Guidance for Predictive Maintenance with Amazon Monitron

This architecture diagram shows you how to create a data reservoir employing Internet of Things (IoT) sensors, live data feeds, notifications, visuals, and linked processes with enterprise resource planning (ERP) to assess plant data for predictive upkeep and to enhance machine availability.

1. Install Amazon Monitron sensors on equipment and Amazon Monitron gateway in the factory.
2. Create Amazon Kinesis Data Streams using Amazon Monitron as the data source.
3. Configure Kinesis Data Streams from the Amazon Monitron managed account to the customer account.
4. Configure an Amazon Simple Storage Service (Amazon S3) bucket as the delivery destination of Amazon Kinesis Data Firehose. Amazon S3 serves as the storage foundation for an industrial data lake.
5. Configure Amazon S3 notifications to send events to the Amazon EventBridge destination.
6. Configure an AWS Lambda function as the target of EventBridge destination rules. The Lambda function processes the Amazon S3 event and sends it to an AWS IoT Events state machine.
7. AWS IoT Events responds to the sensor warning state and creates an enterprise resource planning (ERP) work order using Lambda.
8. AWS IoT Events responds to the sensor warning state and notifies personnel using an Amazon Simple Notification Service (Amazon SNS) topic through SMS, mobile push, and email.
9. Connect AWS Glue Data Catalog to an S3 bucket. Schedule an AWS Glue job through EventBridge to update Data Catalog. Amazon Athena queries Amazon S3 data as defined by Data Catalog.
10. Visualize Internet of Things (IoT) metrics and state from Athena queries using Amazon Managed Grafana.