



1. Custom Package Name

AWS SNS Integration Package for Automation 360

2. Overview

The AWS SNS Custom Package enables Automation Anywhere Automation 360 bots to publish notifications, alerts, and event messages through Amazon Simple Notification Service (SNS).

Amazon SNS follows a publish-subscribe model where a bot can publish a message once to an SNS topic, and SNS can fan out that message to subscribed endpoints such as email and SMS. This helps automation workflows notify users, teams, support groups, downstream processes, or external systems without building custom API integrations.

This package provides reusable Automation 360 actions to connect to AWS SNS, publish messages to SNS topics, send SMS notifications, subscribe endpoints, retrieve topic configuration, view topic subscriptions, retrieve metrics summary, unsubscribe endpoints, and close the active session.

It is designed for notification-driven automation use cases where bots need to communicate events, alerts, approvals, status updates, exceptions, or operational messages in a scalable and maintainable way.

3. Key Features

- Create reusable AWS SNS sessions from Automation 360
 - Publish messages to SNS topics
 - Send SMS messages directly to one or more phone numbers
 - Subscribe email and SMS endpoints to SNS topics with subscription filter policies for targeted delivery
 - Publish topic messages with optional subject and message attributes
 - Retrieve SNS topic attributes
 - List subscriptions configured under an SNS topic
 - Generate topic-level metrics summary
 - Unsubscribe endpoints using subscription ARN
 - End AWS SNS sessions cleanly after execution
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4. Actions Included

Action Name	Description
Start Session	Creates an AWS SNS session using credentials and region



Action Name	Description
Publish Message to Topic	Publishes a message to an SNS topic for fan-out delivery
Publish SMS to Phone Number	Sends an SMS message directly to one or more phone numbers
Subscribe Endpoint	Subscribes an email or SMS endpoint to an SNS topic
List Subscriptions by Topic	Lists all subscriptions associated with an SNS topic
Get Topic Attributes	Retrieves configuration attributes of an SNS topic
Get Topic Metrics Summary	Returns subscription and usage metrics summary for an SNS topic
Unsubscribe Endpoint	Unsubscribes an endpoint using subscription ARN
End Session	Ends the active AWS SNS session

5. Use Cases

- Operational alerting from bots to business or support teams
 - Email and SMS notifications for workflow status updates
 - Approval, exception, and escalation notifications
 - Finance, invoice, compliance, and transaction alerts
 - Broadcasting a single bot event to multiple subscribers
 - Targeted notification delivery using filter policies
 - Cloud event notification from Automation 360 workflows
 - Monitoring SNS topic health, subscription status, and usage metrics
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6. Architecture Overview

Automation 360 Bot → Amazon SNS Topic → Subscribers (Email, SMS, Lambda, SQS, HTTPs etc.)

A bot publishes a notification or event message to an SNS topic. Amazon SNS then distributes the message to configured subscribers based on subscription protocol and optional filter policy rules.

For direct SMS scenarios, the bot can publish an SMS message directly to one or more phone numbers using Amazon SNS without requiring a topic subscription.

7. Prerequisites

- Automation Anywhere Automation 360 Control Room
- AWS Account with Amazon SNS enabled



- SNS topic created for topic-based publish and subscription scenarios
 - Email address or mobile number for endpoint subscription scenarios
 - AWS Access Key ID and Secret Access Key
 - AWS region where SNS resources are configured
 - IAM permissions:
 - sns:Publish
 - sns:GetTopicAttributes
 - sns:ListSubscriptionsByTopic
 - sns:Subscribe
 - sns:Unsubscribe
 - cloudwatch:GetMetricStatistics
 - cloudwatch:GetMetricStatistics is required only when the Get Topic Metrics Summary action is used with usage metrics enabled.
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8. Installation Steps

1. Log in to Automation 360 Control Room
 2. Navigate to **Manage → Packages**
 3. Upload package JAR file
 4. Import demo bot ZIP into Public workspace
 5. Ensure all dependent packages are available
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9. Configuration

Provide the following inputs:

- AWS Access Key (recommended via Credential Vault)
- AWS Secret Key (recommended via Credential Vault)
- AWS Region (e.g., us-east-1)
- SNS Topic ARN for topic publishing, subscription, listing, attributes, and metrics actions
- Message body for topic publishing or SMS publishing
- Optional subject for topic messages delivered to email subscribers
- Optional message attributes JSON for filter-policy-based topic delivery
- Email address or mobile number for endpoint subscription



- Optional filter policy JSON for subscription filtering
- Subscription ARN for unsubscribe operation
- Phone numbers in E.164 format for direct SMS publishing

10. Execution Flow

Topic Notification Flow

1. Start Session
2. Subscribe email or SMS endpoints to an SNS topic, if not already subscribed
3. Publish a message to the SNS topic
4. SNS delivers the message to matching subscribers
5. List subscriptions, get topic attributes, or get metrics summary if needed
6. End Session

Direct SMS Flow

1. Start Session
2. Publish SMS to one or more phone numbers
3. Review command output for SNS publish acceptance status
4. End Session

Filter Policy Flow

1. Start Session
2. Subscribe endpoint with filter policy JSON
3. Publish topic message with matching message attributes
4. SNS delivers the message only to matching subscriptions
5. End Session

11. Inputs and Outputs

Inputs:

Input	Description
AWS Access Key	AWS authentication key
AWS Secret Key	AWS secret key
Region	AWS region (e.g., us-east-1)



Input	Description
Topic ARN	SNS topic used for publish, subscription, listing, attributes, or metrics
Message	Message body to publish
Subject	Optional subject for supported protocols such as email
Message Attributes JSON	Optional SNS message attributes used for filtering and metadata
Phone Numbers	SMS destination phone numbers in E.164 format
Protocol	Subscription protocol, such as Email or SMS
Endpoint	Email address or SMS phone number to subscribe
Filter Policy JSON	Optional subscription filter policy
Subscription ARN	Subscription identifier required for unsubscribe
Lookback Period	Time range for CloudWatch usage metrics

Outputs:

Output	Description
Message ID	Unique ID returned when SNS accepts a publish request
SMS Publish Result JSON	Per-phone-number SMS publish result
Subscription Status JSON	Subscription status, endpoint, protocol, and subscription ARN
Topic Attributes JSON	SNS topic configuration attributes
Subscriptions JSON	Subscriptions configured for an SNS topic
Topic Metrics Summary JSON	Subscription and usage metrics summary
Unsubscribe Status JSON	Result of unsubscribe operation

12. Example Payload

Topic Message Payload

```
{  
  "eventType": "InvoiceApproval",
```



```
"priority": "High",  
"department": "Finance",  
"message": "Invoice approval is pending for review."  
}
```

Message Attributes for Filter Policy

```
{  
  "department": {  
    "dataType": "String",  
    "value": "Finance"  
  },  
  "priority": {  
    "dataType": "String",  
    "value": "High"  
  }  
}
```

These attributes can be used with subscription filter policies so only matching subscribers receive the message.

13. Best Practices

- Use Credential Vault for AWS credentials
 - Avoid hardcoding access keys, secret keys, topic ARNs, or phone numbers in production bots
 - Always call End Session after SNS operations are complete
 - Confirm email subscriptions before expecting email delivery
 - Use E.164 format for SMS phone numbers
 - Use message attributes with filter policies for targeted delivery
 - Keep topic messages clear, concise, and relevant to subscribers
 - Use SNS topic attributes and subscription listing actions for troubleshooting
 - Use CloudWatch/SMS delivery logs when final SMS delivery verification is required
 - Grant only the IAM permissions required for the actions being used
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14. Limitations

- Requires valid AWS credentials and IAM permissions
- Requires network connectivity from Automation 360 runtime to AWS
- Email subscriptions require recipient confirmation before messages are delivered



- SMS publishing depends on AWS SMS settings, SMS sandbox or production status, destination country rules, carrier delivery, and account-level SMS configuration
- SNS publish success means AWS accepted the publish request; it does not guarantee final SMS handset delivery
- Filter policies work only when published message attributes match the subscription filter criteria
- CloudWatch metrics availability depends on AWS metric collection and selected lookback period

15. Troubleshooting

Issue	Resolution
Invalid credentials	Verify AWS Access Key ID and Secret Access Key
Topic not found	Confirm Topic ARN and AWS region
Permission error	Validate IAM policy permissions
Email subscriber not receiving message	Confirm the subscription from recipient inbox
SMS not delivered	Check SMS sandbox status, verified destination numbers, account SMS settings, and delivery logs in AWS
Filtered subscriber not receiving message	Verify filter policy JSON and message attributes
No subscriptions listed	Ensure endpoints are subscribed to the selected topic
Metrics not returned	Enable usage metrics and select a valid lookback period
Unsubscribe failed	Confirm the subscription ARN is valid and active

16. Demo Bot

A sample demo bot is included to demonstrate:

- AWS SNS session creation
- Topic message publishing
- Direct SMS publishing
- Email and SMS endpoint subscription
- Filter policy subscription scenarios
- Topic attributes retrieval



- Subscription listing
- Topic metrics summary
- Endpoint unsubscribe
- Session closure

17. Version

Version: 1.0.0

Platform: Automation 360

18. Disclaimer

This package interacts with AWS services. Users are responsible for AWS usage costs, SMS delivery charges, credential management, IAM permissions, message content, subscriber configuration, and compliance with applicable country-specific messaging regulations.