SOFTWARE UPGRADE GUIDE

erwin

Business User Portal

for Data Intelligence (DI) Suite

VERSION 11.1

Certified Release on Log4j 2.17.1

Software Upgrade Guide

This document provides the instructions to upgrade the Business User Portal software from your current version to the new 11.1 version.

The 11.1 version is certified on Log4j 2.17.1

Publication information

Release : erwin DI Business User portal v11.1
Publication Date : Feb 04, 2022

Contents

1 About this Guide

This document describes the upgrade process for erwin DI Business User Portal on a dedicated on-prem/cloud server from BUP v10.x to BUP v11.1.

1.1 Pre-requisites to upgrade to Business User Portal 11.1 version

To install erwin DI Business User Portal 11.1

- It is mandatory to have the erwin Data intelligence (DI) Suite 11.1 already installed and running.
- It is recommended to deploy erwin DI Business User Portal 11.1 on the same Server/VM where erwin Data Intelligence (DI) Suite 11.1 is installed. However, a separate server can be used to ensure optimal performance levels in the case of large data sets.
- The same erwin DI is leveraged by the Business User Portal application.

Upgrading to the erwin DI Business User Portal v11.1 version

1. ****IMPORTANT**:** Take a backup of the existing backend Database and the ***erwinBUP.war*** file and ***erwinBUP*** folder (tomcat/webapps/).
2. Take a backup of the ***application. properties*** file from the following folder
    a. **Folder:** C:\Program Files\Apache Software Foundation\Tomcat 9x\webapps\erwinBUP\WEB-INF\classes
3. Stop the Tomcat server.
4. From the tomcat/webapps/ folder, delete the existing ***erwinBUP.war*** file and the **erwinBUP** folder
5. Go into the Tomcat Directory\work\Catalina\localhost\ folder and delete the ***erwinBUP*** folder
6. Upgrading Java to the 8 version and Tomcat to v9.0.46 version Click Here to install Java 8 and Tomcat 9 versions (if required)
    a. ***Note***: This step can be ignored if tomcat v9.0.46 and Java 8 versions are already installed.
7. From the newly Downloaded **software build → WAR** folder , copy the ***erwinBUP.war*** file and paste into the tomcat/webapps folder
8. Start the Tomcat server.
9. You will now see an expanded ***erwinBUP*** folder in the tomcat/webapps/ directory

1.2 Configure application properties of BUP in the tomcat

The below properties need to be changed in the ***application.properties*** file of BUP in the tomcat. The ***application.properties*** files enables the communication between erwin BUP and erwin DI Suite. This files also provides the feasibility of configuring other properties like SAML, LDAP, SMTP session timeout etc.,

You can find the ***application.properties*** of BUP in tomcat in the following directory (C:\Program Files\Apache Software Foundation\Tomcat 9.0\webapps\<<erwinBUP>>\WEB-INF\classes)

You can get the information from the previously backed up application.properties.

Please note: DO NOT replace the old application.properties file. Please reenter the necessary properties

Configuring the Application.properties file

Note **: "#" in the ***application.properties*** file indicates that the line is commented.

1.2.1 erwin DI Suite URL and the application path

```
# DIS application URL
dis.application.url=http://localhost:7080/erwinDI

# DIS application path
dis.application.path=C:/Program Files/Apache Software Foundation/Tomcat 9.0/webapps/erwinDI

# DIS documents storage path (same as the path provided in the icc.properties file of DI Suite)
dis.icc.documents.path=C:/MappingManager/erwinDI
```

1. Enter the application URL of the erwin DI Suite application currently running at your end
   Eg: http://localhost:8080/erwinDISuite
2. Provide the full tomcat application path of the erwin DI Suite application
   Eg: C:/Program Files/Apache Software Foundation/Tomcat 9.0/webapps/erwinDISuite
   (If copied directly from windows directory, replace backward slash (\) with forward slash (/))
3. Enter the location of the directory for storing files (e.g. *C:/MappingManager*)
   This should be the same path provided in the ***iccdocuments.properties*** file of DI Suite
   (If copied directly from windows directory, replace backward slash (\) with forward slash (/))

1.2.1.1 For Microsoft SQL Server

```
#-Microsoft SQL Server Datasource----------------------------------------------------

# Datasource
spring.datasource.driver-class-name=com.microsoft.sqlserver.jdbc.SQLServerDriver
spring.datasource.url=jdbc:sqlserver://localhost:1433;databaseName=erwinDISuite_v11
spring.datasource.username=questDIUser
spring.datasource.password=questDIPassword

# BUP Datasource.
# This is only to be enabled when migrating data from the BUP database back to the singular database.
#spring.datasource.bup.driver-class-name=com.microsoft.sqlserver.jdbc.SQLServerDriver
#spring.datasource.bup.url=jdbc:sqlserver://<hostname>:<port>;databaseName=<database>
#spring.datasource.bup.username=databaseuser
#spring.datasource.bup.password=databasepassword
```

**** ensure that all properties under "Oracle Datasource" are commented with "#"**

Under the *Datasource* Section, make the following changes

1. Enter the BUP database URL and the database name.
   E.g.: jdbc:sqlserver://localhost:1433;databaseName=erwinDISuite
   Hostname = localhost (deployed locally)
   Port No = 1433 (provided while installing the database)
   Database = erwinDISuite (same database as erwin DI)
2. Provide the database username.
   E.g.: questDIUser *(Application account user name used to connect to the DISuite backend database)*
3. Enter the database password created to the database user.
   E.g.: questDIPassword *(Application account user password used to connect to the DISuite backend database)*

   Important Note - If you are on a separate database for DI and BUP, you will need to enter the parameters of the older BUP database (marked in the RED below in the *BUP Datasource* section) so that the tables/data can be migrated from the older BUP database to the new singular DI database.

```
# BUP Datasource.
# This is only to be enabled when migrating data from the BUP database back to the singular database.
#spring.datasource.bup.driver-class-name=com.microsoft.sqlserver.jdbc.SQLServerDriver
#spring.datasource.bup.url=jdbc:sqlserver://<hostname>:<port>;databaseName=<database>
#spring.datasource.bup.username=databaseuser
#spring.datasource.bup.password=databasepassword
```

1.2.1.2 For Oracle

```
#-Oracle Datasource-------------------------------------------------------------

# Datasource
#spring.datasource.driver-class-name=oracle.jdbc.OracleDriver
#spring.datasource.url=jdbc:oracle:thin:@//<hostname>:<port>/<SID>
#spring.datasource.username=schemauser
#spring.datasource.password=schemapassword

# BUP Datasource.
# This is only to be enabled when migrating data from the BUP database back to the singular database.
#spring.datasource.bup.driver-class-name=oracle.jdbc.OracleDriver
#spring.datasource.bup.url=jdbc:oracle:thin:@//<hostname>:<port>/<SID>
#spring.datasource.bup.username=schemauser
#spring.datasource.bup.password=schemapassword
```

** Remove all the Hashes under “Oracle Datasource” as shown in the above figure, and ensure that all properties under “Microsoft SQL Server Datasource” are commented with “#”

1. Enter the BUP database URL and the database name.
   E.g.: jdbc:oracle:thin:@//localhost:1521/ORCL
   Hostname = localhost (deployed locally)
   Port No = 1521 (provided while installing the database)
   SID = ORCL
2. Provide the database username.
   E.g.: erwinDIS *(database account username to connect to the DI database)*
3. Enter the database password created to the database user.
   E.g.: erwinDIpassword *(database account user password to connect to the DI database)*

Important Note - If you are on a separate database for DI and BUP, you will need to enter the parameters of the older BUP database (marked in the RED below in the *BUP Datasource* section) so that the tables/data can be migrated from the older BUP database to the new singular DI database.

```
# BUP Datasource.
# This is only to be enabled when migrating data from the BUP database back to the singular database.
#spring.datasource.bup.driver-class-name=oracle.jdbc.OracleDriver
#spring.datasource.bup.url=jdbc:oracle:thin:@//<hostname>:<port>/<SID>
#spring.datasource.bup.username=schemauser
#spring.datasource.bup.password=schemapassword
```

1.2.2 Search Configuration:

If customers want to use the elastic search functionality – enable the following . Otherwise, set it to false.

Please note that elastic search requires two additional 3rd party software installations i.e. ***Opendistro Elastic Search*** and ***Logstash***. Ensure that these 2 software packages are installed and configured before you change the below properties.

Click here to navigate to elastic search section, for how to install and configure Elastic Search and Opendistro

```
# Elasticsearch Configuration---------------
globalsearch.enabled=true
elasticsearch.protocol=https
elasticsearch.certificate.validation=false
elasticsearch.host=localhost
elasticsearch.port=9200
elasticsearch.username=admin
elasticsearch.password=admin
```

1. Enable globalsearch.enabled to “true”, to enable elastic search
2. Host - If elastic search is deployed in the same server as of BUP. Make it as localhost, else provide the server name
3. Port - Default port number of opendistro elastic search is 9200. Update this port number if elastic search port number is changed

1.2.3 LDAP Configuration

If LDAP is not required, No changes are needed to this section.
To enable LDAP, fill the necessary fields. For More on LDAP, please go to LDAP Prerequisite Configurations

```
#-LDAP Configuration-----------------------------------------------------------------

app.features.ldap.enabled=false
app.ldap.url=ldap://<hostname>:<port>/<target entry dn>
app.ldap.manager.dn=<manager dn>
app.ldap.manager.password=<password>
#The type of ldap server. Value can be either default or activedirectory. If omitted, it will default to default.
#app.ldap.server.type=activedirectory
app.ldap.group.role.autoprovision=true
app.ldap.group.role.attribute=cn
app.ldap.group.search.base=ou=groups
app.ldap.group.search.filter=member={0}
app.ldap.user.search.base=ou=users
app.ldap.user.search.filter=uid={0}
app.ldap.user.full.name.attribute=cn
app.ldap.user.email.attribute=mail
app.ldap.config.filepath=classpath:/ldap/ldapConfig.json
```

if LDAP authentication is required:

1. Turn on the flag (app.features.ldap.enabled) to “true”
2. Provide the LDAP URL
   Eg: ldap://192.168.60.9/dc=vm
3. Give the LDAP Manger distinguished name
   Eg: cn=admin,dc=vm
4. Provide password for LDAP
   Eg: openstack

1.2.4 SAML Configuration

If SAML is not required, No changes are needed to this section.
To enable SAML, fill the necessary fields.

```
#-SAML Configuration----------------------------------------------------

app.features.saml.enabled=false
app.saml.keystore.filepath=classpath:/saml/samlKeystore.jks
app.saml.keystore.storepassword=erwinbup@1
app.saml.keystore.aliasname=erwinbup
app.saml.keystore.aliaspassword=erwinbup
app.saml.group.role.autoprovision=true
app.saml.config.filepath=classpath:/saml/samlConfig.json
app.saml.idp.default.filepath=classpath:/metadata/idp-metadata.xml
app.saml.idp.metadata.trustcheck=false
```

If SAML is required:

1. Enable the flag (app.features.saml.enabled) to “true”
2. Provide the password for SAML
3. Enter aliasname

1.2.5 Email Configuration

SMTP is used for email configuration, fill the necessary fields to enable email configuration

```
#-Email Configuration--------------------------------------

app.features.mail.enabled=false
spring.mail.host=<hostname>
spring.mail.username=<username>
spring.mail.password=<password>
spring.mail.properties.mail.transport.protocol=smtp
spring.mail.properties.mail.smtp.port=25
spring.mail.properties.mail.smtp.auth=false
spring.mail.properties.mail.smtp.starttls.enable=false
spring.mail.properties.mail.smtp.starttls.required=false
app.support.email=support@erwin.com
```

1. Turn on the flag (app.features.mail.enabled) to “true”
2. Enter SMTP mail server host
   Eg: 127.0.0.1
3. Enter SMTP server username
4. Enter SMTP server password

1.2.6 Session Configuration

```
#-Session Configuration-----------------------------------------------------------

app.accesstoken.secret=accesstokensecret
app.refreshtoken.secret=refreshtokensecret
# Time in milliseconds for session to expire. Please note that the actual session timeout will be double
app.accesstoken.expirationinms=1800000
```

1. Configure the session timeout period for BUP web portal. This is the time defined in milliseconds

1.3 Step 4: Restart the tomcat server

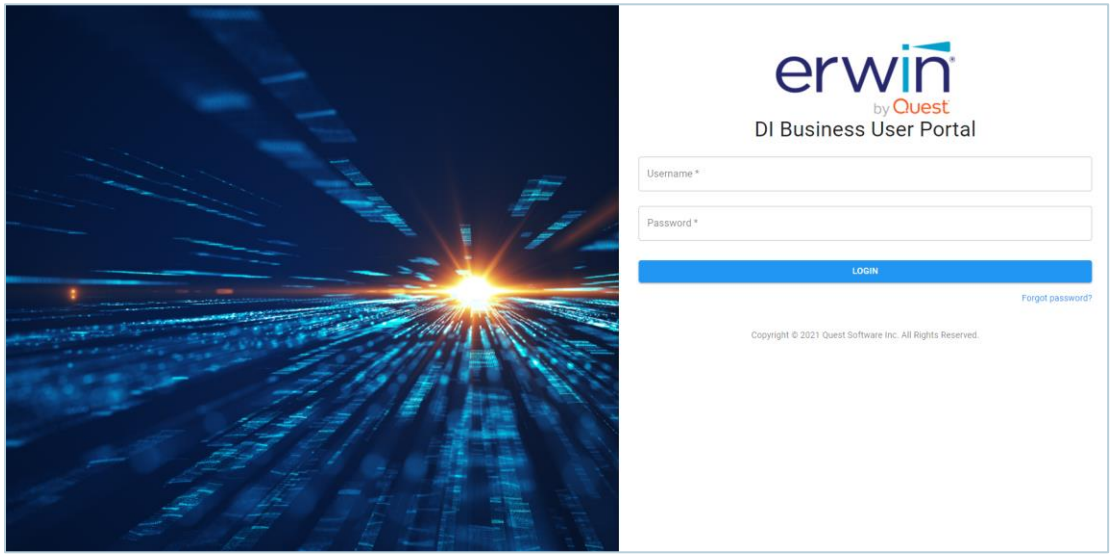
Once all the above application properties are entered restart the tomcat server

1.4 Step 5: Login and activate the license key

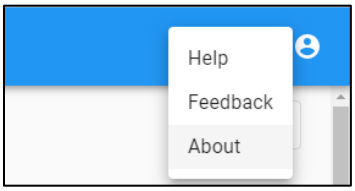
1. Type the URL **http://IP_ADDRESS:Port#/erwinBUP/**

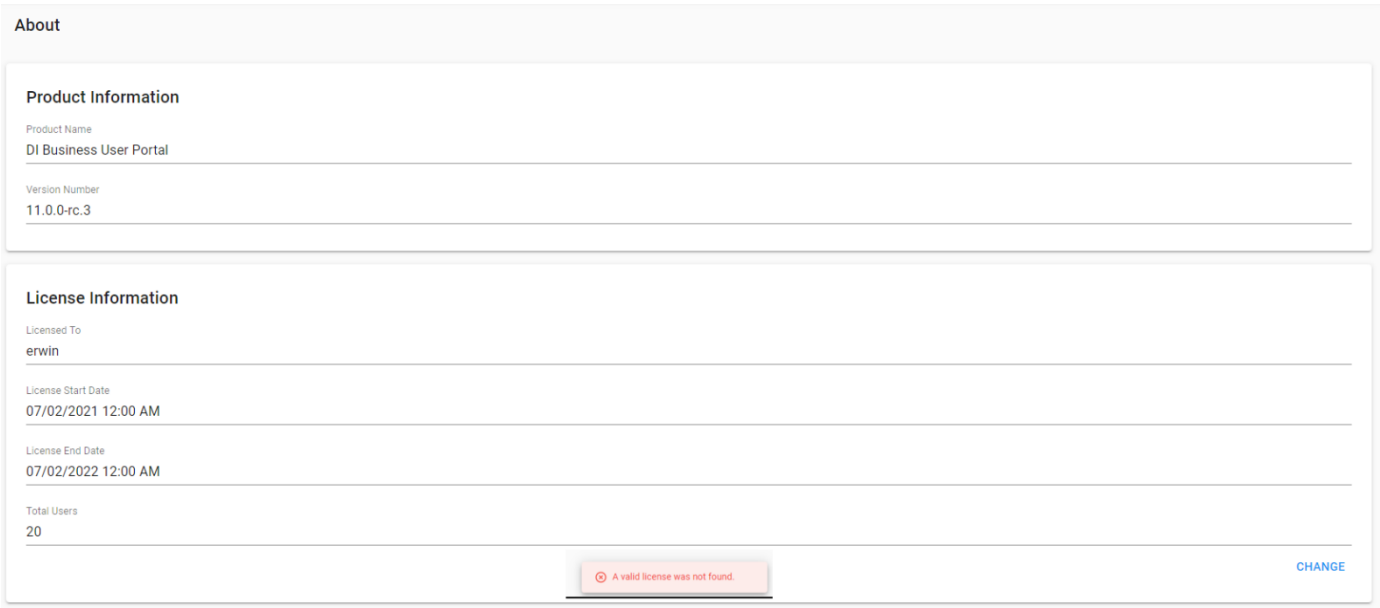
   IP_ADDRESS = IP Address or Physical Name of Server where tomcat is running

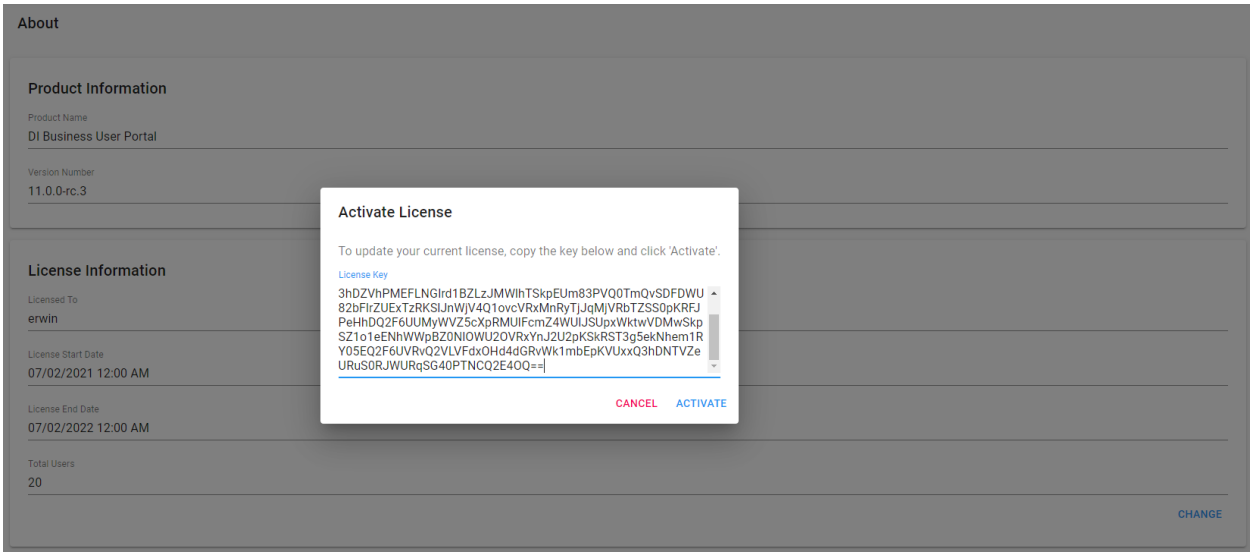
   Port#: Port Number on which Tomcat is configured



- To obtain a license, Business user portal license customers need to contact erwin support by telephone or the web licensing form, or contact your erwin license administrator.
- Once you have the license key, login using the Administrator account → click on the ***Help*** icon and then navigate to the ***About*** section. Click on "**change"** and enter the license key text
- Once the license key is pasted, click on activate.







1.4.1 Points to remember during the License Activation

1. An Administrator can login to the Business User Portal using the Administrator account without any license key. However, users will not be able to see any data, till a valid license key is entered and activated.
2. Ensure that all the spaces in the beginning & in the end of the license text are trimmed while pasting the License key
3. Erwin DI Business User portal allows multi-login; however, the license always validates the number of concurrent users.
    a. For example: If an organization has a license for 50 users, at any given point erwin DI Business User portal, validates the concurrent user sessions. It allows same user login in multiple systems, but will not allow the 51 session as the organization exceeds its maximum concurrent user count
4. The Business User Portal's license is completely independent of erwin Data intelligence Suite. Customers need to contact their erwin counterpart or erwin support by telephone or the web licensing form to obtain a license key for the Business User Portal

2 LDAP Prerequisites

By default, erwin BUP has been configured for standalone database user authentication. However, erwin BUP provides the capability to utilize LDAP for user authentication. Before configuring LDAP user authentication, some prerequisites are needed to be performed.

2.1.1 Configure LDAP user groups

erwin BUP is initially configured for two roles: Administrator and public. Erwin BUP can detect and automatically map LDAP user groups to erwin BUP roles. The application is configured to map the following user groups to roles:

- business-admin -> Administrator
- business-user -> public

Therefore, to take advantage of the default configuration only the two user groups need to be created: business-admin and business-user.

2.1.2 Modifying LDAP role mappings

Some users may prefer to use different groups or roles. To modify the role mapping, locate and modify the ldapConfig.json file. This file can be located under: C:\Program Files\Apache Software Foundation\Tomcat 8.5\webapps\<<erwinBUP>>\WEB-INF\classes.

For configuration in application. properties, please follow the steps from LDAP Configuration section

2.2 Elastic Search Configuration

Elastic search enables users to easily get the information that they are searching for. Elasticsearch and Logstash are opensource and are free to use under the Apache 2 license. Here are the steps needed to install and configure elastic search.

erwin Business User Portal allows the user to enable or disable the global search using application properties.

To enable make the below flag as "true"

```
# Elasticsearch Configuration---------------
globalsearch.enabled=true
elasticsearch.protocol=https
elasticsearch.certificate.validation=false
elasticsearch.host=localhost
elasticsearch.port=9200
elasticsearch.username=admin
elasticsearch.password=admin
```

2.2.1 Installs required

- Open Distro 1.13.3 (windows) and 1.13.2 (Linux)

  Download windows.exe (or) .zip opendisto elasticsearch file from link

- Java 11 - Requires java 11 for Opendistro/logstash to run
- Logstash – Download the Logstash 7.16.x - OSS for windows from this link

2.2.2 Recommended System Requirements for elastic Search

For Opendistro elastic search

Memory	Minimum – 16GB Recommended – 32-64GB
Heap Size	Minimum – 8GB Recommended 16GB – 32GB Recommended is half the allocated amount of memory
CPU	Recommended – 2-8 Cores
Disk	Recommended – 200 – 300GB

For Logstash

Memory	Recommended – 8-16GB
Heap Size	Recommended is half the allocated amount of memory Recommended – 4-8GB
CPU	Recommended – 2 Cores
Disk	Recommended – 1GB

‘

2.2.3 Steps of installation

Once all the above software’s are downloaded, here are the steps to install them

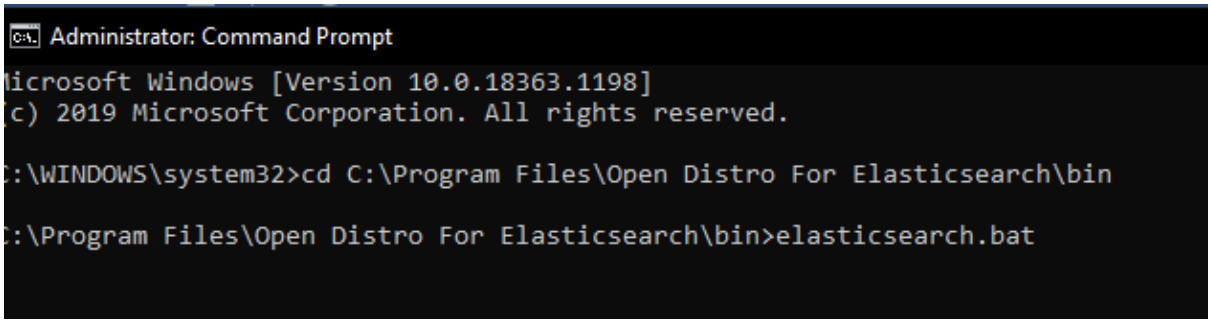
Step 1: Install Java 11 (or) copy dump to your c drive and ensure that JAVA_HOME variable is set for java 11

JAVA_HOME - C:\Program Files\jdk-11.0.9

Step 2: Install open Distro - If it asks for Java locate it in C:\Program Files\jdk-11.0.9\bin\Java.exe

Step 3: Start elastic search

- Open cmd prompt in admin mode
- Navigate to C:\Program Files\Open Distro For Elasticsearch\bin
- Run elasticsearch.bat

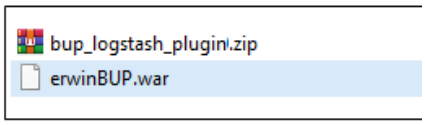


Step 4: Copy Logstash Dump to your C:/ drive

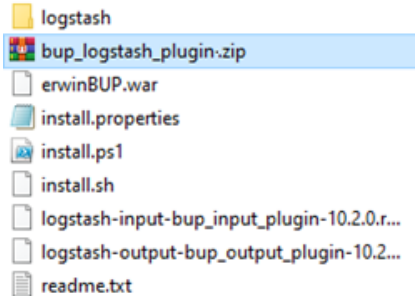
2.2.4 Configuration using automated Shell script

To run the elastic search, customers need to provide BUP database details and the required properties. A script is provided along with erwinBUP.zip file. Follow the below steps

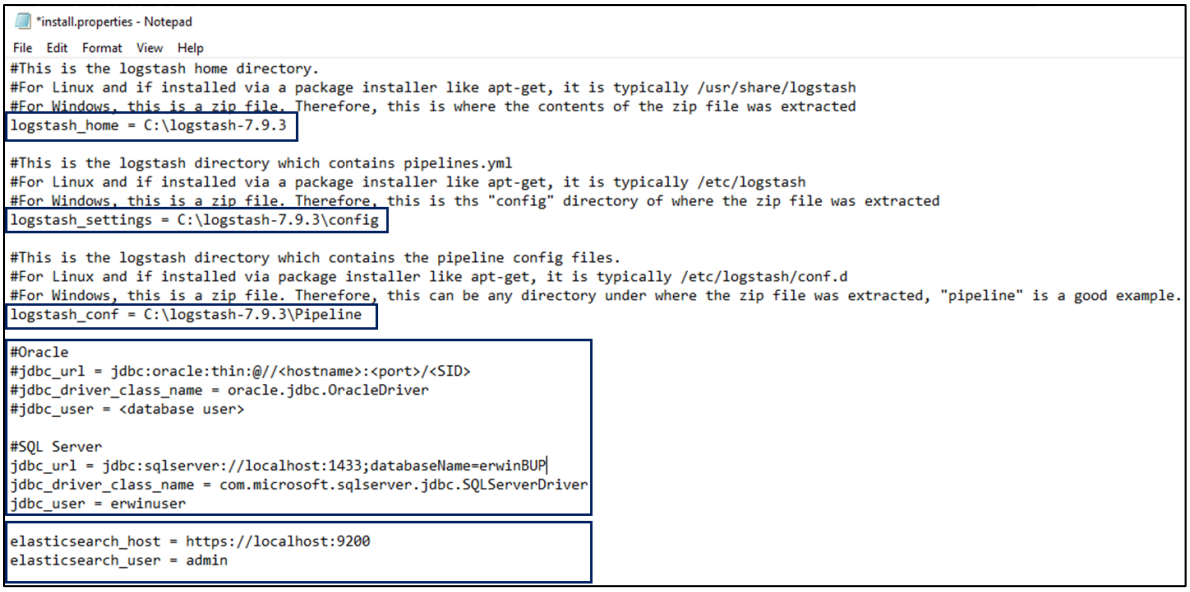
Step 1: Extract erwinBUP_v11.1.zip. It has both erwinBUP.war file and the Logstash plugin zip file.



Step 2: Extract the bup_logstash_plugin.zip file.

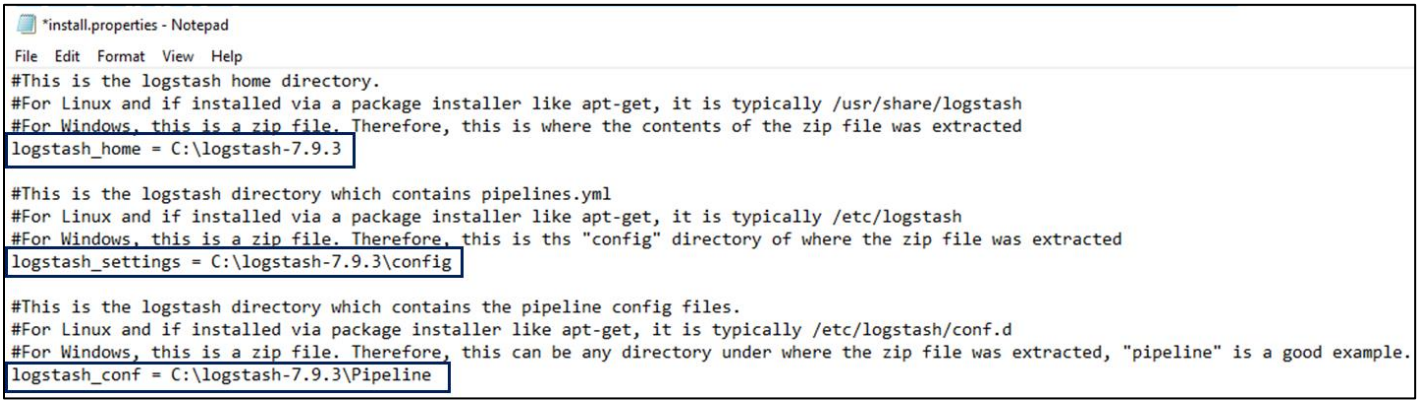


Step 3: Update the *install.properties* file

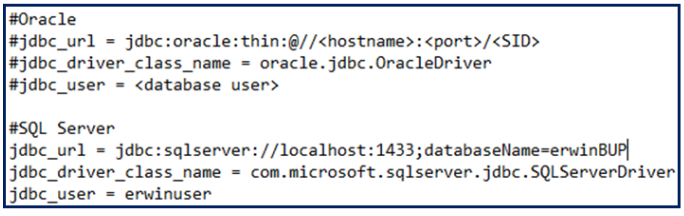


Parameters

- logstash_home = <logstash home directory>
  - Enter the home directory of logstash
    - Eg: C:\logstash-7.16.3
- logstash_settings = <logstash settings directory>
  - Enter the folder for logstash settings – usually config files
    - Eg: C:\logstash-7.16.3\config
- logstash_conf = <logstash configuration directory>
  - Enter the location of pipleline folder
  - A new folder named “Pipeline” will be automatically created under logstash.
    - Eg: C:\ logstash-7.16.3\pipeline



- Database Properties
  - Enter the address of DI database, along with the name of the database.
  - Provide the username of the DI database.



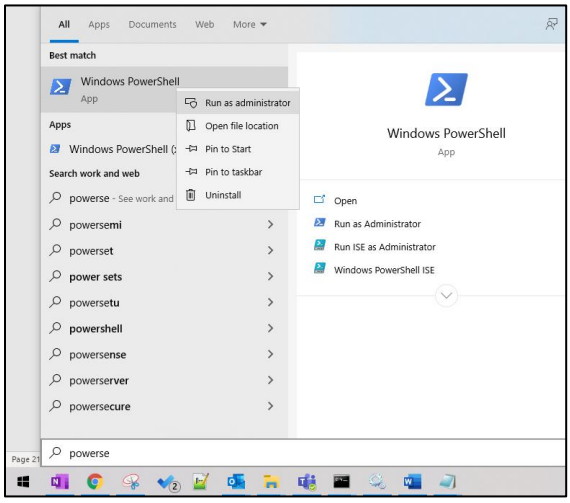
- If Oracle, uncomment the below lines under oracle, and comment all the lines under SQL. Provide the above details

- Enter logstash properties

```
elasticsearch_host = https://localhost:9200
elasticsearch_user = admin
```

Step 4: execute the script.

- Run Powershell script in Admin mode



- CD to the downloaded & extracted erwinBUP folder → eg: C:\Downoads\erwinBUP\11.0
- Run install.ps1

```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\WINDOWS\system32> cd C:\Users\DeepakPothapragada\Desktop\BUP\RC4\erwinBUP\11.0
PS C:\Users\DeepakPothapragada\Desktop\BUP\RC4\erwinBUP\11.0> .\install.ps1
```

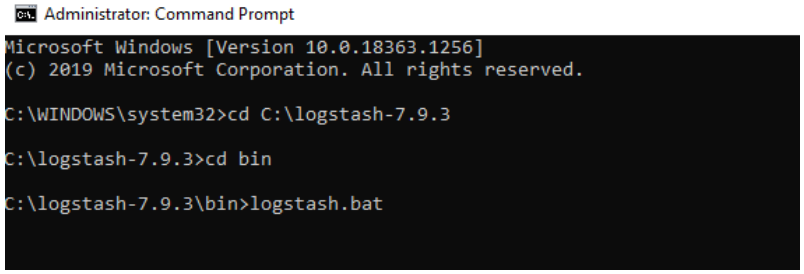
- Enter BUP database jdbc password
- Enter elastic search password. (Default password is “admin”)

```
Loading install properties...
Checking logstash home directory existence...
Checking logstash settings directory existence...
Checking logstash conf directory existence...
Please enter your jdbc password:
Please enter your Elasticsearch password:
```

- Wait till you see the message that the plugin is installed successfully

2.2.5 Start logstash

- Open cmd prompt in admin mode
- Navigate to logstash home - C:/logstash-7.9.3 (or)7.10.0/bin
- Run “logstash.bat”



2.2.6 Configure application.properties of the file

- Go to application. Properties & Change the below properties

```
# Elasticsearch Configuration------------------------
globalsearch.enabled=true
elasticsearch.protocol=https
elasticsearch.certificate.validation=false
elasticsearch.host=localhost
elasticsearch.port=9200
elasticsearch.username=admin
elasticsearch.password=admin
```

- Enable globalsearch.enabled to “true”, to enable elastic search
- Host - If elastic search is deployed in the same server as of BUP. Make it as localhost, else provide the server name
- Port - Default port number of opendistro elastic search is 9200. Update this port number if elastic search port number is changed
- Restart the tomcat service.
- Access the application and search should be enabled.

If there are any errors and difficulties in installing BUP or in configuring elastic search reach out to dgsupport@erwin.com and we will get in touch with you to help you with the installation process.

2.3 Ensuring Open Distro and Logstash are compatible with the latest Log4j 2.17.1 version

Once you have installed the below versions of the Open Distro and Logstash softwares.

- Open Distro to 1.13.3 (windows) and 1.13.2 (Linux)
- Logstash-oss to 7.16.3

Update Open Distro log4j jars to 2.17.1. The number of dependencies to update depends on OS. Binaries can be found here https://www.apache.org/dyn/closer.lua/logging/log4j/2.17.1/apache-log4j-2.17.1-bin.zip

> Apache Downloads
>
> Home page of The Apache Software Foundation
>
> www.apache.org

From the above zip file content, copy the Log4j-core and Log4j-api 2.17.1 files and replace the below 2.11.1 and 2.13.1 files in your windows and linux installations.

Windows:

- C:\Program Files\Open Distro For Elasticsearch\plugins\opendistro_security***log4j-slf4j-impl-2.11.1.jar***
- C:\Program Files\Open Distro For Elasticsearch\lib***log4j-core-2.11.1.jar***
- C:\Program Files\Open Distro For Elasticsearch\lib***log4j-api-2.11.1.jar***

Linux:

- /usr/share/elasticsearch/lib/***log4j-api-2.11.1.jar***
- /usr/share/elasticsearch/lib/***log4j-core-2.11.1.jar***
- /usr/share/elasticsearch/plugins/opendistro-performance-analyzer/performance-analyzer-rca/lib/***log4j-api-2.13.0.jar***
- /usr/share/elasticsearch/plugins/opendistro-performance-analyzer/performance-analyzer-rca/lib/***log4j-core-2.13.0.jar***
- /usr/share/elasticsearch/plugins/opendistro_security***/log4j-slf4j-impl-2.11.1.jar***
- /usr/share/elasticsearch/performance-analyzer-rca/lib/***log4j-api-2.13.0.jar***
- /usr/share/elasticsearch/performance-analyzer-rca/lib/***log4j-core-2.13.0.jar***