

Product Release Notes

Oracle Banking Supply Chain Finance

Release 14.5.0.0.0

Part No. F42228-01

May 2021



Oracle Banking Supply Chain Finance
Product Release Note
[May] [2021]
Version 14.5.0.0.0

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1. Release Notes

1.1 Background / Environment

Oracle Financial Services Software Limited has developed Oracle Banking Supply Chain Finance solution. It is a comprehensive digitized end-to-end solution that supports the full lifecycle of supply chain finance and factoring across receivables and payables offering supplier centric financing and buyer centric financing. The solution addresses each of the supply chain processes from design through execution thereby enabling banks to optimize the working capital and supply chain operations of their corporate customers. Its unique value lies in its ability to provide the business with predefined processes and a world-class framework that takes care of business risk and compliance needs.

1.2 Purpose

The purpose of this document is to highlight the functionalities included in the Oracle Banking Supply Chain Finance 14.5.0.0.0 release and patchsets released for 14.5 version.

1.3 Abbreviations

Abbreviation	Detailed Description
OBSCF	Oracle Banking Supply Chain Finance
FCUBS	FlexCube Universal Banking System
OBDX	Oracle Banking Digital Experience
OBPM	Oracle Banking Payment Management
OBVAM	Oracle Banking Virtual Account Management
OBRH	Oracle Banking Routing Hub
DSL	Domain Specific Language
ELCM	Enterprise Limits and Collateral Management
API	Application Programming Interface (Conversion Open Interface)
NLP	Natural Language Processing

1.4 Product Summary

Oracle Banking Supply Chain Finance Release 14.5.0.0.0 is enhanced to meet various challenges faced by financial institutions. It addresses each of the supply chain processes from

design through execution. Its unique value lies in its ability to provide the business with predefined processes and a world-class framework that takes care of business risk and compliance needs.

1.5 **Release Highlights**

The key highlight of this release is to release new functionalities and enhancements made in the existing features with 14.5.0.0.0 version, required for supply chain finance industry with the cutting edge technology.

1.5.1 **OBSCF 14.5.0.0.0 Highlights**

New Functionalities

- Multi-Entity Deployment
- Business Process Management
- Margin Handling
- Purchase Order Management
- NLP Toolkit support for PO
- PO Finance
- Payment Management
- Manual Allocation
- Accounting for Invoices
- Commodity Code Maintenance
- Auto Debit
- Debit Note and Credit Note Creation
- Alert and Notification
- Payment Terms
- Tolerance
- Inquiries
- Integration with Chatbot and OBPM
- Early Payment Discount

Release Enhancements

- File Upload
- Product Parameter
- Invoice and PO Based Charges
- Recon Definition and Decisioning

- Manual Recon
- Auto-Recon for Invoice-Credit Note
- NPA Marking and Delinquency Management
- Dashboards
- Invoice Management Enhancements for Factoring
- Accounting Entries
- Invoice Inquiry
- Integration and Adoptions

2. Features

2.1 Multi-Entity Deployment

2.1.1 Overview

As a part of this release, support for multi-entity is enabled for this product. This feature will enable a single instance of the product to onboard multiple entities of the bank onto the platform.

2.1.2 Description

Following features are made available to support multi entity functionality:

- Creation of 'Multi-Entity Admin' user(s).
- Entity Definition and Maintenance.
- Creation of 'Entity Admin' User(s) and regular users.
- Mapping of users (entity admins or regular users) to one or more entities - The users of the application will be central in nature and users can have access to one or more entities.
- User Entitlement is local to the entity.
- Data Segregation at Entity Level - On the database end, there will be segregation of data between the different entities. The different entities data are housed in different schemas on the database. Depending on the database deployment architecture employed, these schemas for the different entities could be in the same or different PDBs of the database.
- Deployment of Flyway scripts (database scripts) for an application across all entities during deployment of patches and upgrades.
- Deployments with single entity are also deployed in the same architecture with a 'default entity'.
- Upgrade of existing (pre 14.5) deployments to a single entity deployment with the 'default entity'.

2.2 Business Process Management

2.2.1 Overview

By using the 'Business Process Maintenance' screen, business processes can be created or existing processes can be modified. Additionally, below tasks can be achieved from this screen:

- Add a new stage or modify an existing stage of an existing process.
- Upload/download 'json-based dsl'.
- Customizing the workflow definition.
- Preview the flow-diagram of a modified or new added process.

2.2.2 Description

- Screen with the list of processes for performing above tasks is provided.
- Drag-drop functionality for selecting process stages is provided.
- Automatic versioning of the newly created process.

2.3 Margin Handling

2.3.1 Overview

When invoice repayments exceeds the finance outstanding, a margin amount is generated. Margin will get generated only when payment amount gets reconciled with invoice and not when recon with finance takes place directly.

2.3.2 Description

Margin will get generated in following scenario from an application perspective:

- Auto and manual recon of payment with invoice (if re-payment amount towards invoice is greater than finance outstanding).
- Margin calculation during finance settlement is done only when repayments are made towards Invoice and not in case of finance reconciliation or manual finance settlement.

2.4 Purchase Order Management

2.4.1 Overview

Purchase Order management allows banks to create/manage purchase order details along with associated shipment, commodity, and auto-calculated pricing details.

2.4.2 Description

- Screen for creating purchase orders has been enhanced with the introduction of commodity code maintenance.
- Screen for managing (search/view/process) purchase orders events is provided.
- Maker and checker for creating/managing purchase orders is provided.
- PO screen validates the commodity codes that are maintained by corporate or bank user.
- PO status can be marked as 'Stale' based on EOD or BOD as per configuration.
- Below table depicts the POs that will be displayed against various actions:

Action	Condition
Accept	PO Status is Raised
Edit	<ul style="list-style-type: none"> • PO is not Financed

Action	Condition
	<ul style="list-style-type: none"> PO Status is not Cancelled
Cancel	PO is not Financed
Link Program	PO is not already linked to a program
Initiate Finance	<ul style="list-style-type: none"> PO is linked to a Program PO is Accepted PO is not financed up to Financeable Amount calculated

2.5 NLP Toolkit support for Purchase Order

Increased process efficiency through NLP tool kit that facilitates banks and corporates to capture purchase order data from scanned copies of purchase orders and save them without manually keying in the requisite data.

2.6 PO Finance

The SCF system is enhanced to support pre-shipment or PO based financing. The model allows:

- Buyer Driven Pre-shipment Finance.
- Supplier Driven Pre-shipment Finance.

Below screens are enhanced to support PO Finance:

- Product Parameter: User can specify whether the 'Product' is Invoice/PO based.
- PO Management: 'Initiate Finance' action is supported in 'PO Management' where PO can be selected and finance can be triggered.
- Finance Disbursement & Finance Settlement Screens: Linked PO can be viewed in these screens and existing fields have been enriched to support financing based on 'Instrument Type'.

2.7 Payment Management

2.7.1 Overview

Payment Management screen enable banks to stop the payment from being reconciled automatically or manually. Bank user can mark the payment record for 'Not to be Reconciled' or 'Not to be Auto-Reconciled'.

2.7.2 Description

- Screen to search payment records and initiate action on the same.
- Maker and checker for payment management is provided.
- Payments listed under 'Not to be Reconciled' includes those marked as 'Not to be Auto-Reconciled'.
- Payment with part reconciled status can be reconciled (part/full) only with that entity (invoice) with which it got part-reconciled earlier (auto or manual).
- Recon Category and Recon Status options in the search parameters are driven by the Action to be performed as given below:

Action	Recon Category	Recon Status
Not to be Reconciled	Invoice - Payment Recon	Unreconciled or Part-Reconciled
Not to be Auto- Reconciled	Invoice - Payment Recon	Unreconciled or Part-Reconciled

2.8 Manual Allocation

2.8.1 Overview

Manual allocation allows banks to allocate payments manually to the appropriate virtual accounts. It also allows to appropriate allocation amount amongst multiple virtual accounts. By using this feature, bank user can select unallocated or partly-allocated payments and allocate the same to relevant virtual accounts.

2.8.2 Description

- Screen to search payment record and allocate payment amount is provided.
- Maker and checker for manual allocation is provided.
- Enhancements are made to the existing recon rule definition screen to enable allocation of payments to virtual accounts as an extension of the reconciliation of other related recon categories such as 'Invoice to Payment Recon'.
- Rules based on a single entity such as 'Payments' can also be maintained to directly allocate the payment to a virtual account. There is a provision to maintain sequence for each clause/sub rule, thereby allowing AND/OR conditions to be maintained between clauses.
- Recon Rule definition UI is enhanced to have a few new fields to define allocation parameters.
- Allocation grids allows for maintenance of either allocation attributes or virtual accounts based on which allocation requests will be sent to OBVAM.
- A link for 'Preview' is provided where the user can preview the rule-setup in both maker and authorizer screen.
- Existing recon rules definition maintenance is enhanced to allow back office user to match attributes of LHS and RHS entity basis multiple 'pattern type' options. Back office user

would further be able to maintain rules or rule clauses against only one entity, if required, and establish 'AND' and 'OR' condition between various clauses/sub rules.

2.9 Accounting for Invoices

2.9.1 Overview

Accounting parameters to support accounting for invoice events like assignment, dispute, payment etc. are added to existing accounting module.

2.9.2 Description

- Accounting entries generation and posting is handled for various events of Invoices by enriching existing accounting parameters.

2.10 Commodity Codes Maintenance

2.10.1 Overview

A new screen to maintain and configure commodities is provided. This screen is used for creating new records of commodities and modifying or deleting existing commodity records.

2.10.2 Description

- Screens for creating, modifying, deleting, and authorizing Commodity is provided.
- Maker and checker for Commodity maintenance is also provided.
- Search and view screen for Commodity Maintenance is provided.

2.11 Auto Debit

2.11.1 Overview

Invoices can be auto-debited on maturity date basis auto-debit parameters configured in relationship parameters.

2.11.2 Description

- Relationship Parameter screen is enhanced to provide flag for auto-debit.
- Program Parameter screen is enhanced to provided flag for auto-debit.
- Batch jobs have been configured which trigger auto-debit for invoices and finances based on relationship parameters and program parameters.

2.12 Debit Note and Credit Note Creation

2.12.1 Overview

The 'Receivables' module is now renamed as 'Receivables and Payables'. Additionally, support for raising debit notes and credit notes against invoices on behalf of the buyers/suppliers is provided. To cater to the added support for credit/debit note, invoice creation and invoice management has been extended to provide support for credit/debit note creation and management.

2.12.2 Description

Several actions, similar to those on an invoice, can be performed on credit/debit notes.

- The 'Create Invoice' screen is now renamed as 'Create Receivables and Payables' with added instrument type for 'Debit Note' and 'Credit Note'. Now, user can create and manage Invoice, Debit Notes, and Credit Notes from this screen.
- The 'Invoice Management' screen has been renamed as 'Receivables and Payables Management'.

2.13 Alert and Notification

2.13.1 Overview

The Alerts Management System is used to configure any kind of customer alerts in the system associated with Finance, Invoice or PO event. For example: Invoice acceptance, Invoice cancellation, Finance maturity, Limit burst etc. Alert can be configured and managed through two screens namely, 'Alert Definition' and 'Alert Decisioning'.

2.13.2 Description

- Screens for creating, modifying, deleting, and authorizing Alert Definitions and Alert Decisioning are provided.
- Maker and checker for Alert Definition and Alert Decisioning is also provided.
- Search and view screen for all Alert Definition and Alert Decisioning is provided.

2.14 Payment Terms

2.14.1 Overview

The Payment Terms menu helps bank to maintain specific payment frequencies and dates for buyers making bulk payments on repetitive fixed dates. Thus, payment frequencies (basis which he will make invoice payments) such as weekly, monthly etc. can be maintained against each buyer.

2.14.2 Description

- Screens for creating, modifying, deleting, and authorizing Payment Terms are provided.
- Maker and checker for Payment Terms is also provided.
- Search and view screen for all Payment Terms is provided.

- Below changes are done for the Finance and Invoice processing:
 - Finance Maturity date calculation in Product Parameters will be based on 'Payment Due Date'.
 - Invoices are marked overdue only after the Payment due date and not Invoice due date.
 - Ageing of Invoices is based on payment due date.
 - Auto-Debit for invoices is based on the payment due date.

2.15 Tolerance

2.15.1 Overview

Reconciliation of repayments with invoices may be based on several auto-reconciliation rules such as FIFO, LIFO etc. By using the Tolerance menu, user can configure an acceptable discrepancy between invoice and payment receipt to match invoices with the respective payment receipts. Such tolerances can be defined for buyer and supplier combination to automate the matching process and mark invoices as paid if they fall within the tolerance limits. Tolerances allow transactions to match when they do not have exact matching amounts.

Tolerance can be defined as amount basis or percentage basis supported for 'Invoice-Payment' reconciliations.

2.15.2 Description

- Screens for creating, modifying, deleting, and authorizing Tolerance configurations are provided.
- Maker and checker for Tolerances is also provided.
- Search and view screen for all Tolerances is provided.
- Auto and manual reconciliation has been enhanced to cater to tolerance application during reconciliation.

2.16 Inquiries

2.16.1 Overview

With this release, several new inquiry screens are added to the system. Additionally, layout of the existing inquiry screens are also enhanced to provide convenience of selecting the grid fields to be displayed in the inquiry search result.

New inquiries added with this release are as given below:

- Charge Inquiry: To inquire charges applied to the customer.
- Payment Inquiry: To inquire real time information of the status of the payment.
- Purchase Order Inquiry: To inquire the status of the purchase orders.

- **Credit Note Inquiry:** To inquire the status for the Credit Notes.
- **Receivables Inquiry:** To inquire about the Invoice and Debit Notes. User can select the 'Instrument Type' as 'Invoice' and 'Debit Note' to view its relevant search parameters.

Enhancement has been done to following inquiries

- Invoice Inquiry to cater to Debit Note records fetch
- Accounting Inquiry
- Charge Inquiry
- Finance Inquiry

2.16.2 Description

- Search screen for each inquiry is provided.
- The 'Invoice Inquiry' is renamed as 'Receivables Inquiry'.
- Option to view/hide columns of the search result is provided for all inquiries.

2.17 Integration with Chatbot

2.17.1 Overview

Based on the "Oracle Digital Assistance" framework, OBSCF now supports the conversational chatbot feature. By using the chatbot feature, user can inquire about below details by clicking on the chatbot icon.

- **Finance Inquiry:** Provides options to back office user to identify outstanding loans which are due in next 5 days both across borrowers and for a specific borrower.

2.17.2 Description

- Icon to launch the chatbot window is provided.

2.18 Integration with OBPM

2.18.1 Overview

Oracle Banking Supply Chain Finance is now integrated with Oracle Banking Payments (OBPM) for incoming payment handling for finance and invoice settlement

2.18.2 Description

- Consumption of payment notification/credit info through payment API on invocation of same by OBPM.

2.19 Early Payment Discount

2.19.1 Overview

By using 'Dynamic Discount' screens, user can create and maintain the discount rate templates. On behalf of buyer/supplier corporate. Also once created, the offer can be accepted by the bank user on behalf of buyer/supplier from invoice management for specific invoice(s)

2.19.2 Description

- Screens for creating, modifying, deleting, and authorizing dynamic discount (early payment discount) offer configurations are provided.
- Maker and checker for dynamic discount configurations is also provided.
- Search and view screen for all dynamic discount is provided.
- Early payment discount can be accepted for specific invoices through 'Receivables and Payables Management' screen.
- Reconciliation is enhanced to apply early payment discount during repayment.

3. Release Enhancements

3.1 File Upload

As a part of this release, the 'File Management' module has been enhanced with below functionality support:

- Additional fields in Invoice File: Funding Request Amount and 4 filler fields.
- Additional fields in Payment File: Payment file received with the 'Flag' field as "A" will indicate that the payment is to be allocated to a virtual account.
- Uploading files for Purchase Order is supported.
- Uploading files for Debit/Credit Note is supported.
- Uploading files for counterparty details is supported.

3.2 Product Parameter

As a part of this release, below list of enhancements are implemented in the in the Product Parameter screen:

1. New toggle switches added in the 'Basic Info' tab to automate assignment and acceptance workflow:
 - Assignment Applicable
 - Auto Assignment
 - Acceptance Applicable
 - Auto Acceptance
 - Auto Acceptance (Days)
2. New toggle switches added in the 'Finance Parameters' tab to automate disbursement and settlement process flows:
 - Disbursement Auth Required
 - Disbursement Auto Processing
 - Settlement Auth Required
 - Settlement Auto Processing
3. Additional list of values available in 'Maturity date calculation' field of 'Repayment Parameters' tab to support PO financing:
 - PO Date
 - PO date + Max Tenor
 - Business Date + Max Tenor

4. A tab named as 'Credit Limit' for the setup of limit decisioning for various events of finance/invoice.

3.3 Invoice and PO Based Charges

To apply charges at any stage of the lifecycle of a purchase order or instrument, support for configuring charges for all the relevant lifecycle events is provided.

- Charge event dropdown lists the events of the lifecycle of an invoice/PO basis which charges are to be levied.
- Charges configured for an invoice to apply for Debit Notes also.
- The application charges only once for a given status for an invoice. For example, charge is levied on "Assigned" status. If an Assigned invoice is disputed and then this dispute is resolved, then the invoice status is changed back to "Assigned". Charge will not be levied again in such a case.
- Charge Decisioning screen has been updated with the below events:
 - Assignment
 - Dispute
 - Invoice Payment

3.4 Recon Definition and Decisioning

As part of this release, the Recon Definition and Recon Decisioning functionality has been enhanced with support for credit note, and virtual account allocation:

- Recon category for credit note is provided.
- Fields for account/attribute allocation for payment record are provided in recon definition.
- Additionally, the 'Recon Rule Definition' screen has been redesigned to support nested conditions for configuration of reconciliation rules.
- Recon Rule Decisioning screen has been enhanced to include 'Credit Note' as 'Recon Category'.

3.5 Manual Recon

As part of this release, below enhancements are implemented in the 'Manual Recon' screen:

- User can reconcile both payments and credit notes against invoices at one go. Recon category 'Invoice to Payments Recon' is replaced by 'Invoice to Payments/Credit Notes Recon' which list options to search both payments and credit notes against invoices. Similarly, the grid for unreconciled Payments will also list unreconciled credit notes.

- List of invoices displayed are as per the suggestive matching for One Payment to Multiple Invoices reconciliation.
- The screen also displays recon rules maintained in the application against a payment record.
- The search criteria is improved with addition of search parameters.
- As and when a reconciliation is done, OBSCF publishes the data of matched records on a kafka queue/projection server.

3.6 Auto-Recon for Invoice-Credit Note

A new reconciliation category is added in the application to allow reconciliation of invoices with credit notes. Similar to the existing recon categories, this new category will allow the user to create recon rules for attributes of a credit note with attributes of an invoice.. Reconciliation of invoices against credit notes will be triggered whenever a credit note is created or uploaded, if the rule conditions are satisfied.

3.7 NPA Marking and Delinquency Management

The disbursement for a borrower corporate will freeze/un-freeze based on their NPA status

- Freeze: Post stamping of loans with asset status in EOD/post liquidation, system to freeze disbursement of borrower corporate in case if any of his loans is flagged as adverse.
- Unfreeze: System to remove disbursement freeze if any, on borrower corporate, if none of his loans are flagged with adverse status.

3.8 Dashboards

Dashboards are a collection of various portlets wherein user based on their role and user level data access can view appropriate portlet. Dashboards are a collection of widgets that give user an overview of the reports and metrics that aids the user in operational/business reporting and analytics. Users can drag and re-position different portlets, adjust their size, expand or collapse them, rename their header text etc.

In addition to the existing ones, below new portlets are released:

- Limit Utilization
- Reconciliation Dashboard

3.9 Invoice Management Enhancements for Factoring

As a part of this release, invoice management functionality (In Receivables and Payables Management screen) has been enhanced so that the bank user can perform below additional actions to support factoring:

- Edit Invoice
- Resolve disputed invoice
- Write-off disputed invoice
- Mark Under PUA
- Mark Indirect Payment
- Credit Limit Booking/Release

Approved Invoice: When limits are booked/utilized (only positive utilization) for a certain invoice action/operation, then the invoices on which that action is to be performed is flagged as approved.

Unapproved Invoice: or actions where the limits does not get utilized due to limit breach etc, then the invoices to be flagged as unapproved. Also for certain actions where the credit limit gets released (dispute, invoice paid etc.), there the invoice is to be flagged as unapproved.

3.10 Accounting Entries

The 'Accounting Entries' screen is enhanced with below events of invoices to support the factoring:

<u>Event</u>	<u>Filter Criteria</u>	<u>Filter criteria Field label</u>	<u>Field Value</u>
Assignment	Is Approved	Approved	Y/N(Switch)
Re-Assignment	Is Approved	Approved	Y/N(Switch)
Dispute	Is Approved	Approved	Y/N(Switch)
Dispute Resolution	Is Approved	Approved	Y/N(Switch)
Dispute Write off	Is Approved	Approved	Y/N(Switch)
Invoice Payment	Is Approved	Approved	Y/N(Switch) (Priority-3)
Invoice Payment	Is PUA	PUA	PUA: Y/N(Switch) (Priority-2)
Invoice Payment	Is PUA and Payment Party	PUA and Payment Party	Payment Party: populate all party roles (Priority-1)

3.11 Invoice Inquiry

The layout of the search results of all the inquiry screen has been enhanced due to which the user has convenience of selecting the columns to be displayed in the inquiry search result. Also below enhancements have been done additionally

- 'Invoice Inquiry' is now renamed as 'Receivables Inquiry'.
- Two new invoice statuses are added as 'Assigned' and 'Approved'.
- User can select multiple invoice statuses to search.
- Historical statuses are displayed in the search result grid.

3.12 Integration and Adoptions

3.12.1 Integration via OBRH

All integrations of OBSCF application are routed via OBRH. OBRH enables seamless & standardized integrations between OBSCF and other banking products using configurations provided as part of the product infrastructure.

3.12.2 Adoption of Event Hub

Event Hub is an abstraction provided for sending and receiving messages via Kafka with inbuilt duplication checks and guaranteed message delivery features.

3.12.3 Adoption of Batch Server

Batch server provides triggering of batch tasks based on a DSL (Domain Specific Language). It supports:

- Dynamic addition of Spring Cloud Data Flow DSL's for both event based and CRON based triggers.
- Dynamic registration of tasks.
- Screens have been provided to support Configure, View, Trigger, and Monitor the batch tasks.

4. Deprecated Functionality

Below list describes the fields/functionality/screens/features that are discontinued with the OBSCF release 14.5.0.0.0.

- In the 'Manual Recon' screen, the option of reconciling by '**Many Invoice to Many Payment**' is removed from the 'Reconcile By' dropdown list.
- **Application Code** field is removed from the system's user interface and has been defaulted to the logged in user session.
- A drop-down '**Credit Limit Utilization**' is deprecated from 'Product Parameters' maintenance screen.

5. Patches and Bugs

BugID	Bug Description	Fix Description

6. Security Fixes

NA

7. Limitations and Open issues

7.1 Limitations and open issues

BugID	Bug Description

8. Components of the Software

8.1 Documents accompanying the software

The various documents accompanying the software are as follows:

- Release Notes
- Installer Kit
- User Manuals and Installation manuals

8.2 Software Components

Software Components of OBSCF 14.5 that form part of this release are as follows:

- Core
 - UI Components (Knockout, OJET, Lux)
 - The Swagger / YAML for the services supported
 - Configuration files for the services
 - Service Components
 - Tables, Sequences, Static Data
- Installation utilities
 - Installation documents for Database, UI, Web services

9. Annexure – A: Environment Details

Oracle Banking Supply Chain Finance			
Application Server	Oracle Linux Server Release 8.3 (x86 64 Bit)	Java HotSpot (TM) JDK (with WebLogic Application Server)	JDK 1.8 Update 281
		Oracle WebLogic	12.2.1.4.0
		Oracle Repository Creation Utility (RCU)	12.2.1.4.0
		Oracle Fusion Middleware Infrastructure	12.2.1.4.0
Database Server	Oracle Linux Server Release 8.3 (x86 64 Bit)	Oracle RDBMS Enterprise Edition	19.10.0.0.0 (19c)
Document Management System	Oracle Linux Server Release 8.3 (x86 64 Bit)	Oracle WebCenter Content Imaging	12.2.1.4.0
Client Machines#		Mozilla Firefox	87+
		Google Chrome	88+
		Microsoft Edge	89+
		Apple Safari	14+
<p>Browser Support is strictly tied to the Browser itself, and no longer based on the Operating System. Current release is certified on client workstations with Windows 10 and Mac.</p>			

10. Annexure – B: Third Party Software Details

Sr. No.	Copyright Holder Data Owner	Licensed Item ID	Licensed Item Name	Licensed Item Version	BA ID
1	Eclipse Foundation	59202	EclipseLink	2.7.7	86580
2	JSON.org	60616	JSON	20200518	86522
3	Joe Walnes	63649	XStream	1.4.14	89898
4	The Apache Software Foundation	57096	POI	4.1.2	86574
5	Project Lombok	62966	Lombok	1.18.16	90843
6	QOS.ch	55962	Simple Logging Facade for Java (SLF4J)	1.7.30	87236
7	The Apache Software Foundation	61192	Kafka	2.6.0	87153
8	Python Software Foundation	62207	Python	3.8.6	88581
9	jsoup.org	58378	jsoup	1.13.1	82944
10	Steven Sanderson	51996	Knockout.js	3.5.0	87534
11	Google	58644	Guava	29	86442
12	Benjamin Peterson	59737	six	1.15.0	88243
13	FasterXML, LLC	61527	jackson-jaxrs-json-provider	2.11.2	86519
14	The Pallets Team	59071	Flask	1.1.2	87525
15	Pivotal Software, Inc	61593	spring-cloud-stream-binder-kafka	3.0.8.RELEASE	86720
16	jsonwebtoken.io	60118	jjwt	0.11.2	86581
17	FasterXML, LLC	62084	jackson-dataformat-xml	2.11.2	86518
18	Alec Koumjian	62697	datefinder	0.7.1	87889
19	Olli-Pekka Heinisuo	61297	opencv-python	4.3.0.36	84688
20	Edouard Belval	62790	pdf2image	1.14.0	88100
21	Vladimir Goncharov	67226	pyap	0.3.1	95480
22	OpenJS Foundation	61260	lodash	4.17.20	88244
23	Python Software Foundation	55914	python-dateutil	2.8.1	88165
24	Marco Ziccardi	35513	Node-TimSort	0.3.0	87530
25	Schibsted Marketplaces Products	59746	jslt	0.1.9	87399
26	Boxfuse GmbH	61597	flyway-core	6.5.5	86517
27	Zalando SE	61412	connexion	2.7.0	88562
28	Google	64214	Tesseract	4.1.1	95479
29	Scrapinghub	62792	dateparser	0.7.6	88103
30	Pivotal Software, Inc	62387	Spring Cloud Sleuth	2.2.5.RELEASE	87147

Sr. No.	Copyright Holder Data Owner	Licensed Item ID	Licensed Item Name	Licensed Item Version	BA ID
31	Pivotal Software, Inc	61528	Spring Security	5.3.4.RELEASE	86314
32	The Netty Project	62363	netty-transport-native-epoll	4.1.52.Final	87076
33	SmartBear Software	64411	swagger-ui	3.39.0	91487
34	SmartBear Software	60156	swagger-annotations	1.6.2	86668
35	Zaxxer.com	59481	HikariCP	3.4.5	86719
36	josdejong	51995	math.js	5.9.0	87537
37	QOS.ch	61711	log4j-over-slf4j	1.7.30	87045
38	Barthelemy Dagenais	59064	py4j	0.10.9	88163
39	Oracle	61232	JavaScript Extension Toolkit (JET)	9.1.0	96367
40	Stuart Knightley et. al	51994	JSZip	3.2.1	87533
41	scipy.org	63004	SciPy	1.5.3	88571
42	scikit-image team	62791	scikit-image	0.17.2	88102
43	The Apache Software Foundation	62730	spring-cloud-starter-netflix-zuul	2.2.5.RELEASE	87944
44	The Apache Software Foundation	62732	spring-cloud-netflix-eureka-client	2.2.5.RELEASE	87947
45	Pivotal Software, Inc	61592	spring-cloud-stream	3.0.8.RELEASE	86999
46	Jonathan Halterman	59507	modelmapper	2.3.8	86669
47	The Apache Software Foundation	62141	Commons IO	2.8.0	88241
48	Alex Clark and contributors	60093	Python Imaging Library (Pillow)	7.2.0	88098
49	The Apache Software Foundation	62973	spring-cloud-netflix-eureka-server	2.2.5.RELEASE	88509
50	Adam Hupp	62799	python-magic	0.4.18	88166
51	The Apache Software Foundation	62389	ZooKeeper	3.6.2	87164
52	Pivotal Software	62708	spring-cloud-netflix-core	2.2.5.RELEASE	87901
53	Pivotal Software, Inc	62001	Spring-Security-Oauth	2.5.0.RELEASE	86315
54	Pivotal Software, Inc	62702	spring-cloud-config-client	2.2.5.RELEASE	87897
55	Matthias Lee	60944	pytesseract	0.3.4	83844
56	Jason R Coombs	62694	Configparser	5.0.0	87887
57	MapStruct Authors	67120	mapstruct	1.4.2.Final	95329
58	Apache 2.0	63707	tika-core	1.25	97435
59	SmartBear Software	62548	swagger-parser	2.0.22	87550
60	pypi.org	61997	pybase64	1.0.1	88360
61	The Apache Software Foundation	63867	velocity-tools-generic	3.0-422ed61	90380

Sr. No.	Copyright Holder Data Owner	Licensed Item ID	Licensed Item Name	Licensed Item Version	BA ID
62	Apache Software Foundation	57695	Velocity Engine	2.2	86577
63	The Apache Software Foundation	53857	cglib	3.3.0	72478
64	Kalle Stenflo	59742	JsonPath	2.4.0-1ed1ea0	87401
65	The Apache Software Foundation	49220	Commons FileUpload	1.4	88426
66	FasterXML, LLC	62631	jackson-dataformat-cbor	2.11.2	87748
67	The Netty Project	62362	netty-codec-http	4.1.52.Final	87073
68	VMware	67360	micrometer-registry-prometheus	1.6.4	96451
69	Apache Software Foundation	62632	camel-core	3.5.0	87752
70	Apache Software Foundation	62793	camel-cxf	3.5.0	88107
71	Apache Software Foundation	62794	camel-resilience4j	3.5.0	88108
72	The Apache Software Foundation	62727	spring-cloud-starter-netflix-eureka-client	2.2.5.RELEASE	87948
73	Tim Wood, Iskren Chernev, Moment.js contributors	49010	Moment.js	2.24.0	98631
74	Quan Nguyen	68626	tess4j	4.5.4	98076
75	Pivotal, Inc.	61216	Spring Boot	2.3.3.RELEASE	86910
76	The Apache Software Foundation	56296	PDFBox	2.0.18	88373
77	Apache Software Foundation	59221	Apache FOP	2.5	87059
78	NumPy Developers	59912	NumPy	1.19.0	83082
79	The Apache Software Foundation	62725	spring-cloud-starter-netflix-eureka-server	2.2.5.RELEASE	88488
80	Barry Warsaw	60231	importlib-metadata	1.7.0	88489
81	Pivotal Software, Inc	62706	spring-cloud-starter-config	2.2.5.RELEASE	87900
82	Pivotal Software, Inc	62705	spring-cloud-config-server	2.2.5.RELEASE	87899
83	Netflix	62968	Conductor	2.30.1	88494
84	JS Foundation and other contributors	58838	jQuery	3.5.1	87532
85	The Apache Software Foundation	61806	OpenNLP-tools	1.9.3	85908
86	Oracle	57812	Jakarta Mail	1.6.5	83350
87	The Apache Software Foundation	60358	Avro	1.10.0	86513