.

3. In the upper-right part, click **Add**.

4. Add the first key and value from the following table, then click **Save settings**. Repeat this
   for the second and the third key listed in the table.

Key	Value

ifinder.securefilter.jwt.algorithm	Enter the complete code and modify the path to the JWT key file.
	
	```var spec = new java.security.spec.X509EncodedKeySpec(IO.readAll(IO.getInputStream(Configs.CFG.getStr('.ifinder.securefilter.jwt.secret'))))```
	```var kf = java.security.KeyFactory.getInstance('RSA')```
	```var publicKey = kf.generatePublic(spec)```
	```com.auth0.jwt.algorithms.Algorithm.RSA256(publicKey)```

ifinder.securefilter.jwt.secret	Enter the path to the public JWT key file: Sample for Windows path: **C:\Intrafind\keys\if_rsa_public.der**
searchbar.api.cors.whitelist	Enter following with the value for your integrating portal server here. If you add multiple values, separate them with a comma. **Sets.of('https://my-portal:port')**

8 Advanced configuration for Linchpin

If you use iFinder Confluence Search together with a Linchpin header, you can optimize the styling of the search integration.

1. In Confluence go to **General configuration > LINCHPIN THEME > Configuration** and open the **Header** section.

2. In the **Search and Create** area, change the search input type to the following:
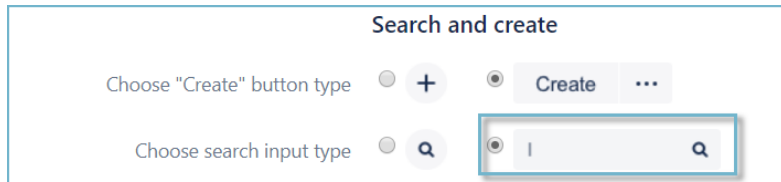
3. On the same page, open the **Advanced** section.

4. Add the following, in the **Custom CSS (use at own risk)** field:

```css
.ifc-searchreplacer {
  margin: 0 !important;
}
```

5. Save your settings.

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9 Advanced configuration for indexing

You can access the connector configuration in Confluence at **Administration > Manage Apps > iFinder Confluence Search > Configure** in the **iFinder Confluence Connector** section.

9.1 Settings for indexing

In addition to the basic required settings described before, you can for example define which spaces are indexed and which content types are excluded from indexing.

> If you change the indexing settings after indexing, a deletion of the iFinder index and complete reindexing is required: Deleting the index.

Field	Description	Values
Index service URL	URL at which the index service is accessible.	http://localhost:9605/hessian/index
Search service URL	URL at which search service is accessible.	http://localhost:9605/hessian/search
Converter service URL	URL at which converter service is accessible.	http://localhost:9602/hessian/converter
Confluence content types which should be indexed or not (true or false)	You can exclude Confluence content types from indexing. For the types that you want to index enter **true**. For the others enter **false**. The field must not be empty. If you change these settings after indexing, a deletion of the iFinder index and complete reindexing is required: Deleting the index.	
Spaces		true/false
Pages		true/false
Attachments		true/false
Blog posts		true/false
Comments		true/false
Personal info		true/false
Archived spaces	Default is **false**. Enter **true** if you also want to index archived spaces. The resulting documents are marked with a special value in the field **_str.status** or **_facet.status** (ARCHIVED or CURRENT).	true/false

Field	Description	Values
	If you change these settings after indexing, a deletion of the iFinder index and complete reindexing is required: Deleting the index.	
Spaces to index	A caseinsensitive list of spaces to be indexed separated with commas or semicolons. Enter the unique keys of the spaces that you want to index. If nothing is defined here or in the list of excluded spaces, all spaces are indexed. If you change these settings after indexing, a deletion of the iFinder index and complete reindexing is required: Deleting the index. Example: PUBLICSPACE, COMMONSPACE	
Excluded spaces	A caseinsensitive list of spaces that are excluded from indexing separated with commas or semicolons. Enter the unique keys of the spaces that you want to exclude from indexing. If a list of excluded spaces is defined, the defined list of spaces to index is ignored completely. If you change these settings after indexing, a deletion of the iFinder index and complete reindexing is required: Deleting the index. Example: SECRETSPACE	

9.2 Expert settings

The following settings are only relevant for the IntraFind support team and very experienced administrators. Only change the settings in coordination with IntraFind support.

Field	Description	Values
Connector ID	**Do not change.** Unique ID for the connector.	confluence
Index name	**Do not change.** Search scope at which the data is displayed in iFinder5 elastic.	Confluence
Expert: Proxy server	**Only for experts.** Optionally, you can use a proxy server.	http://myproxy

Field	Description	Values
Expert: Proxy port	**Only for experts.** Port for the proxy server	1234
Expert: Proxy user	**Only for experts.** User for the proxy server	
Expert: Proxy password	**Only for experts.** Password for the user. The password is stored encrypted.	
Expert: Converter service timeout	**Only for experts.** Timeout for the converter service	30
Expert: Converter service maximum field length	**Only for experts.** Maximum length in characters of attachments that are sent to the converter. Longer attachments are cut off.	524288
Expert: Regular expression for exluding files	**Only for experts.** Regular expression for attached files that should not be indexed. If a file name of an attachment complies with one of the regular expressions, this attachment is excluded from indexing. Multiple regular expressions may be configured, separated by semicolon. Example: Exclude attachments with the file extensions **.png** and **.jpg** and the file **do_not_index.txt** `.+\.(png|jpg);do_not_index.txt`	
Expert: World readable permission group	**Only for experts.** General user group in which all users are.	S-1-1-0
Expert: Tenant	**Only for experts.** The iFinder5 elastic supports multi tenancy. Tenants are an additional option the authorize content by logically dividing the index. If no specific tenant is to be used, the default value **public** should be defined here.	public
Markup	Enter **true** if you want the Confluence markup to be indexed to a specific field. This could be relevant if you have additional content in Confluence macros, for example drop-down menus, which would not be indexed otherwise. If you change this setting after the	true/false

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Field	Description	Values
	initial indexing, a deletion of the iFinder index and complete reindexing is required:	
Expert: Index Linchpin Userprofiles (e.g. rest/cup/1.0)	**Only for experts.** Interface for Linchpin User Profiles. If you do not have Linchpin User Profiles installed, the setting is irrelevant. Can be different for a later Linchpin version.	rest/cup/1.0
Expert: Linchpin administrator	**Only for experts.** Administrator user who is in the group of Confluence administrators to access the Linchpin interface.	
Expert: Linchpin password	**Only for experts.** Password for the administrator user encrypted with **iFinder Administration > Tools > Password encryption.**	
Fields with semantically significant terms	You can insert a script that defines fields as semantically significant terms. For example, you can copy individual fields completely or edit or filter their values.	By default, the fields **_str.label** and **_str.space** are defined as semantically significant terms.

9.3   Deleting the iFinder index

> This procedure deletes the iFinder index. After this you need to reindex the content. This can significantly affect the performance of your instance; for larger instances, the process can take hours.
>
> The standard Confluence index is not affected.

1. Open iFinder Administration at http://my_ifinder_server:9680/resource/index.html.

2. Go to **iFinder Administration > Select a product > Tools > Index analyzer > Index viewer**.

3. In the **_facet.indexname** field, enter **Confluence**.

4. Click the **Search** button.

5. Scroll down to **Delete index data**.

6. Click **Delete**.

7. Reindex your Confluence contents as described in Getting started with iFinder Confluence Search: Starting indexing.

10 Advanced iFinder configuration

If you want to use the full functionality, contact our Sales department for detailed information at atlassian@intrafind.com.

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11 Uninstalling iFinder

> If you want to run the Confluence system without iFinder Confluence Search for testing purposes or due to technical problems, you can deactivate iFinder Confluence Search temporarily with **Manage apps > iFinder Confluence Search > Deactivate**.

11.1 Uninstalling iFinder Confluence Search in Confluence

1. Go to **Manage apps > iFinder Confluence Search**.

2. Click on **Uninstall**.

3. Confirm if required.

4. Remove the user group used for access to iFinder search, for example **ifinder_universal_plugin**.

11.2 Uninstalling iFinder server with uninstall routines

> In case of problems, you can uninstall manually as described under Uninstalling iFinder server manually.

1. Log on to your iFinder server with a user with administration access.

2. Start the *<Installation directory>\9_UNINSTALL.bat* file as administrator: **Context menu > Start as administrator**.

11.3 Uninstalling iFinder server manually

Troubleshooting: If uninstalling the services does not work as described above, proceed as follows:

1. Log on to your iFinder server with a user with administration access.

2. Stop all IntraFind services with **Windows Start menu > Services > IntraFind - Service name > Stop**.

3. To uninstall Apache Tomcat:

    a. Stop the service with **Windows Start menu > Services > Apache Tomcat > Stop**.

    b. Open a command prompt.

    c. Navigate to *<tomcat installation path>/bin/*.

    d. Execute the following command:

    ```
    service.bat remove
    ```

4. To uninstall Elasticsearch:

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     a. In the command prompt, navigate to *<installation path>/services/if-elasticsearch7/bin/*.

     b. Execute the following command:

```
elasticsearch-service.bat remove
```

     c. Delete respective folder.

5. For all other IntraFind services in the *<Installation folder>\services* folder (except for if-elasticsearch7):

     a. Start *<Installation folder>\services\<if-sv-servicename>\bat***uninstallService.bat**.

     b. Delete respective folder.

6. To uninstall iFinder Administration (**if-app-admin-ui**):

     a. Start *<Installation folder>\apps\if-app-admin-ui>\bat***uninstallService.bat**.

     b. Delete the *<Installation folder>\apps\if-app-admin-ui* folder.

7. To uninstall the JDK, delete the folder.

8. Open the registry by typing **regedit** in **Windows menu** search. Remove all entries starting with **IF_** from the registry at **HKEY_LOCAL_MACHINE\Software**, for example **HKEY_LOCAL_MACHINE\Software\IF_Service_elasticsearch7**.

9. Delete the complete installation directory of iFinder, for example *C:\IntraFind*.

12 Updating a license on iFinder server (iFCS)

Proceed as follows to install a new iFinder license on the productive iFinder server for iFinder Confluence Search.

Phase 1: Store the new license file *intrafind.lic* on the server on which the software is installed.

1. Connect to the iFinder server on which the license should be installed.

    > With a 3-node cluster, you must install the license on all three productive servers!

2. Navigate to the folder where you have stored the license file. Default is *C:\IntraFind\license* .

3. Rename the existing license file *intrafind.lic* to *intrafind.lic.bak_<date>*, for example *intrafind.lic.bak_20200504*.

4. Copy the new license file *intrafind.lic* to the folder.

Phase 2: Restart the Tomcat server and services on all servers.

> Alternatively to the following steps you can restart the whole server if this is possible in your environment.

1. Log in with a user who has administration rights.

2. Start the **RESTART.bat** script to stop and start all relevant services.

3. Info for servers: A message of success should be sent back for all started and stopped services.

Phase 3: Check whether searching is working properly.

1. Is the search input field still there?

2. Can you perform a search and get a hit list?

3. Are the known functions still available (e.g. search dropdown/quicksearch)?