

AppDynamics Pro Documentation

Version 3.9.x

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This topic covers release information for AppDynamics Pro versions 3.9.x.

If you are reading this in PDF format, many links will open in the product documentation wiki. AppDynamics continuously improves its product documentation. The most current release notes are on the wiki at [Platform Release Notes](#).

3.9.x Updates

3.9.8.3 Updates

Resolved Issues

Component	Summary	Key
Agent	Agent background transformation tasks slowing application startup	CORE40168
Agent	Deadlock in Java Agent due to oracle.classloader.PolicyClassLoader	CORE-40863
Agent	Java agent creating large boolean array resulting in Java heap issues	CORE-40998
Agent	Multiple WARN messages from BCIEngine appear in log	CORE-42731
PHP Agent	Segfault in snapshot creation when backend limit reached	CORE-40923
UI	Searching for snapshots does not respect business transaction name filter	CORE-38056

3.9.8.2 Updates

Resolved Issues

Component	Summary	Key
.NET Agent	Overhead added in cases where the application loads and unloads AppDomains 1000s of times during business transaction execution	CORE39113
Agent	Agent unable to transform classes in the background	CORE-39433
Node.js Agent	Node.js agent unable to register multiple nodes through one proxy on a Controller using SSL	CORE-38746
PHP Agent	Segfaults occur when the backend limit for the PHP agent is exceeded	CORE-38979

3.9.8.1 Updates

Resolved Issues

Component	Summary	Key
.NET Agent	The .NET Agent Coordinator may fail to start in some cases	CORE38485

3.9.8 Updates

Enhancements

Node.js Agent Updates

- The Node.js Agent supports Node.js version 0.10.33, 0.10.34 and 0.10.35.

Java Agent Updates

- New entry points and correlation capabilities for JRuby.

Resolved Issues

Component	Summary	Key
.NET Agent	Unable to instrument Windows services with 3.9.4 agent	CORE37026
.NET Agent	AppDynamics agent causing application issues during the Snapshotting process	CORE-37122
.NET Agent	Agent log has NPE	CORE-37455
Agent	JRuby: Disparity between CPM metric reported for Tier1->external calls level vs Tier->external calls->Tier2 level	CORE-36977
Agent	Capped number of error objects cached for processing	CORE-37069
Agent	POJO rule definition in 'transaction discovery session' may incorrectly be registered as a real transaction	CORE-37333
Agent	NPE in MetricAggregatorFactory	CORE-37338
Agent	Node property coalesced-cg-generation does not take effect	CORE-37339
Agent	Getting java.lang.ArrayIndexOutOfBoundsException when aggressive snapshots feature is enabled	CORE-37383

Agent	DBCam integration doesn't close statement, likely leads to exhausting open cursors.	CORE-37453
Agent	Thread correlation not working; classes extending callable are not instrumented	CORE-38108
Controller-APM	Applications list is not loading	CORE-37679
Controller-DevOps	Event email body has missing substitution parameter	CORE-37184
Controller-DevOps	HR cache load performance issue (during controller startup)	CORE-37484
Controller-DevOps	Performance degradation in health rule processing on large controllers	CORE-37647
Controller-DevOps	Performance issue while loading health rule objects from the database	CORE-37802
Controller-Platform	Slow queries due to missing index	CORE-37519
PHP Agent	Agent SegFault when reporting a PHP Exception with a null trace property	CORE-37110
UI	Business Transaction List: Min & Max Response times are always 0 in v3.9	CORE-33433

3.9.7.4 Updates

Resolved Issues

Component	Summary	Key
Controller-Platform	Upgrade scripts not working	CORE-38562

3.9.7.1 Updates

Resolved Issues

Components	Summary	Key
Controller-DevOps	NPE in RelevantAppEntitiesStash causes health rules to not evaluate	CORE37126

Controller-DevOps	Email body missing data causing a <code>#{eventInfo.getEventMessage()}</code> substitution to not render	CORE-36324
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3.9.7 Updates

Enhancements

Policies and Alerts

There is now a Service Endpoint health rule type. Previously you had to create a Custom health rule to monitor Service Endpoints.

Java Agent

This update adds built-in support for async transaction tracking for Tibco ActiveMatrix BusinessWorks.

Resolved Issues

Component	Summary	Key
Agent	Application throws NameAlreadyBoundException with 3.9.x agents	CORE35897
Agent	StackTraceHelper.calculateHashCode() can NPE	CORE-36511
Agent	BCIFixer batch process fails to re-transform	CORE-36976
Agent	CallStackSampler QualityTracker has incorrect stats	CORE-37012
Controller-APM	NPE occurs within EventReceiverBean.saveEvents	CORE-36737
Controller-Blitz	QuorumServerNodeTest failing	CORE-37029
Controller-Platform	Controller upgrade from 3.9.4.1 to 3.9.7 fails	CORE-36616
Controller-Platform	Silent install ignoring port in response file	CORE-37006
Controller-Platform	JVM options not restored after Controller upgrade	CORE-37027
EUMCloud	Web Request has two different values in Geo Dashboard screen	CORE-35101
Node.js Agent	Snapshots taken with "maxSnapshotsPerPeriod" set to 0	CORE-36838
UI	Unable to add a Group BT under metric category for graph series in Custom Dashboard	CORE-28175

UI	Continuous NPE in the server.log file	CORE-34289
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3.9.6.1 Updates

Resolved Issues

Component	Summary	Key
Controller-DevOps	Policies that are "Batch Actions Per Minute" do not work after Controller restart	CORE-36857
Controller-DevOps	Controllers are running out of memory due to policies not starting	CORE-36703

3.9.6 Updates

Enhancements

Controller

- MySQL version update. The version of the MySQL database embedded in the Controller has been updated from 5.5.38 to 5.5.40. See [Security Notes](#) for more information.

Resolved Issues

Component	Summary	Key
.NET Agent	MVC3 AsyncController HTTP entry (OOTB) stopped working in 3.9	CORE34168
Agent	Monitoring Mbean attributes with brackets in names	CORE-28551
Agent	Memory Leak - NewTransactionIdManager.txIdentifierToCTC holds 2GB	CORE-32604
Agent	new Date().toString() may deadlock some jvms because of a jvm issue	CORE-34857
Agent	DBCcam integration NPE potential	CORE-35277
Agent	Async metrics not appearing when using chained constructors	CORE-35728

Controller-DevOps	Baseline based health rule violation triggered when the system is quiet.	CORE-35031
Controller-DevOps	In the REST URL for a path, when ART metrics = 0, value is -1 instead of 0	CORE-35289
Controller-DevOps	The logic in checking whether HR is enabled is incorrect.	CORE-35771
Controller-DevOps	App Agent Availability metric becomes "unknown" when agent is down	CORE-35811
Controller-DevOps	DB calls in HealthRuleProcessorBean.checkEntityPresent() are degrading HR performance	CORE-35961
Controller-DevOps	Change default HR processing to single-threaded so that agent snapshots don't cause overhead	CORE-36144
Controller-Platform	Snapshot's SQL Call view is showing truncated SQL string	CORE-29387
Controller-Platform	Summary metrics timestamp is not consistent between db and cache	CORE-35100
Controller-Platform	Java servlet errors on all apps loading page as well as at the node level	CORE-35354
Controller-Platform	Turn on events query fast path by default for 3.9.6	CORE-36195
EUMCloud	Accounts with no EUM enabled apps shouldn't stay active in EUM Cloud	CORE-35666
EUMCloud	EUM on-prem installer version is always 3.9.0.0	CORE-35756
Node.js Agent	[Node.js] Agent creates infinite loop in instrumented code	CORE-35493
UI	Unable to determine No of calls	CORE-34495
UI	EUM Default Naming Configuration 'Enabled' flag doesn't get saved	CORE-34696
UI	'Edit Transaction Discovery' leads to nothing	CORE-34972
UI	Docs: Link Broke in EUE	CORE-35199
UI	UI : Geo Map should only plot region having page request.	CORE-35473
UI	UI : Data miss matching in the Geo Dashboard.	CORE-35474

3.9.5.2 Updates

Resolved Issues

Component	Summary	Key
UI	Beta Flow Map data from 3.8 release is causing exceptions in 3.9	CORE-35673

3.9.5.1 Updates (SaaS Only)

Resolved Issues

Component	Summary	Key
Controller-EUM	App registration request times out on multi-tenant Controllers	CORE-35248

3.9.5 Updates

Enhancements

Node.js Agent

- A new **autoSnapshotDurationSeconds** option is provided for changing the length of automatically-generated process snapshots.

PHP Agent

- The PHP Agent supports the PHP SOAPClient as an exit point.

DevOps

- Floating point numbers can now be used to define health rule conditions.
- Severity parameter added to the Custom Event API.

Mobile

- iOS Crash Dashboard now handles gracefully the situation where the requested event type has not been registered with event store.
- Sorting Network Request Snapshot list by columns now functions correctly.

Resolved Issues

Component	Summary	Key
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.NET Agent	Backend naming configuration for WCF backends is not working	CORE34365
Agent	Custom activity tracking not resetting CRC, causing outbound correlation headers to grow without bound in some cases	CORE32360
Agent	Downstream tier does not continue transaction if upstream hasn't registered business transaction yet	CORE34799
Analytics	Add @JsonIgnoreProperties(ignoreUnknown = true) on all analytics client POJOs that are serialized/deserialized	CORE33888
Analytics	Disable CORS in Elasticsearch	CORE33920
Analytics	NPE in indexer log	CORE-34120
Controller-APM	Controller server throws error while loading BT dashboard; data inconsistencies	CORE-34092
Controller-DevOps	Health rules based on baseline percentage never violate	CORE-26777
Controller-DevOps, UI	Integer overflow when setting up health rule condition	CORE-29228
Controller-DevOps	False Alerting in BT response time rule	CORE-29678
Controller-DevOps	After upgrade from 3.7.15 to 3.8.4 Controller alerts no longer work	CORE-30969
Controller-DevOps	AND logic not working for custom event property matching in policies	CORE-34485
Controller-EUM	Mobile RUM: iOS Crash dashboard fails if event never registered	CORE-34219
Controller-EUM	Mobile EUM data not displaying properly on 3.9.3.2	CORE-34541
Controller-EUM, Installer	Missing property -Dappdynamics.controller.eum.cloud.hostName in domain.xml	CORE-34575
Controller-Platform	Controller MySQL service wrapper needs to properly detect when Controller database has shut down	CORE-33202
Controller-Platform	Historical event details not displaying in dashboard	CORE-34364
EUMCloud	JsonSyntaxException thrown when processing app config registration	CORE-33332
EUMCloud	NPE in BrowserBeaconProcessor	CORE-34698

EUMCloud	Collectors data uploaded with wrong timestamp	CORE-35062
Installer	Problems installing 32-bit Controller whose version is 3.9.3.2 on 32-bit Windows	CORE-34533
JSAgent	Error running Adrum.js on Firefox	CORE-33821
Machine Agent	NPE in Machine Agent with JavaHardwareMonitor	CORE-34293
PHP Agent	[Proxy] org.zeromq.ZMQException: Operation cannot be accomplished in current state(0x9523dfb)	CORE-32432
UI	Sorting columns doesn't work (Network Request Snapshots)	CORE-33585
UI	Unable to scroll to newest custom time ranges in manage time range list	CORE-34140
UI	Transaction snapshot drill down not working correctly	CORE-34164
UI	Typo in Servlet Custom Match rule Help popup	CORE-34342
UI	Service-end-points dashboard % error column shows values for error/min	CORE-34510
UI	Uploading of ProGuard files is broken	CORE-34747

3.9.4.3 Updates

Resolved Issues

Component	Summary	Key
Controller-Platform	Cache for tracking zero filled metrics cache does not expire metrics	CORE-44567

3.9.4.2 Updates

Resolved Issues

Component	Summary	Key
Agent, Controller-APM	Controller drops metric data at the Daylight Saving Time (DST) change	CORE-22789

3.9.4.1 Updates

DevOps

- REST API added to create and delete Action Suppressions

Resolved Issues

Component	Summary
Controller	REST API Action Suppression
Controller	Flow map not loading for certain Controllers after upgrade to 3.9.4

3.9.4 Updates

Controller

- The Controller installer now checks to ensure that its bitness (whether 32 or 64 bit) matches that of the operating system before performing an installation or upgrade. It presents an error if the 32-bit installer is used on a 64-bit system or the 64-bit installer on a 32-bit system.

Node.js Agent

- The Node.js Agent supports Node.js version 0.10.32.

.NET Agent

- The .NET Agent now includes finer-grained agent-level security settings. See the Default Profiler Element on [.NET Agent Configuration Properties](#).

EUEM

Licensing

- Behavior corrected in situations where an attempt is made to provision a license when a license already exists.

Analyze

- Format for Analyze queries has been updated

Web

- Error message added when there is an error downloading resource details
- Potential race condition in JavaScript Agent on Firefox 25 corrected
- Additional detail displayed in map of Poland in Geo Dashboard

EUEM On-Premise Processor

- The HTTP and HTTPS beacon ports for the EUEM Processor are now configurable in the installer. Previously the installer set the ports to port 80 and 443 respectively. If you have set up a reverse proxy, changing the ports requires an update to the adrum.js file after upgrade.
- You can now configure an HTTPS port as the Processor listening port in the installer. The port number is 7002, by default. For instructions on setting up the keystore for the Processor, see [Install the On-Premise End User Experience Management Processor](#).
- If you are upgrading an existing EUEM installation, it is important to note the following change made by the installer. During upgrade, if the existing HTTP or HTTPS port on which the EUEM Processor listens is 80 or 443 (or another port that requires root permissions to open the port on the machine), the installer requires you to change the port numbers. Be sure to change the port number to one that does not require root permissions for a process to open, such as the default numbers 7001 or 7002.

Dev Ops

- Health rules which cannot currently be evaluated (when a necessary metric is not available, when a necessary baseline is not available, when a new health rule has just been added, or when the system has just restarted) are now displayed with a status of "Unknown"

Resolved Issues

Component	Summary
.NET Agent	Fixed an issue with HTTPClient backend naming
.NET Agent	Fixed an issue instrumenting BizTalk Service
.NET Agent	Fixed an issue with Unattended Install when the AD_SetupFile path contains a space
Agent	Fixed an issue with tracking jobs in Tibco BusinessWorks
Controller-DevOps	Handle Health Rule data unavailability gracefully "Unknowns"
Controller-DevOps	ASW with HRs selection fails to work as expected
Controller-EUM	Fixed an issue with the display of resource timings in EUM Browser snapshots
Controller-APM, Controller-EUM	Fixed an issue selecting EUM-related metrics for custom dashboards

Controller-Platform	Fixed an issue with remediation scripts
EUMCloud, UI	Added more granularity to Poland geo locations
EUMCloud	Allow specifying http and https port during install of on-prem processor
EUMCloud	Provide stop command for stopping eum processor on Windows
Installer	Fixed Known Issue when running the Controller installer from a shell launched by the su command
Node.js Agent	Business transactions correctly display call graph icons, which is only when a process snapshot was captured in the same time range as the transaction snapshot
UI	Agent Internal events are no longer displayed by default on Controller UI
UI	Issue with script timeouts on BT List using IE9 and IE10

3.9.3.3 Updates

Resolved Issues in 3.9.3.3

Component	Summary
Agent, Controller-APM	Controller drops metric data at the Daylight Saving Time (DST) change

3.9.3.2 Updates

Resolved Issues in 3.9.3.2

Component	Summary
UI/EUEM	Page Composition data now correctly displays on the Page Dashboard - fixes a UI regression in 3.9.3

3.9.3.1 Updates

Resolved Issues in 3.9.3.1

Component	Summary
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Controller-DevOps	Reduces the activity an enabled entity logger on a controller records in the FINE logs for com.appdynamics.RULES.PROCESSING.
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3.9.3 Updates

.NET Agent

- Previous versions of the .NET Agent required that you instrument executable Windows services as standalone applications. Now the agent allows you to instrument them as Windows services.

Controller

- The static stall threshold option is no longer available across agent types, including PHP and Node.js Agent. For more information, see the update notes for release 3.9.2.1. If you had a static stall threshold configured prior to 3.9.3, when you upgrade your PHP or Node.js agent your static stall threshold will automatically change to a standard deviation of 300.
- A security vulnerability affecting version 3.9.x Controllers has been addressed. Note that version 3.8.x and earlier Controllers are not affected by this vulnerability. If using a 3.9.x version of the Controller, it is strongly recommended that you upgrade to 3.9.3.
- Administrators can now enforce minimum password complexity requirements for local (AppDynamics-authenticated) users in the Controller UI. For more information, see [Configure Users](#).

Java Agent

- Java Agent performance problems that occur when JDBC backend naming rules are changed to non-default values have been fixed.
- URLs now appear in the URL entry point column of the snapshot list for transactions originating in Apache Synapse Enterprise Service Bus (ESB).

Node.js Agent

- Error reporting has been improved. The agent now reliably reports errors for unhandled exceptions. You can restrict the errors that are reported and counted by configuring errors to be ignored. See [Configure Error Detection for Node.js](#).
- When you monitor nodes in a cluster, to reduce overhead you can configure them to use a multi-tenant proxy by setting all agents to use the same proxy. This involves setting the control directory for the agents that will share a proxy and proxy script, and then starting the proxy manually. See [Set Up A Multi-Tenant Proxy for Node.js Agents](#).

See also the [Controller update](#) regarding static stall thresholds.

Dev-Ops

- Health rules with very long names fired but did not show up in the Health Rule Violations List. They are now visible.
- Can now fire policies based on custom events, including by property, if desired. See [Configure Policies](#).
- Can now add custom event "type" and key/value properties to custom events. See [Use the AppDynamics REST API](#).
- Can now filter events based on custom events in the Events dashboard. See [Filter and Analyze Events](#).
- Can now post a custom event to a tier, node, and/or business transaction. See [Use the AppDynamics REST API](#).
- Can now customize the name of a multi-tenant controller as it shows up in notifications for a single tenant. See [Use the AppDynamics REST API](#).

EUEM On-Premise Processor

- When you are installing the EUEM On-Premise Processor, avoid permissions issues by using `localhost` rather than the host name or the IP address in the Database Information setup screen, in Demo mode, and in the Database Information setup screen for the Controller host, in Production mode. See [Install the On-Premise End User Experience Management Processor](#).
- It is now possible for users to specify the beacon HTTP and HTTPS ports for the controller if the installation is not using a reverse proxy. See [Install the On-Premise End User Experience Management Processor](#).

Web EUEM

- The User Data field in the Browser Snapshot was accidentally removed as the page was migrated from FLEX to HTML. It is now visible in the page.
- Assisted Injection Using Attribute Injection for MVC Razor Version 5 is now supported. See [Supported Environments and Versions - Web EUEM](#).
- A potential race condition using Firefox 25 has been resolved.
- The JavaScript agent downloaded from the Getting Started agent wizard now has the correct port numbers.
- The Lite version of Web EUEM now includes the following features: Geo-Dashboard, Page/Iframe List, and Usage Stats for the previous 24 hour period for up to 500 million page views. Access via APIs is supported. See [Web EUEM License](#).
- Clicking on the Geo-Dashboard tab now navigates to appropriate page.
- End User Experience in left navigation bar refreshes more quickly.

Mobile EUEM

- The Lite version of Mobile EUEM now provides the Crash Dashboard and Crash Snapshots, the latter covering the previous 365 days. It covers up to 5 million devices. See [Mobile EUEM Licenses](#).
- End User Experience in left navigation bar refreshes more quickly.

Resolved Issues in 3.9.3

Component/s	Summary
.NET Agent	Blacklisted instrumentation of certain assemblies.
.NET Agent	.NET Agent now supports multiple information points on the same method.
.NET Agent	.NET Agent now detects HttpClient.GetAsync exit points.
.NET Agent	WCF service/operation name now shows in the Exit Call window.
.NET Agent	Fixed an issue with ASP.NET service endpoints.
Agent	Memory leak no longer occurs when using custom JMX metric rules.
Agent	URL now displays in snapshot for Apache Synapse.
Agent	There is no longer any performance degradation with non-default JDBC configuration.
Agent	Instrumentation no longer causes java.lang.Throwable: java.lang.ClassCircularityError.
Agent	Servlet Splitting on custom expression now works with 3.8.5 agent and above.
Agent	EUM auto injection configuration now works when notxdetect=true is received from struts.
Agent	Stall standard deviation threshold no longer miscategorizes transactions.
Controller	Can now post an event to a tier, or to a particular node via REST API.
Controller	Can now create policies based on Custom Events.
Controller	JMX metrics now display correctly.
Controller	Email alerts now point to the correct Controller URL.
Controller	Fixed application and Business Transaction flow map rendering issue.
Controller	Controller metric cache issues no longer causes gaps in data on UI.
Controller	Health rules with long names fire now display in Health Rule Violations.
Controller	Status light widget is now working in custom dashboard.
Controller	Business Transactions are now shown in "End User Experience" request page.
Controller	Special characters in MySQL root password no longer break controller.bat and controller.sh.

Controller	Default logging location for Controller analytics-processor modified.
Controller	There are no longer problems with computing rollups when a subset of agents are not reporting any data.
Docs	You can now view the video on the App list.
EUMCloud	Information is now correct for Blackberry devices in EUM.
EUMCloud	The EUEM web agent downloaded from the Getting Started area of the UI now has the correct port numbers.
EUMCloud	EUM installer now checks that the EUEM database account can be created.
EUMCloud	NullPointerException no longer appears in the crash processor.
EUMCloud, UI	Redefined EUEM Lite entitlements for Web and Mobile.
EUMCloud, UI	Clicking on GeoDash tab now navigates to the correct window.
Node.js Agent	Uncaught exceptions are now reported as BT errors if the BT context can be established or as application errors if there is no BT context.
Node.js Agent	tmpDir is now derived from a hash of controller host, controller port, application name, tier name, and node name.
Node.js Agent	Added a ctrlDir setting to the options in the profile statement that has precedence over the default "folder schema" in /tmp/appdynamics. This directory is auto-created if not available.
PHP Agent	A null pointer exception introduced in the upgrade from 3.9.0 to 3.9.2.1 that prevented metrics from being reported in some circumstances was fixed.
UI	Improved resizing left nav bar response.
UI	Switching locations no longer resets your browser choice.
UI	SEP Configuration screen now flows smoothly.
UI	[MhSS] Clone Delete and Archive buttons on the horizontal panel.
UI	Drilling down to specific URL now works in Custom Dashboards on Chrome and Internet Explorer.
UI	Strengthened authorization controls.
UI	[Custom Dashboard] Added a column Tier on graph properties and series.
UI	Drilling down from alert emails to Node/Tier now works correctly.

UI	App/BT Dashboard and flow map now displays fully when the screen is maximized.
UI	Improved agent download using Getting Started Wizard.
UI	Improved End User Experience to prevent it from hanging.
UI	Improved Transaction Scorecard display.
UI	Charts at bottom of flow maps now show correct time ranges.
UI	BT list no longer has filters open by default.
UI	User Data is now displays properly in browser beacon's snapshot view.
UI	Improvements to Custom Events API ensure they show up correctly in the Events workspace.
UI	You can now have Policies filter on custom events.

3.9.2.3 Updates

Resolved Issues in 3.9.2.3

Component	Summary
Controller	Custom Dashboards no longer blank in UI after Controller upgrade to 3.9.2.2 build 43 from 3.8.5.1
Controller, UI	Node level flow map now shows links between tiers
UI	Flow map now shows inbound async calls

3.9.2.2 Updates

Controller

- Addresses a security vulnerability that affects 3.9.x Controllers. Controllers versions 3.8.x and earlier are not affected by this vulnerability.

3.9.2.1 Updates

- Static stall thresholds are no longer available. The change has the following effect on Java and .NET agents by version:
 - Agents version 2.x support dynamic thresholds. All stall configuration that were static

- will be changed to standard deviation threshold of 300.
- Agents versions 3.0 through 3.7.21.1 do not support dynamic thresholds. If static stall threshold was enabled for those agents, they are reverted back to 45-second static thresholds.
- Agents version 3.8 and above support dynamic thresholds. If stall configuration was disabled for transactions prior to upgrading, you will experience no impact.
- Addressed a XSS security vulnerability in the edit widget functionality. For more information, see the [Security Notes](#).

3.9.2 Updates

Controller

- The modifyJvmOptions utility has been enhanced to provide additional error handling if adding duplicate system parameters. Also, the command for listing existing Java Options in the domain configuration has been added for the Windows version of the utility. To use it, enter:

```
modifyJvmOptions.bat list
```

For more information about modifyJvmOptions, see [Modify GlassFish JVM Options](#)

DevOps

- Previously action suppression created unnecessary event traffic to the database. This has been removed. All information continues to be logged.
- Previously setting up action suppression events showed in the UI only the top level entity and not any children that might also be affected. Children are now shown. See [Action Suppression](#).

Java Agent

- Introduces a new Java Agent node property, disabled-features. This property specifies data collection mechanisms that should be disabled at the agent, allowing application owners to limit data reported by the agent for security or privacy reasons. For more information, see [disabled-features](#) in the [App Agent Node Properties Reference](#).

.NET Agent

- The [log-request-payload](#) node property includes logging for HTTP parameters in WCF calls.
- Configure [async backend detection](#) and [thread correlation](#) separately.
- [Object instance tracking](#) no longer requires you to install Microsoft CLR Memory Diagnostics.

Node.js Agent

- The Node.js Agent supports Node.js version 0.10.31.
- The Node.js Agent supports node-redis v12.X.

EUEM Licensing

- Known Issue: If you add an EUEM license to an existing application, you may need to log out of the controller and log in again before the Configure->Instrumentation->End User Experience tab correctly shows that you are currently licensed for End User Monitoring.

Web EUEM

- AD-X-Forwarded-For header added to allow customer to specify the IP address to use for geo resolution. See [Use a Custom Geo Server For Web EUEM](#).
- Schema for custom Geo server updated as part of new header support. See [Use a Custom Geo Server For Web EUEM](#).
- Status column removed from Browser Snapshots list. See [Browser Snapshots](#).
- Ajax Dashboard now includes With Load checkbox. See [The Ajax Dashboard](#).
- DOM Ready location in all snapshots now correctly located.

Mobile EUEM

- @InfoPoint annotation added to simplify creating Information Point extensions to Android mobile instrumentation. See [Customize Your Android Mobile Instrumentation](#).
- Custom Data tab now includes With Load checkbox. See [Monitor Custom Data](#).
- EUEM Account Name now visible on License Panel. See [Instrument an iOS Application](#) and [Instrument an Android Application](#).

Resolved Issues in 3.9.2

Component	Summary
Agent	Agent node backend limit exceeded
Agent	Java Agent Scala support — JVM throws malformed class name due to scalac bug
Agent	Spring RMI instrumentation not applied
Agent	Servlet split using POST request parameters not working
Controller	Issues using modifyJvmOptions utility when adding proxy host and port Java properties

Controller	Event email body has <code>#{eventInfo.getEventMessage()}</code>
Controller	Action Suppression object scope (runtime) screen does not show full information
Controller	restoreJvmOptions.bat fails on Windows Controller
.NET Agent	Custom correlation configuration subsections do not inherit supersection values
.NET Agent	Error in onMethodEndTracked: System.OverflowException: Arithmetic operation resulted in an overflow
.NET Agent	Async tracking: Web Service BeginXXX/EndXXX callback logic is missed in the snapshot
UI	Add checkbox to show BT / Ajax with Load
UI	Status of "Completed" for EUM snapshots is confusing
UI	Resource waterfall should show idle time in a different color
UI	Selecting an entry in Processes tab scrolls the list back to top
UI	Fix computation of DOM Ready Time
UI	Inconsistent filter UX in mobile Custom Data; missing "Load" filter

3.9.1.1 Updates

Controller

- Resolves an issue that permitted users with custom roles to access applications in the UI for which their roles have not been intentionally granted permission. This issue affected any Controller upgraded from 3.8.x and earlier to 3.9.x, and resulted from the upgrade process inadvertently granting custom dashboard permissions by default to all custom roles. If you have manually modified the custom dashboard permissions for roles, you should verify and if necessary reapply your manual changes after completing the upgrade to 3.9.1.1.
- Resolves an issue that caused Controller upgrade on Windows to sometimes fail with an error message of "Unable to restore JVM options." This happens if the modifyJVMOptions.bat utility has been previously used to modify domain.xml settings on the Controller instance.

Resolved Issues in 3.9.1.1

Component	Summary
Controller	Users allowed to view un-permitted application.

Controller	Upgrade fails on Windows Controller due to changes by modifyJVMOptions.bat
------------	--

3.9.1 Updates

Controller

- If a policy is deleted while there are open incidents associated with the policy or modified so that the health rule is no longer in violation, the health rule violation incident is canceled. Previously, the canceled event was not available as an actionable event and not evident in the event browser UI. You can now configure notifications for the canceled event.

Node.js

- The Node.js Agent supports Node.js version 0.10.30.

Resolved Issues in 3.9.1

Component	Summary
Agent	IndexOutOfBoundsException exception generated due to cross-tier correlation errors when business transaction limit is exceeded
Controller	JRE bundled with installer updated to 1.7 to match Controller JRE version
Controller	Unused security certificates generate errors in the Controller server log
Analytics (Event Service)	Disable dynamic scripting in bundled Elasticsearch

New and Enhanced Features in 3.9

The following components have new and enhanced features in release 3.9.

End User Experience Management

- On-prem version of EUEM Processor (previously known as the EUEM Cloud) now supported
- Expanded percentile support across the UI
- Known Issue: The installer does not return control to the command prompt after installation and startup of the production mode EUEM Processor on Windows is complete. As a result, after installation, you cannot log off from the terminal session without terminating the EUM

processor. For more about EUEM Processor installation, see [Install the On-Premise End User Experience Management Processor](#).

Web End User Experience Management Updates

- [Resource timing details](#) in browser snapshots
- Beta: on-demand [synthetic snapshots](#)
- Beta: [faceted search](#) on full data event store

Mobile End User Experience Management Updates

- Updated [crash dashboard](#), using faceted search on full data event store
- Crash grouping on crash dashboard
- APIs for creating custom metrics, timers, and information points in mobile agents
- New tab for [displaying custom data](#)

Controller Updates

Installation and Platform Changes

- The Controller installer contains an additional configuration option, the location of an Elastic Search file store. The file store is used by the Event Service, which is used by Database Monitoring.
- The Controller administration script now includes additional command options for stopping and starting the Event Service on the Controller. The Event Service is not started by default. The command options are `start-events-service` and `stop-events service`. For example to start the Event Service on Linux, run the script from the bin directory under the Controller home, as follows:

```
./controller.sh start-events-service
```

On Windows, from an elevated command prompt, run:

```
controller.bat start-events-service
```

Policies and Alerts

- Instead of suspending health rule evaluation after a health rule violation for a period of time, the Controller now continues to evaluate violating health rules every minute. It throttles actions for a continuing condition using the new health rule violation events, "Health Rule Violation Continues - Warning" and "Health Rule Violation Continues - Critical". For more information, see [Health Rules](#).

User Interface

HTML5 pages and flow maps as follows:

- HTML5 flow maps for the Application and Business Transaction dashboards. The new flow maps include better automatic layout, filtering by performance data, updated visual design, and more.
- Business Transaction List
- All Applications Dashboard

Custom Dashboards

- **Grid Layout option:** This is the default option for creating custom dashboards. Grid layout gives you a flexible layout that is easy to rearrange on the canvas. Grid layout also scales in size when viewed on mobile devices. See [Create a Custom Dashboard](#).
- **Custom Dashboard Templates:** This special type of custom dashboard is a template that enables you to create a dashboard which can be reused effortlessly across different nodes and tiers without remapping metrics.

Java Agent Updates

- **Business Transaction Discovery** assists you in instrumenting your applications. Within this tool you can see the business transactions being captured, modify the auto-discovery business transaction detection criteria or the configuration you are currently using, view the expected results of these changes, and repeat the change/view process until you are satisfied with the results. Then you can choose to apply the changes if you want. To help you decide what types of transactions you should monitor, you can use **Class/Method Browser** within the Business Transaction Detection tool that provides full visibility into the classes and methods detected, including snapshots of those transactions.
- **Percentile Metrics** configuration can now be accomplished through the Controller.
- **Callgraphs** can now be configured to capture slow transaction collections through the **Enable Aggressive Slow Snapshot Collection** option. This feature is enabled by default. When enabled, this feature ensures that full call graphs are captured for business transactions monitored using Java Agent.
- **jdbc-resultsets** App Agent for Java node property: Use this property to indicate the implementation classes of the java.sql.ResultSet interface that should be instrumented.
- **New Platforms supported:**
 - **Oracle Java SE 8**
 - **Oracle Java Message Service 2.0**
 - **WebSockets 1.0**
 - **Teradata all versions**
See [Supported Environments and Versions for Java](#).

.NET Agent Updates

- The .NET Machine Agent takes [machine snapshots](#) that capture critical details about CPU usage, memory usage, and the IIS queue on a server at a specific moment in time.
- The .NET Machine Agent reports [CLR crash events](#).
- The .NET Agent supports [service endpoints](#).
- The .NET Agent supports [object instance tracking](#). See [Monitor Memory Usage with Object Instance Tracking for .NET](#) for prerequisites and usage.

See [Supported Environments and Versions](#).

PHP Agent Updates

- The installer now writes controller information to the PHP configuration files (php.ini or appdynamics_agent.ini depending on your setup), instead of to controller-info.xml. If you need to modify controller information settings post-installation, do so in the PHP configuration files. The old controller-info.xml file is no longer used. Existing customers should update their environments to reflect this change. If you use an automated release process to install and update your app agent, modify that procedure to write the controller information properties to the ini file. If you create or modify agent settings via apache, set them accordingly at the apache.conf level. See [Controller Information in the PHP Configuration Files](#).
- HTTP Data Collectors are now supported for the PHP agent. See [Data Collectors and Configure Data Collectors](#).
- Information points, which provide business metrics and code metrics, are now supported. See [Configure Information Points for PHP](#).
- A -v option has been added to the installer to specify the version of PHP being instrumented. Required only if the default install directory is not used.
- A multi-tenant proxy has been implemented. Formerly a separate proxy was started for each app server. Now multiple agents report to a single proxy.

Node.js Agent Updates

- AppDynamics introduces the new Node.js application agent. This agent was in beta prior to 3.9. A 3.9 controller is required.
- A multi-tenant Java proxy has been implemented. The agent now supports a Node.js application running in cluster mode and reports each child process as a unique node in the controller.
- The root node in the process snapshot call graph no longer includes the idle time.
- Custom match and exclude rules can be configured for Node.js business transactions. See [Configure Transaction Detection for Node.js](#).
- Business transaction configurations by default provide an exclude rule for static content, such as images, CSS files, JavaScript files, and static HTML pages, so that business transactions are no longer automatically detected for this type of content. You can view and modify this rule in the business transaction configuration screen.
- Business transaction invocation details are available in process snapshots. See the BUSINESS TRANSACTIONS tab in [View Process Snapshots](#).
- In the summary of business transaction snapshot, you can link to the call graph of the associated process snapshot if there is one.

- New metrics for CPU usage, memory, and I/O are available per Node.js process. See [Node.js Process Metrics](#).
- Exit call information is now available in transaction snapshots. See the EXIT CALLS tab in [View Process Snapshots](#).
- If you are running EUEM or Mobile APM and server-side correlation has been set up for those agents, correlation is available between associated web browser / mobile data and Node.js business transactions. This means that a business transaction link in a browser or mobile snapshot takes you to the flow map for the associated business transaction on the Node.js side. You may also occasionally transaction snapshots linked with associated browser/mobile snapshots, but this is not common for the Node.js agent.

Agent-Controller Compatibility Matrix

- The Controller supports older Agents. Newer Agents will not work with an older Controller version. See the [Agent - Controller Compatibility Matrix](#).

Security Notes

The following sections list general security information for AppDynamics. For release-specific security information, see the update notes for that release.

MySQL Security Issues Addressed

The update to MySQL 5.5.40 in release 3.9.6 addresses various security issues in the MySQL database embedded in the Controller, including:

- CVE-2012-5615
- CVE-2014-4274
- CVE-2014-4287

For details see <https://support.oracle.com/epmos/faces/DocumentDisplay?&id=1926629.1> (requires login).

Security Vulnerability Addressed

Release 3.9.2.2 and 3.9.3 address security vulnerabilities affecting 3.9.x Controllers. Controllers version 3.8.x and earlier are not affected by the vulnerabilities.

Edit Widget Functionality XSS Vulnerability Addressed

Release 3.9.2.1 address a cross-site scripting vulnerability exposed by the edit widget functionality.

CVE-2014-3120

Release 3.9.1 addresses CVE-2014-3120 by modifying the default Elastic Search configuration to disable dynamic scripting.

SSL Certificate Monitoring Extension

The SSL Certificate Monitoring Extension is a new extension on the [AppDynamics eXchange](#) that reports the expiration date of SSL certificates on the machine as a metric to the Controller. The extension reports the certificate expiration date metric for the domains and at the interval you configure.

For more information, see the [SSL Certificate - Monitoring Extension](#) listing.

POODLE Vulnerability (CVE-2014-3556) Remediation

The POODLE vulnerability allows attackers to exploit a flaw in how browsers handle encryption in SSL 3.0. To avoid exposure to this exploit, modify the Controller configuration to prevent SSL 3.0 connections, as follows:

1. Open the domain configuration file for the Controller for editing:
`<controller-home>/appserver/glassfish/domains/domain1/config/domain.xml`
2. Modify the `ssl` element for the secure HTTP port listener by setting the `ssl3-enabled` attribute to false, as follows:

```

<protocol security-enabled="true" name="http-listener-2">
  <http request-timeout-seconds="300" timeout-seconds="300"
  default-virtual-server="server" max-connections="-1"
  send-buffer-size-bytes="32768"
  compressable-mime-type="text/html, text/javascript, text/css"
  compression="on">
    <file-cache></file-cache>
  </http>
  <ssl>
    ssl3-tls-ciphers="+TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA384,+TLS
    _ECDHE_RSA_WITH_AES_256_CBC_SHA384,+TLS_RSA_WITH_AES_256_CBC_SH
    A256,+TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA384,+TLS_ECDH_RSA_WITH
    _AES_256_CBC_SHA384,+TLS_DHE_RSA_WITH_AES_256_CBC_SHA256,+TLS_D
    HE_DSS_WITH_AES_256_CBC_SHA256,+TLS_ECDHE_ECDSA_WITH_AES_256_CB
    C_SHA,+TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA,+TLS_RSA_WITH_AES_256
    _CBC_SHA,+TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA,+TLS_ECDH_RSA_WIT
    H_AES_256_CBC_SHA,+TLS_DHE_RSA_WITH_AES_256_CBC_SHA,+TLS_DHE_DS
    S_WITH_AES_256_CBC_SHA,+TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256
    ,+TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256,+TLS_RSA_WITH_AES_128_C
    BC_SHA256,+TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA256,+TLS_ECDH_RSA
    _WITH_AES_128_CBC_SHA256,+TLS_DHE_RSA_WITH_AES_128_CBC_SHA256,+
    TLS_DHE_DSS_WITH_AES_128_CBC_SHA256,+TLS_ECDHE_ECDSA_WITH_AES_1
    28_CBC_SHA,+TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA,+TLS_RSA_WITH AE
    S_128_CBC_SHA,+TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA,+TLS_ECDH_RS
    A_WITH_AES_128_CBC_SHA,+TLS_DHE_RSA_WITH_AES_128_CBC_SHA,+TLS_D
    HE_DSS_WITH_AES_128_CBC_SHA,+TLS_ECDHE_ECDSA_WITH_3DES_EDE_CBC_
    SHA,+TLS_ECDHE_RSA_WITH_3DES_EDE_CBC_SHA,+SSL_RSA_WITH_3DES_EDE
    _CBC_SHA,+TLS_ECDH_ECDSA_WITH_3DES_EDE_CBC_SHA,+TLS_ECDH_RSA_WI
    TH_3DES_EDE_CBC_SHA,+SSL_DHE_RSA_WITH_3DES_EDE_CBC_SHA,+SSL_DHE
    _DSS_WITH_3DES_EDE_CBC_SHA,-SSL_RSA_WITH_RC4_128_MD5,-TLS_EMPTY
    _RENEGOTIATION_INFO_SCSV" ssl3-enabled="false"
    classname="com.sun.enterprise.security.ssl.GlassfishSSLImpl"
    cert-nickname="slas" tls-enabled="false"></ssl>
  </protocol>

```

3. You may also need to set the `tls-enabled` attribute of the `ssl` element to true, but *only if* you have legacy agents or runtimes that only support TLSv1.0. As of release 3.8.1, the Controller supports TLSv1.1 and TLSv1.2 implicitly.

4. Restart the Controller to have the change take effect.

For more information on the POODLE vulnerability, see <https://www.openssl.org/~bodo/ssl-poodle.pdf>.

Controller Notes

The following notes apply to on-premise Controller users. You can download the Controller for

installation on premises from the [AppDynamics Download Center](#).

- Installing or upgrading the Controller on any Windows system that does not use English as its system language will fail. For the workaround, see [Non-English Language Setting Workaround](#).
- An exception may appear in the logs on startup indicating that an Apache .jar file is missing. This is harmless and the exception can be ignored.
- An exception sometimes occurs during application configuration export.
- The Controller installation or upgrade may fail to complete if a loopback entry is missing from the hosts file. This error is sometimes indicated by an error message in the installer screen output similar to the following:

```
Failed to reach Controller at  
http://127.0.0.1:<port>/controller/createAccount?action=ping!
```

Where <port> is usually an ephemeral port number.

If the Controller installation or upgrade fails, verify that your hosts file includes a mapping between the loopback address (127.0.0.1) and the hostname of your system. The hosts file is typically found in the /etc/hosts directory in Linux systems, and C:\Windows\System32\drivers\etc on Windows.

The mapping in the hosts file should look something like:
127.0.0.1 localhost <your-hostname>

If the entry is missing, back up the existing hosts file, add the localhost mapping, and try upgrading or installing again. You can get the actual hostname you need to map by entering the hostname command on Linux, or entering "ipconfig /all" at the Windows command prompt.

Installation Notes for the Controller

- Before you install or upgrade the Controller, validate the hardware requirements as listed at [Controller System Requirements](#). The sizing requirements have been updated and now include recommendations based on metrics per minute in addition to the number of nodes in the installation. Features such as monitoring asynchronous threads and End User Monitoring increase the number of metrics per minute flowing to the Controller.
- AppDynamics strongly recommends that you install the Controller on a dedicated machine for adequate stability and performance.
- The disk space requirements differ for each of the Controller performance profiles. Verify the disk space requirements for your performance profile at [Controller System Requirements](#).
- If installing on Windows, note the operational and configuration guidelines listed in [Install the Controller on Windows](#) for preventing the possibility of Controller data corruption due to conflicts with existing Windows processes. Also note the workaround if installing or upgrading a Windows machine that does not use English for its regional settings, see [Non-English Language Setting Workaround](#).

Known Issues for Installation

- The Controller installation may fail to complete if a loopback entry is missing from the hosts file. See known issues in the previous section for more information.
- *Fixed in 3.9.4:* Running the Controller installer from a shell launched by the su command may cause Controller installation or upgrade to fail with errors indicating that the process was unable to create or write to database files.

This error results from the installer attempting to perform database update operations as the user associated with environment settings rather than the one specified by the su command (usually the root user).

To work around this issue, invoke the su command with a dash character ("su -"). This causes the user environment settings for the shell to be updated with the identity specified by the su command.

- .NET 3.5 features are required in some cases to install the Controller as a Windows service. If you try to install the Controller as a service, the following error appears: "The following feature couldn't be installed: .NET Framework 3.5". See [.NET Framework 3.5 requirement issue](#) for more information and a workaround.
- When the MySQL database is registered and running as a Windows service and the host machine is shut down or rebooted, Windows may kill the service before it has finished shutting down gracefully. See [MySQL Shut Down Failure](#) for more information and a workaround.
- After installation, the Controller log server.log contains error messages logged at the severity level SEVERE indicating that certificates have expired. The certificates are unused by the Controller, and it is safe to disregard the errors.
- *Fixed in 3.9.5* Installing the Controller on 32-bit Windows systems may fail, as indicated by application server startup failure due to a missing DLL. See [Windows 32-bit Installation Issue](#) for more information and a workaround.

MySQL Shut Down Failure on Windows as a service

When the MySQL database is registered and running as a Windows service and the host machine is shut down or rebooted, Windows may kill the service before it has finished shutting down gracefully. If this occurs, MySQL will consider its databases crashed and will perform crash recovery operations the next time it starts up. This crash recovery may result in the MySQL startup exceeding the Windows service startup timeout, which prevents the Controller app server from starting automatically.

This issue is due to Microsoft service manager default timeouts that are too short for the MySQL shutdown operation and MySQL crash recovery on startup. To work around the issue, modify the WaitToKillServiceTimeout and the ServicesPipeTimeout settings in the registry.

Note that there is a bug in Windows 7 and Server 2008 R2 that causes the service manager to ignore WaitToKillServiceTimeout.

- Windows Server 2008 R2, 6.1.7600
- Windows Server 2008 R2 SP1, 6.1.7601
- Windows 7, 6.1.7600
- Windows 7 SP1, 6.1.7601

If using one of these versions of Windows, you *must* install the hotfix described at <http://support.microsoft.com/kb/2549760> before performing the workaround.

To check for the presence of KB2549760 hotfix, run the following command from an elevated command prompt (run as administrator):

```
wmic qfe list | findstr KB2549760
```

After verifying the hotfix, edit the Windows registry to increase the default values for the keys that control the process start and shut down wait timeout. The keys to edit are:

Key Name	Subkey	Recommended value
HKLM\SYSTEM\CurrentControlSet\Control	WaitToKillServiceTimeout	600000
HKLM\SYSTEM\CurrentControlSet\Control	ServicesPipeTimeout	1200000

The registry may also be updated from the command line with the following commands:

```
reg add HKLM\SYSTEM\CurrentControlSet\Control /v
WaitToKillServiceTimeout /t REG_SZ /d 600000 /f
reg add HKLM\SYSTEM\CurrentControlSet\Control /v ServicesPipeTimeout /t
REG_SZ /d 1200000 /f
```

These changes set the process shutdown timeout to 10 minutes and the process start up timeout to 20 minutes.

.NET Framework 3.5 Requirement Issue

Certain features of the .NET 3.5 Framework are required in order to install the Controller as a Windows service. .NET Framework 4.0 alone may not be sufficient. If you try to install the Controller as a service, the following error appears: "The following feature couldn't be installed: .NET Framework 3.5".

This occurs on the following versions of Windows Server:

- Server 2012
- Server 2012 R2

The following instructions assume the use of Windows Server operating systems (which have the Windows Server Manager). If you encounter this issue on a non-server version, such as Windows 8, you need to download the .NET 3.5 executable and perform the equivalent installation.

To install .NET 3.5 features:

1. As a user in the Administrators group on the local computer, open Windows Server Manager.
2. Select "Add Roles and Features" and click Next.
3. Click Next until you get to the Server Selection screen.
4. Select the server on which you want to install the Controller as a service.
5. Click Next in the Server Roles.

6. In the Select features screen, expand .NET Framework 3.5 Features and select .NET Framework 3.5. Keep the .NET Framework 4.0 option selected.
7. Click Install.

You can now install the Controller as a service as described [in the documentation](#).

Windows 32-bit Installation Issue

Fixed in 3.9.5 On 32-bit Windows systems, the Controller may not be installed correctly, resulting in application server startup issues due to a missing DLL file. When you attempt to manually start the application server, the following error appears:

```
Error: missing `server' JVM at
`C:\AppDynamics\Controller\jre\bin\server\jvm.dll
```

To work around this issue, follow these steps:

1. For a new installation, uninstall the Controller if a previous installation attempt has failed.
2. Download and install the 32-bit JDK 1.7.0_55 on the machine. Make sure that the file `jdk\jre\bin\server\jvm.dll` is present.
3. Add the following location to PATH environment variable: `C:\Windows\system32`
4. Open an elevated command prompt (run the command prompt as Administrator).
5. Run the Controller installation with the pause mode flag:
`setup.exe -Vpause_mode=true`
In this mode, after the installer deploys files, it shows a message saying "Installer is run in pause mode. Click ok to continue." This gives you a chance to modify the file system, as described in the next step, before the installer starts and configures the Controller components.
6. When the installer pauses, at a command prompt, copy the `jdk\jre\bin\server` folder to the `Controller\jre\bin` folder.
7. Return to the installer dialog and click **OK** to continue normal installation.

Upgrade Notes for the Controller

- For all major upgrades, AppDynamics recommends that you upgrade both the Controller and Agents. This ensures that you get all the latest Agent features and fixes.
- If you are upgrading both the Controller and the Agents, first upgrade the Controller then upgrade the Agents.
- Make sure that you have saved a backup of the following files before starting the upgrade procedure:
 - `<Controller_Installation-Directory>/db/db.cnf`
 - `<Controller_InstallationDirectory>/appserver/glassfish/domains/domain1/config/domain.xml`
 - `<Agent_Installation_Directory>/conf/controller-info.xml`
- If you are applying the upgrade by passing a response file to the installer, you must pass the

response file generated by the installer at first installation. This response file is at `.install4j/response.varfile` under the Controller home directory. Make sure that the settings in the file reflect any configuration changes you have made since installation.

- Known issue: An issue prevents you from changing the database port number at upgrade time if using a response file. If you set a different database port in the response file, `response.varfile`, from the one used by the Controller, the installation times out while attempting to start the database.
- Known issue: In certain scenarios, the Controller upgrade on Windows may fail with an error message of “Unable to restore JVM options.” This happens if the `modifyJVMOptions.bat` utility has been previously used to modify `domain.xml` settings on the Controller instance. If you encounter this error on an attempted upgrade, upgrade to 3.9.1.1 or contact [AppDynamics Support](#) for the workaround.
- Known issue: The Controller upgrade may fail to complete if a loopback entry is missing from the hosts file. See known issues in the previous section for more information.

For more information, see [Upgrade the Controller](#).

Non-English Language Setting Workaround

When installing or upgrading the Controller on Windows systems that use a regional and language setting other than English (United States), the Controller installation or upgrade fails. The error message may indicate that the Controller database failed to start or that the setup processes failed to reach the Controller. The error occurs when the installer is attempting to start the Controller, and causes the installer to abort the installation or upgrade.

To work around this issue:

1. Change the regional and language setting on the system to English (United States).
2. Perform the upgrade or installation.
3. When the upgrade or installation is finished, edit the `<Controller_installation_directory>\bin\controller.bat` and replace the following line:

```
IF %TIME% == %START_TIMEOUT% (
```

With:

```
IF "%TIME%" == "%START_TIMEOUT%" (
```

This line appears in the `:startControllerDB` section of the file. Notice the addition of quotes around both values used in the value comparison.

4. Save your changes.
5. Change the regional and language settings back to its original value.

Mobile APM Notes

- Known Issue: the Mobile Geo Dashboard may time out if there are a large number of apps and large amounts of data.
- The Mobile APM Agent increases the number of metrics reported, which may affect the hardware requirements for an on-premise controller. See [Additional Sizing Requirements](#).

App Agent for Java Notes

Obtain the AppDynamics App Agent for Java download for your system from the [AppDynamics Download Center](#):

- For Sun and JRockit JVMs, download AppServerAgent-x.x.x.zip
- For IBM JVMs, download AppServerAgent-ibm-x.x.x.zip

For more information see:

- [Install the Java Agent](#)
- [Java Server-Specific Installation Settings](#)
- [App Agent for Java Configuration Properties](#)

Known Issue: the new JVM Guard feature may not consistently report JVM crashes.

.NET Agent Notes

Obtain the AppDynamics App Agent for .NET download for your system from the [AppDynamics Download Center](#):

- For Windows 32-bit, download dotNetAgentSetup.msi
- For Windows 64-bit, download dotNetAgentSetup64.msi

For more information see:

- [Install the .NET Agent](#)
- [.NET Agent Configuration Properties](#)
- [Resolve .NET Agent Installation and Configuration Issues](#)
- [Configure the .NET Machine Agent](#)

Deprecation Notice

AppDynamics will no longer support Microsoft's Internet Explorer 8 effective October 2014 for the Controller user interface. Deprecation of IE 8 becomes necessary as the Controller UI makes increasing use of rich, dynamic HTML 5.

Who does this affect?

- All SaaS customers accessing AppDynamics Controller environments will need to upgrade their Internet Explorer browser to a newer version, or use another supported browser

platform.

- On-premise customers deploying versions of AppDynamics Controllers shipped after October 2014 will need to upgrade their Internet Explorer browser to a newer version, or use another supported browser platform.
- AppDynamics will continue to support IE 8 on Controllers from earlier releases.

This does not affect EUM clients. The JavaScript Agent will continue to capture End User Experience metrics from IE 8 browsers.

Agent - Controller Compatibility Matrix

- [Java Agent - Controller Compatibility](#)
- [App Agent for .NET - Controller Compatibility](#)
- [App Agent for PHP - Controller Compatibility](#)
- [App Agent for Node.js - Controller Compatibility](#)
- [AppDynamics for Databases - Controller Compatibility](#)
- [SSL Compatibility between Java Agent and Controller](#)
- [Introduction of New Agent Features](#)
- [Learn More](#)

AppDynamics agents are not backwards compatible with the AppDynamics Controller. The Controller version must be equal to or greater than the versions of any agents connecting to it. This page describes compatibility mappings between the Controller and older versions of the agents.

A monitored environment may have agents of different versions deployed in it at a given time, as long as all agents are compatible with the Controller version. However, in this environment the oldest agents should be on the originating tiers of any business transactions. This ensures that agents on downstream nodes can process the correlation header created by the originating tier. This is an important point to consider when rolling out agent upgrades: be sure to start upgrading the agents on the nodes of downstream tiers first, and then upgrade the agents on the originating tier nodes last.

Java Agent - Controller Compatibility

The Controller supports older agents. Prior to 3.6.2, newer agents will not work with an older Controller. 3.6.2 and newer agents will work with the Controller that has the same major and minor version (X.x).

The 3.9 Controller supports the following versions of the Java Agent:

- 3.5.2 - 3.5.7
- 3.6.0 - 3.6.7
- 3.7.x
- 3.8.x
- 3.9.x

For the notes on SSL protocol compatibility between versions of the agent and Controller, see [SSL](#)

Compatibility Matrix for App Agent for Java - Controller.

App Agent for .NET - Controller Compatibility

The Controller supports older Agents. Prior to 3.6.2, newer agents will not work with an older Controller. 3.6.2 and newer agents will work with the Controller that has the same major and minor version (X.x).

The 3.9.x Controller supports the following versions of the App Agent for .NET:

- 3.5.3 - 3.5.7
- 3.6.0 - 3.6.7
- 3.7.x
- 3.8.x
- 3.9.x

App Agent for PHP - Controller Compatibility

The 3.9.x Controller supports the following versions of the PHP Agent:

- 3.7.7 and newer 3.7.x
- 3.8.x
- 3.9.x

App Agent for Node.js - Controller Compatibility

The 3.9.x Controller supports the following versions of the Node.js Agent:

- 3.8.5 +
- 3.9.x

AppDynamics for Databases - Controller Compatibility

The 3.8.x Controller supports the following versions of AppDynamics for Databases:

- 2.7.4 and higher

Note: AppDynamics for Databases version 2.7.4 is required for AppDynamics for Databases to correlate with the App Agent for PHP.

SSL Compatibility between Java Agent and Controller

The default protocol used by the Controller and Java Agent are:

- Controller: TLSv1.2
- Java App Agent:

- For Java 8 SE applications, TLSv1.2.
- For Java 7+ applications, TLSv1.2. You can change the agent to use SSLv3 if desired. See [Security](#) for information on changing the default security protocol used by the Controller or agent.
- For Java 5/6 applications, SSLv3. You must enable SSLv3 connection on the Controller if the agents connect directly to the Controller. See [Security](#) for information on changing the default security protocol used by the Controller or agent.

The default SSL protocols for the Controller and agent changed in 3.8.x. See [Agent - Controller Compatibility Matrix](#) in the 3.8 documentation for SSL compatibility information for previous versions.

Introduction of New Agent Features

Even when new and old agents are supported by the same up-to-date Controller (in 3.6.2 and later), new functionality introduced by later agents is not available on the older agents.

Information about when an agent feature was introduced is documented in the *New and Enhanced Features* section for a new major release (such as 3.9) and *<minor_release_number> Updates* sections for minor releases in the [release notes](#). So, for example, Business Transaction Discovery was introduced for the Java agent in 3.9.0; this is documented in the Java Agent Updates section under New and Enhanced Features in 3.9 in the [Platform Release Notes](#). Addition of the SOAPClient as an exit point for the PHP agent was introduced in 3.9.5; this is documented in the PHP Agent section under 3.9.5 Updates in the [Platform Release Notes](#).

Learn More

- [Supported Environments and Versions](#)