

# Informatica Corporation

## Informatica ActiveVOS

### Version 9.2.4

### Release Notes

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This release note contains information about new features and fixed issues for Informatica ActiveVOS.

**Note:** Informatica ActiveVOS 9.2.3 was not released to Informatica customers as it was intended for internal Informatica use only.

## New Features and Enhancements

Informatica ActiveVOS 9.2.4 offers two new capabilities: a Server Health-Check page and the ability to disable following HTTP redirects by REST services.

Customers are encouraged to review the list of issues corrected as these surface performance improvements resulting from enhancements and fixes.

## Additional Platforms Supported

This release includes support for Red Hat JBoss AS 6.2.0 and AS 7.3.0 Final. Installation into a JBoss domain is now possible.

## Required Action

A number of defects and enhancements require that you execute a DDL patch script when upgrading to the Informatica ActiveVOS 9.2.4 release. Customers must run this DDL patch script before starting the server. These defects and enhancements are 16447, 16726, 18018 and 18067.

Please refer to the “Upgrading Database Schema” section of this release note.

## Informatica ActiveVOS 9.2.4 Enhancements

### New Server Health-Check Page

Load balancers can now use the new server health check page to determine if a node in a cluster is available to process requests. Application containers (for example, Oracle WebLogic) cannot do this purpose as they report the ActiveVOS "application" as being available when in fact the server is still starting up and not yet fully activated. During this time and until all deployed services are fully activated, ActiveVOS will respond with HTTP 503 (Service Unavailable) responses.

This approach does not work when a TCP-level load balancer is used because it does not expect to monitor HTTP 503 responses sent by an ActiveVOS server node. These load balancers are typically capable of monitoring a URL using either HTTP GET or HEAD requests. To support this a new “healthcheck” endpoint was added. This endpoint reports server status as described below. It is available at [http://\[host:port\]/active-bpel-health/healthcheck](http://[host:port]/active-bpel-health/healthcheck). It is available anonymously.

Administrators can also set a server as “Administratively Offline” using the console. This allows the ability to manually set the engine to online/offline mode and thus control when load balancers can resume sending requests. The URLs for these requests are `/active-bpel-health/online` and `/active-bpel-health/offline`.

The “Administratively Offline” status is not persisted; this means that when you restart your server, this status isn’t restored.

### Response Codes

Server is running

HTTP GET: returns a node status of “Running”

HTTP HEAD: returns an HTTP 200 status

Server Stopped via console

HTTP GET: returns a node status of “Unavailable”

HTTP HEAD: returns an HTTP 503 status

Server is in recovery

HTTP HEAD: returns an HTTP 503 status

Server is marked administratively offline

HTTP GET: returns a node status of "Administratively offline"

HTTP HEAD: returns an HTTP 503 status

Server is marked administratively online

HTTP GET: returns a node status of "Running"

HTTP HEAD: returns an HTTP 200 status

## Disabling Following HTTP Redirects on REST Services

Informatica ActiveVOS 9.2.4 provides the ability to disable following HTTP Redirects on REST requests. Do this by adding the following policy directive:

```
followRedirects="false"
```

Add this to the <abp:HTTPTransportOptions/> policy element in the PDD or when setting up a dynamic endpoint reference as shown here.

```
<wsa:EndpointReference xmlns:wsa="http://www.w3.org/2005/08/addressing"
  xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <wsa:Address>http://localhost:8080/path</wsa:Address>
  <wsa:Metadata>
    <wsp:Policy
      xmlns:wsp="http://schemas.xmlsoap.org/ws/2004/09/policy"
      xmlns:abp="http://schemas.active-endpoints.com/ws/2005/12/policy">
      <abp:HTTPTransportOptions followRedirects="false"/>
    </wsp:Policy>
  </wsa:Metadata>
</wsa:EndpointReference>
```

No UI support for setting this directive exists.

## Issues corrected by Informatica ActiveVOS 9.2.4

This release includes the following notable Informatica ActiveVOS customer issues:

CR	Description
15957	Fixed a defect calling the WS-HumanTask getAttachment operation which could result in a fault.
16123	Fixed a defect whereby the “Additional query” dialog of the Process Console’s process list page did not pop up for users using Internet Explorer 7
16203	Database queries were enhanced to eliminate contention when performing WS-HumanTask getTasks operation that resulted in poor response times. See also related defect 16607.
16251	Fixed a defect installing ActiveVOS Server 9.2.2 on IBM WebSphere 7 on Solaris and RHEL.
16269	<p>Fixed a deadlock in the ActiveVOS server’s AeResource cache</p> <p>Under specific circumstances after a few minutes after starting the server it would be possible for several threads to get stuck resulting from a deadlock. This would stop further server processing. This deadlock condition was caused in the caching layer of the AeResource cache.</p> <p><b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-5.zip</code> is also available. This patch resolves defects 16269, 17041, and 17115, which were fixed with ActiveVOS 9.2.4.</p>
16326	<p>Fixed a problem with reports that did not launch in the ActiveVOS Console when the console is launched using the Reverse Proxy URL.</p> <p><b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-2.zip</code> is also available.</p>
16372	Fixed a problem with BIRT reports saved with the ActiveVOS Designer 9.2.2 would fail to open up in the ActiveVOS Console
16412	<p>Fixed a problem with the WebSphere servlet/filter that interfered with ActiveVOS reporting</p> <p><b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-1.zip</code> is also available.</p>
16447	For database servers other than MySQL Process Recovery was slow due to incorrect/missing index. An additional index was added and included in the upgrade DDL.
16607	<p>Database queries were enhanced to eliminate contention when performing WS-HumanTask getTasks operation that resulted in poor response times.</p> <p>See also defect 16607.</p>

16726	Fixed a problem with queue receive IDs going over 2 billion. Customers running in an ActiveVOS MultiSite configuration are likely to encounter this issue. For details on MultiSite, see <a href="http://infocenter.activevos.com/infocenter/ActiveVOS/v92/topic/doc.server_console/html/SvrUG6-11.html">http://infocenter.activevos.com/infocenter/ActiveVOS/v92/topic/doc.server_console/html/SvrUG6-11.html</a> .
16780	Fixed a problem with the WS-HumanTask getInput operation that may fail due to strict XML Schema validation, when the schema used a substitution group, or when the task input used xsi types.  <b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-4.zip</code> is also available.
16858	Fixed a problem with the <abp:timeout> partner policy on an endpoint reference not being applied correctly for certain cases allowing for processes to remain in the running state  <b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-3.zip</code> is also available.
16945	Fixed a problem with the expiration of a human tasks if the date of expiration is greater than 12 days
17130	Corrected a situation where a single process being recovered by the engine containing thousands of records returned from a service invoke would take an excessive amount of time, causing thread starvation as the process recovery thread would hold up a majority of threads in the system.  Process recovery now uses a 30 second timeout. This limits the amount of time a single process may take for recovery. If recovery of a single process exceeds this limit, it will be faulted and information is displayed in the ActiveVOS Console. The server log will record the server trace of the recovery thread at the time it was interrupted.
17041	Fixed a problem saving process state causing the server to stop processing  This issue would arise when variable state saves were attempted when multiple versions of a variable were being saved. This could sporadically occur and be reported with the following stack trace in the server log, or execution markers not showing in the process detail view.  Apr 16, 2014 9:19:30 AM org.activebpel.rt.AeException logError SEVERE: Warning: probably need to use a type-specific null value for parameter 1! org.activebpel.rt.bpel.server.engine.storage.sql.AeQueryRunner\$AeWarning ....  <b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-5.zip</code> is also available. This patch resolves defects 16269, 17041, and 17115 fixed with ActiveVOS 9.2.4.

<p><b>17115</b></p>	<p>Fixed a problem that could cause threads to be blocked in a busy environment because the default counter block size for the <code>JournalID</code> journal counter was set too low. The problem materialized in the logs as follows:</p> <pre> WorkManager.aeWorkMgr : 124" daemon prio=3 tid=0x064df000 nid=0x5d1b waiting for monitor entry [0x1a92e000]     java.lang.Thread.State: BLOCKED (on object monitor)     at org.activebpel.rt.bpel.server.engine.storage.AeCounter.getNextValue(AeCounter .java:160)     - waiting to lock ... </pre> <p><b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-5.zip</code> is also available. This patch resolves defects 16269, 17041, and 17115 fixed with ActiveVOS 9.2.4.</p>
<p><b>17116</b></p>	<p>Fixed a contention problem in the WSDL Locator object. This materialized as thread dumps in a highly loaded environment; for example:</p> <pre> "WorkManager.aeWorkMgr : 210" daemon prio=3 tid=0x04c40800 nid=0xae7 waiting for monitor entry [0x0f67e000] java.lang.Thread.State: BLOCKED (on object monitor) at org.activebpel.rt.wsdl.def.AeBPELExtendedWSDLDef. ... </pre> <p><b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-6.zip</code> is also available.</p>
<p><b>17160</b></p>	<p>Fixed a problem with correlation not working when instantiating a process using a Pick activity when a process has correlation set to one message (but not all messages) and there is a subsequent intermediate Pick to be correlated in the same Pick branch that started the process</p> <p><b>Note:</b> ActiveVOS 9.2.2 patch <code>Server922-7.zip</code> is also available.</p>
<p><b>17896</b></p>	<p>Fixed a problem reconnecting to a remote JMS broker that was failing over to the default initial context when a JMS Manager was configured to use a remote JNDI location.</p> <p>This occurred after the loss of connection to a remote JMS provider. The server incorrectly reverted to using the local JNDI context instead of the remote one, and never successfully reconnected to the remote queue. The only work around was to restart ActiveVOS after remote queues were back up and available.</p> <p>An ActiveVOS 9.2.2 patch is available upon request.</p>
<p><b>17919</b></p>	<p>Fixed a problem with the <code>businessAdministrators</code> and <code>potentialOwners</code> groups' variables getting lost after changing the logging level of deployed process in ActiveVOS console.</p>
<p><b>17926</b></p>	<p>Fixed a problem where the search filter in "Deployment Log" did not work properly when errors are present in the deployment logs.</p>

<b>18018</b>	<p>Fixed SQL performance issues when taking contributions offline.</p> <p>These issues occurred during recovery and taking contributions offline in large databases (millions of records in the AeProcess table) and resulted in long running SQL operations. The tables primarily affected are the AeProcess and AePlan tables. Changes to existing indexes were made.</p> <p>Customers should follow the instructions found in the “Upgrading Database Schemas” below.</p>
<b>18067</b>	<p>To improve process purge performance, foreign keys were added as indexed to a number of tables.</p>

## Migrating to Informatica ActiveVOS 9.2.4

### Upgrading an Existing ActiveVOS Server

To upgrade from an earlier version of ActiveVOS Server, see “Migrating from an earlier release of ActiveVOS” in the Configuration section.

### Upgrading Database Schemas

#### ACTION REQUIRED

A number of defects and enhancements require that you execute a DDL patch script when upgrading to the Informatica ActiveVOS 9.2.4 release. Customers must run this DDL patch script before starting the server. These defects and enhancements are 16447, 16726, 18018 and 18067.

Current customers upgrading to 9.2.4 who are not using Screenflow but intend to purchase it in the future must execute the following DDL statement:

```
[installationDirectory]/server-
enterprise/[appsvr]/ddls/create_repository_[yourdb].ddl
```

Depending on your current patch level, portions of this patch may fail because indexes being created already exist. You can safely ignore these errors.

All customer upgrading to 9.2.4, need to apply the following script. The following shows the contents of this patch script for MySQL. For other databases, locate the relevant DDL script at

```
[installationDirectory]/server-
enterprise/[appsvr]/ddls/updates/enterprise/ActiveBPEL_Enterprise-
[yourdb]-Patch-9.2.4.sql".
```

Here are the contents of this patch script:

```
-----  
--  
-- SQL Patch script to upgrade the DB from version 9.2 to 9.2.4  
-----  
--  
CREATE INDEX AePlanByPersist ON AePlan(PlanId, PersistenceType);  
CREATE INDEX AeProcessAttachPid ON AeProcessAttachment(ProcessId);  
CREATE INDEX AePojoPid ON AePojo(ProcessId);  
  
DROP INDEX AeProcessByEndDate ON AeProcess;  
COMMIT;  
CREATE INDEX AeProcessByEndDate on AeProcess(PlanId, EndDate);  
COMMIT;  
  
ALTER TABLE AeQueuedReceive MODIFY QueuedReceiveId BIGINT NOT NULL;  
COMMIT;  
  
-----  
-- Update the DB version number.  
-----  
UPDATE AeMetaInfo SET PropertyValue = '9.2.4 ActiveVOS Enterprise' WHERE  
PropertyName = 'Version';
```

## Migrating an Existing ActiveVOS Designer Workspace

Use the following procedure to update the path and startup settings for the ActiveVOS embedded server.

1. In the Designer **Servers** view, right-click on **ActiveVOS Server at localhost** then click **Delete**.
2. Right-click and select **New > Server**.
3. In the **New Server** dialog box, click **Configure runtime environments**.
4. In the **Preferences** dialog box, remove the existing embedded server.
5. Click **Add**.
6. Select **ActiveVOS\_Embedded\_Server**, then click **Finish**.
7. In the **New Server** dialog box, click **Finish** to add the new server.

## Informatica Global Customer Support

You can contact a Customer Support Center by telephone or through the Online Support. Online Support requires a user name and password. You can request a user name and password at <http://mysupport.informatica.com>.

The telephone numbers for Informatica Global Customer Support are available from the Informatica web site at <http://www.informatica.com/us/services-and-training/support-services/global-support-centers/>.