

高可用 Jira 集群的安装以及数据迁移

1. 安装准备

- 数据库 MySQL

创建数据库和 jira 用户

```
CREATE DATABASE jira;  
CREATE user 'jira'@'%' identified by 'jira-password';  
GRANT all privileges on jira.* to 'jira'@'%';  
flush privileges;
```

配置数据库信息: /etc/mysql/mysql.conf.d/mysqld.cnf

```
[mysqld]  
bind-address = 0.0.0.0  
max_connections = 500
```

重启 MySQL 服务

- 负载均衡

需要 enable sticky session

- NFS

需要创建一个共享目录, 确保每个 jira 节点都可以读写入该目录。

编辑/etc/fstab 文件, 推荐的 mount 选项如下:

```
NFS-IP:/opt/jiradata /opt/jira-shared-home nfs  
rw,nfsvers=4.1,lookupcache=pos,noatime,intr,rsz=32768,wsz=32768,_netdev 0 0
```

```
mount /opt/jira-shared-home
```

- Jira Data Center license key
- Plugins lisence key
- Linux 用户和群组: Jira

2. 获取 JIRA software 安装包

<https://www.atlassian.com/software/jira/update>

3. 安装 Jira

获取安装包之后, 执行安装包。

```
chmod a+x atlassian-jira-software-9.4.6-x64.bin
```

Root 执行 jira 安装, root 可以创建 jira user 和 group。也可以选择作为系统服务运行

```
sudo ./atlassian-jira-software-9.4.6-x64.bin
```

```

root@lzh-mysql:/opt# cd /opt/jira
root@lzh-mysql:/opt# ./atlassian-jira-software-9.4.6-x64.bin
Unpacking JRE ...
Starting Installer ...

This will install Jira Software 9.4.6 on your computer.
OK [o, Enter], Cancel [c]
o
Click Next to continue, or Cancel to exit Setup.

Choose the appropriate installation or upgrade option.
Please choose one of the following:
Express Install (use default settings) [1], Custom Install (recommended for advanced users) [2, Enter], Upgrade an existing Jira installation [3]
2

Select the folder where you would like Jira Software to be installed.
Where should Jira Software be installed?
[/opt/atlassian/jira]

Default location for Jira Software data
[/var/atlassian/application-data/jira]
/opt/jira

Configure which ports Jira Software will use.
Jira requires two TCP ports that are not being used by any other
applications on this machine. The HTTP port is where you will access Jira
through your browser. The Control port is used to startup and shutdown Jira.
Use default ports (HTTP: 8080, Control: 8005) - Recommended [1, Enter], Set custom value for HTTP and Control ports [2]
1

Jira can be run in the background.
You may choose to run Jira as a service, which means it will start
automatically whenever the computer restarts.
Install Jira as Service?
Yes [y, Enter], No [n]
y

Details on where Jira Software will be installed and the settings that will be used.
Installation Directory: /opt/atlassian/jira
Home Directory: /opt/jira
HTTP Port: 8080
RMI Port: 8005
Install as service: Yes
Install [i, Enter], Exit [e]
i

```

4. 安装 MySQL JDBC driver

Jira 支持的数据库以及其 jdbc driver 参考

<https://confluence.atlassian.com/adminjiraserver/supported-platforms-938846830.html>

Jira 连接 mysql 需要安装 MySQLdriver

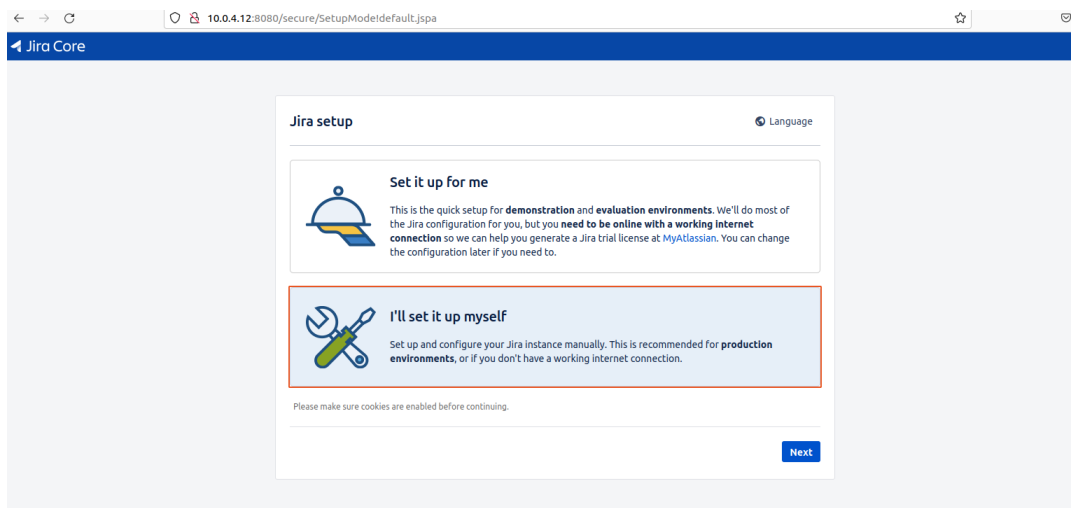
<https://dev.mysql.com/downloads/connector/j/8.0.html>

解压之后将 jar 包复制到 jira 安装目录内

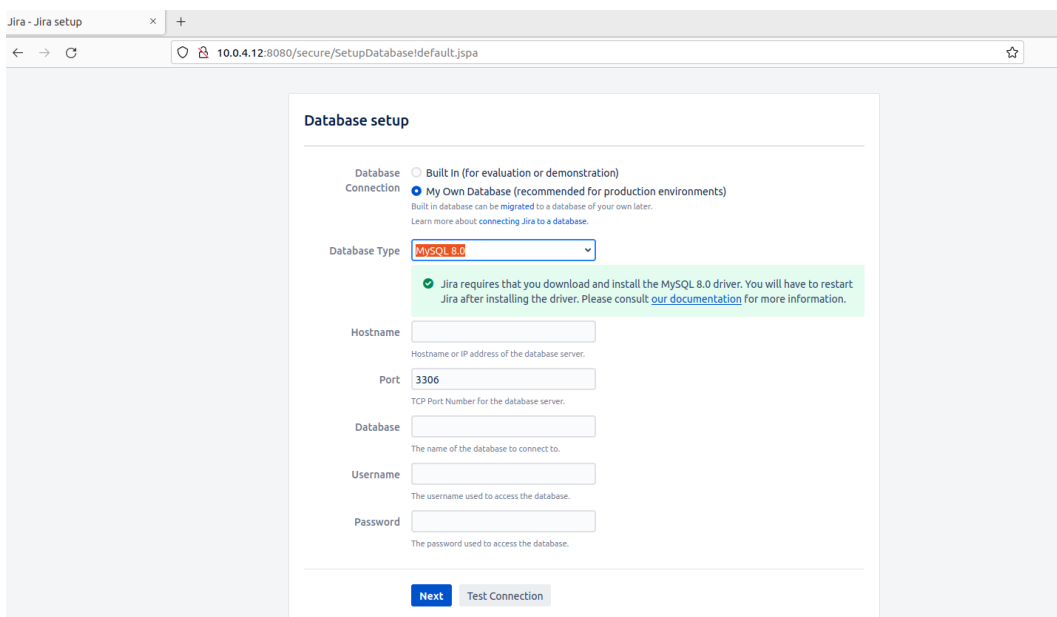
```
cp mysql-connector-j-8.0.33.jar /opt/Atlassian/jira/lib/
```

5. Jira 配置

安装后启动 jira 程序。在浏览器内输入 IP:8080 开始配置 Jira



选择合适的数据库，并输入数据库的 host, port 以及 database 和用户名密码。支持的数据库有： PostgreSQL, MYSQL5.7, MySQL8.0, Oracle, Microsoft SQL server, Aurora PostgreSQL。



下一步输入 Jira 一些基本配置信息，base url 应该填写负载均衡的 IP:PORT。

Jira - Jira setup

10.0.4.12:8080/secure/SetupApplicationPropertiesdefault.jspa

Jira Core

Set up application properties

Existing data? You can import your data from another installed or hosted Jira server instead of completing this setup process.

Application Title
The name of this installation.

Mode ☒ Private
Only administrators can create new users.
☐ Public
Anyone can sign up to create issues.

Base URL
The base URL for this installation of Jira.
All links created will be prefixed by this URL.

Next

输入 License Key （或可以生成一个 30 天的 trial key）

Jira - Jira setup

Jira - Jira setup

10.0.4.12:8080/secure/SetupLicensedefault.jspa

Jira Core

Specify your license key

You need a license key to set up Jira. Enter your license key or generate a new license key below. You need an account at [MyAtlassian](#) to generate a license key.

Please enter your license key

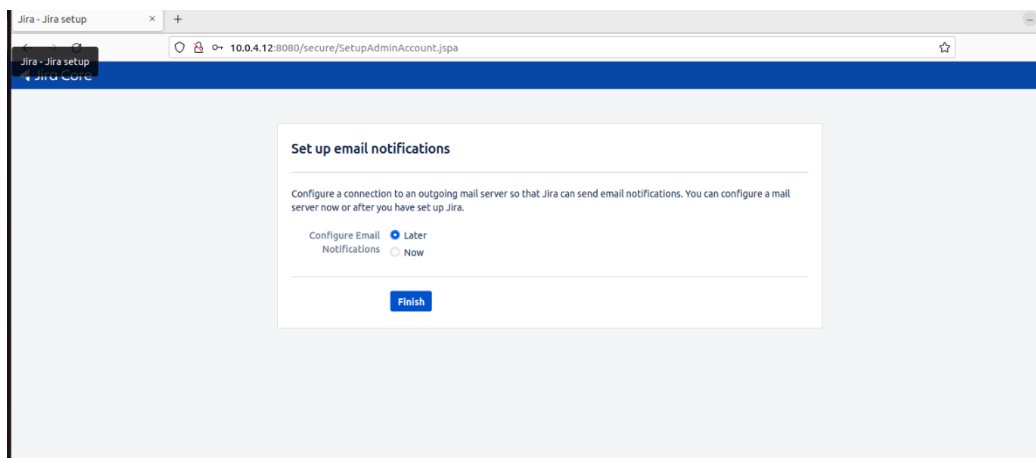
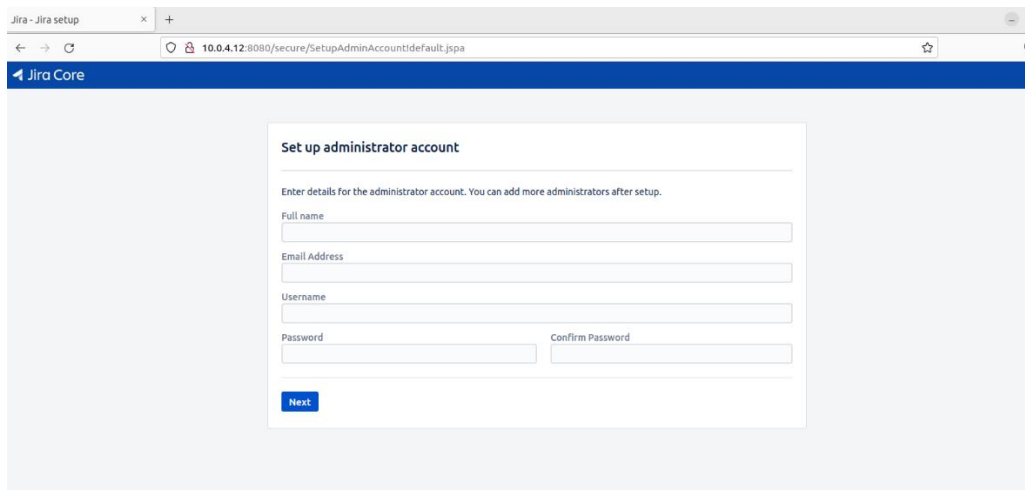
Server ID **BYGT-NYBP-4WJY-VX3C**

Your License Key

or generate a Jira trial license at [MyAtlassian](#)

Next

创建管理员用户及密码， 设置邮件提醒（可先忽略， 因为后期会从 Jira server 恢复所有数据）



完成所有配置后， 停止 jira 服务。

6. 高可用 Jira 集群的配置

复制 jira 本地数据目录(/opt/jira)到共享目录(/opt/jira-shared-home)下：

- data
- plugins
- logos
- import
- export
- caches
- keys

在 Jira 本地数据目录(/opt/jira 安装时指定的 data 目录)下创建文件 cluster.properties

```
jira.node.id = node1
jira.shared.home = /opt/jira-shared-home
```

增加 maximum open files: jira 安装目录下: /opt/Atlassian/jira/bin/setenv.sh

```
ulimit -n 16384
```

重新启动 Jira 服务, 将 jira node 加入负载均衡器, 并确保其可以正常运行。

7. Node 加入 Jira 集群

首先确保共享目录已经成功 mount

如步骤 2, 3, 4 安装 jira, 并确保其可以加载配置页面, 然后停止 Jira 服务。

从运行的 node1 复制 dbconf.xml (/opt/jira/)以及 server.xml (/opt/atlassian/jira/conf/)到新的节点

在新节点上创建 cluster.properties file (/opt/jira):

```
jira.node.id = node2
jira.shared.home = /opt/jira-shared-home
```

记得复制任何改动过的文件到新的节点上, 确保所有节点的配置保持一致
/opt/atlassian/jira/bin/setenv.sh 添加:

```
ulimit -n 16384
```

重启 node2 节点, 确保其可以正常创建 issue, project, 然后将其加入负载均衡内。

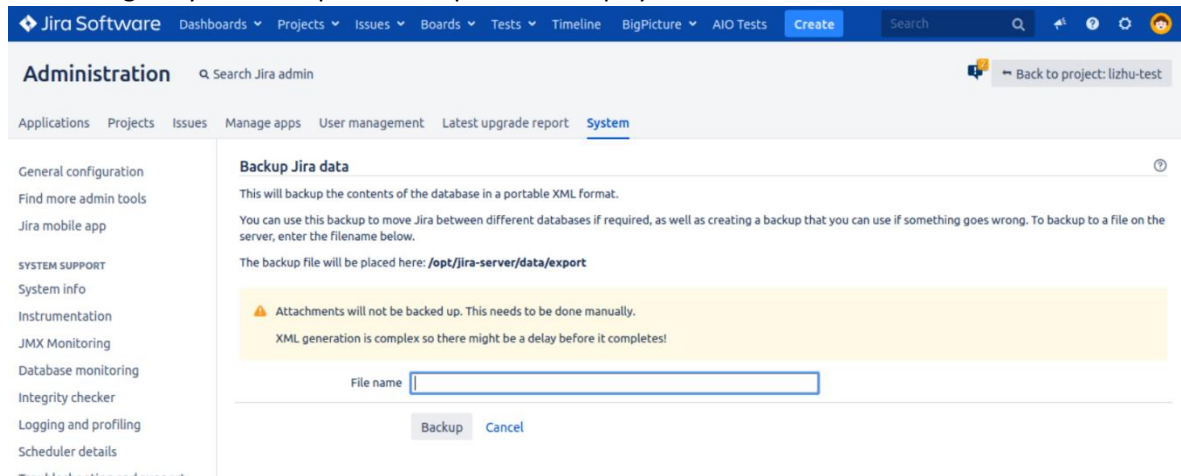
8. 数据迁移

因为 Jira v8.5.2 不可以直接迁移到 Jira 集群内, 所以需要备份数据之后再在新的 Jira 集群内进行恢复。

需要提前在新的 node1 上将安装的 plugins 安装并输入 lisence key

备份老版本的 Jira 数据, 备份名为 backup.zip:

Jira settings > system > import and export > backup system



Jira Software Dashboards Projects Issues Boards Tests Timeline BigPicture AIO Tests Create Search

Administration Search Jira admin Back to project: lizhu-test

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Backup Jira data

This will backup the contents of the database in a portable XML format.

You can use this backup to move Jira between different databases if required, as well as creating a backup that you can use if something goes wrong. To backup to a file on the server, enter the filename below.

The backup file will be placed here: /opt/jira-server/data/export

⚠ Attachments will not be backed up. This needs to be done manually.
XML generation is complex so there might be a delay before it completes!

File name

Backup Cancel

备份之后，avatars, attachments 和 logos 目录不会被备份，所以还需要手动备份这三个目录。

```
cd <Jira Home Dir> (/opt/jira-server)
zip -r data.zip logos/ data/avatars/ data/attachments/
```

将备份的文件以及 zip 文件都复制到新的 jira 集群节点 node1 上，并解压缩 zip 文件。将备份的 backup.zip 移动到 jira-home-dir /import 目录下

```
cp backup.zip /opt/jira-shared-home/import/
chown jira:jira /opt/shared-home/import/backup.zip
```

将 zip 解压缩的 logos, attachments, avatars 放到对应共享目录下。

```
cp -r logos /opt/jira-shared-home/logos && cp -r ./data/avatars /opt/jira-shared-home/data/
&& cp -r ./data/attachments /opt/jira-shared-home/data/
```

```
chown -R jira:jira /opt/jira-shared-home/logos && chown -R jira:jira /opt/jira-shared-home/data/
```

将 Jira 集群内其他的节点 stop，只保留 node1 运行。开始 restore 文件：

Jira settings > system > import and export > restore system

Restore Jira Data - Jira

10.0.4.12:8080/secure/admin/XmlRestore!default.jsps

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Restore Jira data from Backup

i The backup file and index paths must be located on the same machine as your Jira instance.
You will be logged out after the restore process. Make sure you know your login details in the data being restored.

w This will wipe all existing Jira content - make sure you [backup first!](#)

File name*
Enter a filename to restore data from. Files will be loaded from: /opt/jira/import

Index Path

License (if required)

Only enter a license if you want to override all the licenses in the import file.

Outgoing mail ☒ Enable ☐ Disable

重启 Jira 集群内的其他节点，保证所有节点都可以共享数据，写入数据。

9. 注意

1. 新的集群需要重新安装 plugins：比如 Zephyr Test， Timeline， Bigpicture
2. 启动 jira 时请选择。./start-jira.sh 这是默认用 jira 用户运行 jira。
3. 可以在安装 Jira 时不选择 run as service， 之后自己配置 Jira 作为 systemd service

```
touch /lib/systemd/system/jira.service
chmod 664 /lib/systemd/system/jira.service
```

在 jira.service 内写入一下内容：

```
[Unit]
Description=Atlassian Jira
After=network.target

[Service]
Type=forking
User=jira
LimitNOFILE=20000
PIDFile=/opt/atlassian/jira/work/catalina.pid
ExecStart=/opt/atlassian/jira/bin/start-jira.sh
ExecStop=/opt/atlassian/jira/bin/stop-jira.sh

[Install]
WantedBy=multi-user.target
```

配置 JIRA 服务为开机自启动

```
systemctl daemon-reload
systemctl enable jira.service
systemctl start jira.service
systemctl status jira.service
```

当 enable 服务出现问题时，可能是因为之前安装的时候选择了 run jira as service，所以需要移除自动生成的 init 文件。


```
systemctl enable jira.service
```

Synchronizing state of jira.service with SysV service script with
/lib/systemd/systemd-sysv-install.

Executing: /lib/systemd/systemd-sysv-install enable jira

update-rc.d: error: jira Default-Start contains no runlevels, aborting.

```
cp /etc/init.d/jira /opt/atlassian/jira-init.d.bak && rm /etc/init.d/jira
```

```
sudo systemctl enable jira.service
```

Created symlink /etc/systemd/system/multi-user.target.wants/jira.service →
/lib/systemd/system/jira.service.