Openfire/Spark Installation and Configuration

1) What is Openfire & what spark ignite??

Openfire and Spark are two separate software applications developed by the same organization, Ignite Realtime, for real-time collaboration using the XMPP protocol.

Openfire is a server application that provides the backend infrastructure for real-time messaging and collaboration. It enables the creation of user accounts, groups, chat rooms, and other administrative functions. Openfire supports various authentication mechanisms and can integrate with other systems such as LDAP and Active Directory.

Spark, on the other hand, is a desktop client application that provides a user interface for messaging and collaboration. It is designed to work with Openfire and supports various features such as group chat, file transfer, and screen sharing. Spark is available for Windows, Linux, and macOS.

Together, Openfire and Spark provide a complete solution for real-time messaging and collaboration that can be used by organizations to build their own internal chat networks or by developers to create custom chat applications. The combination of Openfire and Spark is a popular choice among organizations that value open-source, extensibility, and security.

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Home	Projects Downloads Co	ommunity Fans	Support	About		
Releases	Source Beta Releases Open	fire Plugins				
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1 🧲	Openfire 4.7.4	Plugins Old versions	Readme & License	z <u>Changelog</u> <u>Nightly (</u>	Suilds Source	SPECIAL THANK YOU!
OPENFIRE	Openfire (formerly Wildfire) is a cro about the name change As of Openfire version 4.7.0, a Jav	oss-platform real-time o va Runtime Environmer	ollaboration serv at (JRE) is <u>no lon</u> e	er based on the XMPP ger distributed with the C	protocol. <u>Read</u> Openfire	Thank you EJ Technologies for an open source license provided to this project to help build installers to distribute.
	release. Checksums for Openfire distributa repository.	bles are available in the	e <u>Github 'release</u> :	s' section of the Openfire	source code	INSTALL4J
	Choose your platform:	🚝 Windows	👌 Linux	🎽 Mac		
	openfire-4.7.4-1.noarch.rpm	RPM for Red Hat Linux	and variants	November 9, 2022	43.07 MB	IN YOUR WORDS
	openfire 4.7.4 all.deb Debi openfire 4.7.4.tar.gz Work	an package s on most Unix variants		November 9, 2022 November 9, 2022	40.12 MB 45.77 MB	At Genexis we managed to quickly create a massively scalable IoT servic delivery platform using Openfire at its

2)We can download both from https://www.igniterealtime.org/downloads/ .

We install Openfire from RPM and or we can directly download ta.gz file and create custom installtion if we want to.

In Our case we do the custom installation from the downloaded tar.gz file we keep downloaded file on our /opt/soft folder and untar it.

After keeping Openfire in a custom location, we start the application by going /opt/soft/openfire/bin and fire command "./openfire start" or We can shoot from the current terminal "/opt/soft/openfire/bin/openfire start" so application will run, or we can say start.

```
osboxes@ansibel-controller:/opt/soft/openfire/bin
                                                                                             ×
 File Edit View Search Terminal Help
[osboxes@ansibel-controller openfire]$ ll
total 412
drwxr-xr-x. 3 osboxes osboxes
                                       4096 Nov 9 11:00 bin
-rw-r--r-. 1 osboxes osboxes 375002 Nov 9 10:59 changelog.html
drwxr-xr-x. 2 osboxes osboxes 4096 Nov 9 11:00 conf
drwxr-xr-x. 4 osboxes osboxes 4096 Nov 9 11:00 documentation
drwxr-xr-x. 2 osboxes osboxes 4096 Nov 9 11:00 lib
-rw-r--r-. 1 osboxes osboxes 10874 Feb 16 2022 LIC
                                                       2022 LICENSE.html
drwxr-xr-x. 3 osboxes osboxes 4096 Nov 9 11:00 plugins
-rw-r--r-. 1 osboxes osboxes 5403 Feb 16 2022 README.html
drwxr-xr-x. 6 osboxes osboxes 4096 Nov 9 11:00 resources
[osboxes@ansibel-controller openfire]$ cd bin/
[osboxes@ansibel-controller bin]$ ll
total 40
drwxr-xr-x. 3 osboxes osboxes 4096 Nov 9 11:00 extra
-rwxr-xr-x. 1 osboxes osboxes 19424 Nov 9 11:00 openfire
-rw-r--r-. 1 osboxes osboxes 5292 Sep 22 2022 openfirectl
-rw-r--r-. 1 osboxes osboxes 5015 Feb 16 2022 openfire.sh
[osboxes@ansibel-controller bin]$ ./openfire start
Starting openfire
[osboxes@ansibel-controller bin]$ pwd
/opt/soft/openfire/bin
[osboxes@ansibet-controller bin]$
```

3) openfire will listen on 9090 on http for 1st time for installation.



Built by the IgniteRealtime.org community

Select language hit next.

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Setup		
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Admin Account	Server Host Name (FQDN): Openfire	
	Admin Console Port	
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We can setup server settings like Domain name and FQDN and hit next.

Admin port 9090 and secure admin port is 9091 on https.

Select database embedded one because we do not maintain database of openfire server.



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In Our earlier and easy usage, we create a local environment so need to create and delete, update user from openfire server but now we use active directory feature so if user exists on AD then we can directly import user from the AD and maintain from AD only.

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Setup			
Setup Progress	Profile Settings: Connection Settings		
✓Server Settings			
✓Database Settings Profile Settings	1. Connection Settings Z. User Mapping 3. Group Mapping		
Admin Account	Step 1 of 3: connection Settings Configure connection settings for your LDAP directory below. All fields are required; if you need additional information about a field, hover your mouse over the corresponding help icon.		
	LDAP Server Server Type: Active Directory Protocol () Host () Port () Details of the server you are connecting to: Map v /// Host () 4369 Like Straft 15 () Nov ()	• 0	
	Vour current settings mean user credentials will be passed in plain text between Openfire and your LDAP server. You should either use LDAPS or enable StartTLS for LDAP.		
	Base DN: de=avindia.de=com		
	Authentication: Administrator DN: adm951357@awinda.com Password: •••••••••• ⑦	0	
	Advanced Settings	Test Settings	Continue
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4) Domain Integration as shown as below

Same configuration should be done for active directory collaboration and AD's global administrator use authentication must be done to achieve proper success in auth.

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openfire [.]			Openfire 4.7.4, build 51b9db9
Setup			
Setup Progress /Language Selection /Server Settings /Database Settings Admin Account	Profile Settings: Connection Settings 1. Connection Settings 2. User Mapping Step 1 of 3: Connection Settings Configure connection settings for your LDAP directory below. All fields are required; if you need additional information about a field, hover your mouse over the corresponding help icon. LDAP Server Server Type: Active Directory Profile Profile Details of the server you are connecting to: Test: Connection Settings Use Start[LS] Test: Success! A connection was successfully established to the LDAP server using the settings above. Close this test panel and continue to the next step. Base DN: de=winda.de=com Authentication: Administrator DN: Administrator DN: adm551357@windia.com Password: Test	• 0 	
	Advanced Settings	Test Settings Save &	Continue
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Test connection before preceding so we can achieve 100 % success in setting up server-side configuration.

5) Very important setup not to forget adding administrator of openfire server this activity done only when we configure openfire server so if want add administrator we can do after completion of openfire server.

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Setup				
etup Progress Language Selection Server Settings Database Settings Profile Settings Admin Account	Administrator Account Choose one or more users from your LDAP directory to be administrators by entering their usernames. Alternatively, provide the name of one of the groups from your LDAP directory to make all of its members an administrate Add Administrator: The value provided above is a LDAP user. The value provided above is an LDAP group name. Add	tor of Openf	lre.	
	Administrator	Test	Remove	
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	prashant.jagadale	-		
	amardeep	8		
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So, add AD's server administrators at this step only so others can access openfire admin console.

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Setup			
Setup Progress <td>Setup Complete! This installation of Openfire is now complete. To continue: Login to the admin console</td> <td></td> <td></td>	Setup Complete! This installation of Openfire is now complete. To continue: Login to the admin console		
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6) So now setup is complete we can access openfire admin portal by <u>http://localhost:9090</u> & <u>https://localhost:9091</u> for secure authentication.

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openfire ⁻		Openfire 4.7.4, build 51b9db9 Logged in as kaushal.kate - <mark>Logout</mark> Clustering status - Disabled
Server Users/Groups	Sessions Group Chat Plugins	
Server Manager Server	r Settings TLS/SSL Certificates Media Services PubSub	
Server Information	Server Information	
System Properties		
Language and Time	Below you will find server information, ports being used and latest news about Openfire	
Clustering	Server Properties	
Cache Summary	Server Uptime: 3 days, 2 hours, 20 minutes started May 5, 2023 8:23:55 AM	Ignite Realtime News
Database	Version: Openfire 4.7.4	
Logs	Server Directory: /opt/soft/openfire XMPP Domain Name: ansibel.controller	Spark 3.0.2 Released, Mar 31, 2023
Email Settings	Amr P Domain Maine, ansider-conditien	Openfine Dèdé plugie 1.7.6 relevendi Mar 10.0000
SMS Settings	Environment	Openine Pade plugin 1.7.6 feleased:, Mar 18, 2023
Security Audit Viewer	Java Version: 1.8.0_362 Red Hat, Inc OpenJDK 64-Bit Server VM Appserver: jetty/9.4.43.v20210629	Release v1.1.0 of the MUC Real-Time Block List plugin for Openfire, Mar 18, 2023
	Server Host Name (FQDN): ansibel-controller OS / Hardware: Linux / amd64	Developing Openfire Efficient XML Interchange (EXI) functionality, Mar 14, 2023
	Locale / Timezone: en / Eastern Standard Time (-5 GMT) OS Process Owner: osboxes	Botz version 1.2.0 release, Mar 9, 2023
	Java Memory 58.81 MB of 444.69 MB (13.2%) used	HTTP File Upload v1.2.2 released!, Mar 5, 2023
		Translations everywhere!, Mar 2, 2023
	Server Ports	

Now our openfire server backend is ready to use 1st thing here we can see all the details regarding server.

A few things we need to observe are that Java memory is by default allocated and we may increase if in case we face issue slowness or GC full.

We can do that by creating a file in /opt/soft/openfire/bin filename "openfire.vmoptions" contains

"-Xms8000m

-Xmx12000m

"

So, we specifically saying minimum 8 Gb to 12 GB Java memory should be used by openfire server.

Minium 6 GB utilized as we have seen in observation and minimum 6 CPU core for standard 400-500 user via Active directory and if user increase then we need to increase Java memory and CPU also.

If Java memory is utilized above 80% then we must restart openfire server by "/opt/soft/openfire/bin/openfire restart".

6) User administration is an important and easy task if we use AD integration.

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				Openfire Logged in as ka Cluster	4.7.4, build 51b9db9 ushal.kate - Logout ing status - Disabled
Server Users/Groups	Sessions Group Chat Plugins				
Users Groups					
Group Summary	Edit Group				
Group Options					
Delete Group	Edit group settings and add or remove group members and administrators using the forms below.				
Create New Group	Edit Details				
	 Not allowed: the group account system is read-only. 				
	Groop Name - [Account				
	Description:				
	* Hequired reus				
	Contact List (Roster) Sharing				
	You can use the form below to automatically add this group to users' contact lists. When enabled, this group will only appear in the contact lists of the group's members. However, you can share this group with all users or members of other groups.				
	pruduke contact list group sharing				
	Enter contact list group name				
	○ Crises of the same Boob ones Riode same Boob				
	Al users				
	O The following groups:				
	Access Control Assistance Operators Accust Operators				
	Administration Administrations				
	Allewer TROOC Password Replication Group Even Treacher				
	(Save Contact Los Detrings)				
	Members of This Group				
	 Not allowed: the group account system is read-only. 				
	Total Users: 0 - Users or page: 25 - V				
	Usiname Natio				
	No members in this group. Use the form above to add some,				

For Active directory integration we must go in groups active/enable all working security group from AD.

At AD side we must create a security group in the organization unit (OU) so openfire can fetch all users and groups.

File Action View Help Image: Second S	odified 29/2023 2:09:2 29/2023 3:31:2 18/2023 11:13:
Image: Second secon	odified 29/2023 2:09:2 29/2023 3:31:2 18/2023 11:13:
b Compliance Name Type Description M b Conference App Bhammanand Bhadikar User 4/	odified 29/2023 2:09:2 29/2023 3:31:2 18/2023 11:13
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CONTENT-WRITER Sysadmin Security Group - Global 4/	
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Program Data Satyaprakash avindia.com/ITG	~
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7) If we follow these above settings at openfire side, then backend is configured.

We must install spark client who can connect to openfire server. Spark clients can be windows, Linux, Mac.

vanced connection preferences	
General Security Proxy SSO Certificates Mutual auth	
Encryption mode	
O Required	
O If possible	
O Disabled	
✓ Use Direct TLS method	
Disable certricate nosularile vernication (not recommended)	
Allow for client side authentication	
Farret All Lasia Dassurada	

Disabled TLS to connect openfire server in Spark client newer then 2.72.

Import Note:-

How to stop, start & restart Spark server??

In our case we have configured in root so take root access and fire below command

"/opt/soft/openfire/bin openfire start"

"/opt/soft/openfire/bin/openfire stop"

"/opt/soft/openfire/bin/openfire restart"

"/opt/soft/openfire/bin /openfire status"

Or we can go to path /opt/openfire/bin/ and "./openfire start "

"./openfire restart "

"./openfire stop "

"./openfire status "