

Impacts of Apple Mail Privacy Changes on Oracle Responsys

A summary analysis of the impact and changes to Oracle Responsys due to Apple's Mail Privacy Protection policy

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INTRODUCTION

Apple is expected to release a new Apple Mail Privacy Protection policy in mid-September. This change will affect various email marketing activities. In an effort to mitigate the impacts of this upcoming change for Oracle Responsys customers, Oracle has provided solutions to the potential impacts within the following document. Additional details about Apple Mail Privacy Protection are discussed in [this blog](#).

WHAT IS MAIL PRIVACY PROTECTION?

Mail Privacy Protection (MPP) is a new privacy protection for the Apple Mail app in Apple's newest operating systems that provides recipients the choice to share their email activity with senders. These changes impact the following operating systems: iOS 15, iPadOS 15, WatchOS 8, and macOS Monterey.

At a high-level, Mail Privacy Protection performs the following:

- Hides the recipient's IP address
- Generalizes the recipient's location
- Hides (obscures) whether the recipient opened emails
- Makes email open times unreliable
- Hides (obscures) recipient's device information

For more information on Apple's announcement, review [this press release](#).

HOW DOES MPP WORK?

Apple delivers recipient privacy protections by doing the following things related to email content retrieval using the Apple Mail app. These actions directly affect our HTML Open Tracking feature, which relies on a personalized image URL hosted by Responsys to gather Open event tracking information.

#	MPP BEHAVIOR	DESCRIPTION
1	Email message content is requested without sharing the device's IP address.	This "hides" the recipient's true IP address and location. Apple requests the content through a proxy IP address instead of the recipient's, and the derived general location is of the proxy IP address.
2	Provides a generic user-agent string value when requesting email message content.	Prevents senders from knowing the type of device and app used to read the email. Our observations indicate the device's user-agent string is replaced with a generic value of "Mozilla/5.0". <i>Note: Our data shows that currently, <1% of Responsys Open events contain the "Mozilla/5.0" user-agent information today.</i>
3	Apple Mail may retrieve email message content any time after the message is delivered to the device.	Senders are unable to discern if a recipient opened the email or if the message was "opened" automatically by the Apple Mail app. Senders also will not know if the open time is correct.

IMPACTS AND SOLUTIONS

Mail Privacy Protection prevents senders from determining if an Open event occurred as a result of a recipient truly opening and reading a message or as a result of the Apple Mail app automatically retrieving the message content after the message is delivered to the device.

To mitigate MPP's impact to Responsys's features, we will classify all Open events with only "Mozilla/5.0" in their user-agent string as "Auto Open" events; thereby enabling Responsys's features to continue working effectively. There will be fewer matching profiles and Open events as a result, but you will not be reacting to false-positive opens or making decisions on open behaviors that didn't happen.

Impact to Responsys	Impact from MPP Behavior (refer to table above)	Solution
False-positive email open signals and an inability to separate from positive open signals	Primarily #3; also #1 and #2	We are classifying all Open events with only "Mozilla/5.0" in their user-agent string as Auto Open events. This will equally affect opens committed by the recipient and opens committed in an automated fashion by Apple Mail.
Increased number of total Open events	#3	Because MPP may automatically open every email delivered to recipients, we expect significant traffic back to the Oracle Cloud. We have already taken steps to ensure that we have no interruption in data collection by expanding the capacity in multiple locations worldwide.
Obscured open time	#3	By removing Auto Open events, we will no longer be recording open dates/times for emails read/processed by the Apple Mail app. However, the advanced intelligence features that rely on Open event data also use Click events to provide additional information on customer engagement and the best time to send. For non-Apple Mail app users, we will continue to capture open times that feed these AI algorithms and will adjust our algorithm to weigh Click events more than they are currently. Relying on Click events more than in the past will require more time to capture the equivalent data captured using Open events to predict an optimal send time.

Impacts to Standard Responsys Features

Feature	Cause of Impact	Impact	Solution
<p><u>Data Switch (relying on Open events)</u> Data Switch routes individuals down different paths based on rules configured in the switch. A common condition used is whether or not an individual has opened an email. If open=Yes, the customer path would be different than if an Open event did not occur.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>MEDIUM IMPACT</u> Automated false-positive Open events will result in more profiles following the path of an engaged individual.</p>	<p>Auto Open events will be removed from Data Switch paths. The switch will not act on erroneous engagement, and the number of profiles routed to the open=Yes path will decline. Open rates will be lower after removing the Auto Open events, because we will only count opens where we can detect that the recipient has opened the email message.</p>
<p><u>Multivariate Testing (MVT)</u> MVT tests the performance of different campaign versions and determines the best version to use after the test is complete, based on the metric selected by the marketer.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> Automated false-positive opens will skew the Open rates higher for each campaign. The data impact could cause the identification of the winning version to be incorrect. However, given there is no impact on other non-Open metrics, the Marketer can choose Click-through Rate, for example, to identify the best version.</p>	<p>We will remove the Auto Open events, and MVT will not act on erroneous engagements. Open rates will be lower because we will only count opens where we can detect the individual has opened the email message.</p>
<p><u>Recency, Frequency, Monetary Analysis (RFM)</u> RFM reviews the recency and frequency of engagement and how much an individual has spent when calculating their RFM score. Based on their score, each person maps to personas or segments, such as “Can’t Lose” or “At Risk”.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> Auto Open events could artificially inflate recipients’ scores, placing them in incorrect personas.</p>	<p>We will reduce Open events' weight and rely more heavily on clicks and conversions. Our testing shows minimal impacts to the personas when switching away from opens.</p>

Feature	Cause of Impact	Impact	Solution
<p><u>Inline Campaign Performance Metrics</u> This dashboard displays total Sent, Delivered rate, Open rate, Click-through rate, and Conversions rate metrics with up-to-the-minute campaign performance.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> Auto Open events result in higher Open rates, due to the automated false-positive opens.</p>	<p>After we remove Auto Open events, there will be campaign-specific changes to the inline metrics. Open rates will be lower after removing the Auto Open events, because we will only count opens where we can detect that the individual has opened the email message. We will display a tooltip that reminds you how we calculate the Open rates.</p> <p>Additional feature enhancements will be added and announced at a later date.</p>
<p><u>Inline Program Metrics</u> This displays up-to-the-minute campaign performance metrics on the Analyze tab. It shows such information as Open rate, Click-through rate, and Conversions rate.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> Auto Open events result in higher Open rates, due to the automated false-positive open events.</p>	<p>After we remove Auto Open events, there will be changes to the inline program metrics. Open rates will be lower after removing the Auto Open events, because we will only count opens where we can detect that the individual has opened the email message. We will display a tooltip that indicates how the Open rate is calculated.</p>

Feature	Cause of Impact	Impact	Solution
<p><u>All Performance Reports</u> All campaign performance reports show various metrics indicating how specific campaigns performed. These metrics include Opens, Open rates, or derivatives of them.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> Open rate = (# of Opens)/(# of Sends - # of Bounced)</p> <p>Auto Open events result in higher Open Rates, due to the automated false-positive opens increasing the numerator in the Open Rate calculation.</p> <p>Open rates will be lower after removing the Auto Open events, because we will only count opens where we can detect that the individual has opened the email message. This results in a smaller numerator in the Open Rate calculation.</p> <p>We are unable to decrease the denominator (# of Sends - # of Bounce) in our calculations because MPP does not provide a way to differentiate regular Open events from false-positive Open events.</p>	<p>There will be near-term and longer-term solutions put in place.</p> <p>For the near term, reports will not include bulk Auto Open events. As a result, Campaign Open rates will appear lower, creating a new, consistent baseline to evaluate trends. A new Email Performance Auto Opens report will show the number of sends and Auto Opens for each campaign.</p> <p>Additional feature enhancements will be added and announced at a later date.</p>
<p><u>Contact Event Data (CED) Files</u> CED files allow marketers to export various types of data, primarily behavior events, automatically. These files capture the behavior events at the individual level so that marketers can import them into 3rd party systems.</p>	<p>False-positive email open signals</p> <p>Increased number of total events</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> The automated false-positive Open events will contaminate these data.</p>	<p>We will remove Auto Open events from the current Open CED file.</p>

Feature	Cause of Impact	Impact	Solution
<p><u>Event Switch</u> The Event Switch marks a specific event for individuals as programmed to automated journey paths. If engaged, the individual moves to the next stage. If not engaged, they are released or time out.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> The automated false-positive Open events will result in many illegitimate Open events that could trigger an event switch.</p>	<p>Auto Open events will be removed from Event Switch, causing an orchestration time out for those recipients who only read email using the Apple Mail app.</p>
<p><u>Audience/Filter Designer</u> Filter Designer lets marketers define criteria for audience/segment membership. When a filter runs, it generates a list of profiles that match the requirements.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> Opens is a standard parameter used to define audience membership. Automated false-positive open events will result in a large volume of individuals suddenly qualifying for membership incorrectly.</p>	<p>Auto Open events will be removed from the data queried by Audience/Filter Designer.</p>
<p><u>Live Report</u> The Live Report shows Open events (and other information) in real-time, as the event happens. This report ensures that the campaigns just sent are correctly working.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> The number Open events will grow as a result of the automated false-positive open events.</p>	<p>Auto Open events will be removed from the Live Report metrics.</p> <p>Additional feature enhancements will be added and announced at a later date.</p>
<p><u>Campaign Monitoring</u> Campaign Monitoring Dashboard displays all campaign activity (emails sent, opens, clicks, etc.) for the most recent 24 hrs in 15-min intervals. Marketers gain insights into the rate emails were delivered and validate the receipt of engagement events.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p><u>LOW IMPACT</u> The number of Open events will grow as a result of the automated false-positive Open events.</p>	<p>Auto Open events will be removed from campaign monitoring.</p> <p>Additional feature enhancements will be added and announced at a later date.</p>

Feature	Cause of Impact	Impact	Solution
<u>Integrations with Infinity, Audience Segmentation, and Unity</u>	False-positive email open signals Increased number of total events Obscured open time	<u>LOW IMPACT</u> The number of Open events will grow as a result of the automated false-positive open events.	We will remove Auto Open events from the current Open events provided to Infinity, Audience Segmentation, and Unity.

Impacts to Responsys Advanced Intelligence Features

Impacted Feature	Cause of Impact	Impact	Solution
<p><u>Send Time Optimization (STO)</u> Optimal send time is calculated for each individual by recording when they opened their emails. Using that time, we apply an algorithm to identify the best send time for each individual.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p>HIGH IMPACT MPP will provide false-positive open events and contaminate the overall open data.</p>	<p>By removing Auto Open events, we will no longer be recording open dates/times for emails affected by MPP. However, STO also uses Click events to provide additional information on customer engagement and the best time to send.</p> <p>For non-Apple Mail app users, we will continue to capture open times that feed the STO algorithm.</p>
<p><u>Fatigue Analysis</u> The Fatigue Analysis dashboard for Email looks at email opens to determine where each individual fits on the fatigue scale and maps them to a specific persona.</p>	<p>False-positive email open signals</p> <p>Obscured open time</p>	<p>HIGH IMPACT The false-positive opens indicate engagement regardless of whether the recipient opened and read the email message. Including these false-positives will skew the results so that these individuals will not be considered Fatigued and could erroneously place them in the "Under Fatigued" category.</p>	<p>Our analysis shows that using Click events instead of Open events results in a reasonably consistent categorization compared to the current model that uses Apple Mail app Open events. There is a slight impact on the Just Right and Saturated personas; when compared to the existing algorithm, we see around 3% fewer members in Just Right and about 3% more in Saturated. We will update the model in future to rely more on clicks and conversions.</p>

Impacted Feature	Cause of Impact	Impact	Solution
<p><u>Simulation</u> Simulation predicts the performance of campaigns in the simulated program (using open, click, conversion metrics) and identifies aggregate Open rates and Click rates for the entire program.</p>	<p>False-positive email open signals.</p> <p>Obscured open time.</p>	<p><u>MEDIUM IMPACT</u> The predicted Open rates will be higher than what we would typically experience due to the automated false-positive email open signals.</p> <p>Marketers can still choose the program with the best relative engagement rates. Our aggregation of performance data lessens the impact because the results are at the program level and are a comparison between different versions of the same program.</p>	<p>Because simulations are based on historical data and we are removing the Auto Open events, we will not see a significant short-term impact.</p> <p>Additional feature enhancements will be added and announced at a later date.</p>
<p><u>Intelligent Audiences</u> Based on the profile information included in a program, which could include an Open event, we look across the entire profile list to find "look-alike" profiles.</p>	<p>False-positive email open signals</p> <p>Obscured open time.</p>	<p><u>LOW IMPACT</u> Open events are one type of assessed engagement metric. Without any changes, we would automatically include profiles in the program that look like those we think are engaging due to false-positive events, but in reality, aren't engaging.</p>	<p>In addition to removing the Auto Open events, we will weigh Open events slightly lower, relying on Click events and Conversion events more than Open events. As a result, the resulting Intelligent Audience will be even more relevant because it is based on higher-value activities.</p>
<p><u>Predicted Subject Lines</u> Predicted Subject Lines looks at historical Open rates on past subject lines to predict the Open rate on the potential subject line aggregated by the campaign.</p>	<p>False-positive email open signals</p>	<p><u>LOW IMPACT</u> Automated false-positive open events could skew results for subject lines.</p>	<p>Due to the aggregate nature of the metric and removal of Auto Open events, we will not make any changes in the short term.</p> <p>Additional feature enhancements will be added and announced at a later date.</p>
<p><u>Intelligent Switch</u> Intelligent Switch looks at Click events and Conversion events by channel. There is no impact on identifying the best channel. However, the Intelligent Switch also has an STO component, which is impacted.</p>	<p>False-positive email open signals</p>	<p><u>LOW IMPACT</u> No impact to identifying the best channel. The STO component impact is the same as described in the Send Time Optimization section above.</p>	<p>The STO component of Intelligent Switch will receive the same treatment through removal of Auto Open events from the dataset.</p> <p>Additional feature enhancements will be added and announced at a later date.</p>
<p><u>Customer Lifetime Value (CLV)</u> CLV looks only at Conversion events</p>	<p>N/A</p>	<p><u>NO IMPACT</u></p>	<p>Nothing required.</p>

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