APPLICATION PERFORMANCE MANAGEMENT

– Key Considerations and Differentiators –

Little argument remains regarding the importance of an application performance management (APM) solution to monitor and manage the availability and performance of an organization's software applications. In today's connected business environment, when there's an issue, it is of the utmost importance to understand and fix the "why" as soon as possible. This is often referred to as the "mean time to detect" (MTTD) and "mean time to repair" (MTTR).

Modern applications are developed using a mix of microservices, APIs and more. As a result, the underlying complexity associated with more monolithic applications has moved into the application architecture itself, increasing the requirement for organizations to understand not only what is happening within each process, but how these processes interact as a part of a large dynamic system.

APM solutions help ensure applications continue to perform even through agile development and continuous updates. With a number of APM solutions on the market, each with their subtle (and not so subtle) differences, it can be difficult to decide which solution fits best. This is never a simple answer, because the unique needs of businesses can vary significantly, even though there are commonalities among these needs, just as there are commonalities among APM solutions.

While the APM market has matured and stabilized, there is still evolution within this space and among several of the leading providers as they continue to address evolving application architectures.

Methodology

Over the course of this assessment, Zibis Group looked at three vendor solutions—CA Technologies (CA), AppDynamics, and Dynatrace—selected for their enterprise readiness (i.e., scalability, security, high availability, etc.), rich functionality and market-leading position. Here, each vendor also facilitates deployment on-premises and through a Software-as-a-Service (SaaS) model.

As expected in a mature market, all three solutions fully met the defined criteria in several categories and features. However, in many aspects, the solutions differ in capabilities and ability to meet the needs of organizations supporting today's modern applications. This report focuses on these areas of differentiation. For each feature, a rounded percentage score has been given, as shown below. The features have been displayed and summarized for each category.

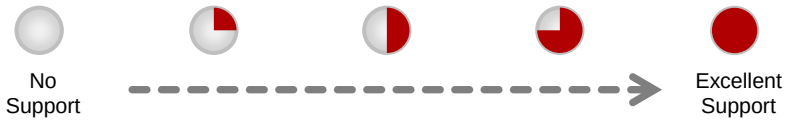

Figure 1: Standard feature scoring

(0%=no support, 25%=marginal support, 50%=fair support, 75%=good support, 100%=excellent support)

The tables in the summary section represent a roll-up of the feature scores for each category. Figure 2 below is a breakdown of each category score, while Figure 3 shows a stack-rank bar chart of how each solution scored across six categories.

SUMMARY

The following table and graph represent an aggregated view of how each vendor scored across the six categories considered in this evaluation. The following pages will dig further into each category to discuss how the different solutions rate and compare.

Key APM Considerations and Differentiators			
Category	**CA**	**AppDynamics**	**Dynatrace**
1. Omni-Channel EUE and Analysis	(91)	(73)	(77)
2. Modern and Mixed App Support	(83)	(72)	(72)
3. Mean Time to Discovery and Repair	(75)	(75)	(75)
4. Complexity Management	(79)	(68)	(71)
5. Installation, Instrumentation and Customization	(86)	(79)	(79)
6. Expansion and Integration	(79)	(58)	(71)

Figure 2: An average of each of the category scores for each section (1–6)

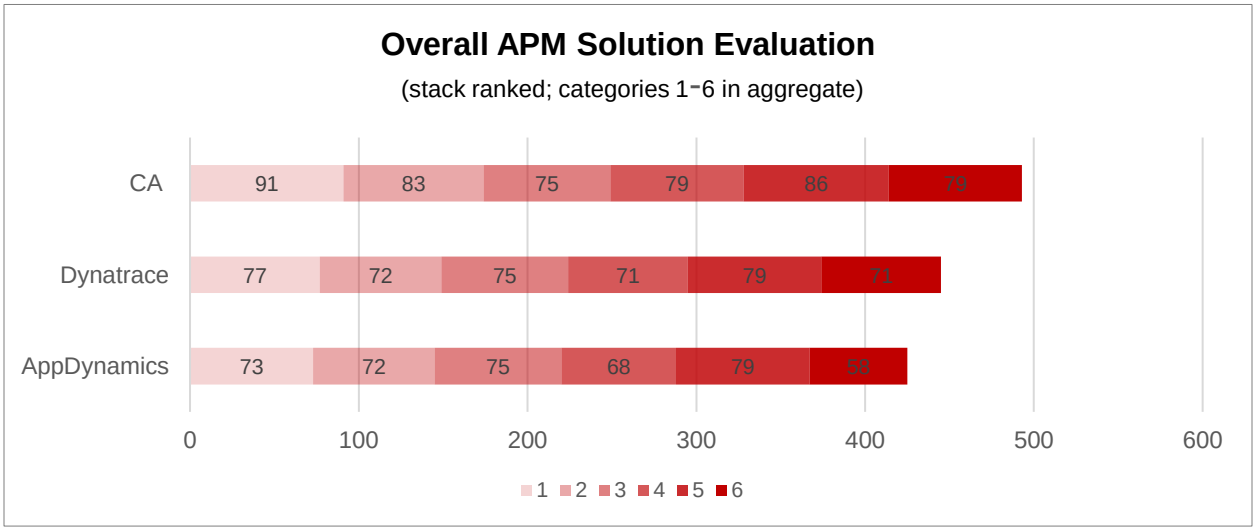

Figure 3: Stack rank of the scores from each section (1-6), showing the aggregate/total ranking for each solution

1 Omni-Channel End User Experience and Analysis

End-to-End Visibility

Marketers are moving away from "campaigns," focusing instead on the end-to-end customer experience and customer journey. Today, solutions are available to show a single view of a customer's behavior and experience, spanning all interactions irrespective of touchpoint, channel or device. It is correspondingly important that an APM solution monitor all digital transactions, regardless of touchpoint (e.g., Web, mobile app, smart watch, IoT, kiosks, etc.) to provide end-to-end visibility into application performance, from the back-end infrastructure, to application services, and ultimately the end-user experience.

All three APM solutions can provide some level of infrastructure visibility through their respective agents; however, AppDynamics requires an additional license. In addition to included infrastructure visibility, CA also offers its CA Digital Experience Insights Infrastructure Management solution, which provides an additional level of transaction visualization, infrastructure monitoring and diagnosis not currently matched by the others. Investigators can seamlessly navigate deeper into technical details from end-user applications, into application component performance and into the underlying infrastructure to find the root cause of any performance issues.

End-User Experience

Even when application infrastructures are performing optimally, a poor end-user experience (e.g., mobile app crashes, JavaScript errors, etc.) can lower user satisfaction and lead to customer defection. Respectively, each investigated solution can add end-user monitoring to help understand the actual customer experience by using a JavaScript agent injected (automatically or manually) into Web application pages as they are delivered. For mobile app end-user monitoring, CA supports wrapping existing Android package kits (APKs), while others require access to code to rebuild apps to incorporate their respective software development kits (SDKs).

Furthermore, while these vendors provide some level of insight into end-user click paths and interactions, CA App Experience Analytics adds support for real-time session playback, aggregated heat maps and more, so developers and user-experience designers can better understand how end users are actually interacting with applications. It is worth noting that Dynatrace has recently acquired Qumram to help it better compete in this space, although it is expected to take some time to fully integrate the solutions.

Metric Granularity and Historical Review

Given the plethora of data collected, all vendors provide algorithms to age data over time, moving it to tiers based on the assumption that recent data is accessed the most and has the highest resolution. While generally configurable, default values are typically designed to help prevent data stores from growing excessively large. However, aggressive data aggregation can have an impact on troubleshooting, potentially hiding the true cause of issues or making it difficult to understand the order of events.

While some APM solutions aggregate the most recent data into one-minute increments, CA Application Performance Management (CA APM) monitors all transactions and reports application performance every 15 seconds, storing these 15-second chunks uncompressed for one week and subsequently storing compressed 60-second chunks for 30 days and compressed 15-minute chunks for one year. By comparison, AppDynamics rolls data up into one-minute increments for the first four hours, 10-minute increments after four hours and one-hour increments after 48 hours, which is retained for 365 days. Similarly, Dynatrace AppMon keeps one-minute resolution for two weeks, one-hour resolution for two months, and one-day resolution for one year. The additional granularity provided by CA may, for example, provide customers with an improved ability to troubleshoot issues where the sequence of events is critical.

Omni-Channel EUE and Analysis			
Feature	**CA**	**AppDynamics**	**Dynatrace**
Overall (evaluated across 11 features)	 (91)	 (73)	 (77)
End-to-End Visibility (including infrastructure visibility, agentless monitoring, database monitoring, end-to-end transaction tracing)			
End-User Experience (including browser and mobile end-user monitoring, agent injection and mobile app wrapping, mobile crash analytics, synthetic monitoring, user usage and analytics)			
Metric Granularity and Historical Review (considers data resolution and archiving policies)			

Figure 4: Category scoring, by vendor, for omni-channel end-user experience analysis

2 Modern (and Mixed) Application Environments and Development Practices

Mixed Application Environment Support

Modern applications are developed using agile methodologies, containerization, APIs, microservices and more. Depending on the customer environment and the future application roadmap, the prospective solution should support a mix of traditional and modern application architectures to support performance management for all application components through a single interface. Prospective customers will need to investigate to make sure the respective product supports their utilized technologies (e.g., Docker, JavaScript frameworks like Angular, etc.).

CA and AppDynamics support these mixed application environments, whether in a more traditional app environment or in a dynamic cloud infrastructure, all through a single product. With Dynatrace, customers may be presented with two separate offerings from which to choose depending on their application environment. At a high level, Dynatrace (formerly Ruxit) was built from the ground up to support dynamic cloud infrastructures, while Dynatrace AppMon plays a role in more traditional application environments. Prospective customers looking to make the transition to dynamic cloud-based applications, or those with mixed environments already, may be required to implement two Dynatrace products with overlapping functionality—or make sacrifices.

Docker Support

Docker has played a key role in the evolution and adoption of containerization, microservices, and dynamically scalable environments. It is no surprise that all three investigated APM solutions provide Docker support in some way, although the level of support and how it is implemented are areas of differentiation.

Thanks to its requirement for root privileges (discussed in further detail later), the Dynatrace OneAgent is able to inject itself into processes inside of Docker containers, providing a view into both applications and the Docker platform itself. What's important to note, however, is that Docker support provided by Dynatrace AppMon is different. Once again, customers may be required to select between two separate Dynatrace products.

In the case of AppDynamics, its Standalone Machine Agent can be used to monitor and identify Docker container issues that impact application performance. There are two caveats here: The Standalone Machine Agent is deployed inside a Docker container, which

then collects metrics from the App Agents installed in the other containers on the same host (i.e., Docker images must be altered to include the App Agent); and Docker monitoring requires a separate Server Visibility license.

Similar to the others, CA APM supports adding the standard application agent to containers. The single CA APM product also provides an Agentless Docker Monitor to capture container performance metrics from standalone Docker containers and Docker swarm (i.e., clustered) deployments without a requirement to modify Docker images. Customers can quickly introduce Docker platform monitoring into existing environments without requiring any modification.

DevOps Integration

In addition to supporting modern application architectures, APM solutions should also address more modern development practices. Through the adoption of a DevOps culture, many organizations have modernized and accelerated development with principles and practices, such as implementing toolchains to automate all parts of the end-to-end software development and deployment process.

In short, it's important to understand how the solution can enable an organization to work with its DevOps practices across the complete software development lifecycle, mobile to mainframe—including agile development, continuous testing, continuous deployment and agile operations. Although a separate discussion, CA can provide customers with solutions to implement a DevOps culture, supporting continuous integration, testing and delivery through a single vendor. AppDynamics and Dynatrace also offer various integrations with third-party DevOps Solutions.

Modern (and Mixed) App Env and Dev Practices

Feature	CA	AppDynamics	Dynatrace
Overall (evaluated across nine features)	(83)	(72)	(72)
Mixed Application Environment Support (includes platform support, Web/application server support, SOA stack and middleware support, mainframe support, etc.)			
Docker Support (direct Docker API support, ease of integration, etc.)			
DevOps Integration (considers use within development and continuous build, test and deploy environments)			

Figure 5: Category scoring, by vendor, for modern (and mixed) application environments and development practices

3 Mean Time to Discovery and Repair

Monitoring and Trouble-shooting

To help identify anomalies, each vendor solution automatically establishes baselines for comparison against normal operating conditions and includes a number of "health" rules to automatically trigger alerts when application performance deviates from those baselines. The length of time required to establish these automated baselines will vary depending on the individual product, however. This can be important when APM solutions are used for testing applications under development (i.e., requiring shorter durations to establish baselines, typically with lower transaction volumes and throughput). Similarly, each of the solutions provides facilities for tweaking health rules, defining when alerts and notifications

are triggered. Depending on the vendor solution, this includes thresholds, standard deviations, error rates, durations, and in the case of CA, ratios.

During investigation, it appeared that AppDynamics does not include a rule for "error"-related issues out of the box, but this can be remedied through a manual addition. More concerning, however, is that Dynatrace states that by default, its offering assumes that low-volume requests are of less importance than high-volume requests. This means that requests that contribute less than 1 percent to the overall load of a service won't raise alerts unless their impact is significant enough that the service's overall response time or failure rate is affected. In this case, operators are required to manually tag the service in question as a "key request" to ensure the service has standard alerting thresholds.

Root Cause Analysis

Root cause analysis to reduce mean time to diagnosis and mean time to repair is the most important function of an APM solution. Given the plethora of collected data, each vendor uses proprietary algorithms focused on reducing the mean time to detect and remediate the cause of any performance issue. CA APM provides its Assisted Triage feature, an engine and story generator that identifies the most meaningful events that occur and provides contextual *stories* about these events. This analysis suggests possible culprits of performance issues, allowing analysts to quickly assess problem scenarios, in many cases, without a manual diagnosis.

AppDynamics provides troubleshooting tools that list potential issues and let users go directly to that point in a call graph or drill down into the transaction flow. Dynatrace can confidently correlate the cause of an issue and produce a visual image with the relationships of how it came to its conclusion.

Common Issue Discovery and Resolution

Testing a prospective APM solution requires that a monitored application actually experience performance-related issues. While there are a plethora of problem patterns that could be used for testing, one particular test is often misdiagnosed, in which a solution may focus on the high response times of a calling component, leaving analysts to manually inspect and deduce the underlying issue.

A prevalent example of this is an N+1 query problem (or death by a thousand cuts), where queries are issued for a parent record and then one query for each child record. While small database queries may seem unimportant, it is the sum of these many tiny, individual procedures run hundreds of times that can quickly increase response times. In an N+1 query problem, many monitoring and profiling solutions will not record any of this, as each discrete run is still considered trivial.

Often, the response time of the service making these database calls is erroneously flagged due to increased response times, and it is up to the investigator to recognize the high database call ratio, potentially increasing time to repair. In the case of CA APM, however, its ability to monitor high call ratios allows CA's Assisted Triage to identify when a component calls any back-end-type nodes an unusual number of times, reducing mean time to detect and repair.

Collaboration

All three investigated APM solutions provide some form of collaboration, with some variance between them. For example, many vendors support the use of URL sharing to quickly link directly to the pertinent details. Generally, preferences on collaboration facilities are dependent on an organization's internal culture, and the individual requirements are what sets the vendors apart.

AppDynamics' Virtual War Room uniquely provides collected details around an investigation incorporating recorded chat facilities. Dynatrace uses integration with a number of third-party solutions for incident management, its ChatOps systems and enterprise service management systems to help organize and troubleshoot IT and non-IT

related services and resources. CA provides its aptly named Analysis Notebook for further investigation of individual problems.

Mean Time to Discovery and Repair			
Feature	**CA**	**AppDynamics**	**Dynatrace**
Overall (evaluated across six features)	 (75)	 (75)	 (75)
Monitoring and Troubleshooting (includes Health Policies and Rules, Notifications and Alerts, etc.)			
Root Cause Analysis/Assisted Triage (available assistance to pinpoint root cause and reduce manual diagnostics)			
Common Issue Discovery and Resolution (considers thresholds, standard deviations, error rates, durations, etc.)			
Collaboration (tools and facilities available for URL sharing, contextual data collection, etc.)			

Figure 6: Category scoring, by vendor, for mean time to discovery and repair

4 Complexity Management

Data Visualization

The increased use of agile methodologies, containerization, APIs, microservices, etc. has resulted in the underlying complexity associated with more monolithic applications moving into the application architecture itself, increasing the requirement for organizations to understand not only what is happening within each process, but how these processes interact as a part of a larger dynamic system. Through root cause analysis, flow maps, filtering and more, each vendor attempts to simplify and isolate the most pertinent components and relevant data with varying degrees of success; in some cases, capabilities are hindered by vendor decisions and/or implementation choices.

In addition to tabular data, flow maps are popular visual presentations used to portray application and service components and the relationships between them. They add value when attempting to quickly understand the flow of business transactions between services. All three vendor solutions include a flow map facility of some kind, including varying details for service status, request throughput and more. While some of the visual aspects may come down to personal preference, working well for individual transactions and smaller application environments, prospective customers need to consider how vendors address the additional clutter and complexity when environments become significantly larger (e.g., services replicated across thousands of nodes and hundreds of thousands of containers to address scalability).

Large Enterprise Management

At a basic level, all the solutions provide an isolated view (i.e., flow map) for a single service, business transaction, etc. Similarly, all the solutions support the concept of filtering and tagging—also known as custom attributes (e.g., owner, version, etc.)—to provide additional context and make it easier to query, filter and compare related services.

CA has ample experience in addressing the needs of large organizations (e.g., scalability and high availability) and can address the complex needs of enterprise environments. As such, CA APM allows more flexibility with regard to tailoring complex environments to address the needs of different stakeholders.

Dynatrace also supports the use of tags in combination with service naming rules to enforce naming standards, whereas AppDynamics' solution focuses on server tagging, which, like many other instances, requires a separate server visibility license.

Customized Visualization

Filtering on tag values allows users to remove information from the data set displayed in flow maps, dashboards, etc., cumulatively removing unaffected components when troubleshooting. While all three vendors support tagging and dynamic filtering, CA APM also adds "Perspectives," which let users group components based on shared attributes, grouping them in a flow map without removing them from the dataset. Although AppDynamics and Dynatrace provide a way to group two or more services of the same type to appear as a single icon in a flow map, CA allows users to create personalized multi-level perspectives, easily switching between them via drop-down menu to better view the environment from multiple perspectives (e.g., role, team, organization, geo, etc.).

Logical Models

At an even higher level, CA APM's Universes feature allows organizations to tailor an environment to logically refine the number and types of application components into meaningful and manageable groups that users can work with (e.g., application, business unit, department, etc.), removing unrequired component data and reducing noise. This feature allows more flexibility than AppDynamics and Dynatrace in that there is no limitation in the sense that an agent, host, process or business service can be added to multiple "universes", depending on the customer requirements.

In larger deployments, AppDynamics recommends dividing the environment into several elements known as "business applications". Role-based access controls in the UI are then oriented by business application, meaning that teams must align themselves with these applications. Furthermore, AppDynamics agents can belong to only one tier, and a tier can only belong to one business application. Similarly, in Dynatrace AppMon, where system profiles are used to model the tiers and nodes of an application and environment, an agent can be matched to exactly one system profile, used to manage the configuration settings of the agents. These more rigid implementations mean that additional planning must be conducted before defining applications, potentially increasing complexity when making changes as application architectures and stakeholder interests evolve.

Complexity Management			
Feature	**CA**	**AppDynamics**	**Dynatrace**
Overall (evaluated across seven features)	(79)	(68)	(71)
Data Visualization (considers tabular data, transaction flow tracing, flow maps, dashboards, reporting and analytics)			
Large Enterprise Management (considers tagging options, filtering, scalability, availability, etc.)			
Customized Visualization (considers flow map customization capabilities, custom reporting, etc.)			
Logical Models (modeling the operational or logical layout of applications and infrastructures to address different stakeholders)			

Figure 7: Category scoring, by vendor, for complexity management

5 Installation, Instrumentation and Customization

Solution Deployment

All three vendors offer on-premises and SaaS models mitigating installation complexity and maximizing ROI. While CA APM SaaS is independent, it also functions as a part of a full-stack monitoring solution called CA Digital Experience Insights across applications, users and infrastructure.

CA Digital Experience Insights and AppDynamics have an integrated view across both SaaS and on-premises offerings, using a common code base. In the case of Dynatrace, however, functionality between its on-premises and SaaS solutions varies significantly. Dynatrace has two separate offerings, Dynatrace AppMon, predominantly for on-premises implementations, and Dynatrace, primarily focused on SaaS and managed offerings.

Agent Installation and Application Instrumentation

While all three vendors provide a SaaS offering to reduce installation complexity, agents will still need to be installed within the customers' application environment. The majority of solutions available on the market require manual instrumentation of application components once agents are installed. Vendors often make this process easier by including example instructions—facilitating copy and paste in instances—and agent downloads with connection details already injected to reduce configuration complexity.

The Dynatrace OneAgent provides auto-injection capabilities to minimize the steps needed to install and deploy monitoring. This approach has the benefit of reducing initial configuration of services and any ongoing maintenance. It should be noted, however, that this type of monitoring requires root or system administrator privileges and creates an opt-out type of monitoring that may present difficulties for system administrators, especially in larger environments.

Metric Customization

Once instrumented, the respective agents begin capturing and reporting on anywhere from 1,000 to 2,000 pre-established (i.e., set by the respective vendors) metrics. Furthermore, each vendor provides facilities to extend agents with additional custom metrics via scripts, plugins, etc. CA APM supports the ability to refine which metrics are captured, allowing customers to create lean implementations, with some customers having reduced the total number of metrics to less than 100. Customers can focus on specific areas of interest and minimize overhead and costs associated with unused metrics.

Installation, Instrumentation and Customization			
Feature	**CA**	**AppDynamics**	**Dynatrace**
Overall (evaluated across seven features)	(86)	(79)	(79)
Solution Deployment (considers server installation, platform support, directory server support, SaaS/on-premises options, etc.)			
Agent Instrumentation (considers agent installation and application instrumentation)			
Metric Customization (includes the extension and customization of agents to increase or reduce the number of metrics captured)			

Figure 8: Category scoring, by vendor, for installation, instrumentation and customization

6 Expansion and Integration Considerations

Depth and Breadth

To reinforce support for modern and mixed architectural environments, the level of Web application server support, middleware support and SOA stack support is of key importance. In short, more out-of-the-box support means fewer custom extensions. In all three vendor cases, the respective *supported* lists are extensive, but the depth of that support is also important. While one vendor may have a more extensive list in one area, another may provide deeper functionality. Here, individual customer requirements will dictate whether a particular vendor has any advantage.

Beyond the app and infrastructure monitoring components considered in this analysis, CA additionally provides a full portfolio of IT operations, DevOps and application lifecycle management solutions. For example, a recent addition to the CA IT operations portfolio is Runscope, a synthetic API monitoring solution designed specifically to ensure API uptime, performance and correctness. New additions to CA's portfolio also include the CA BlazeMeter® load and performance testing platform, the CA Automic One Automation platform, and the CA Veracode application security platform.

Solution Extensibility

Each vendor provides the ability to add end-user monitoring support to help understand application performance from the end-user perspective. CA and Dynatrace can also provide agentless monitoring solutions.

CA can address a customer's APM requirements, exceeding AppDynamics and Dynatrace with more end-user analysis and infrastructure visibility, and more through an extended portfolio (e.g., native integration for CA's DevOps products and continuous delivery solutions). Comparatively, AppDynamics and Dynatrace provide limited product portfolios, hindering their ability to extend solutions without a requirement for third-party integration.

Packaging

The packaging of solutions and their included capabilities (versus optional add-ons) can often be a significant discussion point. For example, vendors may discuss feature functionality as if it were part of the base offering, only to reveal them later as a paid option or a completely separate product. Without getting into individual licensing details, CA has a tradition of providing customers more out of the box (similar to its other product lines) compared to vendors that charge per agent, per unit, etc. In general, each vendor charges separately for its respective end-user monitoring solutions. AppDynamics requires separate server visibility and database visibility licensing to provide comparable infrastructure visibility (including Docker support), whereas CA and Dynatrace include these out of the box.

Expansion and Integration Considerations

Feature	CA	AppDynamics	Dynatrace
Overall (evaluated across six features)	(79)	(58)	(71)
Depth and Breadth (considers the variety and extent of middleware, framework, support, etc.)			
Solution Extensibility (considers native vendor extensions, third-party support, ETL capabilities, etc.)			
Packaging (included vs. optional paid functionality)			

Figure 9: Category scoring, by vendor, for expansion and integration considerations

FINAL THOUGHTS

Given diverse and unique business requirements, selecting the right APM solution will be very individual. Dynatrace provides ease of installation with respect to agent installation and instrumentation but can confuse the issue when customers are required to decide between its two competing offerings (Dynatrace and AppMon). AppDynamics' War Room may provide additional collaborative troubleshooting tools that may be of interest to some organizations, but the solution can require separately licensed options (server visibility, database visibility) depending on a customer's needs. CA provides customers with more functionality out of the box, more agent customization options and deeper infrastructure visibility, and addresses the unique requirements of large complex enterprise environments. Notably, CA has also made some dramatic changes with its APM offering as of late, providing customers with one of the most significant upgrades in the product's history with regard to ease of use enhancements and reduced time to diagnose.

Applications need to perform optimally for businesses to maintain their narrow competitive advantage and reduce the risk of lost customers due to downtime or slow response times. Depending on the organization's back-end infrastructure and internal policies, some solutions may be excluded almost instantly based on mixed environments that might necessitate a requirement for multiple products, or where licensing exacerbates cost based on the number of components required. While all these products are likely to get the job done in one form or another, prospective customers must fully weigh the core areas of differentiation between them and how they tie into their own unique needs as part of the overall decision making process.

The following provides a brief overview of the functionality provided by CA, AppDynamics and Dynatrace.

Product Mapping			
Functional Area	**CA**	**AppDynamics**	**Dynatrace**
APM	CA Application Performance Management (CA APM)	AppDynamics Application Performance Monitoring	Dynatrace (Ruxit) SaaS or Managed, or Dynatrace AppMon (on-premises)
Docker/Microservice Monitoring	Agentless Docker Monitoring (included in CA APM)	Server visibility license with Standalone Machine Agent deployed in a Docker container	OneAgent (Ruxit) or Docker Monitoring Plugin (included in Dynatrace AppMon)
Infrastructure Monitoring	Included (CA APM Infrastructure Agent); additional depth available via CA Digital Experience Insights Infrastructure Management	Server Monitoring and Database Monitoring	Included in Agents; a dedicated host agent is available if no other agent used
Application Aware (Agentless) Monitoring	CA Customer Experience Manager	N/A	Dynatrace Data Center Real User Monitoring
End-User Experience Monitoring	CA App Experience Analytics or CA APM's Digital Experience Collector feature	Browser Real-User Monitoring	Dynatrace User Experience Management
Mobile APM	CA App Experience Analytics (part of CA Digital Experience Insights)	Mobile Real-User Monitoring	Mobile Application Support (included in Dynatrace User Experience Management)
Synthetic User Monitoring	CA App Synthetic Monitor	Browser Synthetic Monitoring	Dynatrace Synthetic Monitoring

Figure 10: Product mapping, by vendor, across defined functional areas

This assessment was commissioned by CA Technologies. Zibis Group does not endorse any vendor solution. This report is provided as a guide to help evaluate products based on several critical areas of consideration when choosing an APM solution.

ABOUT ZIBIS GROUP

Zibis Group Inc. ("Zibis Group") is a leading source for market research and advisory services on the Information and Communications Technology (ICT) industry and related sectors. We assist vendors, government institutions, academia, nonprofits and other key industry stakeholders by providing them with the tools they need to make informed decisions.

Zibis Group is a niche play in the marketplace for customized ICT sector research. We understand that all companies have distinct interests and unique business challenges. We thrive on rising to the occasion and in seeing our clients succeed. Technology is changing, and we're here to help.

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