



# Micro Focus Transformation Hub

Software Version: 3.0.0

## Release Notes

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# Overview

Micro Focus Transformation Hub centralizes event processing and delivery, helps you to scale your security environment, and opens up event data to third-party solutions. It enables you to take advantage of scalable, high-throughput, multi-broker clusters for publishing and subscribing to event data. To better reflect current and future features required for event brokering, the former ArcSight **Event Broker** component has been rebranded to **Transformation Hub**.

Transformation Hub provides a packaged version of Apache Kafka. After you install and configure a Transformation Hub cluster, you can use SmartConnectors to publish data, and subscribe to that data with Logger, ESM, ArcSight Investigate (via Vertica integration), Apache Hadoop, or your own custom producer or consumer.

## What's New in this Release

This release of Transformation Hub 3.0.0 has been designed for improved reliability and infrastructure flexibility, and includes the following features:

- **Container Deployment Foundation (CDF):** The ArcSight Installer has been replaced by the native CDF Installer process, supported by the latest CDF code-base (May 2019). The latest CDF release improves stability and manageability issues found in prior CDF releases.
- **Wizard-based Container Installer:** Transformation Hub now uses a simpler and more intuitive wizard-based Installer. There are fewer initial configuration properties, with appropriate defaults, and post-deployment reconfigurations are simplified.
- **Non-Container Install Option (THNC):** This release supports the installation of a Transformation Hub into a deployment that connects to a customer-provided and managed Kafka, known as Transformation Hub, Non-containerized (THNC).
- **Improved Documentation:** Product documentation has been improved, including a new CDF Planning Guide and a reorganized and rewritten Transformation Hub Deployment Guide, with more examples and diagrams.
- **Improved End-to-End Performance and Reliability:** From producers like Connectors to consumers like Logger, ESM and ArcSight Investigate, performance and stability has been improved end-to-end.
- **Rebranding:** Event Broker has been rebranded to Transformation Hub to better reflect the features of this component.
- **Infrastructure Size Flexibility:** Customers can choose a flexible infrastructure size, from a single, shared node to 10 or more nodes.
- **Non-root Installs:** Containerized Transformation Hub supports non-root installation.

- **Dynamic Reconfiguration:** Changing execution parameters now results in a rolling stop and restart of cluster pods to enable the new settings.
- **Other Features:** Additional new features include FIPS OS-level support, support for Kubernetes liveness probes, and an improved licensing procedure that supports new licenses as well as legacy ArcMC licenses.

## System Requirements

For details on Transformation Hub platform, system, and browser support, refer to the CDF Planning Guide, available from the [Micro Focus Software Community](#).

## Download Files

Files on the [Micro Focus Entitlement Portal](#) for download of this version of Transformation Hub include the following.

**Note:** Each file (except for .txt and .pdf files) also includes an accompanying md5 file for verification of authenticity.

- arcsight-installer-metadata-2.0.0.22.tar.gz
- arcsight-installer-metadata-2.0.0.22.tar.gz.sig
- cdf-2019.05.00131.zip
- cdf-2019.05.00131.zip.sig
- cdf-core-images-2019.05.00131.tgz
- cdf-core-images-2019.05.00131.tgz.sig
- transformationhub-3.0.0.22.tgz
- transformationhub-3.0.0.22.tgz.sig
- ArcSight-TransformationHub-3.0.0.1018.bin
- ArcSight-TransformationHub-3.0.0.1018.bin.sig
- ArcSight\_Transformation\_Hub\_3\_0\_0\_License.txt
- Micro Focus\_Transformation\_Hub\_3\_0\_0\_Customer\_Letter.pdf

## A Note About Logger Receivers

An issue exists where any Logger configured as a Transformation Hub consumer must be restarted after the undeployment and redeployment of Transformation Hub.

**Workaround:** In order to prevent this on an individual Logger, after redeploying Transformation Hub, you must disable and then enable the Logger's Kafka receivers, as follows:

1. Log in to the Logger.
2. Navigate to the Logger's Kafka receivers configuration view.
3. Select a receiver to disable.
4. Disable the desired receiver by clicking on the green check mark (enabled) to the right of the receiver name. A blue spinner will be displayed.
5. Wait until the green check mark changes to a red (disabled) icon. The receiver is now disabled.
6. Click the red (disabled) icon. A blue spinner will be displayed.
7. Wait until the green check mark is displayed again. The receiver has now been re-enabled.
8. Repeat Steps 3-7 for any of the Logger's other Kafka receivers.

Perform this procedure on each affected Logger.

# Closed Issues

This release resolves the following issues.

**Note:** This list includes legacy issues from the Event Broker and ArcSight Installer.

Key	Release Note Description
INST-1071	When adding a node to the cluster, the following error was returned: <code>{{Cluster status check failed, [MngPortal] URL: https://&lt;URL&gt;:9090 Inactive}}</code> . This error has been fixed.
INST-938	After you changed the Vertica database connection, and then accessed Investigate, a 502 error would be displayed until the pods have restarted with the new configuration. This was a known issue that occurs when changing the Vertica database connection multiple times and has been corrected.
INST-936	When attempting to upgrade the 1.10 or 1.20 ArcSight Installer, running the <code>arcsight-installer-worker.sh</code> would fail because the <code>arcsight-master.properties</code> files does not exist. This error will no longer been seen after upgrades from 1.10 to 1.20.
INST-921	Arcsight Installer was internally using the following network ranges, but these ranges are no longer required. * 172.16.0.0/16 - subnet of 65,536 addresses reserved for Kubernetes pods * 172.30.78.0/24 - subnet of 256 addresses reserved for Kubernetes services Make sure the ranges above are not occupied/blocked in your network. If the ranges are not available, you can change the default ranges before installation of the cluster. * open <code>arcsight-installer-master.sh</code> and change the following variables ** <code>POD_CIDR</code> - any subnet of 65536 addresses. (eg. <code>POD_CIDR=172.18.0.0/16</code> ) ** <code>SERVICE_CIDR</code> - any subnet of 256 addresses not overlapping with <code>POD_CIDR</code> (eg. <code>SERVICE_CIDR=172.30.80.0/24</code> ) ** <code>DNS_SVC_IP</code> - an ip address from the second half of <code>SERVICE_CIDR</code> range (eg. <code>DNS_SVC_IP=172.30.80.78</code> ) * use <code>arcsight-installer-master.sh</code> to install the cluster
INST-895	In some cases, on RHEL 7.4 and IPv6-disabled systems, the NFS server would crash, in an error related to the RPC socket issue. This crash will no longer take place.
INST-860	Previously, when you deployed a product and a long-running background process was not finished when user session was valid, deployment would fail without notification. This issue has been resolved.
INST-836	The <code>arcsight-installer-worker.sh</code> script now checks that the unzip package is installed on a worker node before attempting to install the worker node.
INST-824	After the deployment process, nearly 3 GB of unneeded files would be left behind and need manual deletion. These files are now deleted automatically.
INST-813	In some cases, the undeploy and redeploy of Transformation Hub would fail, with Transformation Hub containers in a crash loop. This error has been fixed.
INST-801	During Kubernetes redeploy or restart, it is possible that some pods were in the "MatchNodeSelector" state and were not deleted by Kubernetes when a new pod was created. Therefore, some death pods were in the namespaces of products and the user had to delete them using <code>kubect1</code> . Now they are deleted when Kubernetes starts ( <code>kube-poststep.sh</code> which is registered to Kubernetes service).
INST-790	In some cases, nginx-ingress-controller and kube-dns could go into a crash loop. This issue has been resolved.
INST-788	Previously, when you deployed a product and a long-running background process was not finished when user session was valid, deployment would fail without notification. This issue has been resolved.
INST-706	You can no longer specify a non-positive number for a number of Kafka or ZooKeeper instances.

Key	Release Note Description
INST-635	An issue has been resolved where a Vertica table, <b>investigation.rejected_events</b> , was not created because of the error condition: 'Exception in thread 'main'.
INST-605	An issue has been resolved in the Vertica installation process where the command <code>./kafka_scheduler stop</code> did not stop the scheduler. The command will work correctly now.
INST-443	After an undeployment and redeployment, Kafka topics could lose one or more partitions. Partitions will no longer be lost after redeployment.
INST-301	In some cases, deployment of EB or AI could hang for up to 20 minutes with the error message: <b>Failed to pull image "hub.docker.io/hercules/search-engine:master" net/http: request canceled.</b> This indicated that the image failed to download from the Docker hub. This issue has been resolved and the download will proceed correctly.
INST-18	The Add Host command in the Vertica Database Scheduler would previously support only adding one host IP at a time, but now supports adding multiple host IP addresses.
INST-12	In some cases, Kafka nodes might not come back up after being stopped using <code>./kube-stop.sh</code> . The Kafka nodes will come back as expected now.
EB-2214	If a log-scanning liveness probe for Schema Registry is activated (by setting a configuration value for either the regex or literal fields), it will cause the Schema Registry pods to go into CrashLoopBackOff status.
EB-2152	Documentation on updating the server.crt file has been corrected.
EB-1864	FIPS mode at the OS level is now supported.
EB-1739	Non-root installations are now supported.
EB-1669	When adding worker nodes, use FODN to specify the node. IP address may not be used.
EB-1559	When logging into the ArcSight Installer, the Installer could erroneously display as 'Investigate.' This issue has been fixed.
EB-1554	Non-root installations are now supported.
EB-1413	xfis is now supported on RHEL and CentOS.
EB-1180	ArcMC was displaying duplicate CEF field names when creating topic routing rules. This issue has been fixed.
EB-909	An issue was present where the stream processor stops processing events and the error "ConcurrentModificationException" with the exception stack trace pointing to "org.apache.kafka.common.internals.PartitionStates.partitionSet" due to the known Kafka defect KAFKA-4950. This issue has been resolved.



## Open Issues

This release contains the following open issues.

**Note:** This list includes legacy issues from the Event Broker and ArcSight Installer.

Key	Release Note Description
INST-1965	<p><b>Issue:</b> The following symptoms are displayed:</p> <ol style="list-style-type: none"> <li>1. Management portal at port 5443 is not accessible.</li> <li>2. "cdf-apiserver" pod's in namespace core restart counter is growing</li> <li>3. When listing previous log of failed cdf-apiserver pod (<code>kubectl logs --previous --namespace core cdf-apiserver..</code>) you can see following exception at the end of the log:</li> </ol> <pre>Error starting ApplicationContext. To display the auto-configuration report re-run your application with 'debug' enabled. 2019-07-16 17:34:41.572 ERROR 39 --- [main] o.s.boot.SpringApplication : Application startup failed java.lang.IllegalStateException: Failed to execute CommandLineRunner ...</pre> <p><b>Caused by:</b> suiteinstaller.exception.exp.DuplicateException: deployment already exist. deploymentInDb=suiteinstaller.v1_1.domain.entity.Deployment@15723761</p> <p><b>Workaround:</b></p> <ol style="list-style-type: none"> <li>1. SSH into one of the cluster node running kubernetes and get exact name of <code>suite-db</code> pod: <code>kubectl get pods -n core grep suite-db</code></li> <li>2. Open bash session into this pod: <code>kubectl exec -it &lt;suite-db-pod-name&gt; -n core bash</code></li> <li>3. Fetch secret used to access the database: <code>get_secret suitedb_user_password</code></li> <li>4. Log into database, when asked for password use the value result from previous step: <code>psql -h127.0.0.1 -Ucdfapiserver -d suitedb</code></li> <li>5. Get deploymentUuid <code>select * from deployment where deployment_status='INSTALL_FINISHED';</code></li> <li>6. Check <code>sias_configuration</code> <code>select * from sias_configuration where key like '%/suite-installer/v2/primary-deployment%';</code> if this value is not empty - you are mitigating the right bug, delete it: <code>delete from sias_configuration where key like '%/suite-installer/v2/primary-deployment%';</code></li> <li>7. Wait for <code>cdf-apiserver</code> pod to timeout and restart again. Check the current pod log (<code>kubectl logs</code> without <code>-p/ --previous</code>) and see that startup is fine and error is not there anymore.</li> <li>8. Make sure Management Portal at port 5443 is accessible again.</li> </ol> <p>If select from step 6 did not return a result this means symptoms are not matching, contact Micro Focus support for mitigation.</p>

Key	Release Note Description
INST-1920	<p><b>Issue:</b> When accessing the Management Portal at the <code>https://{external_access_host}:5443</code> address, any one of the following errors is returned:</p> <ul style="list-style-type: none"> <li>• <code>DLG_FLAGS_SEC_CERT_CN_INVALID</code></li> <li>• Does not load by displaying an empty page.</li> </ul> <p><b>Workaround:</b> Remove the access restriction of binding only <code>External_Access_Hostname</code> FQDN and use <code>*https://{virtual_IP}:5443*</code> instead. Perform the following procedure:</p> <ol style="list-style-type: none"> <li>1. Edit the ingress rule file for the Management Portal: <code>kubectl edit ingress mng-portal --namespace core</code></li> <li>2. Open the file in the <code>vi</code> editor.</li> <li>3. Navigate to the <code>spec</code> section and remove the <code>external_access_header</code> of the <code>http</code> rule. <b>Note:</b> Pay special attention to leave the dash character (<code>-</code>) in the same position and retain the same spacing, or the exit command will not confirm saving the file. Change the rule as follows:   <pre>spec:   rules:   - http:       paths:       - backend:           serviceName: mng-portal           servicePort: 80         path: /mngPortal       - backend:           serviceName: mng-portal           servicePort: 80         path: /</pre> </li> <li>4. Save the file.</li> <li>5. Run the following command: <code>kubectl get ingress mng-portal --namespace core</code></li> </ol> <ul style="list-style-type: none"> <li>• If you modified the <code>http</code> rule successfully, the output of this command will be <code>star</code>. This confirms that the Management Portal can now be accessed at <code>https://{virtual_IP}:5443</code> openly.</li> <li>• Alternatively, you can access it by <code>https://{external_access_host}.5443*</code> but the error <code>DLG_FLAGS_SEC_CERT_CN_INVALID</code> will no longer be displayed in your browser.</li> </ul>
INST-1370	<p><b>Issue:</b> While running <code>./downloadimages.sh --suite investigate -r docker -o arcsightsecurity</code>, the following errors are displayed:</p> <pre>q: error: Cannot iterate over null mv: cannot stat ?/var/opt/kubernetes/offline/temp_files/suite-metadata/feature?: No such file or directory</pre> <p><b>Workaround:</b> No action is needed, these errors don't affect the download.</p>
INST-1300	<p><b>Issue:</b> When uninstalling the Arcsight installer via the script <code>\$k8s-home/uninstall.sh</code>, the script may hang.</p> <p><b>Workaround:</b> Reboot the machine and run <code>uninstall.sh</code> again or remove the <code>/opt/arcsight/kubernetes</code> directory. Interrupt the script and re-invoke it. If it still hangs, reboot the node, and invoke the script once the server has rebooted.</p>
INST-1236	<p><b>Issue:</b> <code>hercules-rethinkdb-0</code> is in <code>CrashLoopBack</code> state after deployment.</p> <p><b>Workaround:</b> Delete <code>rethink-db</code> pod and let it recreate itself. Together with install container it will try to reach the vault again.</p>
INST-1230	<p><b>Issue:</b> A long-running cluster with Investigate deployed may experience an out of memory condition, requiring a cluster node reboot.</p> <p><b>Workaround:</b> Monitor the <code>cpu / memory</code> usage of pods / cluster nodes, for example using the commands <code>kubectl top node</code> and <code>kubectl top pod &lt;pod name&gt; -n &lt;pod namespace&gt;</code></p>

Key	Release Note Description
INST-1186	<p><b>Issue:</b> The ArcSight Installer doesn't properly handle interface names when VLAN tagging is configured.</p> <p><b>Workaround:</b> Please contact Micro Focus Support to help address this issue.</p>
INST-1143	<p><b>Issue:</b> The Zookeeper cluster is out of sync at times and Kafka fails to select a leader after losing multiple brokers, causing Kafka to fail. This occurs on Zookeeper startup, due to a timing problem. It may also occur on a Zookeeper cluster.</p> <p><b>Workaround:</b> Undeploy and then redeploy Event Broker.</p>
INST-1118	<p><b>Issue:</b> The User is never logged out of the Arcsight Installer Deployment page.</p> <p><b>Workaround:</b> Navigate to a different browser page.</p>
EB-2190	<p><b>Issue:</b> Port 9999 and 10000 on Kafka nodes are set open for Kafka Manager to monitor Kafka metrics.</p> <p><b>Workaround:</b> None.</p>
EB-2179	<p><b>Issue:</b> When running THNC integrated with ArcMC for more than a week, you may see ArcMC disconnected due to some potential TCP hanging issue from Vertx client/server communication.</p> <p><b>Workaround:</b> Restart THNC.</p>
EB-1999	<p>The Transformation Hub Kafka Manager UI shows cluster version '1.1.0', instead of 2.1.0.</p> <p><b>Workaround:</b> None. This is a known limitation.</p>
EB-1508	<p><b>Issue:</b> eb-web-service pods status shows "running" but displays the following error message: "JMX client heartbeat java.lang.OutOfMemoryError"</p> <p><b>Workaround:</b> Starting with EB 2.30, the pod should automatically restart when communication with it is lost. If that does not happen when you see this issue, please restart the web service by executing the <code>kubect1 delete</code> command on the web service pod. After the web service pod restarts, ArcMC will connect with the proper status.</p>
EB-1303	<p>EB/Transformation Hub rules are not exportable to ArcMC, nor can they be backed up or restored.</p> <p><b>Workaround:</b> None.</p>
EB-1302	<p>ArcMC does not support the following logical operators for Transformation Hub rule creation:</p> <ul style="list-style-type: none"> <li>• NOT</li> <li>• DOESNOTCONTAIN</li> </ul>
EB-1132	<p><b>Issue:</b> A recovered Kafka/ZooKeeper node is not added to the cluster.</p> <p><b>Workaround:</b> Please contact Micro Focus Support if you encounter this issue.</p>
EB-631	<p>In some cases, when Kafka goes down and then recovers, there can be a difference in the event count of CEF and Avro topics. Under failure conditions it is expected that there may be data duplication since messages are re-delivered. The redelivery leads to some duplicate events.</p> <p><b>Workaround:</b> None. This is a known Kafka behavior.</p>

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