

Alibaba Cloud Elastic IP Address

API Reference

Issue: 20190908

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Generic conventions

Table -1: Style conventions

Style	Description	Example
	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restore business.
	This indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus, page names, and other UI elements.	Click OK.
<code>Courier</code> font	It is used for commands.	Run the <code>cd / d C :/ windows</code> command to enter the Windows system folder.
<i>Italics</i>	It is used for parameters and variables.	<code>bae log list --instanceid Instance_ID</code>
[] or [a b]	It indicates that it is an optional value, and only one item can be selected.	<code>ipconfig [-all -t]</code>

Style	Description	Example
<code>{}</code> or <code>{a b}</code>	It indicates that it is a required value, and only one item can be selected.	<code>switch {stand slave}</code>

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1 API overview

The following are available Elastic IP Address (EIP) APIs. The endpoint of EIP is `vpc.aliyuncs.com`. For more information on how to use EIP APIs, see the VPC API documentation.

API	Description
#unique_4	Create an EIP.
#unique_5	Associate an EIP with a cloud product instance in the same region.
#unique_6	Disassociate an EIP from a cloud product instance.
#unique_7	Query created EIPs in a region.
#unique_8	Modify the name, description, and peak bandwidth of an EIP.
#unique_9	Release an EIP.

2 Call APIs

Elastic IP Address (EIP) and VPC use the same service address (endpoint). When you call an EIP API, an HTTP GET request is sent to the API service address of EIP, and the system responds according to the parameters set in the request. Both the request and the response are UTF-8-encoded.

Request syntax

EIP APIs use RPC style. You can call EIP APIs by sending HTTP GET requests.

The request syntax is as follows:

```
http :// Endpoint /? Action = xx & Parameters
```

where:

- **Endpoint** : The endpoint of EIP APIs is `vpc . aliyuncs . com` .
- **Action** : the name of the action. For example, if you need to create an EIP, the action is `AllocateEipAddress`.
- **Version** : the version of the API. The version of EIP APIs is `2016 - 04 - 28` .
- **Parameters** : the request parameters. Separate multiple parameters by using ampersands (&).

Request parameters include common parameters and API-specific parameters.

Common parameters include API version and identity authentication information among other parameters. For more information, see [#unique_11](#).

The following is an example of calling `AllocateEipAddress` to create an EIP:



Note:

The following code has been edited to ease readability.

```
https :// vpc . aliyuncs . com /? Action = AllocateEi pAddress
& Format = xml
& Version = 2016 - 04 - 28
& Signature = xxxx % xxxx % 3D
& SignatureM ethod = HMAC - SHA1
& SignatureN once = 1521552885 2396
& SignatureV ersion = 1 . 0
& AccessKeyI d = key - test
& Timestamp = 2012 - 06 - 01T12 : 00 : 00Z
```

...

API authorization

To maintain account security, we recommend that you use the Access Keys (AKs) of RAM users to call APIs. Before you call APIs using the AKs of RAM users, you need to grant permissions to the RAM users by attaching corresponding policies to them.

For a list of EIP resources and interfaces that can be authorized, see [#unique_12](#).

API signature

Authentication is required by the EIP service for each API call, which is provided by the inclusion of signature information in the request.

EIP uses an AccessKeyID and AccessKeySecret pair (that is, an AK) and symmetric encryption to authenticate the identity of the request sender. AKs are certificates that Alibaba Cloud issues to Alibaba Cloud accounts and RAM users for authentication. It is similar to a logon password. The AccessKeyID is used to identify the visitor's identity. The AccessKeySecret is the key used to encrypt the signature string. The server uses the AccessKeySecret to decrypt the signature string. The AccessKeySecret must be kept confidential.

For an RPC API, you must add the signature to the API request in the following format :

```
https://endpoint/?SignatureVersion= 1 . 0 &SignatureMethod= HMAC - SHA1
&Signature= XXXX % 3D & SignatureN once = 3ee8c1b8 - 83d3 - 44af -
a94f - 4e0axxxxxx xx
```

Take the API call of `AllocateEipAddress` as an example. If your AccessKeyID is `testid` , and your AccessKeySecret is `testsecret` , then, the URL in the signature is as follows:

```
http :// vpc . aliyuncs . com /? Action = AllocateEi pAddress
& Timestamp = 2016 - 05 - 23T12 : 46 : 24Z
& Format = XML
& AccessKeyI d = testid
& SignatureM ethod = HMAC - SHA1
& SignatureN once = 3ee8c1b8 - 83d3 - 44af - a94f - 4e0axxxxxx xx
& Version = 2014 - 05 - 26
& SignatureV ersion = 1 . 0
```

To generate the signature, follow these steps:

1. Create the string to be signed by using the request parameter.

```
GET &% 2F & AccessKeyI d % 3Dtestid & Action % 3DAllocate
EipAddress & Format % 3DXML & SignatureM ethod % 3DHMAC - SHA1 &
SignatureN once % 3D3ee8c1b8 - 83d3 - 44af - a94f - 4e0axxxxxx xx
& SignatureV ersion % 3D1 . 0 & TimeStamp % 3D2016 - 02 - 23T12 %
253A46 % 253A24Z & Version % 3D2014 - 05 - 15
```

.

2. Calculate the HMAC value of the string.

Add an ampersand (&) after the AccessKeySecret to add the key of the HMAC value.

In this example, the key is `testsecret &`.

```
CT9X0VtwR8 6fNWS ***** juE =
```

3. Add the signature to the request parameter.

```
http :// vpc . aliyuncs . com /? Action = AllocateEi pAddress
& Timestamp = 2016 - 05 - 23T12 : 46 : 24Z
& Format = XML
& AccessKeyI d = testid
& SignatureM ethod = HMAC - SHA1
& SignatureN once = 3ee8c1b8 - 83d3 - 44af - a94f - 4e0axxxxxx xx

& Version = 2014 - 05 - 26
& SignatureV ersion = 1 . 0
& Signature = XXXX % 3D
```

3 Common parameters

Common request parameters

The following table describes common request parameters used in most Alibaba Cloud APIs.

Table 3-1: Common request parameters

Parameter	Type	Required?	Description
Format	String	No	The format of the response. Valid values: JSON (default) XML
Version	String	Yes	The version of the API. It uses the date format <code>YYYY-MM-DD</code> . Valid value: 2016-04-28
AccessKeyId	String	Yes	The AccessKey ID of the user who calls the API.
Signature	String	Yes	The request signature.
SignatureMethod	String	Yes	The algorithm used to create the request signature. Valid value: HMAC-SHA1
Timestamp	String	Yes	The time at which the request is signed. It uses the format: <code>YYYY-MM-DDThh:mm:ssZ</code> . For example, 2013-01-10T12:00:00Z.
SignatureVersion	String	Yes	The signature version to use. Valid value: 1.0
SignatureNonce	String	Yes	A random number for the signature to prevent from network attacks. Different random numbers must be used for different requests.

Common response parameters

Alibaba Cloud API responses all use a unified format. A status code of the format 2xx indicates a successful call, and a status code of the 4xx or 5xx format indicates a failed call. For successful calls, returned data can be in a XML or JSON format. You can specify the format of the returned data when sending a request. The default format is XML.

A `RequestId` is returned no matter if it is successful or not.

- XML format

```
<? xml version =" 1 . 0 " encoding =" utf - 8 "? >
<!-- The root node of the result -->
< Action + Response >
    <!-- The returned result -->
    < RequestId > 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16
</ RequestId >
    <!-- The returned result -->
</ Action + Response >
```

- JSON format

```
{
  " RequestId ":" 4C467B38 - 3910 - 447D - 87BC - AC049166F2 16
",
  /* The returned result */
}
```

4 Elastic IP Address

4.1 AllocateEipAddress

Creates an Elastic IP Address (EIP).

Issues to note

Before you call this API, make sure that you have known the billing methods and prices of EIPs. For more information, see [Billing method](#).

After you call this API, an EIP in the Available state is allocated in the specified region. EIP supports ICMP, TCP, and UDP protocols, but does not support the IGMP and SCTP protocols.

Debug

Use [OpenAPI Explorer](#) to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required ?	Example value	Description
Action	String	Yes	AllocateEipAddress	The name of this action. Value: AllocateEipAddress
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP belongs. To query the region ID, call DescribeRegions .
AutoPay	Boolean	No	false	Indicates whether to pay automatically. Leave this parameter blank.
Bandwidth	String	No	5	Optional. The peak bandwidth of the EIP. Unit: Mbit/s. Default value: 5

Parameter	Type	Required?	Example value	Description
ClientToken	String	No	02fb3da4-130e-11e9-8e44-001****	Optional. The client token used to guarantee the idempotence of the request. The value of this parameter is generated by the client. The value is unique among different requests and 1 to 64 ASCII characters in length.
ISP	String	No	BGP	Optional. The type of the line. Default value: BGP. - If you have enabled a single-line bandwidth whitelist, you can set the ISP parameter to ChinaTelecom, ChinaUnicom or ChinaMobile to enable a single-line EIP provided by China Telecom, China Unicom, and China Mobile respectively. - This parameter is required if you are a financial cloud user and select the Hangzhou region. Value: BGP_FinanceCloud
InstanceChargeType	String	No	PostPaid	The payment method of the EIP. Value: PostPaid (Pay-As-You-Go). The value of the InternetChargeType parameter must be PayByTraffic. For more information about the Pay-As-You-Go billing method, see Pay-As-You-Go .

Parameter	Type	Required ?	Example value	Description
InternetChargeType	String	No	PayByTraffic	Optional. The billing method of the EIP. Value: PayByTraffic, which means traffic-based billing. For more information, see Traffic-based billing .
Netmode	String	No	Public	Optional. The network type. Default value: Public
Period	Integer	No	1	The purchase period. Leave this parameter blank.
PricingCycle	String	No	Month	The billing cycle of Subscription. Leave this parameter blank.
ResourceGroupId	String	No	rg-acfmxazffgds****	Optional. The ID of the enterprise resource group.

Response parameters

Parameter	Type	Example value	Description
EipAddress	String	12.xx.xx.78	The created EIP.
AllocationId	String	eip-25877c70gdh****	The ID of the EIP.
OrderId	Long	10	The order number, which is returned only when InstanceChargeType is set to PrePaid.
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The request ID.
ResourceGroupId	String	rg-acfmxazfdgdg****	The ID of the enterprise resource group.

Examples

Request example

```
http ( s )://[ Endpoint ]/? Action = AllocateEi pAddress
& RegionId = cn - hangzhou
&< CommonPara meters >
```

Response examples

XML format

```
< AllocateEi pAddressRe sponse >
  < Allocation Id > eip - 25877c70gf dkh ****</ Allocation Id >
  < EipAddress > 123 . xx . xx . 206 </ EipAddress >
  < RequestId > B6B9F518 - 60F8 - 4D81 - 9242 - 1207B35675 4D </
RequestId >
</ AllocateEi pAddressRe sponse >
```

JSON format

```
{
  " RequestId ":" B6B9F518 - 60F8 - 4D81 - 9242 - 1207B35675 4D ",
  " EipAddress ":" 123 . xx . xx . 206 ",
  " Allocation Id ":" eip - 25877c70gf dkh ****"
}
```

Errors

HTTP status code	Error code	Error message	Description
403	Forbbiden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.
400	QuotaExceeded. Eip	Elastic IP address quota exceeded	The quota of EIPs has been reached. To increase the quota, open a ticket . Alternatively, we recommend that you use NAT Gateway to obtain more IP addresses.
400	InvalidPar ameter	Specified value of " InternetChargeType" is not valid	The value of the InternetChargeType parameter is invalid.
400	InvalidPar ameter	Specified value of " Bandwidth" is not valid.	The specified bandwidth value is invalid.

HTTP status code	Error code	Error message	Description
400	QuotaExceeded.Eip	Elastic IP address quota exceeded.	The quota of EIPs has been reached. To increase the quota, open a ticket . Alternatively, we recommend that you use NAT Gateway to obtain more IP addresses.
400	ReserveIpFail	Reserve eip failed.	The operation to reserve the EIP failed.
400	InvalidRegion.NotSupport	The specified region does not support.	The specified region does not support this operation .

For a list of error codes, visit the [API Error Center](#).

4.2 AssociateEipAddress

Associates an EIP with a cloud product instance in the same region.

Note the following when you call this action:

- You can associate an EIP with a VPC ECS instance, a VPC SLB instance, or a NAT Gateway in the same region.
- To associate an EIP with a NAT Gateway, make sure that there was no NAT bandwidth package under your account before January 26, 2018. Otherwise open a ticket to associate the EIP with the NAT Gateway.

Debug

By using [API Explorer](#), you can easily debug APIs, automatically generate SDK code examples, and quickly search for APIs.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	AssociateEipAddress	The name of this action. Value: AssociateEipAddress.

Parameter	Type	Required ?	Example value	Description
AllocationId	String	Yes	eip-2zeerraiwb7ujxxxxxxxxx	The ID of the EIP.
InstanceId	String	Yes	i-2zebb08phyCZxxxxxxxxx	The ID of the instance to associate.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP belongs.
InstanceRegionId	String	No	cn-hangzhou	The ID of the region to which the associated instance belongs.
InstanceType	String	No	EcsInstance	The type of the cloud product instance to associate. Valid values: Nat SlbInstance EcsInstance NetworkInterface.
Mode	String	No	NAT	The mode of associating. Valid values: NAT MULTI_BINDED.
PrivateIpAddress	String	No	192.xx.xx.4	An IP address in the CIDR block of the VSwitch. If you leave the option empty, the system allocates a private IP address according to the VPC ID and VSwitch ID.

Response parameters

Parameter	Type	Example value	Description
RequestId	String	C0FD0EED-F90D-4479-803D-DD62335357E5	The ID of the request.

Examples

Request example

```
http ( s ):// vpc . aliyuncs . com /? Action = AssociateE
ipAddress
& Allocation Id = eip - 2zeerraiwb 7ujxxxxxxx x
& InstanceId = i - 2zebb08phy czxxxxxxx
< CommonPara meters >
```

Response example

XML format

```
< AssociateE ipAddressR esponse >
  < RequestId > 0ED8D006 - F706 - 4D23 - 88ED - E11ED28DCA C0 </
  RequestId >
</ AssociateE ipAddressR esponse >
```

JSON format

```
{
  " RequestId ":" 0ED8D006 - F706 - 4D23 - 88ED - E11ED28DCA C0 "
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidAssociation. Duplicated	Specified instance already is associated.	This instance is already associated with an EIP or a Global Acceleration instance. You must delete this instance before you can associate it with a different EIP or Global Acceleration instance.
400	OperationDenied	Specified instance is not in VPC.	The specified instance does not exist in the VPC.
400	InvalidParameter. Mismatch	Specified elastic IP address and ECS instance are not in the same region .	The specified EIP and ECS instance are not in the same region.

HTTP status code	Error code	Error message	Description
400	IncorrectEipStatus	Current elastic IP status does not support this operation	The current status of the specified EIP address does not support this operation.
404	InvalidInstanceId.NotFound	Specified instance does not exist.	The specified instance does not exist.
400	IncorrectInstanceStatus	Current instance status does not support this operation.	The current instance status does not support this operation.
400	InvalidInstanceType.ValueNotSupported	The specified value of InstanceType is not supported.	The value of the InstanceType parameter is invalid.
400	IncorrectHaVipStatus	HaVip can be operated by this action only when it's status is Available or InUse.	You can perform this operation only if the HAVIP is the Available or InUse state.
400	InvalidParameter	The specified parameter is not valid.	The specified parameter value is invalid.
400	OperationDenied	Eip of default vpc not allow this operation	The EIP of the default VPC does not support this operation.
400	Forbidden	The eip instance owner error	You need to be authorized to call the EIP. Please check that you have the appropriate permissions and try again.
400	InvalidBindingStatus	The eip binding status invalid.	The associating status of the EIP is invalid.
400	BIND_INSTANCE_HAVE_PORTMAP_OR_BIND_EIP	The instance may have portMap or already bind eip.	You must delete the existing port forwarding rule associated with the ECS instance first.
400	BIND_INSTANCE_OWNER_ERROR	Cannot operate the eip.	You cannot operate this EIP.

HTTP status code	Error code	Error message	Description
404	InvalidAllocationId.NotFound	Specified allocation ID is not found	The specified public IP address does not exist.
400	InvalidParams.NotFound	instance not found	The specified instance does not exist.

[See common error codes](#)

4.3 ModifyEipAddressAttribute

Modifies the name, description, and peak bandwidth of an Elastic IP Address (EIP).

Debug

[Use OpenAPI Explorer to perform debug operations and generate SDK code examples.](#)

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ModifyEipAddressAttribute	The name of this action. Value: ModifyEipAddressAttribute
AllocationId	String	Yes	eip-2zeerraiwb7uj6i0d0fo3	The instance ID of the EIP.
RegionId	String	Yes	cn-hangzhou	The region ID of the VPC to which the route table belongs.
Bandwidth	String	No	100	Optional. The peak bandwidth of the EIP. Unit: Mbit/s

Parameter	Type	Required?	Example value	Description
Description	String	No	Description	Optional. The description of the EIP. The description must be 2 to 256 characters in length. It must start with a letter. It cannot start with <code>http://</code> or <code>https://</code> .
Name	String	No	Test123	Optional. The name of the EIP. The name must be 2 to 128 characters in length. It must start with a letter. It can contain numbers, periods (.), underscores (_), and hyphens (-). It cannot start with <code>http://</code> or <code>https://</code> .

Response parameters

Parameter	Type	Example value	Description
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=ModifyEipAddressAttribute
&AllocationId=eip-25877c70xxxxxx
&Name=eip1
&<CommonParameters>
```

Response example

XML format

```
<ModifyEipAddressAttributeResponse>
  <RequestId>0ED8D006-F706-4D23-88ED-E11ED28DCA0C</RequestId>
```

```
</ ModifyEipAddressAttributeResponse >
```

JSON format

```
{
  "RequestId":"0ED8D006 - F706 - 4D23 - 88ED - E11ED28DCA C0 "
}
```

Errors

HTTP status code	Error code	Error message	Description
400	InsufficientBalance.Eip	Your account does not have enough balance.	Your account balance is insufficient.
404	InvalidAllocationId.NotFound	Specified allocation ID is not found	The specified public IP address does not exist.
400	InvalidParameter	Specified value of "Bandwidth" is not supported.	The specified bandwidth is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The request failed to be processed due to unknown errors.
400	IncorrectEipStatus	Current elastic IP status does not support this operation.	The status of the specified EIP does not permit this operation.
404	InvalidAllocationId.NotFound	Specified allocation ID is not found..	The specified public IP address does not exist.
400	InvalidParameter	The parameter is invalid.	The specified parameter value is invalid.
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	The specified region does not exist.

For a list of error codes, visit the [API Error Center](#).

4.4 DescribeEipAddresses

Queries the created EIPs in a specified region.

Debug

[Use OpenAPI Explorer to perform debug operations and generate SDK code examples.](#)

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeEipAddresses	The name of this action. Value: DescribeEipAddresses
RegionId	String	Yes	cn-hangzhou	The ID of the region to be queried. To query the region ID, call DescribeRegions .
AllocationId	String	No	eip-2zeerraiwb7ujxxxxxxxxx	Optional. The ID of the EIP to be queried.
AssociatedInstanceId	String	No	i-2zebb08phyxxxxxxxxx	Optional. The ID of the cloud instance associated with the EIP.

Parameter	Type	Required ?	Example value	Description
Associated InstanceType	String	No	EcsInstance	Optional. The type of the cloud instance associated with the EIP. · EcsInstance (default): ECS instances of the VPC network · SlbInstance: Server Load Balancer (SLB) instances of the VPC network · Nat: NAT Gateways · HaVip: High-Availability Virtual IP Addresses (HaVips) Each ECS instance, SLB instance, and HaVip can only be associated with one EIP . One NAT Gateway can be associated with multiple EIPs.
ChargeType	String	No	PostPaid	Optional. The billing method of the EIP. Value: Postpaid: Pay-As-You-Go
EipAddress	String	No	116.xx.xx.28	Optional. The IP address of the EIP. If you specify this parameter, you can view the information of a specific EIP.
Filter . 1 . Key	String	No	Filter.1.Name	Optional. The filter condition.
Filter . 1 . Value	String	No	value1	Optional. The value of the corresponding filter condition.

Parameter	Type	Required ?	Example value	Description
Filter . 2 . Key	String	No	Filter.2. Description	Optional. The filter condition.
Filter . 2 . Value	String	No	value2	Optional. The value of the corresponding filter condition.
ISP	String	No	BGP	Optional. The service provider . The value is usually BGP.
IncludeReservationData	Boolean	No	true	Optional. Indicates whether to include orders that have not taken effect. Default value: False.
LockReason	String	No	financial	Optional. The reason why the EIP is locked. Valid values: - financial: The EIP is locked due to overdue payments. - security: The EIP is locked for security reasons.
PageNumber	Integer	No	10	Optional. The page number. Default value: 1
PageSize	Integer	No	10	Optional. The number of entries per page in the case of a paged query result. Maximum value: 50. Default value: 10
ResourceGroupId	String	No	rg-acfmxazb4p xxxxxxxx	Optional. The ID of the resource group.

Parameter	Type	Required?	Example value	Description
Status	String	No	Available	Optional. The status of the EIP. Valid values: - Associating: The EIP is being associated with a cloud instance. - Unassociating: The EIP is being disassociated from a cloud instance. - InUse: The EIP is already allocated. - Available: The EIP is available.

Response parameters

Parameter	Type	Example value	Description
EipAddresses			A list of EIPs.
AllocationId	String	eip-2zeerraiwb7ujxxxxxxxx	The ID of the EIP.
AllocationTime	String	2019-04-23T01:37:38Z	The time when the EIP is created.
AvailableRegions		cn-hangzhou	The ID of the region to which the EIP belongs.
Bandwidth	String	5	The peak bandwidth of the EIP. Unit: Mbit/s
BandwidthPackageId	String	cbwp-bp1ego3i4j07cxxxxxxxx	The ID of the Internet Shared Bandwidth instance to which the EIP is added.
BandwidthPackageType	String	CommonBandwidthPackage	The type of the Internet Shared Bandwidth instance.
ChargeType	String	PostPaid	The billing method of the EIP.

Parameter	Type	Example value	Description
Description	String	Overview	The description of the EIP.
EipBandwidth	String	101	The bandwidth of the EIP before the EIP is added to or after the EIP is removed from the Internet Shared Bandwidth instance.
ExpiredTime	String	2019-04-29T02:37:38Z	The time when the EIP expires, which follows the ISO 8601 standard and uses UTC time. It is in the format of YYYY-MM-DDThh:mmZ.
HDMonitorStatus	String	false	Indicates whether high granularity monitoring is enabled for the EIP.
HasReservationData	String	wwedayhddrhht	The value is true only when the request parameter IncludeReservationData is set to true and orders that have not taken effect exit.
ISP	String	BGP	The service provider. The value is usually BGP.
InstanceId	String	vpc-bp15zckdt37xxxxxxxxx	The ID of the cloud instance that is associated with the EIP.
InstanceRegionId	String	cn-hangzhou	The region ID of the cloud instance that is associated with the EIP.
InstanceType	String	EcsInstance	The type of the cloud instance that is associated with the EIP.
InternetChargeType	String	PayByBandwidth	The billing method of the EIP.

Parameter	Type	Example value	Description
IpAddress	String	101.xx.xx.36	The IP address of the EIP.
Name	String	Elastic IP	The name of the EIP.
OperationLocks			The details of a locked EIP.
LockReason	String	financial	The reason why the EIP is locked. Valid values: - financial: The EIP is locked due to overdue payments. - security: The EIP is locked for security reasons.
RegionId	String	cn-hangzhou	The ID of the region to which the EIP belongs.
ReservationActiveTime	String	2019-03-11T16:00:00Z	The time when a renewal takes effect.
ReservationBandwidth	String	12	The bandwidth of the EIP after the renewal.
ReservationInternetChargeType	String	PayByBandwidth	The payment method of the renewal.
ReservationOrderType	String	RENEWCHANGE	The type of the renewal order. Valid values: - RENEWCHANGE: Change the specification. - TEMP_UPGRADE: Temporarily upgrade the EIP. - UPGRADE: Upgrade the EIP.
ResourceGroupId	String	rg-acfmxazxxx xxxxxx	The ID of the resource group.

Parameter	Type	Example value	Description
Status	String	Associating	The status of the EIP. Valid values: - Associating: The EIP is being associated with a cloud instance. - Unassociating: The EIP is being disassociated from a cloud instance. - InUse: The EIP is already allocated. - Available: The EIP is available.
TotalCount	Integer	10	The total number of queried entries.
PageNumber	Integer	10	The current page number.
PageSize	Integer	10	The number of entries per page.
RequestId	String	4EC47282-1B74-4534-BD0E-403F3EE64CAF	The request ID.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DescribeEipAddresses
&RegionId=cn-hangzhou
&CommonParameters
```

Response examples

XML format

```
<DescribeEipAddressesResponse>
  <RequestId>7EEF2D6B-D207-4197-AE37-01279C888757</RequestId>
  <PageNumber>1</PageNumber>
  <EipAddresses>
    <EipAddress>
      <ChargeType>PostPaid</ChargeType>
      <AllocationTime>2018-01-15T11:17:30Z</AllocationTime>
      <ResourceGroupId>rg-acfmxazxxx-xxxxxx</ResourceGroupId>
      <InstanceId></InstanceId>
      <Description></Description>
      <IpAddress>59.110.xx.xx</IpAddress>
```

```

    < Allocation Id > eip - 2ze88m67qx 5zxxxxx </ Allocation
Id >
    < InternetChargeType > PayByTraffic </ InternetCh
argeType >
    < InstanceType ></ InstanceType >
    < Name ></ Name >
    < Status > Available </ Status >
    < BandwidthPackageId ></ BandwidthPackageId >
    < InstanceRegionId ></ InstanceRegionId >
    < BandwidthPackageType ></ BandwidthPackageType >
    < RegionId > cn - beijing </ RegionId >
    < OperationLocks ></ OperationLocks >
    < ExpiredTime ></ ExpiredTime >
    < AvailableRegions >
        < AvailableRegion > cn - beijing </ AvailableRegion >
    </ AvailableRegions >
        < Bandwidth > 1 </ Bandwidth >
    </ EipAddress >
</ EipAddresses >
< TotalCount > 1 </ TotalCount >
< PageSize > 10 </ PageSize >
</ DescribeEipAddresses Response >

```

JSON format

```

{
  "DescribeEipAddresses Response":{
    "PageNumber":" 1 ",
    "EipAddresses":{
      "EipAddress":{
        "ChargeType":" PostPaid ",
        "Status":" Available ",
        "RegionId":" cn - beijing ",
        "ResourceGroupId":" rg - acfmxazxxx xxxxx ",
        "Allocation Time":" 2018 - 01 - 15T11 : 17 : 30Z ",
        "IpAddress":" 59 . 110 . xx . xx ",
        "Allocation Id":" eip - 2ze88m67qx 5zxxxxx ",
        "AvailableRegions":{
          "AvailableRegion":" cn - beijing "
        },
        "InternetChargeType":" PayByTraffic ",
        "Bandwidth":" 1 "
      }
    },
    "TotalCount":" 1 ",
    "PageSize":" 10 ",
    "RequestId":" 7EEF2D6B - D207 - 4197 - AE37 - 01279C8887 57 "
  }
}

```

```
}
```

Errors

HTTP status code	Error code	Error message	Description
404	Forbidden. RegionNotFound	Specified region is not found during access authentication.	The specified region does not exist. Please check if the specified region is correct.
404	InvalidFilterKey. NotFound		The specified filter key is invalid.
404	InvalidFilterValue		The specified filter value is invalid.
404	InvalidLockReason. NotFound	The specified LockReason is not found	The reason why the EIP is locked is unknown.
400	InvalidInstanceAssociatedInstanceType. ValueNotSupported	The specified value of AssociatedInstanceType is not supported.	The specified value of AssociatedInstanceType is invalid.
400	InvalidChargeType. ValueNotSupported	The specified ChargeType is not supported.	The specified billing method is not supported . Please select another billing method.

For a list of error codes, visit the [API Error Center](#).

4.5 UnassociateEipAddress

Disassociates an Elastic IP Address (EIP) from a cloud resource.

Debug

[Use OpenAPI Explorer to perform debug operations and generate SDK code examples.](#)

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	UnassociateEipAddress	The name of this action. Value: UnassociateEipAddress
AllocationId	String	Yes	eip-2zeerraiwb7uj6i0d0fo3	The instance ID of the EIP.
InstanceId	String	Yes	i-12345678	The instance ID of the cloud resource to be disassociated.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP belongs.
InstanceType	String	No	EcsInstance	Optional. The type of the cloud resource instance to be disassociated. Valid values: - EcsInstance (default): ECS instances of the VPC type - SlbInstance: Server Load Balancer (SLB) instances of the VPC type - Nat: NAT Gateways - HaVip: High-Availability Virtual IP Addresses (HaVips)

Response parameters

Parameter	Type	Example value	Description
RequestId	String	220F3179-5238-47F0-A0CA-1272AA2BC41F	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=UnassociateEipAddresses
```

```
& AllocationId = eip - 25877c70x
& InstanceId = i - 25skktcp4
&< CommonParameters >
```

Response example

XML format

```
< UnassociateEipAddressResponse >
  < RequestId > 0ED8D006 - F706 - 4D23 - 88ED - E11ED28DCA C0 </
    RequestId >
</ UnassociateEipAddressResponse >
```

JSON format

```
{
  "RequestId ":" 0ED8D006 - F706 - 4D23 - 88ED - E11ED28DCA C0 "
}
```

Errors

HTTP status code	Error code	Error message	Description
400	IncorrectEipStatus	Current elastic IP status does not support this operation.	The status of the specified EIP does not permit this operation.
400	InvalidInstanceId.NotFound	Specified instance does not exist.	The specified instance does not exist.
400	IncorrectInstanceStatus	The current status of instance does not support this operation.	The status of the instance does not permit this operation.
400	InvalidInstanceType.ValueNotSupported	The specified value of InstanceType is not supported.	The value of InstanceType is invalid.
400	IncorrectHaVipStatus	This operation is denied because status of the specified HaVip is neither Available nor InUse.	This operation cannot be performed because the HaVip is not in the Available or InUse state.
400	OperationDenied	Eip of default vpc not allow this operation	The EIP of the default VPC does not support this operation.

HTTP status code	Error code	Error message	Description
404	Forbidden. RegionNotFound	Specified region is not found during access authentication.	The specified region does not exist.
400	InvalidParameter	The specified parameter is not valid.	The specified parameter value is invalid.
400	Forbidden	The eip instance owner error	You are not authorized to call this EIP.
400	InvalidBindingStatus	The eip binding status invalid.	The associating status of the EIP is invalid.

For a list of error codes, visit the [API Error Center](#).

4.6 ReleaseEipAddress

Releases an Elastic IP Address (EIP).



Note:

Only EIPs in the Available state can be released.

Debug

Use [OpenAPI Explorer](#) to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	ReleaseEipAddress	The name of this action. Value: ReleaseEipAddress
AllocationId	String	Yes	eip-2zeerraiwb7uj6i0d0fo3	The ID of the EIP to be released.

Parameter	Type	Required?	Example value	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP belongs. To query the region ID, call DescribeRegions .

Response parameters

Parameter	Type	Example value	Description
RequestId	String	748C38F6-9A3D-482E-83FB-DB6C39C68AEA	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=ReleaseEip&AllocationId=eip-25877c70x
&<CommonParameters>
```

Response example

XML format

```
<<?xml version="1.0" encoding="UTF-8"?>
<ReleaseEipAddressResponse>
  <RequestId>748C38F6-9A3D-482E-83FB-DB6C39C68AEA</RequestId>
</ReleaseEipAddressResponse>
```

JSON format

```
{
  "RequestId": "748C38F6-9A3D-482E-83FB-DB6C39C68AEA"
```

```
}
```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidAllocationId.NotFound	Specified allocation ID is not found	The specified public IP address does not exist.
400	IncorrectEipStatus	Current elastic IP status does not support this operation.	The status of the specified EIP does not permit this operation.
500	InternalError	The request processing has failed due to some unknown error.	The request failed to be processed due to unknown errors.
404	Forbidden.RegionNotFound	Specified region is not found during access authentication.	The specified region does not exist.
400	Forbidden.ChargeTypeIsPrepaid	It's forbidden to release a prepaid EIP	Subscription EIPs cannot be released.
400	Forbidden	The eip instance owner error	You are not authorized to release the specified EIP.
400	TaskConflict.AssociateGlobalAccelerationInstance	Operate too frequent.	Too many requests were sent.

For a list of error codes, visit the [API Error Center](#).

4.7 DescribeEipGatewayInfo

Queries the gateway address and subnet mask of an EIP.

You can only query the gateway address and subnet mask of an EIP that is associated with a secondary Elastic Network Interface (ENI) in the multi-EIP to ENI mode.

Debug

Use [OpenAPI Explorer](#) to perform debug operations and generate SDK code examples.

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeEipGatewayInfo	The name of this action. Value: DescribeEipGatewayInfo
InstanceId	String	Yes	eni-bp1d66qjxb3qoin3xxxx	The ID of the ENI with which the EIP is associated.
RegionId	String	Yes	cn-zhangjiakou	The region ID of the EIP. To query the region ID, call DescribeRegions .

Response parameters

Parameter	Type	Example value	Description
Code	String	200	The status code of the request.
EipInfos			The details of the EIP.
Ip	String	47.xx.xx.236	The IP address of the EIP.
IpGw	String	47.xx.xx.1	The gateway address of the EIP.
IpMask	String	255.255.255.0	The subnet mask of the EIP.
Message	String	successful	The message indicating whether the request is successful.
RequestId	String	C0FD0EED-F90D-4479-803D-DD62335357E5	The ID of the request.

Examples

Request example

```
http ( s ) : // vpc . aliyuncs . com / ? Action = DescribeEipGatewayInfo & InstanceId = eni - bp1d66qjxb 3qoin3 ****
```

```
& RegionId = cn - zhangjiako u  
&< CommonPara meters >
```

Response examples

XML format

```
< DescribeEipGatewayInfoResponse >  
  < Message > successful </ Message >  
  < RequestId > 0ED8D006 - F706 - 4D23 - 88ED - E11ED28DCA C0 </  
  RequestId >  
  < EipInfos >  
    < EipInfo >  
      < IP > 47 . xx . xx . 236 </ IP >  
      < IpMask > 255 . 255 . 255 . 0 </ IpMask >  
      < IpGw > 47 . xx . xx . 1 </ IpGw >  
    </ EipInfo >  
  </ EipInfos >  
  < Code > 200 </ Code >  
</ DescribeEipGatewayInfoResponse >
```

JSON format

```
{  
  " Message ":" successful ",  
  " RequestId ":" 0ED8D006 - F706 - 4D23 - 88ED - E11ED28DCA C0 ",  
  " EipInfos ":{  
    " EipInfo ":[  
      {  
        " IpMask ":" 255 . 255 . 255 . 0 ",  
        " IP ":" 47 . xx . xx . 236 ",  
        " IpGw ":" 47 . xx . xx . 1 "  
      }  
    ]  
  },  
  " Code ":" 200 "  
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden	User not authorized to operate on the specified resource.	You are not authorized to operate on this resource.

[See common error codes.](#)

4.8 DescribeEipMonitorData

Queries the monitoring data of an Elastic IP address (EIP).

Debug

[Use OpenAPI Explorer to perform debug operations and generate SDK code examples.](#)

Request parameters

Parameter	Type	Required?	Example value	Description
Action	String	Yes	DescribeEipMonitorData	The name of this action. Value: DescribeEipMonitorData
AllocationId	String	Yes	eip-2zeerraiwb7uj6ixxxxxxxxx	The instance ID of the EIP.
EndTime	String	Yes	2017-01-05T01:05:10Z	The end time to retrieve data. This parameter uses the ISO 8601 format and is output in UTC+8. Format: YYYY-MM-DDThh:mm:ssZ. For example, 20:00:00 UTC+8 of January 10, 2013 should be in the format of 2013-01-10T12:00:00Z. If ss is not 00, the next minute is automatically used as the end time.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the EIP belongs.

Parameter	Type	Required?	Example value	Description
StartTime	String	Yes	2017-01-05T02:05:05Z	The start time to retrieve data. This parameter uses the ISO 8601 format and is output in UTC+8. Format: YYYY-MM-DDThh:mm:ssZ. For example, 20:00:00 UTC+8 of January 10, 2013 should be in the format of 2013-01-10T12:00:00Z. If ss is not 00, the next minute is automatically used as the start time.
Period	Integer	No	60	Optional. The time length of each monitoring data point. Default value: 60. Valid values: 60 600 3600. Unit: seconds - The value of (EndTime – StartTime)/Period must be larger than 200, that is, up to 200 points of monitoring data are returned. - If the value of (EndTime – StartTime) is smaller than 200, only the monitoring data collected at the start time is returned.

Response parameters

Parameter	Type	Example value	Description
EipMonitor Datas			The details of EIP monitoring data.
EipBandwidth	Integer	10	The value of the bandwidth: EipFlow/60. Unit: bit/s.

Parameter	Type	Example value	Description
EipFlow	Integer	675	The sum of the inbound and outbound bandwidth.
EipPackets	Integer	3434	The number of packets.
EipRX	Integer	122	The inbound bandwidth. Unit: Bytes.
EipTX	Integer	343	The outbound bandwidth. Unit: Bytes.
TimeStamp	String	2010-01-21T09:50:23Z	The timestamp of the query in ISO8601 format. Example value: 2018-12-20T03:14:00Z.
RequestId	String	C8B26B44-0189-443E-9816-D951F59623A9	The ID of the request.

Examples

Request example

```
https://vpc.aliyuncs.com/?Action=DescribeEipMonitorData
&AllocationId=eip-2zeerraiwb7uj6ixxxxxxxx
&EndTime=2017-01-05T01:05:10Z
&StartTime=2017-01-05T02:05:05Z
<CommonParameters>
```

Response example

XML format

```
<DescribeEipMonitorData>
  <RequestId>B7D72D42-8A6C-4764-963B-5F7C049FA769</RequestId>
  <EipMonitorData>
    <EipMonitorData>
      <TimeStamp>2019-05-29T03:39:00Z</TimeStamp>
      <EipFlow>32666910</EipFlow>
      <EipTX>140370</EipTX>
      <EipPackets>23700</EipPackets>
      <EipRX>32526540</EipRX>
      <EipBandwidth>544448</EipBandwidth>
    </EipMonitorData>
  </EipMonitorData>
```

```

    < TimeStamp > 2019 - 05 - 29T03 : 40 : 00Z </ TimeStamp >
    < EipFlow > 43020 </ EipFlow >
    < EipTX > 17730 </ EipTX >
    < EipPackets > 120 </ EipPackets >
    < EipRX > 25290 </ EipRX >
    < EipBandwid th > 717 </ EipBandwid th >
  </ EipMonitor Data >
</ EipMonitor Datas >
</ DescribeEi pMonitorDa ta >

```

JSON format

```

{
  "RequestId ":" B7D72D42 - 8A6C - 4764 - 963B - 5F7C049FA7 69 ",
  "EipMonitor Datas ":{
    "EipMonitor Data ":[
      {
        "TimeStamp ":" 2019 - 05 - 29T03 : 39 : 00Z ",
        "EipTX ": 140370 ,
        "EipFlow ": 32666910 ,
        "EipPackets ": 23700 ,
        "EipRX ": 32526540 ,
        "EipBandwid th ": 544448
      },
      {
        "TimeStamp ":" 2019 - 05 - 29T03 : 40 : 00Z ",
        "EipTX ": 17730 ,
        "EipFlow ": 43020 ,
        "EipPackets ": 120 ,
        "EipRX ": 25290 ,
        "EipBandwid th ": 717
      }
    ]
  }
}

```

Errors

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The specified instance ID does not exist.
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The format of the specified start time is invalid.
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The format of the specified end time is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidPeriod. ValueNotSupported	The specified parameter "Period" is not valid.	The specified period value is invalid.
400	InvalidStartTime. TooEarly	The specified parameter "StartTime" is too early.	The specified start time is invalid.
400	InvalidAllocationId. NotFound	Specified allocation id is not found.	The specified public IP address does not exist. Check if you have entered the correct public IP address.
400	OperationDenied. TooManyDataQueried	Specified operation is denied as too many data to return.	The operation cannot be performed because too much data is returned.
404	Forbidden. RegionNotFound	Specified region is not found during access authentication.	The specified region does not exist.

For a list of error codes, visit the [API Error Center](#).