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THE TELCO GLOBAL API ALLIANCE

Device Area Restriction Mgmt

- China Telecom
- Contacts: chenfr2@chinatelecom.cn

Use Cases



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Reason :

To safeguard the security and compliance of IoT devices, measures are often taken to bind the device to a designated geographic area. This mechanism helps prevent the device from being stolen or misused while reducing the risk of data leakage. Once it detects that a device has left its preset usage range, the system will automatically disconnect from the network and send a real-time alert to the customer.

Mature Fields

public service



Financial



New Potential Valued Fields

Smart City



Smart Retail



In banking and financial institutions, mobile devices like Pos terminals or mobile banking equipment may be restricted to specific geographic areas. If taken outside this area, the network connection is disabled to prevent fraud or data breaches.

Statement of operations



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API Integration

The Device Area Restriction API is registered to the public service application of China Telecom's API gateway.

Customer applies for APPKEY and APPSECRET of the gateway API, then calls the Device Area Restriction Mgmt API via HTTP/HTTPS to query and subscribe the relevant risk control information of the IoT SIM card.

Revenue Model

Fees are charged monthly or annually based on the number of cards querying the Device Area Restriction Mgmt API.

Current Scale

Currently China Telecom has about 6 million IoT cards using area restriction services

The API definition proposal(bind)



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API Name	Device Area Restriction Mgmt Bind API
Description	This API allows enterprise customers to bind area to the card, when the area is not match with the bind information, operator will block the network, when the area is match, resume the network.
Input Parameters	<ul style="list-style-type: none">• <code>device(Device)</code>: The developer can choose to provide the below specified device identifiers: <code>ipv4Address</code>, <code>ipv6Address</code>, <code>phoneNumber</code>, <code>networkAccessIdentifier</code>.
	<ul style="list-style-type: none">• <code>bindInfo(string)</code>: Such as bind area
Return Results	<ul style="list-style-type: none">• bind operation status, success or fail

The API definition proposal(unbind)



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API Name	Device Area Restriction Mgmt Unbind API
Description	This API allows enterprise customers to unbind area to the card.
Input Parameters	<ul style="list-style-type: none">• device(Device): The developer can choose to provide the below specified device identifiers: ipv4Address, ipv6Address, phoneNumber,networkAccessIdentifier.
Return Results	<ul style="list-style-type: none">• unbind operation status, success or fail

The API definition proposal(query)



API Name	Device Area Restriction Query API
Description	This API allows enterprise customers to query risk control information related to IoT SIM cards, such as region restriction. With this information, enterprises can assess the security and reliability of IoT cards, helping to assess security, detect, and prevent possible fraud.
Input Parameters	<ul style="list-style-type: none">• device(Device): The developer can choose to provide the below specified device identifiers: ipv4Address, ipv6Address, phoneNumber, networkAccessIdentifier.
Return Results	<ul style="list-style-type: none">• code(string): Returns the result identifier• message(string): return result description• result (object): Card arealimit status

The API definition proposal(subscribe)



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API Name	Device Area Restriction Subscription API
Description	<p>This API allows enterprise customers to subscribe to risk control information related to IoT SIM cards. When the device bound to the IoT card changes, the customer can be notified in a timely manner through the callback address registered by the customer, making it convenient for the customer to identify endpoint risks in a timely manner.</p>
Input Parameters	<ul style="list-style-type: none">• device(Device): The developer can choose to provide the below specified device identifiers: ipv4Address, ipv6Address, phoneNumber, networkAccessIdentifier.
	<ul style="list-style-type: none">• sink(string): The address to which events shall be delivered using the selected protocol.
	<ul style="list-style-type: none">• sinkCredential(SinkCredential): A sink credential provides authentication or authorization information necessary to enable delivery of events to a target.
Return Results	<ul style="list-style-type: none">• code(string): Returns the result identifier• message(string): return result description• id(string): SubscriptionId