Oracle® Cloud

What's New for Oracle Internet of Things Asset Monitoring Cloud Service

Release 20.3.1

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What's New for Oracle IoT Asset Monitoring Cloud Service

As soon as new and changed features become available, Oracle IoT Asset Monitoring Cloud Service instances are upgraded in the data centers where Oracle Cloud services are hosted. You don't need to request an upgrade to be able to use the new features—they come to you automatically. Here's an overview of new features and enhancements added recently to improve your Oracle IoT Asset Monitoring Cloud Service experience.

> **Note:**
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> This What's New document will not be updated for post-20.3.1 features. The latest new feature summary information for Oracle IoT Asset Monitoring Cloud Service is available from the Oracle Cloud Readiness site:
>
> New Feature Summary

Release 20.3.1 — July 2020

Feature	Description
PMML Data Engineering Support for Predictions	If you wish to use a pre-trained prediction model in place of the automatic prediction training in Oracle IoT Asset Monitoring Cloud Service, you can upload the trained model in Oracle IoT Asset Monitoring Cloud Service to create a prediction. Oracle IoT Asset Monitoring Cloud Service performs the prediction scoring using your pre-trained model. You can use training models supported by `pmml4s` (PMML Scoring Library for Scala), such as the neural network. When creating a new prediction, upload your PMML file to replace the built-in models used by Oracle IoT Asset Monitoring Cloud Service.

Feature	Description
Forecast for New Products	Use advanced analytics in Oracle IoT Asset Monitoring Cloud Service to forecast product demand for new products in Oracle Demand Management Cloud. Oracle IoT Asset Monitoring Cloud Service employs feature-based machine learning on historical product sales data to come up with insights and forecast recommendations for new products. Oracle Demand Management Cloud provides the required input data through Oracle Object Storage using BICC (Oracle Business Intelligence Cloud Connector). Oracle IoT Asset Monitoring Cloud Service creates training models on the ingested data and performs scoring to create on-demand forecasts for Oracle Demand Management Cloud.

Release 20.2.4 — June 2020

Feature	Description
Import Historical Data	As an administrator, you can choose to import historical sensor and metric based data into Oracle IoT Asset Monitoring Cloud Service, and use this historical data in IoT analytics artifacts, such as metrics, anomalies, predictions, and trends. For example, you may want to import pre-deployment sensor data and use it for training your anomalies and predictions. Oracle IoT Asset Monitoring Cloud Service lets you create and download a `csv` template for an entity (asset) type. The template can include the sensor and metric attributes that you wish to include in your data. You can then use the template to upload historical data for your entities (assets).
Incident Links in Rule Notifications	Your rule email notifications now contain a link to the corresponding incident making it easy to navigate to the incident details in the application.
Custom Data Analysis Time Windows for Dashboard Widgets	When creating dashboard widgets for metrics (KPIs), you can add custom time windows for your widgets. For example, you may want to see the engine temperature values for a forklift 10 to 30 days before today.

Release 20.2.3 — May 2020

Feature	Description
Use Trends in Rules	You can use trends created for your sensor attributes or metrics as rule conditions to trigger incidents, warnings, asset actions, or alerts. The rule condition can test for one or more Nelson Rules in the trend. When the selected trend occurs, the rule gets triggered.

Release 20.2.2 — May 2020

Feature	Description
Oracle Analytics Cloud Integration	Oracle Analytics Cloud integration is now available for both development and production environments.

Release 20.2.1 — April 2020

Feature	Description
New Asset Visualization Options	When browsing assets in the map view, you can quickly preview important asset attribute values without leaving the map view. For asset clusters, you can click a cluster to show the list of individual assets. You can also choose the default view or dashboard to launch when accessing asset details from the map.
New Gadget Options in Asset Dashboards	If your gadget or metric is a sensor attribute, you can click the gadget on the dashboard to access asset location, historical sensor data, and sensor charts in a pop-up window.
Auto-Delete Warnings	Rule configurations now provide an option to automatically delete resolved warnings. You can also manually delete active and resolved warnings.
New and Updated Documentation	Updates were made to the existing user guide and Rest API documentation.

Release 20.1.2 — March 2020

Feature	Description
Send Automatic Email Notifications for Asset Incidents and Warnings	When a rule triggers an asset incident or warning, email notifications are automatically sent to all configured subscribers. Use the built-in, default SMTP account, or use your own SMTP server to channel the notifications.

Feature	Description
Create and Manage Bulk Assets	You can now conveniently create and manage bulk assets. Create multiple assets in draft form with a single create operation. Edit and activate the assets by specifying individual attribute values and creating appropriate device links for the sensor attributes. Alternatively, export the assets to edit them in bulk. You can then import back the updated assets into the same instance. You can also use export and import to copy assets from one instance to another.
Use 3D Asset Models	If you have the 3D (three-dimensional) Digital Twin feature, you can upload and use a pre-configured 3D asset model when creating a new asset type. 3D CAD models let you contextualize your asset components and data in three-dimensional space. Depending on your model, you can choose to rotate or re-orient the asset in three-dimensional space, separate out the sub-assets, and choose various views, such as shaded, X-Ray, and wireframe.
Customize Visualization Options	You can choose to customize the default view that appears when you log into your organization to access the Operations Center. You can also choose custom default views or dashboards for your asset types. For example, if your organization has static HVAC assets that need constant monitoring, you may want to change the default organization view from the Map view to the Incidents view. You can also choose to switch your default view to a custom dashboard created for your asset type or organization.
Automatic Asset Lifecycle Updates from Oracle Maintenance Cloud	Your synced asset attributes in Oracle IoT Asset Monitoring Cloud Service are automatically updated if the corresponding asset attributes in Oracle Maintenance Cloud are updated.
Time-Based Rules	You can now specify weekly or monthly schedules for rules. A schedule defines the time period during which a rule is in force.
New and Updated Documentation	Updates were made to the existing user guide.

Release 19.3.2 — August 2019

Feature	Description
Use Groups in Rules	You can selectively apply rules to a subset of your assets. For example, if an organization has separate groups for its East Coast and West Coast divisions, then it can choose to create East Coast rules that are different from the rules that apply for similar assets in the West Coast.

Feature	Description
Enhanced Asset Views and Search	Enhanced sensor data views for your asset let you choose custom time periods and zoom into graphs. You can also compare your data plots against threshold values that you define for your asset attributes. You can set the location co-ordinates of an asset by directly selecting it on the map. You can search the assets in your view based on custom asset attributes set by your organization. For example, you may want to look for assets using the manufacturer, model, or warranty status value.
New and Updated Documentation	Updates were made to the existing user guide.

Release 19.1.5 — March 2019

Feature	Description
Built-In Digital Twin Simulator	Create asset sensor simulations using the built-in digital twin simulator. Use the simulator to create data patterns for sensors associated with an asset. You can also simulate anomalous data patterns. The simulator can also simulate device alerts and actions. You can choose to invoke these device actions from an asset page or rule.
Enhanced Oracle Maintenance Cloud Integration Automatically Update Asset Meters in Oracle Maintenance Cloud with IoT Data	IoT data coming from devices is automatically pushed to asset meters in Oracle Maintenance Cloud. The maintenance supervisor can see the data directly coming from the devices without having to physically access the asset, facilitating preventive maintenance.
New and Updated Documentation	Updates were made to the existing user guide.

Release 19.1.1 — January 2019

Feature	Description
Design Center	Use the new design center to create and manage your organizations, groups, asset types, asset inventory, places, and all the associated entities. Continue to use the operations center to monitor all your digital twin assets and dashboards.

Feature	Description
Import and Export Organizations	You can export an organization, together with its assets, asset types, and associated artifacts from an Oracle IoT Asset Monitoring Cloud Service instance. You can then import the organization into another Oracle IoT Asset Monitoring Cloud Service instance. When you export an organization, all assets and their associated asset types are exported. The artifacts connected with the asset types, such as metrics, rules, anomalies, predictions, and trends are also exported. Importing the organization into another instance creates the organization, together with its assets, asset types, and associated artifacts, in the importing instance.
Granular Access Control	If you have an asset group that needs to be controlled by a small subset of the organization users, you can fine-tune your access control at the group level. You can now associate Oracle IoT Asset Monitoring Cloud Service users with both organizations and groups. An asset group can be associated with a subset of the organization users.
New and Updated Documentation	Updates were made to the existing user guide.

Release 18.4.5 — December 2018

Feature	Description
Trends	You can analyze statistical trends for your asset sensor attributes and metrics using one or more Nelson Rules. Trends help you analyze the consistency and predictability of your asset properties.
Edit Your Prediction Model to Improve Accuracy	You can add or remove features or attributes that are currently associated with a prediction to select the feature-set that you believe is most relevant for your environment. The updated feature-set is then used to re-train the prediction model. You may also wish to re-train the prediction model if golden data has arrived post the initial training of the prediction. You can configure the system to automatically accept the most accurate model.
Optimized Maintenance Schedule for Oracle Maintenance Cloud	External data such as asset data, work order data, and maintenance schedules from Oracle Maintenance Cloud can be stored and used to analyze asset failure patterns. Learning work-flows, and associated analytics entities, are then created to suggest optimal maintenance schedules for Oracle Maintenance Cloud.
New and Updated Documentation	Updates were made to the existing user guide.

Release 18.4.1 — November 2018

Feature	Description
Enhanced Automatic Anomaly Detection	The automatic (point) anomaly detection algorithms have been enhanced. The system can now better detect if the rate of change of data in a region is not typical, without being affected by individual crests and troughs. Contiguous anomalies are now shown as blocks of anomalies in the data chart.
Digital Twin Application	The Oracle IoT Asset Monitoring Cloud Service application re-creates the digital version of your organization, its groups and subgroups, the various assets, places and other entities in your organization. Use the Operations Center to filter data for various groups, subgroups, and individual assets. You can create organization-wide and individual asset based dashboards. You can also create hierarchical assets and asset associations.
New and Updated Documentation	Major updates were made to the existing user guide. Rest API documentation was updated.

Release 18.3.5 — September 2018

Feature	Description
Centralized User Management and Asset Groups	Oracle Identity Cloud Service provides a centralized identity store for your Asset Monitoring roles and users. Oracle IoT Asset Monitoring Cloud Service uses predefined roles for the application users. Roles are a set of privileges assigned to a user. You can control access to individual assets by creating asset groups, and assigning authorized users to each asset group.
New and Updated Documentation	Updates were made to the existing user guide. New videos and tutorials were added.

Release 18.3.1 — July 2018

Feature	Description
Enhanced Anomaly Support and Behavior Mapping	The enhanced anomaly interface lets you create various anomaly types from a single, simplified interface. You can now specify a sample time window containing acceptable patterns for sensor or metric data. This time window can be a typical period during which your assets, and associated sensors, behaved normally. The system uses the normal data pattern, you specify, to train itself. During day-to-day operations, the system looks out for deviations in sensor data patterns beyond the specified deviation percentage, and flags these as anomalous behavior.
Use Oracle Analytics Cloud to Create Analyses, Projects, and Dashboards on IoT Asset Data	Oracle IoT Asset Monitoring Cloud Service lets you sync asset, metric, and incident data with Oracle Analytics Cloud. You can use analyses, projects, and dashboards in Analytics Cloud to find the answers that you need from key IoT asset data displayed in graphical formats. The Oracle Analytics Cloud Integration is currently available for testing purposes in development environments, and should not be used in production environments. The functionality, compatibility, interfaces, and APIs are subject to change.
New and Updated Documentation	Updates were made to the existing user guide.

Release 18.2.5 — June 2018

Feature	Description
Create Simulated Asset Packages for Tests and Demonstrations	Use simulations to test Oracle IoT Asset Monitoring Cloud Service or to demonstrate its features. You can create asset package simulations using the digital twin simulator. Asset package simulations comprise assets and their associated device simulations. Out-of-the-box asset packages also contain predefined KPIs/metrics, rules, and anomalies.
Receive SMS Phone Notifications for Incidents and Warnings	Enables you to easily monitor your assets using SMS notifications for asset incidents and warnings. When a rule triggers an asset incident or warning, SMS notifications are sent to all configured subscribers on their mobile devices. Oracle IoT Asset Monitoring Cloud Service integrates with the Twilio SMS service to help provide seamless SMS notifications.
New and Updated Documentation	Updates were made to the existing user guide and Rest API documentation.

Release 18.2.3 — May 2018

Feature	Description
Choose Sensor Attributes for your Assets	You can now choose the sensor attributes that you wish to include for your assets. Select the sensor attributes when adding device references for your asset types. The attributes that you choose, from the ones available in your device model, are made available for the assets in Oracle IoT Asset Monitoring Cloud Service. You can now use sensor attributes directly in your predictions, anomalies, and contextual data associations.
Enhanced Expression Builder for Metrics/KPIs	The enhanced expression builder lets you use sensor attributes in computed (or Query type) metrics.
New and Updated Documentation	Updates were made to the existing user guide and Rest API documentation.

Release 18.1.5 — March 2018

Feature	Description
Integrate with Oracle Engagement Cloud	The integration with Oracle Engagement Cloud makes use of Oracle Integration Cloud Service (ICS) for end-to-end integration with Oracle IoT Asset Monitoring Cloud Service. Use rules to sync the incidents created for imported assets in Oracle IoT Asset Monitoring Cloud Service with Engagment Cloud. When you update the Service Request (SR) in Engagement Cloud, the incident is automatically updated in Oracle IoT Asset Monitoring Cloud Service.
New Expression Builder User Interface for Computed Metrics/ KPIs	The new, simplified interface lets you build the expression for your computed metrics that you can then add to your Dashboard or Map.
Use Predictions in Rules	You can use prediction values in rules to trigger incidents, warnings, asset actions, or alerts.
Use Third-Party Map Providers	Oracle IoT Asset Monitoring Cloud Service now lets you integrate with third-party map providers. You can customize your Map page to use the maps and search facility included by your map provider.
New and Updated Documentation	Updates were made to the existing user guide.

Release 18.1.3 — February 2018

Feature	Description
Use Anomalies in Rules	You can use anomalies in rules to trigger incidents, warnings, asset actions, or alerts.

Feature	Description
Create Actions on Asset Type Attributes	You can use actions to set the values of any attributes that you define for your asset type. For example, when invoking a *Reset* action for an asset, you might want to set the *ResetTime* and *ResetBy* attributes.
New and Updated Documentation	Updates were made to the existing user guide. The reference documentation was updated to accommodate for bug fixes and functionality changes in the application.

Release 17.4.5 — December 2017

Feature	Description
Enhanced Oracle Maintenance Cloud Integration	When an incident is created against an imported asset in Oracle IoT Asset Monitoring Cloud Service, the incident automatically translates into a work order in the SCM Maintenance Cloud. For example, if a threshold rule triggers an incident when a device associated with an asset is overheating, a work order corresponding to the incident automatically gets created in the SCM Maintenance Cloud. When you release, close, cancel, or modify the work order in the SCM Maintenance Cloud, the corresponding incident status in Oracle IoT Asset Monitoring Cloud Service is automatically updated. The synchronization between Oracle IoT Asset Monitoring Cloud Service and SCM Maintenance Cloud happens every five minutes.
Use Contextual Data in Pattern Based Anomalies	You can now train the system to learn from sensor data pattern anomalies that typically occur before important events. For example, if you have your breakdown event data stored in a Database Cloud Service table, you can overlay these events on the sensor data timeline to define pattern anomalies that occur around the breakdown events.
New and Updated Documentation	Updates were made to the existing user guide.

Release 17.4.3 — November 2017

Feature	Description
Use Custom Code KPIs	A custom code KPI (Key Performance Indicator) lets you define a KPI where you provide the Spark implementation for computing the results. Use custom code KPIs for domain-specific metrics that require the computations to go beyond the set of expressions provided by the common analytics services.

Feature	Description
Use Syndicated Widgets	Oracle IoT Asset Monitoring Cloud Service provides a set of pages as widgets that you can embed in your application or Web page. Some of the pages available as widgets are the Map page, Assets page, Asset Details page, and the Incidents page.
New and Updated Documentation	Major updates were made to the existing user guide.

Release 17.3.5 — September 2017

Feature	Description
Use Asset Actions with Rules	If your asset type includes asset actions supported by your device, then you can use rules to trigger these asset actions. Asset actions get triggered automatically when the rule conditions are met.
New System Metrics	New system metrics are now available for the number of open routine, outage, and maintenance incidents. New system metrics are also available for the number of resolved and active warnings.

Release 17.3.3 — August 2017

Feature	Description
Use Warnings in Rules	In addition to incidents and alerts, you can now generate warnings when the rule conditions are met. Use warnings to create a log of issues that do not require your immediate attention.
Use KPI Metrics in Rules	You can now use Key Performance Indicator (KPI) attributes in your rule conditions.
Asset Monitoring BOPs for ABCS	Oracle IoT Asset Monitoring Cloud Service supports integration with Oracle Application Builder Cloud Service (ABCS) applications. This enables you to create web and mobile applications that leverage data from IoT. You can download asset monitoring Business Object Providers (BOPs) and import these BOPs into ABCS to access IoT application data as business objects.
SCM Maintenance Cloud Integration	You can import assets from SCM Maintenance Cloud into Oracle Iot Asset Monitoring Cloud Service. You can also export incidents from Oracle IoT Asset Monitoring Cloud Service, and import these as work orders in Oracle Maintenance Cloud.
Support for Asset Actions	You can now add your device model actions to your asset types. You can trigger actions for an asset from the asset details page.

Feature	Description
Use Pattern Based Anomalies	Create a pattern based anomaly to look for patterns in sensor data generated by an asset.
RFID Tag and Reader Support	You can report the location of an RFID-tagged asset that is in proximity of an RFID reader. The RFID reader should be connected to the Oracle IoT Cloud Service network through a gateway.
Integration with Oracle Service Cloud	You can integrate Oracle IoT Asset Monitoring Cloud Service with Oracle Service Cloud through Oracle Integration Cloud Service. You can import a Package file (`.par`) into Oracle Integration Cloud Service that contains all the necessary information about the integrations and connections.

Release 17.2.5 — June 2017

Feature	Description
Predictive Analytics	Three new menu options are now available: Contextual Data, Predictions, and Anomalies. Use these new menu options to improve the reliability of your predictive analysis algorithms and identify potential risks to your assets.
Use Oracle Internet of Things Asset Monitoring Mobile Application to Register Devices	You can now use the Oracle Internet of Things Asset Monitoring Mobile Application to register new devices.
Asset Reservation	With this feature, users can reserve an asset for a defined period. When an asset is reserved, its settings cannot be modified until the reserve is released.
Rules Now Include a Create Alert Option	When creating a new rule or editing an existing rule, users can now select **Create Alert** to generate an alert message when the rule conditions are met.
New and Updated Documentation	Miscellaneous updates were made to the existing user guide and reference documentation to accommodate for bug fixes and functionality changes in the application.

Release 17.1.5 — March 2017

Feature	Description
Asset Groups	With this feature, users can only access the assets in the functional groups to which they are assigned. For example, a user assigned to the plumbing group cannot access the assets of the electrical group because they lack the necessary permissions.
Z-Axis	Z-axis support allows you to filter your search criteria to single or multiple floors in a floor plan.

Feature	Description
Hierarchical Places	You can now add sub-places to a place. For example, individual building floors can be added as sub-places to a building.
New and Updated Documentation	Miscellaneous updates were made to the existing user guide and reference documentation to accommodate for bug fixes and functionality changes in the application.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

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