Cloudera Flow Management 2.1.7

Cloudera Flow Management Release Notes

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What's new in Cloudera Flow Management

Discover the new functionalities and improvements in Cloudera Flow Management (CFM) 2.1.7 and learn how these new features can benefit you.

The CFM 2.1.7 release is based on Apache NiFi 1.26.0 and it also incorporates a lot of Cloudera exclusive features and improvements.



Important: You will need to be at least on CFM 2.1.7 to upgrade to any future release that includes NiFi 2.0.

Here is an overview of what is new in this release:

New processors

CalculateParquetOffsets

CalculateParquetRowGroupOffsets

These processors can be used in combination with ConvertRecord and Parquet Reader to significantly reduce the time required to convert very large Parquet files into another format.

CaptureChangeDebeziumDB2

CaptureChangeDebeziumMySQL

CaptureChangeDebeziumOracle

CaptureChangeDebeziumPostgreSQL

CaptureChangeDebeziumSQLServer

Currently in Technical Preview, these processors leverage the Debezium project to ingest Change Data Capture (CDC) events from external databases.

DecryptContentAge

EncryptContentAge

These new-generation processors are designed for data encryption and decryption. For more information, see Modernizing Streaming Encryption with age in Apache NiFi.

ListenOTLP

This processor enables NiFi to act as a destination for OpenTelemetry Protocol (OTLP) agents to receive OpenTelemetry data from external applications. For more information about this new processor, see Building OpenTelemetry Collection in Apache NiFi with Netty.

PutClouderaHiveQL
PutClouderaHiveStreaming
PutClouderaORC
SelectClouderaHiveQL
UpdateClouderaHiveTable
TriggerClouderaHiveMetaStoreEvent

These Cloudera exclusive components are designed to interact with Hive-based components in the Cloudera Data Platform. Since Hive components will no longer be part of Apache NiFi starting with NiFi 2.0, it is highly recommended to switch to these components as soon as possible to make the upgrade/migration to NiFi 2.0 easier.

PutJiraIssue

This processor allows you to to create new issues in Jira using the Jira REST API.

PutZendeskTicket

This processor allows you to create Zendesk tickets using the Zendesk API.

ConsumeElasticsearch

This processor repeatedly runs a paginated query against a field using a Range query to consume new documents from an Elasticsearch index/query.

FilterAttribute

Thi processor filters the attributes of a FlowFile by retaining specified attributes and removing the rest or by removing specified attributes and retaining the rest.

PackageFlowFile

This processor packages FlowFile attributes and content into an output FlowFile that can be exported from NiFi and imported back into NiFi, preserving the original attributes and content.

PublishSlack

This processor allows you to post a message to the specified Slack channel.

New controller services

ActiveMQJMSConnectionFactoryProvider

This controller service allows you to interact with ActiveMQ without the need to deploy the JMS client on all of the NiFi nodes.

ClouderaHiveConnectionPool

This controller service allows you to interact with Hive without the need to deploy the required dependencies on all of the NiFi nodes.

DatabaseTableSchemaRegistry

This controller service enables you to retrieve the schema associated with a table from an external database. This allows you to validate the data going through NiFi against that schema before pushing the data into this table.

ImpalaConnectionPool

This controller service allows you to interact with Impala without the need to deploy the required dependencies on all NiFi nodes.

RabbitMQJMSConnectionFactoryProvider

This controller service allows you to interact with RabbitMQ without the need to deploy the JMS client on all NiFi nodes.

ProtobufReader

This record reader allows you to read Protobuf data with the record based components.

YamlTreeReader

This record reader allows you to read YAML data with the record based components.

Related Information

Using Parameter Providers

CFM component versions

Review the official component versions for Cloudera Flow Management (CFM) for compatibility with other applications.



Note: NiFi works with the version of NiFi Registry shipped with your version of CFM or later.

CFM 2.1.7

- Apache NiFi 1.26.0.2.1.7.0
- Apache NiFi Registry 1.26.0.2.1.7.0

CFM 2.1.6 SP1

- Apache NiFi 1.23.1.2.1.6.1000
- Apache NiFi Registry 1.23.1.2.1.6.1000

CFM 2.1.6

- Apache NiFi 1.23.1.2.1.6.0
- Apache NiFi Registry 1.23.1.2.1.6.0

CFM 2.1.5 SP1

- Apache NiFi 1.18.0.2.1.5.1000
- Apache NiFi Registry 1.18.0.2.1.5.1000

CFM 2.1.5

- Apache NiFi 1.18.0.2.1.5.0
- Apache NiFi Registry 1.18.0.2.1.5.0

CFM 2.1.4 SP1

- Apache NiFi 1.16.0.2.1.4.1000
- Apache NiFi Registry 1.16.0.2.1.4.1000

CFM 2.1.4

- Apache NiFi 1.16.0.2.1.4.0
- Apache NiFi Registry 1.16.0.2.1.4.0

CFM 2.1.3

- Apache NiFi 1.15.2.2.1.3.0
- Apache NiFi Registry 1.15.2.2.1.3.0



Note: Apache NiFi and Apache NiFi Registry versions are unified in the 1.15.x release.

CFM 2.1.2

- Apache NiFi 1.13.2.2.1.2.0
- Apache NiFi Registry 0.8.0.2.1.2.0

CFM 2.1.1

- Apache NiFi 1.13.2.2.1.1.0
- Apache NiFi Registry 0.8.0.2.1.1.0

CFM 2.0.4

- Apache NiFi 1.11.4
- Apache NiFi Registry 0.6.0

CFM 2.0.1

- Apache NiFi 1.11.4
- Apache NiFi Registry 0.6.0

Support matrix

Review the support matrix before you start installing Cloudera Flow Management (CFM).

System requirements

Review the system requirements before getting started with installing Cloudera Flow Management (CFM).

Supported versions of CDP

CFM 2.1.7 supports the following versions of CDP Private Cloud Base:

- CDP 7.1.9
- CDP 7.1.8
- CDP 7.1.7 and all Service Packs



Note: CFM provides a set of monitoring features when managed by Cloudera Manager. For these features to be available and working, you need to be using Cloudera Manager 7.6.1 or above.

Supported JAVA Development Kits (JDK)

Supported JDKs:



Note: If using Java 8, use only Update 252 (JDK 8u252) and later.

- Oracle Java[™] SE Development Kit 8, Update 252 (JDK 8u252) and later
- OpenJDK 1.8, Update 252 (JDK 8u252) and later
- OpenJDK 11
- Azul Zulu JDK 1.8, Update 252 (JDK 8u252) and later
- Azul Zulu JDK 11

Other system requirements

ZooKeeper

You must install the ZooKeeper service available with your CDP Private Cloud Base cluster.

Python

When deploying CFM on RHEL 8 and using Cloudera Manager with Python 2, you need to specify a symbolic link to python2.

ln -s /usr/bin/python2 /usr/bin/python

Number of cores

Four cores per NiFi node is the minimum number of cores required by Cloudera to be supported. Cloudera recommends eight cores per NiFi node as it usually provides the best starting point for the most common use cases.

Supported operating systems

Review the list of operating systems supported by Cloudera Flow Management (CFM).

Operating system	Versions
CentOS	 7.6 7.7 7.8 7.9 8.2 8.4
RHEL	 7.6 7.7 7.8 7.9 8.2 8.4 8.6 8.7 8.8 8.9 9.1
Oracle	• 8.8
SLES	12 SP515 SP4
Ubuntu	18.0420.04
Windows	10Server 2016Server 2019



Note:

NiFi on Windows is only supported in standalone mode, not managed by Cloudera Manager or as part of a CDP cluster, and as a single instance installation. Clustering NiFi on Windows is not supported.

NiFi Registry is not supported on Windows.

Supported NiFi Registry databases

Review the list of databases supported by NiFi Registry.

- H2
- PostgreSQL 10.x
- PostgreSQL 11.x
- PostgreSQL 12.x
- PostgreSQL 13.x
- PostgreSQL 14.x
- MySQL 8.x

Related Information

Supported NiFi processors

Supported NiFi controller services

Supported NiFi reporting tasks Components supported by partners

Supported NiFi processors

Cloudera Flow Management (CFM) is shipped with Apache NiFi and includes a set of processors, most of which are supported by Cloudera. You should be familiar with the available supported processors, and avoid using any unsupported processors in production environments.

Additional processors are developed and tested by the Cloudera community but are not officially supported by Cloudera. Processors are excluded for a variety of reasons, including insufficient reliability or incomplete test case coverage, declaration of non-production readiness by the community at large, and feature deviation from Cloudera best practices.

AttributesToCSV	GetElasticsearch	PutDropbox
AttributesToJSON	GetFile	PutDynamoDB
Base64EncodeContent	GetFTP	PutDynamoDBRecord
CalculateParquetOffsets	GetGcpVisionAnnotateFilesOperationStatus	PutElasticsearchHttp1
CalculateParquetRowGroupOffsets	GetGcpVisionAnnotateImagesOperationStatus	PutElasticsearchHttpRecord1
CalculateRecordStats	GetHBase	PutElasticsearchJson
CaptureChangeDebeziumDB2 [Technical Preview]	GetHDFS	PutElasticsearchRecord1
CaptureChangeDebeziumMySQL [Technical Preview]	GetHDFSFileInfo	PutEmail
CaptureChangeDebeziumOracle [Technical Preview]	GetHDFSSequenceFile	PutFile
CaptureChangeDebeziumPostgreSQL [Technical Preview]	GetHTMLElement	PutFTP1
CaptureChangeDebeziumSQLServer [Technical Preview]	GetHTTP	PutGCSObject
CaptureChangeMySQL	GetHubSpot	PutGoogleDrive
CompressContent1, 2	GetIgniteCache	PutGridFS
ConnectWebSocket	GetJiraIssue	PutHBaseCell
ConsumeAMQP	GetJMSQueue	PutHBaseJSON
ConsumeAzureEventHub	GetJMSTopic	PutHBaseRecord1
ConsumeElasticsearch	GetMongoRecord	PutHDFS
ConsumeEWS	GetSFTP	PutHive3QL
ConsumeGCPubSub	GetShopify	PutHive3Streaming
ConsumeGCPubSubLite	GetSNMP	PutHiveQL
ConsumeJMS	GetSnowflakeIngestStatus	PutHiveStreaming
ConsumeKafka_1_0	GetSolr	PutHTMLElement
ConsumeKafka_2_0	GetSplunk	PutIceberg [Technical Preview]
ConsumeKafka_2_6	GetSQS	PutIcebergCDC
ConsumeKafka2CDP	GetTCP	PutInfluxDB
ConsumeKafka2RecordCDP	GetTwitter	PutJiraIssue
ConsumeKafkaRecord_1_0	GetWorkdayReport	PutJMS1

ConsumeKafkaRecord_2_0	GetZendesk	PutKinesisFirehose
ConsumeKafkaRecord_2_6	HandleHttpRequest	PutKinesisStream
ConsumeKinesisStream	HandleHttpResponse	PutKudu
ConsumeMQTT1	HashAttribute	PutLambda
ConsumeTwitter	HashContent	PutMongoRecord
ConsumeWindowsEventLog	IdentifyMimeType	PutORC1
ControlRate	InvokeAWSGatewayApi	PutParquet
ConvertAvroSchema	InvokeGRPC	PutRecord
ConvertAvroToJSON	InvokeGRPC	PutRedisHashRecord [Technical Preview]
ConvertAvroToORC	InvokeHTTP	PutRiemann
ConvertAvroToParquet	InvokeScriptedProcessor	PutS3Object
ConvertCharacterSet	JoinEnrichment	PutSalesforceObject
ConvertCSVToAvro	JoltTransformJSON	PutSFTP
ConvertJSONToAvro	JoltTransformRecord	PutSmbFile
ConvertJSONToSQL	JSLTTransformJSON	PutSnowflakeInternalStage
ConvertProtobuf	JsonQueryElasticsearch	PutSNS
ConvertRecord	ListAzureBlobStorage	PutSolrContentStream
CreateHadoopSequenceFile	ListAzureBlobStorage_v12	PutSolrRecord
CryptographicHashAttribute	ListAzureDataLakeStorage	PutSplunk
CryptographicHashContent	ListBoxFile	PutSplunkHTTP
DecryptContent	ListCDPObjectStore	PutSQL
DecryptContentAge	ListDatabaseTables	PutSQS1
DecryptContentCompatibility	ListDropbox	PutSyslog
DecryptContentPGP	ListenBeats	PutTCP
DeduplicateRecord	ListenFTP	PutUDP
DeleteAzureBlobStorage	ListenGRPC*	PutWebSocket
DeleteAzureBlobStorage_v12	ListenGRPC*	PutZendeskTicket
DeleteAzureDataLakeStorage	ListenHTTP	QueryAirtableTable
DeleteByQueryElasticsearch	ListenNetFlow	QueryCassandra
DeleteCDPObjectStore	ListenOTLP	QueryDatabaseTable1
DeleteDynamoDB	ListenRELP	QueryDatabaseTableRecord
DeleteGCSObject	ListenSyslog	QueryElasticsearchHttp
DeleteGridFS	ListenTCP	QueryRecord
DeleteHBaseCells	ListenTCPRecord	QuerySalesforceObject
DeleteHBaseRow	ListenTrapSNMP	QuerySolr
	III. IIDD	QuerySplunkIndexingStatus
DeleteHDFS	ListenUDP	Ç
DeleteS3Object	ListenUDPRecord	QueryWhois
DeleteS3Object	ListenUDPRecord	QueryWhois

DuplicateFlowFile	ListGCSBucket	ResizeImage1
EncodeContent	ListGoogleDrive	RetryFlowFile
EncryptContent2	ListHDFS	RouteHL7
EncryptContentAge	ListS3	RouteOnAttribute
EncryptContentPGP	ListSFTP	RouteOnContent
EnforceOrder	ListSmb	RouteText
EvaluateJsonPath	LogAttribute	SampleRecord
EvaluateXPath	LogMessage	ScanAccumulo
EvaluateXQuery	LookupAttribute	ScanAttribute1
ExecuteGroovyScript	LookupRecord	ScanContent
ExecuteInfluxDBQuery	MergeContent	ScanHBase
ExecuteProcess	MergeRecord1	ScriptedFilterRecord
ExecuteScript	ModifyCompression	ScriptedPartitionRecord
ExecuteSQL	ModifyHTMLElement	ScriptedTransformRecord
ExecuteSQLRecord	MonitorActivity	ScriptedValidateRecord
ExecuteStateless1,2	MoveAzureDataLakeStorage	ScrollElasticsearchHttp
ExecuteStreamCommand	MoveHDFS	SearchElasticsearch
ExtractAvroMetadata	Notify	SegmentContent
ExtractGrok	PackageFlowFile	SelectClouderaHiveQL
ExtractHL7Attributes	PaginatedJsonQueryElasticsearch	SelectHive3QL1
ExtractImageMetadata	ParseCEF1	SelectHiveQL
ExtractRecordSchema	ParseEvtx	SendTrapSNMP
ExtractText	ParseSyslog	SetSNMP
FetchAzureBlobStorage	PartitionRecord	SignContentPGP
FetchAzureBlobStorage_v12	PostHTTP	SplitAvro
FetchAzureDataLakeStorage	PublishAMQP	SplitContent
FetchBoxFile	PublishGCPubSub1	SplitJson1
FetchCDPObjectStore	PublishGCPubSubLite1	SplitRecord1
FetchDistributedMapCache	PublishJMS1	SplitText1
FetchDropbox	PublishKafka_1_0	SplitXml
FetchElasticsearchHttp	PublishKafka_2_0	StartAwsPollyJob
FetchFile	PublishKafka_2_6	StartAwsTextractJob
FetchFTP	PublishKafka2CDP	StartAwsTranscribeJob
FetchGCSObject	PublishKafka2RecordCDP	StartAwsTranslateJob
FetchGoogleDrive	PublishKafkaRecord_1_0	StartGcpVisionAnnotateFilesOperation
FetchGridFS	PublishKafkaRecord_2_0	StartGcpVisionAnnotateImagesOperation
FetchHBaseRow	PublishKafkaRecord_2_6	StartSnowflakeIngest
FetchHDFS	PublishMQTT	TagS3Object
FetchParquet	PublishSlack	TailFile
FetchS3Object	PutAccumuloRecord1	TransformXml

FetchSFTP	PutAzureBlobStorage	TriggerClouderaHiveMetaStoreEvent
FetchSmb	PutAzureBlobStorage_v12	TriggerHiveMetaStoreEvent
FilterAttribute	PutAzureCosmosDBRecord	UnpackContent
FlattenJson	PutAzureDataLakeStorage1	UpdateAttribute
ForkEnrichment	PutAzureEventHub	UpdateByQueryElasticsearch
ForkRecord	PutAzureQueueStorage1	UpdateClouderaHiveTable
GenerateFlowFile	PutAzureQueueStorage_v12	UpdateCounter
GenerateRecord	PutBigQuery	UpdateDatabaseTable
GenerateTableFetch	PutBigQueryBatch	UpdateDeltaLakeTable [Technical Preview]
GeoEnrichIP	PutBigQueryStreaming	UpdateHive3Table
GeoEnrichIPRecord	PutBoxFile	UpdateHiveTable
GeohashRecord	PutCassandraQL1	UpdateRecord
GetAsanaObject	PutCassandraRecord1	ValidateCsv
GetAwsPollyJobStatus	PutCDPObjectStore	ValidateJson
GetAwsTextractJobStatus	PutClouderaHiveQL	ValidateRecord
GetAwsTranscribeJobStatus	PutClouderaHiveStreaming	ValidateXml
GetAwsTranslateJobStatus	PutClouderaORC	VerifyContentMAC
GetAzureEventHub	PutCloudWatchMetric	VerifyContentPGP
GetAzureQueueStorage	PutCouchbaseKey	Wait
GetAzureQueueStorage_v12	PutDatabaseRecord1	YandexTranslate
GetCouchbaseKey1	PutDistributedMapCache	

Footnotes

- 1 indicates a memory intensive processor
- 2 indicates a CPU intensive processor
- * there are two ListenGRPC processors available, one is provided by Apache and the other is provided by Cloudera

Related Information

Supported NiFi Registry databases

Supported NiFi controller services

Supported NiFi reporting tasks

Components supported by partners

Supported NiFi controller services

Cloudera Flow Management (CFM) is shipped with Apache NiFi and includes a set of controller services, most of which are supported by Cloudera. You should be familiar with the available supported controller services, and avoid using any unsupported controller services in production environments.

Additional controller services are developed and tested by the Cloudera community but are not officially supported by Cloudera. Controller services are excluded for a variety of reasons, including insufficient reliability or incomplete test case coverage, declaration of non-production readiness by the community at large, and feature deviation from Cloudera best practices.

AccumuloService	ElasticSearchClientServiceImpl	PrometheusRecordSink
ActionHandlerLookup	ElasticSearchLookupService	ProtobufReader

ActiveMQJMSConnectionFactoryProvider	ElasticSearchStringLookupService	RabbitMQJMSConnectionFactoryProvider
ADLSCredentialsControllerService	EmailRecordSink	ReaderLookup
ADLSCredentialsControllerServiceLookup	EmbeddedHazelcastCacheManager	RecordSetWriterLookup
ADLSIDBrokerCloudCredentialsProviderContr	o HearSel Reiader	RecordSinkHandler
AlertHandler	ExpressionHandler	RecordSinkServiceLookup
AmazonGlueSchemaRegistry	ExternalHazelcastCacheManager	RedisConnectionPoolService
AvroReader	FreeFormTextRecordSetWriter	RedisDistributedMapCacheClientService
AvroRecordSetWriter	GCPCredentialsControllerService	RedshiftConnectionPool
AvroSchemaRegistry	GrokReader	RestLookupService
AWSCredentialsProviderControllerService	HadoopCatalogService	ScriptedActionHandler
AWSIDBrokerCloudCredentialsProviderContro	Il H:Sitovpil∂ BCPConnectionPool	ScriptedLookupService
AzureBlobIDBrokerCloudCredentialsProviderC	o HazderStMapC acheClient	ScriptedReader
AzureCosmosDBClientService	HBase_1_1_2_ClientMapCacheService	ScriptedRecordSetWriter
AzureEventHubRecordSink	HBase_1_1_2_ClientService	ScriptedRecordSink
AzureServiceBusJMSConnectionFactoryProvid	eiHBase_1_1_2_ListLookupService	ScriptedRulesEngine
AzureStorageCredentialsControllerService	HBase_1_1_2_RecordLookupService	SimpleDatabaseLookupService
AzureStorageCredentialsControllerService_v12	HBase_2_ClientMapCacheService	SimpleKeyValueLookupService
AzureStorageCredentialsControllerServiceLook	աիBase_2_ClientService	SimpleRedisDistributedMapCacheClientServi
AzureStorageCredentialsControllerServiceLook	ար <u>ի B</u> ake_2_RecordLookupService	SimpleScriptedLookupService
CassandraDistributedMapCache	Hive3ConnectionPool	SiteToSiteReportingRecordSink
CassandraSessionProvider	HiveCatalogService	SmbjClientProviderService
CdpCredentialsProviderControllerService	HiveConnectionPool	SnowflakeComputingConnectionPool
CdpOauth2AccessTokenProviderControllerSer	iddortonworksSchemaRegistry	StandardAsanaClientProviderService
CEFReader	ImpalaConnectionPool	StandardAzureCredentialsControllerService
CiscoEmblemSyslogMessageReader	IPFIXReader	StandardDropboxCredentialService
ClouderaHiveConnectionPool	IPLookupService	StandardFileResourceService
ClouderaSchemaRegistry	JASN1Reader	StandardHashiCorpVaultClientService
CMLLookupService	JiraRecordSink	StandardHttpContextMap
ConfluentSchemaRegistry	JMSConnectionFactoryProvider	StandardJsonSchemaRegistry [Technical Preview]
CouchbaseClusterService	JndiJmsConnectionFactoryProvider	StandardOauth2AccessTokenProvider
CouchbaseKeyValueLookupService	JsonConfigBasedBoxClientService	StandardPGPPrivateKeyService
CouchbaseMapCacheClient	JsonPathReader	StandardPGPPublicKeyService
CouchbaseRecordLookupService	JsonRecordSetWriter	StandardPrivateKeyService
CSVReader	JsonTreeReader	StandardProxyConfigurationService
CSVRecordLookupService	KafkaRecordSink_1_0	StandardRestrictedSSLContextService
CSVRecordSetWriter	KafkaRecordSink_2_0	StandardS3EncryptionService
DatabaseRecordLookupService	KafkaRecordSink_2_6	StandardSnowflakeIngestManagerProviderSet
DatabaseRecordSink	KerberosKeytabUserService	StandardSSLContextService
DatabaseTableSchemaRegistry	KerberosPasswordUserService	StandardWebClientServiceProvider
DBCPConnectionPool	KerberosTicketCacheUserService	Syslog5424Reader
		- 1

DBCPConnectionPoolLookup	KeytabCredentialsService	SyslogReader
DistributedMapCacheClientService	KuduLookupService	UDPEventRecordSink
DistributedMapCacheLookupService	LoggingRecordSink	VolatileSchemaCache
DistributedMapCacheServer	LogHandler	WindowsEventLogReader
DistributedSetCacheClientService	MongoDBControllerService	XMLReader
DistributedSetCacheServer	MongoDBLookupService	XMLRecordSetWriter
EasyRulesEngineProvider	ParquetReader	YamlTreeReader
EasyRulesEngineService	ParquetRecordSetWriter	ZendeskRecordSink
EBCDICRecordReader [Technical Preview]	PostgreSQLConnectionPool	

Related Information

Supported NiFi Registry databases

Supported NiFi processors

Supported NiFi reporting tasks

Components supported by partners

Supported NiFi reporting tasks

Cloudera Flow Management (CFM) is shipped with Apache NiFi and includes a set of reporting tasks, most of which are supported by Cloudera. You should be familiar with the available supported reporting tasks, and avoid using any unsupported reporting tasks in production environments.

- AmbariReportingTask
- ControllerStatusReportingTask
- MetricsEventReportingTask
- MonitorDiskUsage
- MonitorMemory
- PrometheusReportingTask
- QueryNiFiReportingTask
- ReportLineageToAtlas
- ScriptedReportingTask
- SiteToSiteBulletinReportingTask
- SiteToSiteMetricsReportingTask
- SiteToSiteProvenanceReportingTask
- SiteToSiteStatusReportingTask

Additional reporting tasks are developed and tested by the Cloudera community but are not officially supported by Cloudera. Reporting tasks are excluded for a variety of reasons, including insufficient reliability or incomplete test case coverage, declaration of non-production readiness by the community at large, and feature deviation from Cloudera best practices. Do not use these features in your production environments.

Related Information

Supported NiFi Registry databases

Supported NiFi processors

Supported NiFi controller services

Components supported by partners

Supported NiFi parameter providers

Cloudera Flow Management (CFM) is shipped with Apache NiFi and includes a set of parameter providers, most of which are supported by Cloudera. You should be familiar with the available supported parameter providers, and avoid using any unsupported parameter providers in production environments.

- AwsSecretsManagerParameterProvider
- AzureKeyVaultSecretsParameterProvider
- CyberArkConjurParameterProvider
- DatabaseParameterProvider
- EnvironmentVariableParameterProvider
- FileParameterProvider
- GcpSecretManagerParameterProvider
- HashiCorpVaultParameterProvider

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Components supported by partners

Learn about the processors and controller services built and supported by Cloudera partners.

These components are not officially supported by Cloudera even though Cloudera Quality Engineering teams added test coverage for them.

Processors supported by partners

- ConsumePulsar (v1.18.0)
- ConsumePulsarRecord (v1.18.0)
- PublishPulsar (v1.18.0)
- PublishPulsarRecord (v1.18.0)

Controller services supported by partners

- PulsarClientAthenzAuthenticationService (v1.18.0)
- PulsarClientJwtAuthenticationService (v1.18.0)
- PulsarClientOauthAuthenticationService (v1.18.0)
- PulsarClientTlsAuthenticationService (v1.18.0)
- StandardPulsarClientService (v1.18.0)

These components can be used to push data into Apache Pulsar as well as getting data out of it. In case you have issues or questions while using these components, Cloudera recommends you to reach out to your StreamNative representative team.

Related Information

Supported NiFi Registry databases

Supported NiFi processors

Supported NiFi controller services

Supported NiFi reporting tasks

Download locations

You can download the Cloudera Flow Management (CFM) software artifacts from the Cloudera Archive. There are different CFM artifacts for different operating systems, standalone components, and Windows files.

Use the following tables to identify the Cloudera Flow Management (CFM) repository location for your operating system and operational objectives.



Note:

You must have credentials to download CFM files. Your download credential is not the same as the credential you use to access the Cloudera Support Portal.

You can get download credentials in the following ways:

- Contact your Cloudera sales representative.
- Check the Welcome email you have received for your Flow Management account.
- File a non-technical case on the Cloudera Support Portal for the Cloudera Support team to assist you.

Table 1: RHEL/CentOS 7

File	Location	
Manifest	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/parcel/manifest.json	
Parcel	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/parcel/CFM-2.1.7.0-435-el7.parcel	
Parcel sha file	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/parcel/CFM-2.1.7.0-435-el7.parcel.sha	
CSD	NiFi https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/parcel/ NIFI-1.26.0.2.1.7.0-435.jar NiFi Registry https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/parcel/ NIFIREGISTRY-1.26.0.2.1.7.0-435.jar	

Table 2: RHEL/CentOS 8

File	Location	
Manifest	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat8/yum/tars/parcel/manifest.json	
Parcel	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat8/yum/tars/parcel/CFM-2.1.7.0-435-el8.parcel	
Parcel sha file	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat8/yum/tars/parcel/CFM-2.1.7.0-435-el8.parcel.sha	
CSD	NiFi: https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat8/yum/tars/parcel/ NIFI-1.26.0.2.1.7.0-435.jar NiFi Registry: https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat8/yum/tars/parcel/ NIFIREGISTRY-1.26.0.2.1.7.0-435.jar	

Table 3: RHEL 9

File	Location
Manifest	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat9/yum/tars/parcel/manifest.json
Parcel	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat9/yum/tars/parcel/CFM-2.1.7.0-435-el9.parcel
Parcel sha file	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat9/yum/tars/parcel/CFM-2.1.7.0-435-el9.parcel.sha

File	Location
CSD	NiFi:
	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat9/yum/tars/parcel/ NIFI-1.26.0.2.1.7.0-435.jar
	NiFi Registry:
	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat9/yum/tars/parcel/ NIFIREGISTRY-1.26.0.2.1.7.0-435.jar

Table 4: SLES 12

File	Location
Manifest	https://archive.cloudera.com/p/cfm2/2.1.7.0/sles12/yum/tars/parcel/manifest.json
Parcel	https://archive.cloudera.com/p/cfm2/2.1.7.0/sles12/yum/tars/parcel/CFM-2.1.7.0-435-sles12.parcel
Parcel sha file	https://archive.cloudera.com/p/cfm2/2.1.7.0/sles12/yum/tars/parcel/CFM-2.1.7.0-435-sles12.parcel.sha
CSD	NiFi: https://archive.cloudera.com/p/cfm2/2.1.7.0/sles12/yum/tars/parcel/ NIFI-1.26.0.2.1.7.0-435.jar NiFi Registry: https://archive.cloudera.com/p/cfm2/2.1.7.0/sles12/yum/tars/parcel/ NIFIREGISTRY-1.26.0.2.1.7.0-435.jar

Table 5: SLES 15

File	Location
Manifest	https://archive.cloudera.com/p/cfm2/2.1.7.0/sles15/yum/tars/parcel/manifest.json
Parcel	https://archive.cloudera.com/p/cfm2/2.1.7.0/sles15/yum/tars/parcel/CFM-2.1.7.0-435-sles15.parcel
Parcel sha file	https://archive.cloudera.com/p/cfm2/2.1.7.0/sles15/yum/tars/parcel/CFM-2.1.7.0-435-sles15.parcel.sha
CSD	NiFi: https://archive.cloudera.com/p/cfm2/2.1.7.0/sles15/yum/tars/parcel/ NIFI-1.26.0.2.1.7.0-435.jar NiFi Registry:
	https://archive.cloudera.com/p/cfm2/2.1.7.0/sles15/yum/tars/parcel/ NIFIREGISTRY-1.26.0.2.1.7.0-435.jar

Table 6: Ubuntu 20

File	Location
Manifest	https://archive.cloudera.com/p/cfm2/2.1.7.0/ubuntu20/apt/tars/parcel/manifest.json
Parcel	https://archive.cloudera.com/p/cfm2/2.1.7.0/ubuntu20/apt/tars/parcel/CFM-2.1.7.0-435-focal.parcel
Parcel SHA file	https://archive.cloudera.com/p/cfm2/2.1.7.0/ubuntu20/apt/tars/parcel/CFM-2.1.7.0-435-focal.parcel.sha
CSD	NiFi: https://archive.cloudera.com/p/cfm2/2.1.7.0/ubuntu20/apt/tars/parcel/ NIFI-1.26.0.2.1.7.0-435.jar NiFi Registry:
	https://archive.cloudera.com/p/cfm2/2.1.7.0/ubuntu20/apt/tars/parcel/ NIFIREGISTRY-1.26.0.2.1.7.0-435.jar

Table 7: Standalone components (OS agnostic)

File	Location
NiFi (.tar.gz)	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/cdf_extensions/nifi-1.26.0.2.1.7.0-435-bin.tar.gz
NiFi (.tar.gz.sha256)	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/cdf_extensions/nifi-1.26.0.2.1.7.0-435-bin.tar.gz.sha256
NiFi Registry (.tar.gz)	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/nifi/nifi-registry-1.26.0.2.1.7.0-435-bin.tar.gz
NiFi Registry (.tar.gz.sha256)	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/nifi/nifi-registry-1.26.0.2.1.7.0-435-bin.tar.gz.sha256
NiFi Toolkit (.tar.gz)	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/nifi/nifi-toolkit-1.26.0.2.1.7.0-435-bin.tar.gz
NiFi Toolkit (.tar.gz.sha256)	https://archive.cloudera.com/p/cfm2/2.1.7.0/redhat7/yum/tars/nifi/nifi-toolkit-1.26.0.2.1.7.0-435-bin.tar.gz.sha256

Table 8: Windows files

File	Location
NiFi MSI	https://archive.cloudera.com/p/cfm2/2.1.7.0/windows/nifi-2.1.7.0-435.msi
NiFi MSI SHA file	https://archive.cloudera.com/p/cfm2/2.1.7.0/windows/nifi-2.1.7.0-435.msi.sha256

Unsupported features

The following features are developed and tested by the Cloudera community but are not officially supported by Cloudera. These features are excluded for a variety of reasons, including insufficient reliability or incomplete test case coverage, declaration of non-production readiness by the community at large, and feature deviation from Cloudera best practices. Do not use these features in your production environments.

Unsupported features

Rules engine components and handlers are removed in NiFi 2 to be replaced with a new rules engine. The below components are not supported and should not be used anymore.

- ActionHandlerLookup
- AlertHandler
- EasyRulesEngineProvider
- EasyRulesEngineService
- ExpressionHandler
- LogHandler
- RecordSinkHandler
- · ScriptedActionHandler
- ScriptedRulesEngine

Unsupported customizations

Cloudera cannot guarantee that default NiFi processors are compatible with proprietary protocol implementations or proprietary interface extensions. For example, Cloudera supports interfaces like JMS and JDBC that are built around standards, specifications, or open protocols, but does not support customizations of those interfaces, or proprietary extensions built on top of those interfaces.

Technical preview features

The following features are available in Cloudera Flow Management (CFM) 2.1.7 SP1 but are not ready for production deployment. Cloudera encourages you to explore these technical preview features in non-production environments and provide feedback on your experiences through the Cloudera Community Forums.

Processors in technical preview

- CaptureChangeDebeziumDB2
- · CaptureChangeDebeziumMySQL
- CaptureChangeDebeziumOracle
- CaptureChangeDebeziumPostgreSQL
- CaptureChangeDebeziumSQLServer
- PutIcebergCDC



Note: The processor supports equality deletes which may not be supported yet by other compute engines on CDP. It means that in case of delete operations, the files created by the processor may not be readable by engines like Hive, Spark, and so on. You should check the documentation of the compute engine you'd like to use to confirm if equality delete files are supported or not.

- PutRedisHashRecord
- UpdateDeltaLakeTable

Controller services in technical preview

- EBCDICRecordReader
- StandardJsonSchemaRegistry

Behavioral changes

Learn about behavioral changes in Cloudera Flow Management (CFM) 2.1.7.

No behavioral changes are known between CFM 2.1.6 and CFM 2.1.7.

Known issues in CFM 2.1.7

Review the list of known issues in Cloudera Flow Management (CFM).

Known issues

Truststore changes with Ranger Plugin causing TLS handshake errors

When using the Ranger plugin, the default truststore is changed from cacerts to AutoTLS truststore (cm-auto-global_truststore.jks). This can lead to unintended issues such as TLS handshake errors with common CAs. Connections with common CAs may fail, causing service outages because the AutoTLS truststore contains only internal CA certificates and not the public root certificates.

Add the required certificates manually to the Cloudera Manager truststore.

- 1. Open Cloudera Manager and navigate to Administration Security Update Auto-TLS Truststore.
- 2. Import the certificates in PEM format.

Configuration of java.arg.7

A property has been added for defining java.arg.7 to provide the ability to override the default location of the temporary directory used by JDK. By default this value is empty in Cloudera

Manager. If you use this argument for another purpose, change it to a different, unused argument number (or use letters instead: java.arg.mycustomargument). Not changing the argument can impact functionalities after upgrades/migrations.

JDK error

JDK 8 version u252 is supported. Any lower version may result in this error when NiFi starts:

```
SHA512withRSAandMGF1 Signature not available
```

When using Java 8, only version u252, and above are supported.

JDK limitation

JDK 8u271, JDK 8u281, and JDK 8u291 may cause socket leak issues in NiFi due to JDK-8245417 and JDK-8256818. Verify the build version of your JDK. Later builds are fixed as described in JDK-8256818.

When using Java 8, only version u252, and above are supported.

Kudu Client

All the records are sent as a single Kafka message containing an array of records.

There is an issue in the Kudu client preventing the creation of a new tables using the NiFi processors. The table needs to exist before NiFi tries to push data into it. You may see this error when this issue arises:

Caused by: org.apache.kudu.client.NonRecoverableException: failed to wait for Hive Metastore notification log listener to catch up: failed to retrieve notification log events: failed to open Hive Metastore connection: SASL(-15): mechanism too weak for this user

Verify the necessary table exists in Kudu.

NiFi Node Connection test failures

In CFM 2.1.3, Cloudera Manager includes a new health check feature. The health check alerts users if a NiFi instance is running but disconnected from the NiFi cluster. For this health check to be successful, you must update a Ranger policy. There is a known issue when the NiFi service is running but the NiFi Node(s) report Bad Health due to the NiFi Node Connection test.

Update the policy:

- 1. From the Ranger UI, access the Controller policy for the NiFi service.
- **2.** Verify the nifi group is set in the policy.
- 3. Add the nifi user, to the policy, with READ permissions.

NiFi UI Performance considerations

A known issue in Chrome 92.x causes significant slowness in the NiFi UI and may lead to high CPU consumption.

For more information, see the Chrome Known Issues documentation at 1235045.

Use another version of Chrome or a different browser.

SSHJ version change and key negotiation issue with old SSH servers

ListSFTP and PutSFTP processors fail when using the legacy ssh-rsa algorithm for authentication with the following error:

UserAuthException: Exhausted available authentication methods

Set Key Algorithms Allowed property in PutSFTP to ssh-rsa.

KeyStoreException: placeholder not found

After an upgrade, NiFi may fail to start with the following error:

```
WARN org.apache.nifi.web.server.JettyServer: Failed to start web server... shutting down. java.security.KeyStoreException: placeholder not found
```

The error is caused by missing configuration for the type of the keystore and truststore files.

- 1. Go to Cloudera Manager -> NiFi service -> Configuration.
- **2.** Add the below properties for NiFi Node Advanced Configuration Snippet (Safety Valve) for staging/nifi.properties.xml.

```
nifi.security.keystoreType=**[value]**
nifi.security.truststoreType=**[value]**
```

Where value must be PKCS12, JKS, or BCFKS. JKS is the preferred type, BCFKS and PKCS12 files are loaded with BouncyCastle provider.

3. Restart NiFi.

InferAvroSchema may fail when inferring schema for JSON data

In Apache NiFi 1.17, the dependency on Apache Avro has been upgraded to 1.11.0. However, the InferAvroSchema processor depends on the hadoop-libraries NAR from which the Avro version comes from, causing a NoSuchMethodError exception.



Important: This processor is not supported by Cloudera and its use is highly discouraged as inferring a schema from the data is not recommended in production data flows.

Having well defined schemas ensures consistent behavior, allows for proper schema versioning and prevents downstream systems to generate errors because of unexpected schema changes. Besides, schema inference may not always be 100% accurate and can be an expensive operation in terms of performances.

Use the ExtractRecordSchema processor to infer the schema of your data with an appropriate reader and add the schema as a FlowFile attribute.

CVEs not fixed

The following Common Vulnerabilities and Exposures (CVE) remain unresolved in CFM 2.1.7.

CVE-2020-36518

jackson-databind before 2.13.0 allows a Java StackOverflow exception and denial of service via a large depth of nested objects.

Reason for not being fixed: com.cloudera:jwtprovider-knox:jar:shaded contains jackson-databind:2.10.5.1, and the dependency cannot be excluded upstream because it uses a downstream-specific package ('com.cloudera').

CVE-2021-46877

jackson-databind 2.10.x through 2.12.x before 2.12.6 and 2.13.x before 2.13.1 allows attackers to cause a denial of service (2 GB transient heap usage per read) in uncommon situations involving JsonNode JDK serialization.

Reason for not being fixed: com.cloudera:jwtprovider-knox:jar:shaded contains jackson-databind:2.10.5.1, and the dependency cannot be excluded upstream because it uses a downstream-specific package ('com.cloudera').

CVE-2022-42003

In FasterXML jackson-databind before versions 2.13.4.1 and 2.12.17.1, resource exhaustion can occur because of a lack of a check in primitive value deserializers to avoid deep wrapper array nesting, when the UNWRAP_SINGLE_VALUE_ARRAYS feature is enabled.

Reason for not being fixed: com.cloudera:jwtprovider-knox:jar:shaded contains jackson-databind:2.10.5.1, and the dependency cannot be excluded upstream because it uses a downstream-specific package ('com.cloudera').

CVE-2022-42004

In FasterXML jackson-databind before 2.13.4, resource exhaustion can occur because of a lack of a check in BeanDeserializer._deserializeFromArray to prevent use of deeply nested arrays. An application is vulnerable only with certain customized choices for deserialization.

Reason for not being fixed: com.cloudera:jwtprovider-knox:jar:shaded contains jackson-databind:2.10.5.1, and the dependency cannot be excluded upstream because it uses a downstream-specific package ('com.cloudera').

CVE-2021-23463: XML External Entity (XXE) Injection

The package com.h2database:h2 from 1.4.198 and before 2.0.202 are vulnerable to XML External Entity (XXE) Injection via the org.h2.jdbc.JdbcSQLXML class object, when it receives parsed string data from org.h2.jdbc.JdbcResultSet.getSQLXML() method. If it executes the getSource() method when the parameter is DOMSource.class it will trigger the vulnerability.

Reason for not being fixed: The h2-database-v14 package uses this vulnerable version. Cloudera recommends removing the NAR when not needed.

CVE-2021-42392

The org.h2.util.JdbcUtils.getConnection method of the H2 database takes as parameters the class name of the driver and URL of the database. An attacker may pass a JNDI driver name and a URL leading to LDAP or RMI servers, causing remote code execution. This can be exploited through various attack vectors, most notably through the H2 Console which leads to unauthenticated remote code execution.

Reason for not being fixed: The h2-database-v14 package uses this vulnerable version. Cloudera recommends removing the NAR when not needed.

CVE-2022-23221

H2 Console before 2.1.210 allows remote attackers to execute arbitrary code via a jdbc:h2:mem JDBC URL containing the IGNORE_UNKNOWN_SETTINGS=TRUE;FORBID_CREATION=FALSE;INIT=RUNSCRIPT substring, a different vulnerability than CVE-2021-42392.

Reason for not being fixed: The h2-database-v14 package uses this vulnerable version. Cloudera recommends removing the NAR when not needed.

CVE-2022-45868

The web-based admin console in H2 Database Engine before 2.2.220 can be started via the CLI with the argument -webAdminPassword, which allows the user to specify the password in cleartext for the web admin console. Consequently, a local user (or an attacker that has obtained local access through some means) would be able to discover the password by listing processes and their arguments. NOTE: the vendor states "This is not a vulnerability of H2 Console ... Passwords should never be passed on the command line and every qualified DBA or system administrator is expected to know that." Nonetheless, the issue was fixed in 2.2.220.

Reason for not being fixed: The h2-database-v14 package uses this vulnerable version. Cloudera recommends removing the NAR when not needed.

CVE-2018-14335

An issue was discovered in H2 1.4.197. Insecure handling of permissions in the backup function allows attackers to read sensitive files (outside of their permissions) via a symlink to a fake database file.

Reason for not being fixed: No suggested resolution is available yet.

CVE-2023-36415: Azure Identity SDK Remote Code Execution Vulnerability

Azure Identity SDK Remote Code Execution Vulnerability

Reason for not being fixed: No suggested resolution is available yet.

CVE-2020-8908: Temp directory permission issue in Guava

A temp directory creation vulnerability exists in all versions of Guava, allowing an attacker with access to the machine to potentially access data in a temporary directory created by the Guava API com.google.common.io.Files.createTempDir(). By default, on unix-like systems, the created directory is world-readable (readable by an attacker with access to the system). The method in question has been marked @Deprecated in versions 30.0 and later and should not be used. For Android developers, we recommend choosing a temporary directory API provided by Android, such as context.getCacheDir(). For other Java developers, we recommend migrating to the Java 7 API java.nio.file.Files.createTempDirectory() which explicitly configures permissions of 700, or configuring the Java runtime's java.io.tmpdir system property to point to a location whose permissions are appropriately configured.

Reason for not being fixed: The gcs-connector found in the POM file is shaded by Ranger.

CVE-2023-2976: Use of temporary directory for file creation in `FileBackedOutputStream` in Guava

Use of Java's default temporary directory for file creation in `FileBackedOutputStream` in Google Guava versions 1.0 to 31.1 on Unix systems and Android Ice Cream Sandwich allows other users and apps on the machine with access to the default Java temporary directory to be able to access the files created by the class. Even though the security vulnerability is fixed in version 32.0.0, we recommend using version 32.0.1 as version 32.0.0 breaks some functionality under Windows.

Reason for not being fixed: The gcs-connector found in the POM file is shaded by Ranger.

CVE-2021-22569: Denial of Service of protobuf-java parsing procedure

An issue in protobuf-java allowed the interleaving of com.google.protobuf.UnknownFieldSet fields in such a way that would be processed out of order. A small malicious payload can occupy the parser for several minutes by creating large numbers of short-lived objects that cause frequent, repeated pauses. We recommend upgrading libraries beyond the vulnerable versions.

Reason for not being fixed: This is protobuf shaded by Hadoop.

CVE-2022-3171: Memory handling vulnerability in ProtocolBuffers Java core and lite

A parsing issue with binary data in protobuf-java core and lite versions prior to 3.21.7, 3.20.3, 3.19.6 and 3.16.3 can lead to a denial of service attack. Inputs containing multiple instances of non-repeated embedded messages with repeated or unknown fields cause objects to be converted back-n-forth between mutable and immutable forms, resulting in potentially long garbage collection pauses. We recommend updating to the versions mentioned above.

Reason for not being fixed: This is protobuf shaded by Hadoop.

CVE-2022-3509: Parsing issue in protobuf textformat

A parsing issue similar to CVE-2022-3171, but with textformat in protobuf-java core and lite versions prior to 3.21.7, 3.20.3, 3.19.6 and 3.16.3 can lead to a denial of service attack. Inputs containing multiple instances of non-repeated embedded messages with repeated or unknown fields cause objects to be converted back-n-forth between mutable and immutable forms, resulting in potentially long garbage collection pauses. We recommend updating to the versions mentioned above.

Reason for not being fixed: This is protobuf shaded by Hadoop.

CVE-2019-11358

jQuery before 3.4.0, as used in Drupal, Backdrop CMS, and other products, mishandles jQuery.extend(true, {}, ...) because of Object.prototype pollution. If an unsanitized source object contained an enumerable __proto__ property, it could extend the native Object.prototype.

Reason for not being fixed: JQuery version upgrade is needed in the UI.

CVE-2020-11022: Potential XSS vulnerability in jQuery

In jQuery versions greater than or equal to 1.2 and before 3.5.0, passing HTML from untrusted sources - even after sanitizing it - to one of jQuery's DOM manipulation methods (i.e. .html(), .append(), and others) may execute untrusted code. This problem is patched in jQuery 3.5.0.

Reason for not being fixed: JQuery version upgrade is needed in the UI.

CVE-2020-11023: Potential XSS vulnerability in jQuery

In jQuery versions greater than or equal to 1.0.3 and before 3.5.0, passing HTML containing <option> elements from untrusted sources - even after sanitizing it - to one of jQuery's DOM manipulation methods (i.e. .html(), .append(), and others) may execute untrusted code. This problem is patched in jQuery 3.5.0.

Reason for not being fixed: JQuery version upgrade is needed in the UI.

CVE-2021-29425: Possible limited path traversal vulnerabily in Apache Commons IO

In Apache Commons IO before 2.7, When invoking the method FileNameUtils.normalize with an improper input string, like "//../foo", or "\\..\foo", the result would be the same value, thus possibly providing access to files in the parent directory, but not further above (thus "limited" path traversal), if the calling code would use the result to construct a path value.

Reason for not being fixed: jwtprovider-knox found in the POM file is shaded by Ranger.

CVE-2023-1370: Stack exhaustion in json-smart leads to denial of service when parsing malformed JSON

[Json-smart](https://netplex.github.io/json-smart/) is a performance focused, JSON processor lib. When reaching a '[' or '{' character in the JSON input, the code parses an array or an object respectively. It was discovered that the code does not have any limit to the nesting of such arrays or objects. Since the parsing of nested arrays and objects is done recursively, nesting too many of them can cause a stack exhaustion (stack overflow) and crash the software.

Reason for not being fixed: jwtprovider-knox found in the POM file is shaded by Ranger.

CVE-2018-17196

In Apache Kafka versions between 0.11.0.0 and 2.1.0, it is possible to manually craft a Produce request which bypasses transaction/idempotent ACL validation. Only authenticated clients with Write permission on the respective topics are able to exploit this vulnerability. Users should upgrade to 2.1.1 or later where this vulnerability has been fixed.

Reason for not being fixed: Not fixed. Cloudera recommends to use nifi-kafka-2-6-nar*

CVE-2023-48795

The SSH transport protocol with certain OpenSSH extensions, found in OpenSSH before 9.6 and other products, allows remote attackers to bypass integrity checks such that some packets are omitted (from the extension negotiation message), and a client and server may consequently end up with a connection for which some security features have been downgraded or disabled, aka a Terrapin attack. This occurs because the SSH Binary Packet Protocol (BPP), implemented by these extensions, mishandles the handshake phase and mishandles use of sequence numbers. For example, there is an effective attack against SSH's use of ChaCha20-Poly1305 (and CBC with Encryptthen-MAC). The bypass occurs in chacha20-poly1305@openssh.com and (if CBC is used) the etm@openssh.com MAC algorithms. This also affects Maverick Synergy Java SSH API before

3.1.0-SNAPSHOT, Dropbear through 2022.83, Ssh before 5.1.1 in Erlang/OTP, PuTTY before 0.80, AsyncSSH before 2.14.2, golang.org/x/crypto before 0.17.0, libssh before 0.10.6, libssh2 through 1.11.0, Thorn Tech SFTP Gateway before 3.4.6, Tera Term before 5.1, Paramiko before 3.4.0, jsch before 0.2.15, SFTPGo before 2.5.6, Netgate pfSense Plus through 23.09.1, Netgate pfSense CE through 2.7.2, HPN-SSH through 18.2.0, ProFTPD before 1.3.8b (and before 1.3.9rc2), ORYX CycloneSSH before 2.3.4, NetSarang XShell 7 before Build 0144, CrushFTP before 10.6.0, ConnectBot SSH library before 2.2.22, Apache MINA sshd through 2.11.0, sshj through 0.37.0, TinySSH through 20230101, trilead-ssh2 6401, LANCOM LCOS and LANconfig, FileZilla before 3.66.4, Nova before 11.8, PKIX-SSH before 14.4, SecureCRT before 9.4.3, Transmit5 before 5.10.4, Win32-OpenSSH before 9.5.0.0p1-Beta, WinSCP before 6.2.2, Bitvise SSH Server before 9.32, Bitvise SSH Client before 9.33, KiTTY through 0.76.1.13, the net-ssh gem 7.2.0 for Ruby, the mscdex ssh2 module before 1.15.0 for Node.js, the thrussh library before 0.35.1 for Rust, and the Russh crate before 0.40.2 for Rust.

Reason for not being fixed: This is in the NiFi Registry Web API.

CVE-2023-36479: Jetty vulnerable to errant command quoting in CGI Servlet

Eclipse Jetty Canonical Repository is the canonical repository for the Jetty project. Users of the CgiServlet with a very specific command structure may have the wrong command executed. If a user sends a request to a org.eclipse.jetty.servlets.CGI Servlet for a binary with a space in its name, the servlet will escape the command by wrapping it in quotation marks. This wrapped command, plus an optional command prefix, will then be executed through a call to Runtime.exec. If the original binary name provided by the user contains a quotation mark followed by a space, the resulting command line will contain multiple tokens instead of one. This issue was patched in version 9.4.52, 10.0.16, 11.0.16 and 12.0.0-beta2.

Reason for not being fixed: Jetty 10 requires Java 11.

CVE-2018-1000840

Processing Foundation Processing version 3.4 and earlier contains a XML External Entity (XXE) vulnerability in loadXML() function that can result in An attacker can read arbitrary files and exfiltrate their contents via HTTP requests. This attack appears to be exploitable via The victim must use Processing to parse a crafted XML document.

Reason for not being fixed: nifi-xml-processing is marked as a vulnerability, with no clear solution.

CVE-2020-5408: Dictionary attack with Spring Security queryable text encryptor

Spring Security versions 5.3.x prior to 5.3.2, 5.2.x prior to 5.2.4, 5.1.x prior to 5.1.10, 5.0.x prior to 5.0.16 and 4.2.x prior to 4.2.16 use a fixed null initialization vector with CBC Mode in the implementation of the queryable text encryptor. A malicious user with access to the data that has been encrypted using such an encryptor may be able to derive the unencrypted values using a dictionary attack.

Reason for not being fixed: The solution suggests downgrading the current version of the spring-security-crypto dependency, which is currently not feasible.

CVEs excluded based on the NiFi exclusion list

CVE-2023-4759: Improper handling of case insensitive filesystems in Eclipse JGit allows arbitrary file write

Arbitrary File Overwrite in Eclipse JGit <= 6.6.0 In Eclipse JGit, all versions <= 6.6.0.202305301015-r, a symbolic link present in a specially crafted git repository can be used to write a file to locations outside the working tree when this repository is cloned with JGit to a case-insensitive filesystem, or when a checkout from a clone of such a repository is performed on a case-insensitive filesystem. This can happen on checkout (DirCacheCheckout), merge (ResolveMerger via its WorkingTreeUpdater), pull (PullCommand using merge), and when applying a patch (PatchApplier). This can be exploited for remote code execution (RCE), for instance if the file written outside the working tree is a git filter that gets executed on a subsequent git command.

The issue occurs only on case-insensitive file systems, like the default file systems on Windows and macOS. The user performing the clone or checkout must have the rights to create symbolic links for the problem to occur, and symbolic links must be enabled in the git configuration. Setting the git configuration option core.symlinks = false before checking out avoids the problem. The issue was fixed in Eclipse JGit version 6.6.1.202309021850-r and 6.7.0.202309050840-r, available via Maven Central https://repo1.maven.org/maven2/org/eclipse/jgit/ and repo.eclipse.org https://repo.eclipse.org/content/repositories/jgit-releases/. A backport is available in 5.13.3 starting from 5.13.3.202401111512-r. The JGit maintainers would like to thank RyotaK for finding and reporting this issue.

CVE-2024-21634: Ion Java StackOverflow vulnerability

Amazon Ion is a Java implementation of the Ion data notation. Prior to version 1.10.5, a potential denial-of-service issue exists in `ion-java` for applications that use `ion-java` to deserialize Ion text encoded data, or deserialize Ion text or binary encoded data into the `IonValue` model and then invoke certain `IonValue` methods on that in-memory representation. An actor could craft Ion data that, when loaded by the affected application and/or processed using the `IonValue` model, results in a `StackOverflowError` originating from the `ion-java` library. The patch is included in `ion-java` 1.10.5. As a workaround, do not load data which originated from an untrusted source or that could have been tampered with.

Fixed issues in CFM 2.1.7

Review the list of issues resolved in Cloudera Flow Management (CFM) 2.1.7.

In addition to Apache NiFi 1.26.0, the following fixes have been implemented:

- NIFI-13181: Updated msal4j to version 1.15.0
- NIFI-13151: Deprecated Couchbase Components
- NIFI-13152: Deprecated DataDogReportingTask
- NIFI-13008: Added CLI command to upgrade all instances of a versioned flow

Fixed Common Vulnerabilities and Exposures in CFM 2.1.7

Review the list of fixed Common Vulnerabilities and Exposures (CVE) in Cloudera Flow Management (CFM). CVE-2018-10237

Unbounded memory allocation in Google Guava 11.0 through 24.x before 24.1.1 allows remote attackers to conduct denial of service attacks against servers that depend on this library and deserialize attacker-provided data, because the AtomicDoubleArray class (when serialized with Java serialization) and the CompoundOrdering class (when serialized with GWT serialization) perform eager allocation without appropriate checks on what a client has sent and whether the data size is reasonable.

CVE-2019-10172

A flaw was found in org.codehaus.jackson:jackson-mapper-asl:1.9.x libraries. XML external entity vulnerabilities similar to CVE-2016-3720 also affects codehaus jackson-mapper-asl libraries but in different classes.

CVE-2020-25649

A flaw was found in FasterXML Jackson Databind, where it did not have entity expansion secured properly. This flaw allows vulnerability to XML external entity (XXE) attacks. The highest threat from this vulnerability is data integrity.

CVE-2021-0341

In verifyHostName of OkHostnameVerifier.java, there is a possible way to accept a certificate for the wrong domain due to improperly used crypto. This could lead to remote information disclosure with no additional execution privileges needed. User interaction is not needed for exploitation.Product: AndroidVersions: Android-8.1 Android-9 Android-10 Android-11 Android ID: A-171980069

CVE-2022-25647: Descrialization of Untrusted Data

The package com.google.code.gson:gson before 2.8.9 are vulnerable to Deserialization of Untrusted Data using the writeReplace() method in internal classes, which may lead to DoS attacks.

CVE-2022-31159: Partial Path Traversal in com.amazonaws:aws-java-sdk-s3

The AWS SDK for Java enables Java developers to work with Amazon Web Services. A partialpath traversal issue exists within the 'downloadDirectory' method in the AWS S3 TransferManager component of the AWS SDK for Java v1 prior to version 1.12.261. Applications using the SDK control the 'destinationDirectory' argument, but S3 object keys are determined by the application that uploaded the objects. The 'downloadDirectory' method allows the caller to pass a filesystem object in the object key but contains an issue in the validation logic for the key name. A knowledgeable actor could bypass the validation logic by including a UNIX double-dot in the bucket key. Under certain conditions, this could permit them to retrieve a directory from their S3 bucket that is one level up in the filesystem from their working directory. This issue's scope is limited to directories whose name prefix matches the destinationDirectory, E.g. for destination directory \tmp/foo \, the actor can cause a download to \tmp/foo-bar \, but not \tmp/ bar`. If `com.amazonaws.services.s3.transfer.TransferManager::downloadDirectory` is used to download an untrusted bucket's contents. The contents of that bucket can be written outside of the intended destination directory. Version 1.12.261 contains a patch for this issue. As a workaround, when calling `com.amazonaws.services.s3.transfer.TransferManager::downloadDirectory`, pass a `KeyFilter` that forbids `S3ObjectSummary` objects that `getKey` method return a string containing the substring `..`.

CVE-2023-0833: Red hat a-mq streams: component version with information disclosure flaw

A flaw was found in Red Hat's AMQ-Streams, which ships a version of the OKHttp component with an information disclosure flaw via an exception triggered by a header containing an illegal value. This issue could allow an authenticated attacker to access information outside of their regular permissions.

CVE-2023-34055: Spring Boot server Web Observations DoS Vulnerability

In Spring Boot versions 2.7.0 - 2.7.17, 3.0.0-3.0.12 and 3.1.0-3.1.5, it is possible for a user to provide specially crafted HTTP requests that may cause a denial-of-service (DoS) condition. Specifically, an application is vulnerable when all of the following are true: * the application uses Spring MVC or Spring WebFlux * org.springframework.boot:spring-boot-actuator is on the classpath.

CVE-2023-34462: netty-handler SniHandler 16MB allocation

Netty is an asynchronous event-driven network application framework for rapid development of maintainable high performance protocol servers & clients. The `SniHandler` can allocate up to 16MB of heap for each channel during the TLS handshake. When the handler or the channel does not have an idle timeout, it can be used to make a TCP server using the `SniHandler` to allocate 16MB of heap. The `SniHandler` class is a handler that waits for the TLS handshake to configure a `SslHandler` according to the indicated server name by the `ClientHello` record. For this matter it allocates a `ByteBuf` using the value defined in the `ClientHello` record. Normally the value of the packet should be smaller than the handshake packet but there are no checks done here and the way the code is written, it is possible to craft a packet that makes the `SslClientHelloHandler`. This vulnerability has been fixed in version 4.1.94.Final.

CVE-2023-35116

jackson-databind through 2.15.2 allows attackers to cause a denial of service or other unspecified impact via a crafted object that uses cyclic dependencies. NOTE: the vendor's perspective is that this is not a valid vulnerability report, because the steps of constructing a cyclic data structure and trying to serialize it cannot be achieved by an external attacker.

CVE-2023-35887: Apache MINA SSHD: Information disclosure bugs with RootedFilesystem

Exposure of Sensitive Information to an Unauthorized Actor vulnerability in Apache Software Foundation Apache MINA. In SFTP servers implemented using Apache MINA SSHD that use a RootedFileSystem, logged users may be able to discover "exists/does not exist" information about items outside the rooted tree via paths including parent navigation ("..") beyond the root, or involving symlinks. This issue affects Apache MINA: from 1.0 before 2.10. Users are recommended to upgrade to 2.10

CVE-2023-36414: Azure Identity SDK Remote Code Execution Vulnerability

Azure Identity SDK Remote Code Execution Vulnerability

CVE-2023-39017

quartz-jobs 2.3.2 and below was discovered to contain a code injection vulnerability in the component org.quartz.jobs.ee.jms.SendQueueMessageJob.execute. This vulnerability is exploited via passing an unchecked argument. NOTE: this is disputed by multiple parties because it is not plausible that untrusted user input would reach the code location where injection must occur.

CVE-2023-39196: Apache Ozone: Missing mutual TLS authentication in one of the service internal Ozone Storage Container Manager endpoints

Improper Authentication vulnerability in Apache Ozone. The vulnerability allows an attacker to download metadata internal to the Storage Container Manager service without proper authentication. The attacker is not allowed to do any modification within the Ozone Storage Container Manager service using this vulnerability. The accessible metadata does not contain sensitive information that can be used to exploit the system later on, and the accessible data does not make it possible to gain access to actual user data within Ozone. This issue affects Apache Ozone: 1.2.0 and subsequent releases up until 1.3.0. Users are recommended to upgrade to version 1.4.0, which fixes the issue.

CVE-2023-39410: Apache Avro Java SDK: Memory when deserializing untrusted data in Avro Java SDK

When descrializing untrusted or corrupted data, it is possible for a reader to consume memory beyond the allowed constraints and thus lead to out of memory on the system. This issue affects Java applications using Apache Avro Java SDK up to and including 1.11.2. Users should update to apache-avro version 1.11.3 which addresses this issue.

CVE-2023-44487

The HTTP/2 protocol allows a denial of service (server resource consumption) because request cancellation can reset many streams quickly, as exploited in the wild in August through October 2023.

CVE-2023-49145: Apache NiFi: Improper Neutralization of Input in Advanced User Interface for Jolt

Apache NiFi 0.7.0 through 1.23.2 include the JoltTransformJSON Processor, which provides an advanced configuration user interface that is vulnerable to DOM-based cross-site scripting. If an authenticated user, who is authorized to configure a JoltTransformJSON Processor, visits a crafted URL, then arbitrary JavaScript code can be executed within the session context of the authenticated user. Upgrading to Apache NiFi 1.24.0 or 2.0.0-M1 is the recommended mitigation.

CVE-2023-50291: Apache Solr: System Property redaction logic inconsistency can lead to leaked passwords

Insufficiently Protected Credentials vulnerability in Apache Solr. This issue affects Apache Solr: from 6.0.0 through 8.11.2, from 9.0.0 before 9.3.0. One of the two endpoints that publishes

the Solr process' Java system properties, /admin/info/properties, was only setup to hide system properties that had "password" contained in the name. There are a number of sensitive system properties, such as "basicauth" and "aws.secretKey" do not contain "password", thus their values were published via the "/admin/info/properties" endpoint. This endpoint populates the list of System Properties on the home screen of the Solr Admin page, making the exposed credentials visible in the UI. This /admin/info/properties endpoint is protected under the "config-read" permission. Therefore, Solr Clouds with Authorization enabled will only be vulnerable through logged-in users that have the "config-read" permission. Users are recommended to upgrade to version 9.3.0 or 8.11.3, which fixes the issue. A single option now controls hiding Java system property for all endpoints, "-Dsolr.hiddenSysProps". By default all known sensitive properties are hidden (including "-Dbasicauth"), as well as any property with a name containing "secret" or "password". Users who cannot upgrade can also use the following Java system property to fix the issue: '-Dsolr.redaction.system.pattern=.*(password|secret|basicauth).*'

CVE-2023-50292: Apache Solr: Solr Schema Designer blindly "trusts" all configsets, possibly leading to RCE by unauthenticated users

Incorrect Permission Assignment for Critical Resource, Improper Control of Dynamically-Managed Code Resources vulnerability in Apache Solr. This issue affects Apache Solr: from 8.10.0 through 8.11.2, from 9.0.0 before 9.3.0. The Schema Designer was introduced to allow users to more easily configure and test new Schemas and configSets. However, when the feature was created, the "trust" (authentication) of these configSets was not considered. External library loading is only available to configSets that are "trusted" (created by authenticated users), thus non-authenticated users are unable to perform Remote Code Execution. Since the Schema Designer loaded configSets without taking their "trust" into account, configSets that were created by unauthenticated users were allowed to load external libraries when used in the Schema Designer. Users are recommended to upgrade to version 9.3.0, which fixes the issue.

CVE-2023-50298: Apache Solr: Solr can expose ZooKeeper credentials via Streaming Expressions

Exposure of Sensitive Information to an Unauthorized Actor vulnerability in Apache Solr. This issue affects Apache Solr: from 6.0.0 through 8.11.2, from 9.0.0 before 9.4.1. Solr Streaming Expressions allows users to extract data from other Solr Clouds, using a "zkHost" parameter. When the original SolrCloud is set up to use ZooKeeper credentials and ACLs, they will be sent to whatever "zkHost" the user provides. An attacker could setup a server to mock ZooKeeper, that accepts ZooKeeper requests with credentials and ACLs and extracts the sensitive information, then sends a streaming expression using the mock server's address in "zkHost". Streaming Expressions are exposed via the "/streaming" handler, with "read" permissions. Users are recommended to upgrade to version 8.11.3 or 9.4.1, which fix the issue. From these versions on, only zkHost values that have the same server address (regardless of chroot), will use the given ZooKeeper credentials and ACLs when connecting.

CVE-2023-50386: Apache Solr: Backup/Restore APIs allow for deployment of executables in malicious ConfigSets

Improper Control of Dynamically-Managed Code Resources, Unrestricted Upload of File with Dangerous Type, Inclusion of Functionality from Untrusted Control Sphere vulnerability in Apache Solr. This issue affects Apache Solr: from 6.0.0 through 8.11.2, from 9.0.0 before 9.4.1. In the affected versions, Solr ConfigSets accepted Java jar and class files to be uploaded through the ConfigSets API. When backing up Solr Collections, these configSet files would be saved to disk when using the LocalFileSystemRepository (the default for backups). If the backup was saved to a directory that Solr uses in its ClassPath/ClassLoaders, then the jar and class files would be available to use with any ConfigSet, trusted or untrusted. When Solr is run in a secure way (Authorization enabled), as is strongly suggested, this vulnerability is limited to extending the Backup permissions with the ability to add libraries. Users are recommended to upgrade to version 8.11.3 or 9.4.1, which fix the issue. In these versions, the following protections have been added: * Users are no longer able to upload files to a configSet that could be executed via a Java ClassLoader. * The Backup API restricts saving backups to directories that are used in the ClassLoader.

CVE-2023-50572

An issue in the component GroovyEngine.execute of jline-groovy v3.24.1 allows attackers to cause an OOM (OutofMemory) error.

CVE-2023-52428

In Connect2id Nimbus JOSE+JWT before 9.37.2, an attacker can cause a denial of service (resource consumption) via a large JWE p2c header value (aka iteration count) for the PasswordBasedDecrypter (PBKDF2) component.

CVE-2024-22243: Spring Framework URL Parsing with Host Validation

Applications that use UriComponentsBuilder to parse an externally provided URL (e.g. through a query parameter) AND perform validation checks on the host of the parsed URL may be vulnerable to a open redirect https://cwe.mitre.org/data/definitions/601.html attack or to a SSRF attack if the URL is used after passing validation checks.

CVE-2024-25710: Apache Commons Compress: Denial of service caused by an infinite loop for a corrupted DUMP file

Loop with Unreachable Exit Condition ('Infinite Loop') vulnerability in Apache Commons Compress. This issue affects Apache Commons Compress: from 1.3 through 1.25.0. Users are recommended to upgrade to version 1.26.0 which fixes the issue.

CVE-2024-26308: Apache Commons Compress: OutOfMemoryError unpacking broken Pack200 file

Allocation of Resources Without Limits or Throttling vulnerability in Apache Commons Compress. This issue affects Apache Commons Compress: from 1.21 before 1.26. Users are recommended to upgrade to version 1.26, which fixes the issue.

CVE-2020-12668

Jinjava before 2.5.4 allows access to arbitrary classes by calling Java methods on objects passed into a Jinjava context. This could allow for abuse of the application class loader, including Arbitrary File Disclosure.

Related Information

Support matrix