

erc20Bridger

Classes

AdminErc20Bridger

Admin functionality for the token bridge

Extends

- [Erc20Bridger](#)

Constructors

`new AdminErc20Bridger()`

`new`

AdminErc20Bridger (childNetwork : ArbitrumNetwork) : AdminErc20Bridger Bridger for moving ERC20 tokens back and forth between parent-to-child

Parameters

Parameter Type childNetwork [ArbitrumNetwork](#)

Returns

[AdminErc20Bridger](#)

Inherited from

[Erc20Bridger](#) .constructor

Source

[assetBridger/erc20Bridger.ts:201](#)

Properties

Property Modifier Type Description Inherited from nativeToken? readonly string In case of a chain that uses ETH as its native/gas token, this is either undefined or the zero address

In case of a chain that uses an ERC-20 token from the parent network as its native/gas token, this is the address of said token on the parent network [Erc20Bridger](#) .nativeToken

Accessors

`nativeTokenIsEth`

`get`

`protected`

`nativeTokenIsEth () :`

boolean Whether the chain uses ETH as its native/gas token

Returns

boolean

Source

[assetBridger/assetBridger.ts:71](#)

Methods

approveGasToken()

approveGasToken (params : ApproveParamsOrTxRequest) :

Promise < ContractTransaction

Approves the custom gas token to be spent by the relevant gateway on the parent network

Parameters

Parameter	Type	Description
params	ApproveParamsOrTxRequest	

Returns

Promise <ContractTransaction

Inherited from

[Erc20Bridger](#) .[approveGasToken](#)

Source

[assetBridger/erc20Bridger.ts:272](#)

approveToken()

approveToken (params : ApproveParamsOrTxRequest) :

Promise < ContractTransaction

Approve tokens for deposit to the bridge. The tokens will be approved for the relevant gateway.

Parameters

Parameter	Type	Description
params	ApproveParamsOrTxRequest	

Returns

Promise <ContractTransaction

Inherited from

[Erc20Bridger](#) .[approveToken](#)

Source

[assetBridger/erc20Bridger.ts:335](#)

checkChildNetwork()

protected

checkChildNetwork (sop : SignerOrProvider) :

Promise < void

Check the signer/provider matches the child network, throws if not

Parameters

Parameter	Type	Description
sop	SignerOrProvider	

Returns

Promise <void

Inherited from

[Erc20Bridger .checkChildNetwork](#)

Source

[assetBridger/assetBridger.ts:60](#)

checkParentNetwork()

protected

checkParentNetwork (sop : SignerOrProvider) :

Promise < void

Check the signer/provider matches the parent network, throws if not

Parameters

Parameter Type Description sop SignerOrProvider

Returns

Promise <void

Inherited from

[Erc20Bridger .checkParentNetwork](#)

Source

[assetBridger/assetBridger.ts:49](#)

deposit()

deposit (params : Erc20DepositParams | ParentToChildTxReqAndSignerProvider) :

Promise < ParentContractCallTransaction

Execute a token deposit from parent to child network

Parameters

Parameter Type Description params Erc20DepositParams |ParentToChildTxReqAndSignerProvider

Returns

Promise <ParentContractCallTransaction

Inherited from

[Erc20Bridger .deposit](#)

Source

[assetBridger/erc20Bridger.ts:754](#)

getApproveGasTokenRequest()

getApproveGasTokenRequest (params : ProviderTokenApproveParams) :

Promise < Required < Pick < TransactionRequest ,

"data"

|

"value"

|

"to"

Creates a transaction request for approving the custom gas token to be spent by the relevant gateway on the parent network

Parameters

Parameter Type Description params ProviderTokenApproveParams

Returns

Promise <Required <Pick <TransactionRequest , "data" | "value" | "to"

Inherited from

[Erc20Bridger](#) .[getApproveGasTokenRequest](#)

Source

[assetBridger/erc20Bridger.ts:256](#)

getApproveTokenRequest()

getApproveTokenRequest (params : ProviderTokenApproveParams) :

Promise < Required < Pick < TransactionRequest ,

"data"

|

"value"

|

"to"

Get a tx request to approve tokens for deposit to the bridge. The tokens will be approved for the relevant gateway.

Parameters

Parameter Type Description params ProviderTokenApproveParams

Returns

Promise <Required <Pick <TransactionRequest , "data" | "value" | "to"

Inherited from

[Erc20Bridger](#) .[getApproveTokenRequest](#)

Source

[assetBridger/erc20Bridger.ts:302](#)

getChildErc20Address()

getChildErc20Address (erc20ParentAddress :

string , parentProvider : Provider) :

Promise < string

Get the corresponding child network token address for the provided parent network token

Parameters

Parameter	Type	Description
erc20ParentAddress	string	parentProvider Provider

Returns

Promise <string

Inherited from

[Erc20Bridger](#) [.getChildErc20Address](#)

Source

[assetBridger/erc20Bridger.ts:487](#)

getChildGatewayAddress()

getChildGatewayAddress (erc20ParentAddress :

string , childProvider : Provider) :

Promise < string

Get the address of the child gateway for this token

Parameters

Parameter	Type	Description
erc20ParentAddress	string	childProvider Provider

Returns

Promise <string

Inherited from

[Erc20Bridger](#) [.getChildGatewayAddress](#)

Source

[assetBridger/erc20Bridger.ts:240](#)

getChildGatewaySetEvents()

getChildGatewaySetEvents (childProvider : Provider , filter : object , customNetworkL2GatewayRouter ? :

string) :

Promise < object []

Get all the gateway set events on the L2 gateway router

Parameters

Parameter	Type	Description
childProvider	Provider	filter object filter.fromBlock BlockTag filter.toBlock ? BlockTag customNetworkL2GatewayRouter ? string

Returns

Promise

Source[<https://docs.arbitrum.io/welcome/get-started#source-11>] [[assetBridger/erc20Bridger.ts:1201](#)] (<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L1201>) ##### getChildTokenContract()[<https://docs.arbitrum.io/welcome/get-started#getchildtokencontract>] getChildTokenContract (

childProvider : Provider , childTokenAddr : string) : L2GatewayToken Get the child network token contract at the provided address Note: This function just returns a typed ethers object for the provided address, it doesn't check the underlying form of the contract bytecode to see if it's an erc20, and doesn't ensure the validity of any of the underlying functions on that contract. ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-11>) Parameter Type Description childProvider Provider childTokenAddr string ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-12>) L2GatewayToken ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-10>) [Erc20Bridger] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .getChildTokenContract] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#getchildtokencontract-1>) ##### Source[] (<https://docs.arbitrum.io/welcome/get-started#source-12>) [assetBridger/erc20Bridger.ts:458] (<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L458>) #####

getDepositRequest()[](<https://docs.arbitrum.io/welcome/get-started#getdepositrequest>) getDepositRequest (params : DepositRequest) : Promise < ParentToChildTransactionRequest > Get the arguments for calling the deposit function ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-12>) Parameter Type Description params DepositRequest ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-13>) Promise <[ParentToChildTransactionRequest] (<https://docs.arbitrum.io/sdk/reference/dataEntities/transactionRequest#parenttochildtransactionrequest>) > ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-11>) [Erc20Bridger] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .getDepositRequest] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#getdepositrequest-1>) ##### Source[] (<https://docs.arbitrum.io/welcome/get-started#source-13>) [assetBridger/erc20Bridger.ts:647] (<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L647>) #####

getParentErc20Address()[](<https://docs.arbitrum.io/welcome/get-started#getparenterc20address>) getParentErc20Address (erc20ChildChainAddress : string , childProvider : Provider) : Promise < string > Get the corresponding parent network address for the provided child network token Validates the returned address against the child network router to ensure it is correctly mapped to the provided erc20ChildChainAddress ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-13>) Parameter Type Description erc20ChildChainAddress string childProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-14>) Promise ##### Inherited from[] (<https://docs.arbitrum.io/welcome/get-started#inherited-from-12>) [Erc20Bridger] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .getParentErc20Address] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#getparenterc20address-1>) ##### Source[] (<https://docs.arbitrum.io/welcome/get-started#source-14>) [assetBridger/erc20Bridger.ts:510] (<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L510>) #####

getParentGatewayAddress()[](<https://docs.arbitrum.io/welcome/get-started#getparentgatewayaddress>) getParentGatewayAddress (erc20ParentAddress : string , parentProvider : Provider) : Promise < string > Get the address of the parent gateway for this token ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-14>) Parameter Type Description erc20ParentAddress string parentProvider Provider ##### Returns[] (<https://docs.arbitrum.io/welcome/get-started#returns-15>) Promise ##### Inherited from[] (<https://docs.arbitrum.io/welcome/get-started#inherited-from-13>) [Erc20Bridger] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .getParentGatewayAddress] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#getparentgatewayaddress-1>) ##### Source[] (<https://docs.arbitrum.io/welcome/get-started#source-15>) [assetBridger/erc20Bridger.ts:222] (<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L222>) #####

getParentGatewaySetEvents()[](<https://docs.arbitrum.io/welcome/get-started#getparentgatewaysetevents>) getParentGatewaySetEvents (parentProvider : Provider , filter : object) : Promise < object [] > Get all the gateway set events on the Parent gateway router ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-15>) Parameter Type Description parentProvider Provider filter object - filter.fromBlock BlockTag - filter.toBlock BlockTag - ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-16>) Promise ##### Source[] (<https://docs.arbitrum.io/welcome/get-started#source-16>) [assetBridger/erc20Bridger.ts:1177] (<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L1177>) #####

getParentTokenContract()[](<https://docs.arbitrum.io/welcome/get-started#getparenttokencontract>) getParentTokenContract (parentProvider : Provider , parentTokenAddr : string) : ERC20 Get the parent token contract at the provided address Note: This function just returns a typed ethers object for the provided address, it doesn't check the underlying form of the contract bytecode to see if it's an erc20, and doesn't ensure the validity of any of the underlying functions on that contract. ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-16>) Parameter Type Description parentProvider Provider parentTokenAddr string ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-17>) ERC20 ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-14>) [Erc20Bridger] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .getParentTokenContract] (<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#getparenttokencontract-1>) ##### Source[] (<https://docs.arbitrum.io/welcome/get-started#source-17>) [assetBridger/erc20Bridger.ts:474] (<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L474>) #####

getWithdrawalEvents()[](<https://docs.arbitrum.io/welcome/get-started#getwithdrawalevents>) getWithdrawalEvents (childProvider : Provider , gatewayAddress : string , filter : object , parentTokenAddress ? : string , fromAddress ? : string ,

toAddress ? : string) : Promise < object & object [] > Get the child network events created by a withdrawal #####
Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-17>) Parameter Type Description childProvider
Provider gatewayAddress string filter object filter.fromBlock BlockTag - filter.toBlock ? BlockTag - parentTokenAddress ?
string fromAddress ? string toAddress ? string - ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-18>)
Promise ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-15>) [Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .[getWithdrawalEvents]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#getwithdrawalevents-1>) ##### Source[]
(<https://docs.arbitrum.io/welcome/get-started#source-18>) [assetBridger/erc20Bridger.ts:363]
([https://github.com/OffchainLabs/arbitrum-
sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L363](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L363)) #####
getWithdrawalRequest()[](<https://docs.arbitrum.io/welcome/get-started#getwithdrawalrequest>) getWithdrawalRequest (
params : Erc20WithdrawParams) : Promise < ChildToParentTransactionRequest > Get the arguments for calling the token
withdrawal function ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-18>) Parameter Type
Description params Erc20WithdrawParams ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-19>)
Promise <[ChildToParentTransactionRequest]
(<https://docs.arbitrum.io/sdk/reference/dataEntities/transactionRequest#childtoparenttransactionrequest>) > ##### Inherited
from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-16>) [Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .[getWithdrawalRequest]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#getwithdrawalrequest-1>) ##### Source[]
(<https://docs.arbitrum.io/welcome/get-started#source-19>) [assetBridger/erc20Bridger.ts:811]
([https://github.com/OffchainLabs/arbitrum-
sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L811](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L811)) #####
isDepositDisabled()[](<https://docs.arbitrum.io/welcome/get-started#isdepositdisabled>) isDepositDisabled (
parentTokenAddress : string , parentProvider : Provider) : Promise < boolean > Whether the token has been disabled on
the router ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-19>) Parameter Type Description
parentTokenAddress string parentProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-20>)
Promise ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-17>) [Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .[isDepositDisabled]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#isdepositdisabled-1>) ##### Source[]
(<https://docs.arbitrum.io/welcome/get-started#source-20>) [assetBridger/erc20Bridger.ts:556]
([https://github.com/OffchainLabs/arbitrum-
sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L556](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L556)) ##### isRegistered()[]
(<https://docs.arbitrum.io/welcome/get-started#isregistered>) isRegistered (__namedParameters : object) : Promise <
boolean > Checks if the token has been properly registered on both gateways. Mostly useful for tokens that use a custom
gateway. ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-20>) Parameter Type
__namedParameters object __namedParameters.childProvider Provider __namedParameters.erc20ParentAddress string
__namedParameters.parentProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-21>)
Promise ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-18>) [Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .[isRegistered]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#isregistered-1>) ##### Source[]
(<https://docs.arbitrum.io/welcome/get-started#source-21>) [assetBridger/erc20Bridger.ts:907]
([https://github.com/OffchainLabs/arbitrum-
sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L907](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L907)) #####
registerCustomToken()[](<https://docs.arbitrum.io/welcome/get-started#registercustomtoken>) registerCustomToken (
parentTokenAddress : string , childTokenAddress : string , parentSigner : Signer , childProvider : Provider) : Promise <
ParentContractTransaction < ParentTransactionReceipt >> Register a custom token on the Arbitrum bridge
See[https://developer.offchainlabs.com/docs/bridging_assets#the-arbitrum-generic-custom-gateway]
(https://developer.offchainlabs.com/docs/bridging_assets#the-arbitrum-generic-custom-gateway) for more details #####
Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-21>) Parameter Type Description parentTokenAddress
string Address of the already deployed parent token. Must inherit
from[[https://developer.offchainlabs.com/docs/sol_contract_docs/md_docs/arb-bridge-
peripherals/tokenbridge/ethereum/icustomtoken](https://developer.offchainlabs.com/docs/sol_contract_docs/md_docs/arb-bridge-peripherals/tokenbridge/ethereum/icustomtoken)]([https://developer.offchainlabs.com/docs/sol_contract_docs/md_docs/arb-bridge-
peripherals/tokenbridge/ethereum/icustomtoken](https://developer.offchainlabs.com/docs/sol_contract_docs/md_docs/arb-bridge-peripherals/tokenbridge/ethereum/icustomtoken)) . childTokenAddress string Address of the already deployed child
token. Must inherit from[[https://developer.offchainlabs.com/docs/sol_contract_docs/md_docs/arb-bridge-
peripherals/tokenbridge/arbitrum/iarbtokens](https://developer.offchainlabs.com/docs/sol_contract_docs/md_docs/arb-bridge-peripherals/tokenbridge/arbitrum/iarbtokens)]([https://developer.offchainlabs.com/docs/sol_contract_docs/md_docs/arb-bridge-
peripherals/tokenbridge/arbitrum/iarbtokens](https://developer.offchainlabs.com/docs/sol_contract_docs/md_docs/arb-bridge-

peripherals/tokenbridge/arbitrum/iarbtokens)) . parentSigner Signer The signer with the rights to call registerTokenOnL2 on the
parent token childProvider Provider Arbitrum rpc provider ##### Returns[]([https://docs.arbitrum.io/welcome/get-
started#returns-22](https://docs.arbitrum.io/welcome/get-started#returns-22)) Promise > ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-22>)
[assetBridger/erc20Bridger.ts:1018]([https://github.com/OffchainLabs/arbitrum-
sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L1018](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L1018)) ##### setGateways()[]
(<https://docs.arbitrum.io/welcome/get-started#setgateways>) setGateways (parentSigner : Signer , childProvider : Provider ,
tokenGateways : TokenAndGateway [] , options ? : GasOverrides) : Promise < ParentContractCallTransaction > Register
the provided token addresses against the provided gateways ##### Parameters[]([https://docs.arbitrum.io/welcome/get-
started#parameters-22](https://docs.arbitrum.io/welcome/get-started#parameters-22)) Parameter Type Description parentSigner Signer childProvider Provider tokenGateways
TokenAndGateway [] options ? GasOverrides - ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-23>)
Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-23>) [assetBridger/erc20Bridger.ts:1234]
([https://github.com/OffchainLabs/arbitrum-
sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L1234](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L1234)) ##### withdraw()[]

(<https://docs.arbitrum.io/welcome/get-started#withdraw>) withdraw (params : ChildToParentTxReqAndSigner | OmitTyped < Erc20WithdrawParams , "from" > & object) : Promise < ChildContractTransaction > Withdraw tokens from child to parent network ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-23>) Parameter Type Description params ChildToParentTxReqAndSigner [[OmitTyped]](<https://docs.arbitrum.io/sdk/reference/utis/types#omittedtk>) &object ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-24>) Promise ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-19>) [Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .[withdraw]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#withdraw-1>) ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-24>) [assetBridger/erc20Bridger.ts:874]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L874>) ##### fromProvider()[](<https://docs.arbitrum.io/welcome/get-started#fromprovider>) static fromProvider (childProvider : Provider) : Promise < Erc20Bridger > Instantiates a new Erc20Bridger from a child provider ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-24>) Parameter Type Description childProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-25>) Promise <[Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) > ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-20>) [Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) .[fromProvider]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#fromprovider-1>) ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-25>) [assetBridger/erc20Bridger.ts:212]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L212>) ### Erc20Bridger[](<https://docs.arbitrum.io/welcome/get-started#erc20bridger>) Bridger for moving ERC20 tokens back and forth between parent-to-child ##### Extends[](<https://docs.arbitrum.io/welcome/get-started#extends-1>) * [AssetBridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#assetbridgerdepositparamswithdrawparams>) * | [ChildToParentTransactionRequest]
(<https://docs.arbitrum.io/sdk/reference/dataEntities/transactionRequest#childtoparenttransactionrequest>) * > ##### Extended by[](<https://docs.arbitrum.io/welcome/get-started#extended-by>) * [AdminErc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#adminerc20bridger>) ##### Constructors[](<https://docs.arbitrum.io/welcome/get-started#constructors-1>) ##### new Erc20Bridger()[](<https://docs.arbitrum.io/welcome/get-started#new-erc20bridger>) new Erc20Bridger (childNetwork : ArbitrumNetwork) : Erc20Bridger Bridger for moving ERC20 tokens back and forth between parent-to-child ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-25>) Parameter Type childNetwork [ArbitrumNetwork]
(<https://docs.arbitrum.io/sdk/reference/dataEntities/networks#arbitrumnetwork>) ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-26>) [Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) ##### Overrides[](<https://docs.arbitrum.io/welcome/get-started#overrides>) AssetBridger< Erc20DepositParams | ParentToChildTxReqAndSignerProvider, OmitTyped | ChildToParentTransactionRequest >.constructor ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-26>) [assetBridger/erc20Bridger.ts:201]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L201>) ##### Properties[](<https://docs.arbitrum.io/welcome/get-started#properties-1>) Property Modifier Type Description Inherited from nativeToken? readonly string In case of a chain that uses ETH as its native/gas token, this is either undefined or the zero address In case of a chain that uses an ERC-20 token from the parent network as its native/gas token, this is the address of said token on the parent network [AssetBridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#assetbridgerdepositparamswithdrawparams>) .nativeToken ##### Accessors[](<https://docs.arbitrum.io/welcome/get-started#accessors-1>) ##### nativeTokenIsEth[](<https://docs.arbitrum.io/welcome/get-started#nativetokeniseth-1>) get protected nativeTokenIsEth () : boolean Whether the chain uses ETH as its native/gas token ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-27>) boolean ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-27>) [assetBridger/assetBridger.ts:71]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/assetBridger.ts#L71>) ##### Methods[](<https://docs.arbitrum.io/welcome/get-started#methods-1>) ##### approveGasToken()[](<https://docs.arbitrum.io/welcome/get-started#approvegastoken-1>) approveGasToken (params : ApproveParamsOrTxRequest) : Promise < ContractTransaction > Approves the custom gas token to be spent by the relevant gateway on the parent network ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-26>) Parameter Type Description params ApproveParamsOrTxRequest ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-28>) Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-28>) [assetBridger/erc20Bridger.ts:272]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L272>) ##### approveToken()[](<https://docs.arbitrum.io/welcome/get-started#approvetoken-1>) approveToken (params : ApproveParamsOrTxRequest) : Promise < ContractTransaction > Approve tokens for deposit to the bridge. The tokens will be approved for the relevant gateway. ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-27>) Parameter Type Description params ApproveParamsOrTxRequest ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-29>) Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-29>) [assetBridger/erc20Bridger.ts:335]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L335>) ##### checkChildNetwork()[](<https://docs.arbitrum.io/welcome/get-started#checkchildnetwork-1>) protected checkChildNetwork (

sop : SignerOrProvider) : Promise < void > Check the signer/provider matches the child network, throws if not #####
Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-28>) Parameter Type Description sop
SignerOrProvider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-30>) Promise ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-21>) [AssetBridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#assetbridgerdepositparamswithdrawparams>) .[checkChildNetwork]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#checkchildnetwork>) ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-30>) [assetBridger/assetBridger.ts:60]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/assetBridger.ts#L60>) #####
checkParentNetwork()(<https://docs.arbitrum.io/welcome/get-started#checkparentnetwork-1>) protected checkParentNetwork
(sop : SignerOrProvider) : Promise < void > Check the signer/provider matches the parent network, throws if not #####
Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-29>) Parameter Type Description sop
SignerOrProvider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-31>) Promise ##### Inherited from[](<https://docs.arbitrum.io/welcome/get-started#inherited-from-22>) [AssetBridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#assetbridgerdepositparamswithdrawparams>) .[checkParentNetwork]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#checkparentnetwork>) ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-31>) [assetBridger/assetBridger.ts:49]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/assetBridger.ts#L49>) ##### deposit()(
(<https://docs.arbitrum.io/welcome/get-started#deposit-1>) deposit (params : Erc20DepositParams |
ParentToChildTxReqAndSignerProvider) : Promise < ParentContractCallTransaction > Execute a token deposit from parent
to child network ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-30>) Parameter Type
Description params Erc20DepositParams |ParentToChildTxReqAndSignerProvider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-32>) Promise ##### Overrides[](<https://docs.arbitrum.io/welcome/get-started#overrides-1>) [AssetBridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#assetbridgerdepositparamswithdrawparams>) .[deposit]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#deposit>) ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-32>) [assetBridger/erc20Bridger.ts:754](<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L754>) #####
getApproveGasTokenRequest()(<https://docs.arbitrum.io/welcome/get-started#getapprovegas-token-request-1>)
getApproveGasTokenRequest (params : ProviderTokenApproveParams) : Promise < Required < Pick <
TransactionRequest , "data" | "value" | "to" >>> Creates a transaction request for approving the custom gas token to be
spent by the relevant gateway on the parent network ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-31>) Parameter Type Description params ProviderTokenApproveParams ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-33>) Promise >> ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-33>) [assetBridger/erc20Bridger.ts:256](<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L256>) #####
getApproveTokenRequest()(<https://docs.arbitrum.io/welcome/get-started#getapprovetokenrequest-1>)
getApproveTokenRequest (params : ProviderTokenApproveParams) : Promise < Required < Pick < TransactionRequest ,
"data" | "value" | "to" >>> Get a tx request to approve tokens for deposit to the bridge. The tokens will be approved for the
relevant gateway. ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-32>) Parameter Type
Description params ProviderTokenApproveParams ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-34>) Promise >> ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-34>) [assetBridger/erc20Bridger.ts:302]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L302>) #####
getChildErc20Address()(<https://docs.arbitrum.io/welcome/get-started#getchilderc20address-1>) getChildErc20Address (
erc20ParentAddress : string , parentProvider : Provider) : Promise < string > Get the corresponding child network token
address for the provided parent network token ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-33>) Parameter Type Description erc20ParentAddress string parentProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-35>) Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-35>) [assetBridger/erc20Bridger.ts:487](<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L487>) #####
getChildGatewayAddress()(<https://docs.arbitrum.io/welcome/get-started#getchildgatewayaddress-1>)
getChildGatewayAddress (erc20ParentAddress : string , childProvider : Provider) : Promise < string > Get the address of
the child gateway for this token ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-34>)
Parameter Type Description erc20ParentAddress string childProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-36>) Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-36>) [assetBridger/erc20Bridger.ts:240](<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L240>) #####
getChildTokenContract()(<https://docs.arbitrum.io/welcome/get-started#getchildtokencontract-1>) getChildTokenContract (childProvider : Provider , childTokenAddr : string) : L2GatewayToken Get the child network token contract at the provided
address Note: This function just returns a typed ethers object for the provided address, it doesn't check the underlying form
of the contract bytecode to see if it's an erc20, and doesn't ensure the validity of any of the underlying functions on that
contract. ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-35>) Parameter Type Description
childProvider Provider childTokenAddr string ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-37>)
L2GatewayToken ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-37>)
[assetBridger/erc20Bridger.ts:458](<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L458>) #####

getDepositRequest()[(https://docs.arbitrum.io/welcome/get-started#getdepositrequest-1) getDepositRequest (params : DepositRequest) : Promise < ParentToChildTransactionRequest > Get the arguments for calling the deposit function ##### Parameters[(https://docs.arbitrum.io/welcome/get-started#parameters-36) Parameter Type Description params DepositRequest ##### Returns[(https://docs.arbitrum.io/welcome/get-started#returns-38) Promise <[ParentToChildTransactionRequest] (https://docs.arbitrum.io/sdk/reference/dataEntities/transactionRequest#parenttochildtransactionrequest) > ##### Source[(https://docs.arbitrum.io/welcome/get-started#source-38) [assetBridger/erc20Bridger.ts:647] (https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L647) ##### getDepositRequestCallValue()[(https://docs.arbitrum.io/welcome/get-started#getdepositrequestcallvalue) private getDepositRequestCallValue (depositParams : OmitTyped < ParentToChildMessageGasParams , "deposit" >) : BigNumber | BigNumber Get the call value for the deposit transaction request ##### Parameters[(https://docs.arbitrum.io/welcome/get-started#parameters-37) Parameter Type Description depositParams [OmitTyped] (https://docs.arbitrum.io/sdk/reference/utls/types#omittypedtk) ##### Returns[(https://docs.arbitrum.io/welcome/get-started#returns-39) BigNumber |BigNumber ##### Source[(https://docs.arbitrum.io/welcome/get-started#source-39) [assetBridger/erc20Bridger.ts:589](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L589) ##### getDepositRequestOutboundTransferInnerData()[(https://docs.arbitrum.io/welcome/get-started#getdepositrequestoutboundtransferinnerdata) private getDepositRequestOutboundTransferInnerData (depositParams : OmitTyped < ParentToChildMessageGasParams , "deposit" >) : string Get thedata param for call tooutboundTransfer ##### Parameters[(https://docs.arbitrum.io/welcome/get-started#parameters-38) Parameter Type Description depositParams [OmitTyped](https://docs.arbitrum.io/sdk/reference/utls/types#omittypedtk) ##### Returns[(https://docs.arbitrum.io/welcome/get-started#returns-40) string ##### Source[(https://docs.arbitrum.io/welcome/get-started#source-40) [assetBridger/erc20Bridger.ts:612](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L612) ##### getParentErc20Address()[(https://docs.arbitrum.io/welcome/get-started#getparenterc20address-1) getParentErc20Address (erc20ChildChainAddress : string , childProvider : Provider) : Promise < string > Get the corresponding parent network address for the provided child network token Validates the returned address against the child network router to ensure it is correctly mapped to the provided erc20ChildChainAddress ##### Parameters[(https://docs.arbitrum.io/welcome/get-started#parameters-39) Parameter Type Description erc20ChildChainAddress string childProvider Provider ##### Returns[(https://docs.arbitrum.io/welcome/get-started#returns-41) Promise ##### Source[(https://docs.arbitrum.io/welcome/get-started#source-41) [assetBridger/erc20Bridger.ts:510](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L510) ##### getParentGatewayAddress()[(https://docs.arbitrum.io/welcome/get-started#getparentgatewayaddress-1) getParentGatewayAddress (erc20ParentAddress : string , parentProvider : Provider) : Promise < string > Get the address of the parent gateway for this token ##### Parameters[(https://docs.arbitrum.io/welcome/get-started#parameters-40) Parameter Type Description erc20ParentAddress string parentProvider Provider ##### Returns[(https://docs.arbitrum.io/welcome/get-started#returns-42) Promise ##### Source[(https://docs.arbitrum.io/welcome/get-started#source-42) [assetBridger/erc20Bridger.ts:222](https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L222) ##### getParentTokenContract()[(https://docs.arbitrum.io/welcome/get-started#getparenttokencontract-1) getParentTokenContract (parentProvider : Provider , parentTokenAddr : string) : ERC20 Get the parent token contract at the provided address Note: This function just returns a typed ethers object for the provided address, it doesnt check the underlying form of the contract bytecode to see if it's an erc20, and doesn't ensure the validity of any of the underlying functions on that contract. ##### Parameters[(https://docs.arbitrum.io/welcome/get-started#parameters-41) Parameter Type Description parentProvider Provider parentTokenAddr string ##### Returns[(https://docs.arbitrum.io/welcome/get-started#returns-43) ERC20 ##### Source[(https://docs.arbitrum.io/welcome/get-started#source-43) [assetBridger/erc20Bridger.ts:474] (https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L474) ##### getWithdrawalEvents()[(https://docs.arbitrum.io/welcome/get-started#getwithdrawalevents-1) getWithdrawalEvents (childProvider : Provider , gatewayAddress : string , filter : object , parentTokenAddress ? : string , fromAddress ? : string , toAddress ? : string) : Promise < object & object [] > Get the child network events created by a withdrawal ##### Parameters[(https://docs.arbitrum.io/welcome/get-started#parameters-42) Parameter Type Description childProvider Provider gatewayAddress string filter object filter.fromBlock BlockTag - filter.toBlock ? BlockTag - parentTokenAddress ? string fromAddress ? string toAddress ? string - ##### Returns[(https://docs.arbitrum.io/welcome/get-started#returns-44) Promise ##### Source[(https://docs.arbitrum.io/welcome/get-started#source-44) [assetBridger/erc20Bridger.ts:363] (https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L363) ##### getWithdrawalRequest()[(https://docs.arbitrum.io/welcome/get-started#getwithdrawalrequest-1) getWithdrawalRequest (params : Erc20WithdrawParams) : Promise < ChildToParentTransactionRequest > Get the arguments for calling the token withdrawal function ##### Parameters[(https://docs.arbitrum.io/welcome/get-started#parameters-43) Parameter Type Description params Erc20WithdrawParams ##### Returns[(https://docs.arbitrum.io/welcome/get-started#returns-45) Promise <[ChildToParentTransactionRequest] (https://docs.arbitrum.io/sdk/reference/dataEntities/transactionRequest#childtoparenttransactionrequest) > ##### Source[(https://docs.arbitrum.io/welcome/get-started#source-45) [assetBridger/erc20Bridger.ts:811] (https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L811) ##### isDepositDisabled()[(https://docs.arbitrum.io/welcome/get-started#isdepositdisabled-1) isDepositDisabled (

parentTokenAddress : string , parentProvider : Provider) : Promise < boolean > Whether the token has been disabled on the router ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-44>) Parameter Type Description
parentTokenAddress string parentProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-46>) Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-46>) [assetBridger/erc20Bridger.ts:556]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L556>) ##### isRegistered()[](<https://docs.arbitrum.io/welcome/get-started#isregistered-1>) isRegistered (__namedParameters : object) : Promise < boolean > Checks if the token has been properly registered on both gateways. Mostly useful for tokens that use a custom gateway. ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-45>) Parameter Type
__namedParameters object __namedParameters.childProvider Provider __namedParameters.erc20ParentAddress string __namedParameters.parentProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-47>) Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-47>) [assetBridger/erc20Bridger.ts:907]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L907>) #####
isWethGateway()[](<https://docs.arbitrum.io/welcome/get-started#iswethgateway>) private isWethGateway (gatewayAddress : string , parentProvider : Provider) : Promise < boolean > Is this a known or unknown WETH gateway ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-46>) Parameter Type Description gatewayAddress string parentProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-48>) Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-48>) [assetBridger/erc20Bridger.ts:432]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L432>) #####
looksLikeWethGateway()[](<https://docs.arbitrum.io/welcome/get-started#lookslikewethgateway>) private looksLikeWethGateway (potentialWethGatewayAddress : string , parentProvider : Provider) : Promise < boolean > Does the provided address look like a weth gateway ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-47>) Parameter Type Description potentialWethGatewayAddress string parentProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-49>) Promise ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-49>) [assetBridger/erc20Bridger.ts:402]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L402>) #####
withdraw()[](<https://docs.arbitrum.io/welcome/get-started#withdraw-1>) withdraw (params : ChildToParentTxReqAndSigner | OmitTyped < Erc20WithdrawParams , "from" > & object) : Promise < ChildContractTransaction > Withdraw tokens from child to parent network ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-48>) Parameter Type Description params ChildToParentTxReqAndSigner [OmitTyped](<https://docs.arbitrum.io/sdk/reference/utils/types#omittypedtk>) &object ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-50>) Promise ##### Overrides[](<https://docs.arbitrum.io/welcome/get-started#overrides-2>) [AssetBridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#assetbridgerdepositparamswithdrawparams>) .[withdraw]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/#withdraw>) ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-50>) [assetBridger/erc20Bridger.ts:874](<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L874>) ##### fromProvider()[](<https://docs.arbitrum.io/welcome/get-started#fromprovider-1>) static fromProvider (childProvider : Provider) : Promise < Erc20Bridger > Instantiates a new Erc20Bridger from a child provider ##### Parameters[](<https://docs.arbitrum.io/welcome/get-started#parameters-49>) Parameter Type Description childProvider Provider ##### Returns[](<https://docs.arbitrum.io/welcome/get-started#returns-51>) Promise < [Erc20Bridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/erc20Bridger#erc20bridger>) > ##### Source[](<https://docs.arbitrum.io/welcome/get-started#source-51>) [assetBridger/erc20Bridger.ts:212]
(<https://github.com/OffchainLabs/arbitrum-sdk/blob/f5b3d04baf62356032f5475057637d989da5b6c1/src/lib/assetBridger/erc20Bridger.ts#L212>) [Edit this page]
(<https://github.com/OffchainLabs/arbitrum-docs/edit/master/arbitrum-docs/sdk/reference/assetBridger/erc20Bridger.md>) [Previous AssetBridger](<https://docs.arbitrum.io/sdk/reference/assetBridger/>) [Next EthBridger]
(<https://docs.arbitrum.io/sdk/reference/assetBridger/ethBridger>)