

Network Visibility

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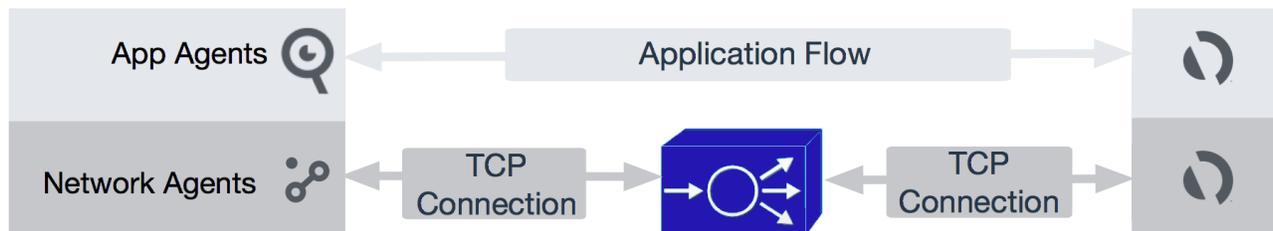
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With Network Visibility, you can

- Answer the key question quickly and easily: *Is the network to blame for any performance issues in my application?*
- Identify the root cause of performance issues in the application, the network, or in application/network interactions (i.e., how an application or server utilizes the network).
- Pinpoint the traffic flows, individual nodes, and transport connections where network or application/network issues are occurring.
- Collect detailed metrics that show how the network is performing and how well your application uses network connections and resources.
- Collect and report targeted troubleshooting information to network, IT, DevOps, and other teams.

Application Intelligence and Network Visibility

Network Visibility extends the application intelligence of AppDynamics APM down the stack from the application to the network. With "app-only" visibility, it can be easy to mistakenly blame (or not blame) the network when an application issue arises. Network Visibility eliminates the guesswork involved in identifying root causes. Network Agents and App Agents, working together, automate the work of mapping TCP connections to the application flows that use them. Network Agents can identify intermediate load balancers (which often split TCP connections) and correlate the connections on either side of these devices.



The agent-based approach of Network Visibility has the following advantages over standard approaches to network monitoring:

- More cost-efficient than using network monitoring appliances, which often view traffic from a few central locations
- Especially useful for distributed environments and multi-tier applications that span multiple network segments
- Works in cloud and hybrid networks, unlike most network-monitoring solutions

Drilling Down to the Root Cause

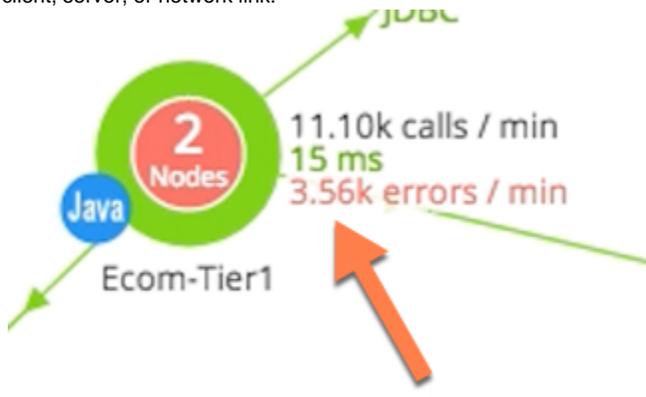
If network issues are affecting your application, Network Visibility makes it easy to find the "needle in the haystack:"

- You see a spike in transaction outliers in the Application Dashboard. Are network issues to blame?
- Switch over to the [Network Dashboard](#). Each tier, node, and link shows network KPIs (Key Performance Indicators) that measure the network health of that element. Turn on baselining to highlight network elements with KPIs outside the baseline.
- To diagnose a tier, node or network link, right-click and choose View Metrics. In the right-click dashboard, look for network metrics with spikes that correlate with the spikes in your transaction outliers. This is often all you need to do to find the network root cause.
- If a network element requires more in-depth troubleshooting, [configure the relevant Network Agents](#) to collect metrics on the individual Connections used by that element. You can then
 - Click on a node or link and view KPIs for the Connections used by the relevant nodes.
 - Right-click on a Connection and view detailed metrics in a right-click dashboard or in the Metric Browser.

Network Visibility Metrics

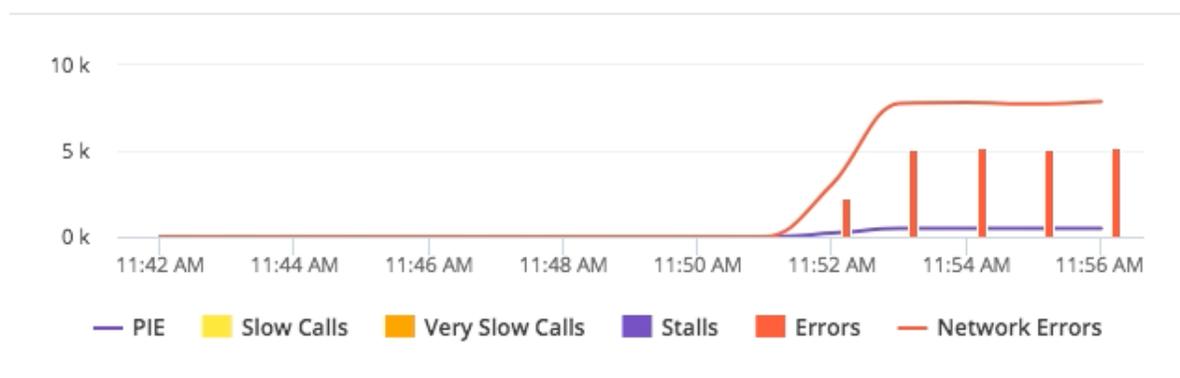
Network Visibility collects and displays the following types of metrics:

- [Network KPIs \(Key Performance Indicators\)](#) provide high-level, at-a-glance measures of whether the network is affecting the performance of the monitored application. The Network Flow Map shows KPIs for each tier, node, and link.
- The [PIE \(Performance Impacting Events\)](#) metric enables you to see immediately if there are any such events on a connected client, server, or network link.



- If the KPI metrics indicate an issue with a specific element, you can view [additional metrics](#) for that element to identify root causes. Simply right-click on an element and choose View Metrics. The metrics and charts in the right-click dashboard are all designed to answer the question: *Are there any bottlenecks on this element that are affecting my applications?*

Network Impact on Transactions



- To perform in-depth analysis, you can view detailed [TCP Flow metrics](#) in the Metric Browser.
- You can view [node metrics](#) to evaluate the health of TCP sockets and network interfaces.

Network Visibility for Multiple App Nodes on the same Server

Network agents can monitor multiple nodes that are associated with the same IP address because they run on the same physical or virtual server. The agent monitors each node individually and calculates network metrics for each node. These metrics are based on the ingress/egress traffic for each individual node, not aggregate traffic for the IP address of the host on which the node is running.

