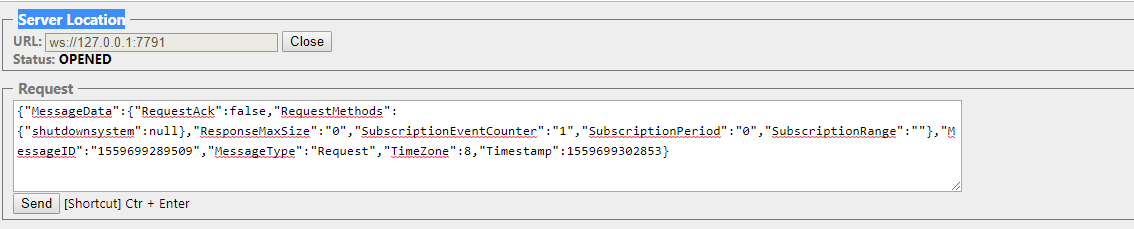
Use Chrome Simple WebSocket Client to connect Connector module on Windows 10

**1.Connect Connector 7790(client port) and send request message to invoke “listapi” method**



**Listapi(7790 port):**

{"MessageData":{"RequestAck":false,"RequestMethods":{"ListAPI":null},"ResponseMaxSize":"0","SubscriptionEventCounter":"0","SubscriptionPeriod":"0","SubscriptionRange":""},"MessageID":"1559699289509","MessageType":"Request","TimeZone":8,"Timestamp":1559699302853}

2019-07-30 10:35:28.493 Information Message Sent {"MessageData":{"RequestID":"1559699289509","ResponseComment":"","ResponseData":{"ListAPI":{"Nuls.RegisterAPI":{"MethodDescription":"Register API","MethodMinEvent":"1","MethodMinPeriod":"0","MethodName":"RegisterAPI","MethodScope":"public","Parameters":[]},"Nuls.ac\_createAccount":{"MethodDescription":"创建指定个数的账户/create a specified number of accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"count","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_createContractAccount":{"MethodDescription":"创建智能合约账户/create smart contract account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createContractAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_createMultiSigAccount":{"MethodDescription":"创建多签账户/create a multi sign account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createMultiSigAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pubKeys","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"minSigns","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_createMultiSignTransfer":{"MethodDescription":"创建多签地址转账交易/create multi sign transfer","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createMultiSignTransfer","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"inputs","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"outputs","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"remark","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"signAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_createOfflineAccount":{"MethodDescription":"创建离线账户, 该账户不保存到数据库, 并将直接返回账户的所有信息/create an offline account, which is not saved to the database and will directly return all information to the account.","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createOfflineAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"count","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_exportAccountKeyStore":{"MethodDescription":"账户备份，导出AccountKeyStore字符串/export account KeyStore","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_exportAccountKeyStore","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"filePath","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAccountByAddress":{"MethodDescription":"根据地址获取账户/get account according to address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAccountByAddress","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAccountList":{"MethodDescription":"获取所有账户集合,并放入缓存/query all account collections and put them in cache","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAccountList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAddressList":{"MethodDescription":"分页查询账户地址列表/Paging query account address list","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAddressList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAliasByAddress":{"MethodDescription":"根据地址获取别名/get the alias by address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAliasByAddress","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAllPriKey":{"MethodDescription":"获取所有本地账户账户私钥，必须保证所有账户密码一致，如果本地账户中的密码不一致，将返回错误信息/Get the all local private keys. if the password in the local account is different, the error message will be returned.","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAllPriKey","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getEncryptedAddressList":{"MethodDescription":"获取本地加密账户列表/Get a list of locally encrypted accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getEncryptedAddressList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getMultiSigAccount":{"MethodDescription":"根据地址获取多签地址/Search for multi-signature accounts by address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getMultiSigAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getPriKeyByAddress":{"MethodDescription":"根据地址查询账户私匙,只返回加密账户私钥，未加密账户不返回/Inquire the account's private key according to the address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getPriKeyByAddress","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getUnencryptedAddressList":{"MethodDescription":"获取本地未加密账户列表/Get a list of local unencrypted accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getUnencryptedAddressList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_importAccountByKeystore":{"MethodDescription":"根据AccountKeyStore导入账户/Import accounts by AccountKeyStore","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_importAccountByKeystore","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"keyStore","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"overwrite","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_importAccountByPriKey":{"MethodDescription":"根据私钥导入账户/Import accounts by private key","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_importAccountByPriKey","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"priKey","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"overwrite","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_importMultiSigAccount":{"MethodDescription":"导入多签账户/Inport a multi sign account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_importMultiSigAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pubKeys","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"minSigns","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_isAliasUsable":{"MethodDescription":"检查别名是否可用/check whether the account is usable","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_isAliasUsable","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"alias","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_isEncrypted":{"MethodDescription":"根据账户地址获取账户是否加密/Whether the account is encrypted by the account address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_isEncrypted","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_removeAccount":{"MethodDescription":"移除指定账户/Remove specified account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_removeAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_removeMultiSigAccount":{"MethodDescription":"移除多签账户/remove the multi sign account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_removeMultiSigAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setAlias":{"MethodDescription":"设置别名/Set the alias of account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setAlias","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"alias","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setMultiSigAlias":{"MethodDescription":"设置多签账户别名,默认签第一个名/set the alias of multi sign account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setMultiSigAlias","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"alias","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"signAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setOfflineAccountPassword":{"MethodDescription":"设置离线账户密码/Set offline account password","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setOfflineAccountPassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"priKey","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setPassword":{"MethodDescription":"设置账户密码/Set account password","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setPassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setRemark":{"MethodDescription":"为账户设置备注/Set remark for accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setRemark","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"remark","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_signBlockDigest":{"MethodDescription":"区块数据摘要签名/Block data digest signature","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_signBlockDigest","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"data","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_signDigest":{"MethodDescription":"数据摘要签名/Data digest signature","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_signDigest","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"data","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_signMultiSignTransaction":{"MethodDescription":"多签交易签名/sign MultiSign Transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_signMultiSignTransaction","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"signAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_transfer":{"MethodDescription":"创建转账交易/create transfer transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_transfer","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"inputs","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"outputs","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"remark","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_updateOfflineAccountPassword":{"MethodDescription":"离线账户修改密码/Offline account change password","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_updateOfflineAccountPassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"newPassword","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"priKey","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_updatePassword":{"MethodDescription":"根据原密码修改账户密码/Modify the account password by the original password","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_updatePassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"newPassword","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_validationPassword":{"MethodDescription":"验证账户密码是否正确/Verify that the account password is correct","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_validationPassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_verifySignData":{"MethodDescription":"验证数据签名/Verification Data Signature","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_verifySignData","MethodScope":"public","Parameters":[{"ParameterName":"pubKey","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"sig","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"data","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.batchValidateBegin":{"MethodDescription":"开始批量打包:状态通知","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"batchValidateBegin","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.blockValidate":{"MethodDescription":"整区块入账校验","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"blockValidate","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeight","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.clearUnconfirmTxs":{"MethodDescription":"清除所有账户未确认交易","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"clearUnconfirmTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.commitBatchUnconfirmedTxs":{"MethodDescription":"未确认交易批量提交账本(校验并更新nonce值)","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"commitBatchUnconfirmedTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"List","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.commitBlockTxs":{"MethodDescription":"提交区块","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"commitBlockTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeight","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.commitUnconfirmedTx":{"MethodDescription":"未确认交易提交账本(校验并更新nonce值)","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"commitUnconfirmedTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.createAgentValid":{"MethodDescription":"create agent transaction validate","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"createAgentValid","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_addBlock":{"MethodDescription":"接收并缓存新区块/Receiving and caching new blocks","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_addBlock","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_addEvidenceRecord":{"MethodDescription":"链分叉证据记录/add evidence record","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_addEvidenceRecord","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"evidenceHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_chainRollBack":{"MethodDescription":"区块回滚/chain rollback","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_chainRollBack","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_contractDeposit":{"MethodDescription":"智能合约委托共识/contract deposit agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_contractDeposit","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"deposit","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractBalance","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractNonce","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_contractWithdraw":{"MethodDescription":"智能合约退出共识/contract withdraw deposit agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_contractWithdraw","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"joinAgentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractBalance","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractNonce","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_createAgent":{"MethodDescription":"创建节点交易/create agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_createAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"packingAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"rewardAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"commissionRate","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"deposit","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_createContractAgent":{"MethodDescription":"智能合约创建节点/contract create agent","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_createContractAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"packingAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"deposit","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"commissionRate","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractBalance","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractNonce","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_depositToAgent":{"MethodDescription":"创建委托交易/deposit agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_depositToAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"deposit","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_doubleSpendRecord":{"MethodDescription":"双花交易记录/double spend transaction record ","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_doubleSpendRecord","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"block","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getAgentAddressList":{"MethodDescription":"获取当前网络共识节点出块地址列表或则查询最近N个区块的出块地址/Get all node out-of-block addresses or specify N block out-of-block designations","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getAgentAddressList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getAgentInfo":{"MethodDescription":"查询指点节点节点详细信息/Query pointer node details","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getAgentInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getAgentList":{"MethodDescription":"查询当前网络中的共识节点列表/Query the list of consensus nodes in the current network","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getAgentList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"keyWord","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getAgentStatus":{"MethodDescription":"查询指定共识节点状态/query the specified consensus node status 1.0","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getAgentStatus","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getConsensusConfig":{"MethodDescription":"获取共识模块配置信息/get consensus config","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getConsensusConfig","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getContractAgentInfo":{"MethodDescription":"智能合约节点/contract get agent info","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getContractAgentInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getContractDepositInfo":{"MethodDescription":"智能合约查询指定账户委托信息/Intelligent Contract Query for Assigned Account Delegation Information","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getContractDepositInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"joinAgentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getDepositList":{"MethodDescription":"查询指定账户或指定节点的委托信息/Query delegation information for a specified account or node","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getDepositList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getInfo":{"MethodDescription":"查询指定账户共识数据/query consensus information for specified accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getNodePackingAddress":{"MethodDescription":"获取当前节点出块地址/Get the current node's out-of-block address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getNodePackingAddress","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getPackerInfo":{"MethodDescription":"获取当前节点的出块账户信息/modifying the Packing State of Nodes","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getPackerInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getPublishList":{"MethodDescription":"查询红黄牌记录/query punish list","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getPublishList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"type","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getRoundInfo":{"MethodDescription":"获取当前轮次信息/get current round information","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getRoundInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getRoundMemberList":{"MethodDescription":"查询指定区块所在轮次的成员列表/Query the membership list of the specified block's rounds","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getRoundMemberList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"extend","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getWholeInfo":{"MethodDescription":"查询全网共识数据/query the consensus information of the whole network","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getWholeInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_receiveHeaderList":{"MethodDescription":"接收并缓存区块列表/Receive and cache block lists","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_receiveHeaderList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"headerList","ParameterType":"List<String>","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_stopAgent":{"MethodDescription":"注销节点/stop agent","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_stopAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_stopContractAgent":{"MethodDescription":"智能合约注销节点/contract stop agent","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_stopContractAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractBalance","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractNonce","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_triggerCoinBaseContract":{"MethodDescription":"交易模块触发CoinBase智能合约/trigger coin base contract","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_triggerCoinBaseContract","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"stateRoot","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_updateAgentConsensusStatus":{"MethodDescription":"修改节点共识状态/modifying the Node Consensus State","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_updateAgentConsensusStatus","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_updateAgentStatus":{"MethodDescription":"修改节点打包状态/modifying the Packing State of Nodes","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_updateAgentStatus","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"status","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_validBlock":{"MethodDescription":"验证区块/verify block correctness","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_validBlock","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"download","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"block","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_withdraw":{"MethodDescription":"退出委托交易/withdraw deposit agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_withdraw","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.depositValid":{"MethodDescription":"deposit agent transaction validate","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"depositValid","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.downloadBlockByHash":{"MethodDescription":"get a block by hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"downloadBlockByHash","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"hash","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getAssetsById":{"MethodDescription":"清除所有账户未确认交易","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getAssetsById","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetIds","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBalance":{"MethodDescription":"获取账户资产(已入区块)","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBalance","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetChainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBalanceNonce":{"MethodDescription":"获取账户资产余额与NONCE值","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBalanceNonce","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetChainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockByHeight":{"MethodDescription":"get a block by height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockByHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeaderByHash":{"MethodDescription":"get a block header by hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeaderByHash","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"hash","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeaderByHeight":{"MethodDescription":"get a block header by height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeaderByHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeaderPoByHash":{"MethodDescription":"get a block header po by hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeaderPoByHash","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"hash","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeaderPoByHeight":{"MethodDescription":"get a block header po by height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeaderPoByHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeadersByHeightRange":{"MethodDescription":"get the block headers according to the height range","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeadersByHeightRange","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"begin","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"end","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeadersForProtocol":{"MethodDescription":"get block headers for protocol upgrade module","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeadersForProtocol","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"interval","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getFreezeList":{"MethodDescription":"分页获取账户锁定资产列表","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getFreezeList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetChainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getLatestBlockHeaders":{"MethodDescription":"get the latest number of block headers","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getLatestBlockHeaders","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"size","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getLatestRoundBlockHeaders":{"MethodDescription":"get the latest several rounds of block headers","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getLatestRoundBlockHeaders","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"round","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getNonce":{"MethodDescription":"获取账户资产NONCE值","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getNonce","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetChainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getRoundBlockHeaders":{"MethodDescription":"get the latest several rounds of block headers","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getRoundBlockHeaders","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"round","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.info":{"MethodDescription":"returns network node height and local node height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"info","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.latestBlock":{"MethodDescription":"the latest block of master chain","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"latestBlock","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.latestBlockHeader":{"MethodDescription":"the latest block header of master chain","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"latestBlockHeader","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.latestBlockHeaderPo":{"MethodDescription":"the latest block header po of master chain","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"latestBlockHeaderPo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.latestHeight":{"MethodDescription":"the latest height of master chain","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"latestHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.msgProcess":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"msgProcess","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"nodeId","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"cmd","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"messageBody","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_activeCross":{"MethodDescription":"跨链协议模块激活跨链","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_activeCross","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"maxOut","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"maxIn","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"seedIps","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_addNodes":{"MethodDescription":"增加待连接节点","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_addNodes","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"isCross","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"nodes","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_broadcast":{"MethodDescription":"广播消息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_broadcast","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"excludeNodes","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"messageBody","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"command","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"isCross","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_createNodeGroup":{"MethodDescription":"主网创建跨链网络或者链工厂创建链","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_createNodeGroup","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"magicNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"maxOut","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"maxIn","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"minAvailableCount","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"isCrossGroup","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_currentTimeMillis":{"MethodDescription":"获取节点网络时间","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_currentTimeMillis","MethodScope":"public","Parameters":[]},"Nuls.nw\_delNodeGroup":{"MethodDescription":"删除指定网络组","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_delNodeGroup","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.nw\_delNodes":{"MethodDescription":"删除节点组节点","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_delNodes","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"nodes","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_getChainConnectAmount":{"MethodDescription":"获取指定网络组可连接数量","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getChainConnectAmount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"isCross","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_getGroupByChainId":{"MethodDescription":"获取节点组信息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getGroupByChainId","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.nw\_getGroups":{"MethodDescription":"分页获取网络组信息,startPage与pageSize 都为0时，不分页，返回所有网络组信息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getGroups","MethodScope":"public","Parameters":[{"ParameterName":"startPage","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_getMainMagicNumber":{"MethodDescription":"查看主网的魔法参数","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getMainMagicNumber","MethodScope":"public","Parameters":[]},"Nuls.nw\_getNodes":{"MethodDescription":"分页查看连接节点信息,startPage与pageSize 都为0时，不分页，返回所有节点信息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getNodes","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"state","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"isCross","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"startPage","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_getSeeds":{"MethodDescription":"查看跨链网络提供的种子节点","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getSeeds","MethodScope":"public","Parameters":[]},"Nuls.nw\_info":{"MethodDescription":"获取节点网络基本信息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_info","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.nw\_nodes":{"MethodDescription":"获取网络连接节点信息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_nodes","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.nw\_protocolRegister":{"MethodDescription":"模块协议指令注册","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_protocolRegister","MethodScope":"public","Parameters":[{"ParameterName":"role","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"protocolCmds","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_reconnect":{"MethodDescription":"本地网络重启","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_reconnect","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.nw\_sendPeersMsg":{"MethodDescription":"向指定节点发送消息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_sendPeersMsg","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"nodes","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"messageBody","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"command","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_updateNodeInfo":{"MethodDescription":"更新连接节点信息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_updateNodeInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"nodeId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeight","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHash","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.paramTestCmd":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"paramTestCmd","MethodScope":"public","Parameters":[{"ParameterName":"intCount","ParameterType":"int","ParameterValidRange":"[0,65535]","ParameterValidRegExp":""},{"ParameterName":"byteCount","ParameterType":"byte","ParameterValidRange":"[-128,127]","ParameterValidRegExp":""},{"ParameterName":"shortCount","ParameterType":"short","ParameterValidRange":"[0,32767]","ParameterValidRegExp":""},{"ParameterName":"longCount","ParameterType":"long","ParameterValidRange":"[0,55555555]","ParameterValidRegExp":""}]},"Nuls.receivePackingBlock":{"MethodDescription":"receive the new packaged block","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"receivePackingBlock","MethodScope":"public","Parameters":[{"ParameterName":"block","ParameterType":"string","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"block","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.rollBackBlockTxs":{"MethodDescription":"区块回滚","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"rollBackBlockTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeight","ParameterType":"long","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.rollBackUnconfirmTx":{"MethodDescription":"回滚提交的未确认交易","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"rollBackUnconfirmTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.rollbackTxValidateStatus":{"MethodDescription":"回滚打包校验状态","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"rollbackTxValidateStatus","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.stopAgentValid":{"MethodDescription":"stop agent transaction validate","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"stopAgentValid","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.transferCMDTest":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"transferCMDTest","MethodScope":"public","Parameters":[]},"Nuls.txCommit":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"txCommit","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"List","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.txRollback":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"txRollback","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"List","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.txValidator":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"txValidator","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"List","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_backPackableTxs":{"MethodDescription":"共识模块把不能打包的交易还回来，重新加入待打包列表/back packaged transactions","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_backPackableTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_batchVerify":{"MethodDescription":"验证区块所有交易/Verify all transactions in the block","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_batchVerify","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"preStateRoot","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_bl\_state":{"MethodDescription":"设置节点区块同步状态(由区块模块设置)/Set the node block state","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_bl\_state","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"status","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_blockHeight":{"MethodDescription":"接收最新区块高度/Receive the latest block height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_blockHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_cs\_state":{"MethodDescription":"设置节点打包状态(由共识模块设置)/Set the node packaging state","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_cs\_state","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"packaging","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_gengsisSave":{"MethodDescription":"保存创世块的交易/Save the transactions of the Genesis block ","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_gengsisSave","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getBlockTxs":{"MethodDescription":"获取区块的完整交易，如果没有查询到，或者查询到的不是区块完整的交易数据，则返回空集合/Get block transactions","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getBlockTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHashList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getBlockTxsExtend":{"MethodDescription":"根据hash列表，获取交易，先查未确认，再查已确认/Get transactions by hashs","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getBlockTxsExtend","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHashList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"allHits","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getConfirmedTx":{"MethodDescription":"根据hash获取已确认交易(只查已确认)/Get confirmed transaction by tx hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getConfirmedTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getConfirmedTxClient":{"MethodDescription":"根据hash获取已确认交易(只查已确认)/Get confirmed transaction by tx hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getConfirmedTxClient","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getSystemTypes":{"MethodDescription":"获取所有系统交易类型/Get system transaction types","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getSystemTypes","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getTx":{"MethodDescription":"根据hash获取交易, 先查未确认, 查不到再查已确认/Get transaction by tx hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getTxClient":{"MethodDescription":"根据hash获取交易，先查未确认，查不到再查已确认/Get transaction by tx hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getTxClient","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_newTx":{"MethodDescription":"接收本地新交易/receive a new transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_newTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_packableTxs":{"MethodDescription":"获取可打包的交易集/returns a list of packaged transactions","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_packableTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"endTimestamp","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"maxTxDataSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"packingAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"preStateRoot","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_register":{"MethodDescription":"注册模块交易/Register module transactions","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_register","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"moduleCode","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"list","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"delList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_rollback":{"MethodDescription":"回滚区块的交易/transaction rollback","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_rollback","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHashList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_save":{"MethodDescription":"保存新区块的交易/Save the confirmed transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_save","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_verifyTx":{"MethodDescription":"验证交易接口，包括含基础验证、验证器、账本验证/Verify transation","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_verifyTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.verifyCoinData":{"MethodDescription":"未确认交易校验","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"verifyCoinData","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.verifyCoinDataBatchPackaged":{"MethodDescription":"打包交易校验","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"verifyCoinDataBatchPackaged","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.withdrawValid":{"MethodDescription":"withdraw deposit agent transaction validate","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"withdrawValid","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nulstar.ListAPI":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ListAPI","MethodScope":"public","Parameters":[]},"Nulstar.checkupdates":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"checkupdates","MethodScope":"public","Parameters":[]}}},"ResponseErrorCode":"","ResponseMaxSize":"0","ResponseProcessingTime":"0","ResponseStatus":0},"MessageID":"1564454029562-5","MessageType":"Response","TimeZone":"8","Timestamp":"1564454128434"}

**shutdownsystem(7790 port):**

2019-07-30 10:36:33.987 Information Message Received {"MessageData":{"RequestAck":false,"RequestMethods":{"shutdownsystem":null},"ResponseMaxSize":"0","SubscriptionEventCounter":"0","SubscriptionPeriod":"0","SubscriptionRange":""},"MessageID":"1559699289509","MessageType":"Request","TimeZone":8,"Timestamp":1559699302853}

2019-07-30 10:36:33.987 Information Message Sent {"MessageData":{"RequestID":"1559699289509","ResponseComment":"Method 'shutdownsystem' not found in current channel!","ResponseData":{"shutdownsystem":{}},"ResponseErrorCode":"NCN-2","ResponseMaxSize":"0","ResponseProcessingTime":"2","ResponseStatus":2},"MessageID":"1564454029562-6","MessageType":"Response","TimeZone":"8","Timestamp":"1564454193987"}

**2.Connect Connector 7791(admin port) and send request message to invoke “ListAPI” method**

**ListAPI (7791 port):**

{"MessageData":{"RequestAck":false,"RequestMethods":{"ListAPI":null},"ResponseMaxSize":"0","SubscriptionEventCounter":"0","SubscriptionPeriod":"0","SubscriptionRange":""},"MessageID":"1559699289509","MessageType":"Request","TimeZone":8,"Timestamp":1559699302853}

2019-07-30 10:19:23.788 Information Message Sent {"MessageData":{"RequestID":"1559699289509","ResponseComment":"","ResponseData":{"ListAPI":{"Nuls.RegisterAPI":{"MethodDescription":"Register API","MethodMinEvent":"1","MethodMinPeriod":"0","MethodName":"RegisterAPI","MethodScope":"public","Parameters":[]},"Nuls.ac\_createAccount":{"MethodDescription":"创建指定个数的账户/create a specified number of accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"count","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_createContractAccount":{"MethodDescription":"创建智能合约账户/create smart contract account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createContractAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_createMultiSigAccount":{"MethodDescription":"创建多签账户/create a multi sign account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createMultiSigAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pubKeys","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"minSigns","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_createMultiSignTransfer":{"MethodDescription":"创建多签地址转账交易/create multi sign transfer","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createMultiSignTransfer","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"inputs","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"outputs","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"remark","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"signAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_createOfflineAccount":{"MethodDescription":"创建离线账户, 该账户不保存到数据库, 并将直接返回账户的所有信息/create an offline account, which is not saved to the database and will directly return all information to the account.","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_createOfflineAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"count","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_exportAccountKeyStore":{"MethodDescription":"账户备份，导出AccountKeyStore字符串/export account KeyStore","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_exportAccountKeyStore","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"filePath","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAccountByAddress":{"MethodDescription":"根据地址获取账户/get account according to address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAccountByAddress","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAccountList":{"MethodDescription":"获取所有账户集合,并放入缓存/query all account collections and put them in cache","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAccountList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAddressList":{"MethodDescription":"分页查询账户地址列表/Paging query account address list","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAddressList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAliasByAddress":{"MethodDescription":"根据地址获取别名/get the alias by address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAliasByAddress","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getAllPriKey":{"MethodDescription":"获取所有本地账户账户私钥，必须保证所有账户密码一致，如果本地账户中的密码不一致，将返回错误信息/Get the all local private keys. if the password in the local account is different, the error message will be returned.","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getAllPriKey","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getEncryptedAddressList":{"MethodDescription":"获取本地加密账户列表/Get a list of locally encrypted accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getEncryptedAddressList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getMultiSigAccount":{"MethodDescription":"根据地址获取多签地址/Search for multi-signature accounts by address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getMultiSigAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getPriKeyByAddress":{"MethodDescription":"根据地址查询账户私匙,只返回加密账户私钥，未加密账户不返回/Inquire the account's private key according to the address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getPriKeyByAddress","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_getUnencryptedAddressList":{"MethodDescription":"获取本地未加密账户列表/Get a list of local unencrypted accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_getUnencryptedAddressList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_importAccountByKeystore":{"MethodDescription":"根据AccountKeyStore导入账户/Import accounts by AccountKeyStore","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_importAccountByKeystore","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"keyStore","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"overwrite","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_importAccountByPriKey":{"MethodDescription":"根据私钥导入账户/Import accounts by private key","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_importAccountByPriKey","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"priKey","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"overwrite","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_importMultiSigAccount":{"MethodDescription":"导入多签账户/Inport a multi sign account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_importMultiSigAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pubKeys","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"minSigns","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_isAliasUsable":{"MethodDescription":"检查别名是否可用/check whether the account is usable","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_isAliasUsable","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"alias","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_isEncrypted":{"MethodDescription":"根据账户地址获取账户是否加密/Whether the account is encrypted by the account address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_isEncrypted","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_removeAccount":{"MethodDescription":"移除指定账户/Remove specified account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_removeAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_removeMultiSigAccount":{"MethodDescription":"移除多签账户/remove the multi sign account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_removeMultiSigAccount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setAlias":{"MethodDescription":"设置别名/Set the alias of account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setAlias","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"alias","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setMultiSigAlias":{"MethodDescription":"设置多签账户别名,默认签第一个名/set the alias of multi sign account","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setMultiSigAlias","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"alias","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"signAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setOfflineAccountPassword":{"MethodDescription":"设置离线账户密码/Set offline account password","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setOfflineAccountPassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"priKey","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setPassword":{"MethodDescription":"设置账户密码/Set account password","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setPassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_setRemark":{"MethodDescription":"为账户设置备注/Set remark for accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_setRemark","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"remark","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_signBlockDigest":{"MethodDescription":"区块数据摘要签名/Block data digest signature","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_signBlockDigest","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"data","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_signDigest":{"MethodDescription":"数据摘要签名/Data digest signature","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_signDigest","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"data","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_signMultiSignTransaction":{"MethodDescription":"多签交易签名/sign MultiSign Transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_signMultiSignTransaction","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"signAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_transfer":{"MethodDescription":"创建转账交易/create transfer transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_transfer","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"inputs","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"outputs","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"remark","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_updateOfflineAccountPassword":{"MethodDescription":"离线账户修改密码/Offline account change password","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_updateOfflineAccountPassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"newPassword","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"priKey","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_updatePassword":{"MethodDescription":"根据原密码修改账户密码/Modify the account password by the original password","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_updatePassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"newPassword","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_validationPassword":{"MethodDescription":"验证账户密码是否正确/Verify that the account password is correct","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_validationPassword","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.ac\_verifySignData":{"MethodDescription":"验证数据签名/Verification Data Signature","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ac\_verifySignData","MethodScope":"public","Parameters":[{"ParameterName":"pubKey","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"sig","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"data","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.batchValidateBegin":{"MethodDescription":"开始批量打包:状态通知","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"batchValidateBegin","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.blockValidate":{"MethodDescription":"整区块入账校验","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"blockValidate","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeight","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.clearUnconfirmTxs":{"MethodDescription":"清除所有账户未确认交易","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"clearUnconfirmTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.commitBatchUnconfirmedTxs":{"MethodDescription":"未确认交易批量提交账本(校验并更新nonce值)","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"commitBatchUnconfirmedTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"List","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.commitBlockTxs":{"MethodDescription":"提交区块","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"commitBlockTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeight","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.commitUnconfirmedTx":{"MethodDescription":"未确认交易提交账本(校验并更新nonce值)","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"commitUnconfirmedTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.createAgentValid":{"MethodDescription":"create agent transaction validate","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"createAgentValid","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_addBlock":{"MethodDescription":"接收并缓存新区块/Receiving and caching new blocks","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_addBlock","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_addEvidenceRecord":{"MethodDescription":"链分叉证据记录/add evidence record","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_addEvidenceRecord","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"evidenceHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_chainRollBack":{"MethodDescription":"区块回滚/chain rollback","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_chainRollBack","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_contractDeposit":{"MethodDescription":"智能合约委托共识/contract deposit agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_contractDeposit","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"deposit","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractBalance","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractNonce","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_contractWithdraw":{"MethodDescription":"智能合约退出共识/contract withdraw deposit agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_contractWithdraw","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"joinAgentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractBalance","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractNonce","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_createAgent":{"MethodDescription":"创建节点交易/create agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_createAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"packingAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"rewardAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"commissionRate","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"deposit","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_createContractAgent":{"MethodDescription":"智能合约创建节点/contract create agent","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_createContractAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"packingAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"deposit","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"commissionRate","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractBalance","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractNonce","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_depositToAgent":{"MethodDescription":"创建委托交易/deposit agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_depositToAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"deposit","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_doubleSpendRecord":{"MethodDescription":"双花交易记录/double spend transaction record ","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_doubleSpendRecord","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"block","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getAgentAddressList":{"MethodDescription":"获取当前网络共识节点出块地址列表或则查询最近N个区块的出块地址/Get all node out-of-block addresses or specify N block out-of-block designations","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getAgentAddressList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getAgentInfo":{"MethodDescription":"查询指点节点节点详细信息/Query pointer node details","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getAgentInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getAgentList":{"MethodDescription":"查询当前网络中的共识节点列表/Query the list of consensus nodes in the current network","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getAgentList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"keyWord","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getAgentStatus":{"MethodDescription":"查询指定共识节点状态/query the specified consensus node status 1.0","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getAgentStatus","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getConsensusConfig":{"MethodDescription":"获取共识模块配置信息/get consensus config","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getConsensusConfig","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getContractAgentInfo":{"MethodDescription":"智能合约节点/contract get agent info","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getContractAgentInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getContractDepositInfo":{"MethodDescription":"智能合约查询指定账户委托信息/Intelligent Contract Query for Assigned Account Delegation Information","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getContractDepositInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"joinAgentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getDepositList":{"MethodDescription":"查询指定账户或指定节点的委托信息/Query delegation information for a specified account or node","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getDepositList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"agentHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getInfo":{"MethodDescription":"查询指定账户共识数据/query consensus information for specified accounts","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getNodePackingAddress":{"MethodDescription":"获取当前节点出块地址/Get the current node's out-of-block address","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getNodePackingAddress","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getPackerInfo":{"MethodDescription":"获取当前节点的出块账户信息/modifying the Packing State of Nodes","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getPackerInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getPublishList":{"MethodDescription":"查询红黄牌记录/query punish list","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getPublishList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"type","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getRoundInfo":{"MethodDescription":"获取当前轮次信息/get current round information","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getRoundInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getRoundMemberList":{"MethodDescription":"查询指定区块所在轮次的成员列表/Query the membership list of the specified block's rounds","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getRoundMemberList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"extend","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_getWholeInfo":{"MethodDescription":"查询全网共识数据/query the consensus information of the whole network","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_getWholeInfo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_receiveHeaderList":{"MethodDescription":"接收并缓存区块列表/Receive and cache block lists","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_receiveHeaderList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"headerList","ParameterType":"List<String>","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_stopAgent":{"MethodDescription":"注销节点/stop agent","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_stopAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_stopContractAgent":{"MethodDescription":"智能合约注销节点/contract stop agent","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_stopContractAgent","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractAddress","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractSender","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractBalance","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractNonce","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_triggerCoinBaseContract":{"MethodDescription":"交易模块触发CoinBase智能合约/trigger coin base contract","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_triggerCoinBaseContract","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"stateRoot","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_updateAgentConsensusStatus":{"MethodDescription":"修改节点共识状态/modifying the Node Consensus State","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_updateAgentConsensusStatus","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_updateAgentStatus":{"MethodDescription":"修改节点打包状态/modifying the Packing State of Nodes","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_updateAgentStatus","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"status","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_validBlock":{"MethodDescription":"验证区块/verify block correctness","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_validBlock","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"download","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"block","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.cs\_withdraw":{"MethodDescription":"退出委托交易/withdraw deposit agent transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"cs\_withdraw","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"password","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.depositValid":{"MethodDescription":"deposit agent transaction validate","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"depositValid","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.downloadBlockByHash":{"MethodDescription":"get a block by hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"downloadBlockByHash","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"hash","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getAssetsById":{"MethodDescription":"清除所有账户未确认交易","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getAssetsById","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetIds","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBalance":{"MethodDescription":"获取账户资产(已入区块)","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBalance","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetChainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBalanceNonce":{"MethodDescription":"获取账户资产余额与NONCE值","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBalanceNonce","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetChainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockByHeight":{"MethodDescription":"get a block by height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockByHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeaderByHash":{"MethodDescription":"get a block header by hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeaderByHash","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"hash","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeaderByHeight":{"MethodDescription":"get a block header by height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeaderByHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeaderPoByHash":{"MethodDescription":"get a block header po by hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeaderPoByHash","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"hash","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeaderPoByHeight":{"MethodDescription":"get a block header po by height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeaderPoByHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeadersByHeightRange":{"MethodDescription":"get the block headers according to the height range","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeadersByHeightRange","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"begin","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"end","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getBlockHeadersForProtocol":{"MethodDescription":"get block headers for protocol upgrade module","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getBlockHeadersForProtocol","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"interval","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getFreezeList":{"MethodDescription":"分页获取账户锁定资产列表","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getFreezeList","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetChainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getLatestBlockHeaders":{"MethodDescription":"get the latest number of block headers","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getLatestBlockHeaders","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"size","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getLatestRoundBlockHeaders":{"MethodDescription":"get the latest several rounds of block headers","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getLatestRoundBlockHeaders","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"round","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getNonce":{"MethodDescription":"获取账户资产NONCE值","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getNonce","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetChainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"assetId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"address","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.getRoundBlockHeaders":{"MethodDescription":"get the latest several rounds of block headers","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"getRoundBlockHeaders","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"round","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.info":{"MethodDescription":"returns network node height and local node height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"info","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.latestBlock":{"MethodDescription":"the latest block of master chain","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"latestBlock","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.latestBlockHeader":{"MethodDescription":"the latest block header of master chain","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"latestBlockHeader","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.latestBlockHeaderPo":{"MethodDescription":"the latest block header po of master chain","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"latestBlockHeaderPo","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.latestHeight":{"MethodDescription":"the latest height of master chain","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"latestHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.msgProcess":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"msgProcess","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"nodeId","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"cmd","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"messageBody","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_activeCross":{"MethodDescription":"跨链协议模块激活跨链","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_activeCross","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"maxOut","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"maxIn","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"seedIps","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_addNodes":{"MethodDescription":"增加待连接节点","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_addNodes","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"isCross","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"nodes","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_broadcast":{"MethodDescription":"广播消息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_broadcast","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"excludeNodes","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"messageBody","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"command","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"isCross","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_createNodeGroup":{"MethodDescription":"主网创建跨链网络或者链工厂创建链","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_createNodeGroup","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"magicNumber","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"maxOut","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"maxIn","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"minAvailableCount","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"isCrossGroup","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_currentTimeMillis":{"MethodDescription":"获取节点网络时间","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_currentTimeMillis","MethodScope":"public","Parameters":[]},"Nuls.nw\_delNodeGroup":{"MethodDescription":"删除指定网络组","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_delNodeGroup","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.nw\_delNodes":{"MethodDescription":"删除节点组节点","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_delNodes","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"nodes","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_getChainConnectAmount":{"MethodDescription":"获取指定网络组可连接数量","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getChainConnectAmount","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"isCross","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_getGroupByChainId":{"MethodDescription":"获取节点组信息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getGroupByChainId","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""}]},"Nuls.nw\_getGroups":{"MethodDescription":"分页获取网络组信息,startPage与pageSize 都为0时，不分页，返回所有网络组信息","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getGroups","MethodScope":"public","Parameters":[{"ParameterName":"startPage","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"pageSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.nw\_getMainMagicNumber":{"MethodDescription":"查看主网的魔法参数","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"nw\_getMainMagicNumber","MethodScope":"public","Parameters":[]},"Nuls.nw\_getNodes":{"MethodDescription":"分页查看连接节点信息,startPage与pageSize 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the new packaged block","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"receivePackingBlock","MethodScope":"public","Parameters":[{"ParameterName":"block","ParameterType":"string","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"block","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.rollBackBlockTxs":{"MethodDescription":"区块回滚","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"rollBackBlockTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeight","ParameterType":"long","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.rollBackUnconfirmTx":{"MethodDescription":"回滚提交的未确认交易","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"rollBackUnconfirmTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.rollbackTxValidateStatus":{"MethodDescription":"回滚打包校验状态","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"rollbackTxValidateStatus","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.stopAgentValid":{"MethodDescription":"stop agent transaction validate","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"stopAgentValid","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.transferCMDTest":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"transferCMDTest","MethodScope":"public","Parameters":[]},"Nuls.txCommit":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"txCommit","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"List","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.txRollback":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"txRollback","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"List","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.txValidator":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"txValidator","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"int","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"List","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_backPackableTxs":{"MethodDescription":"共识模块把不能打包的交易还回来，重新加入待打包列表/back packaged transactions","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_backPackableTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_batchVerify":{"MethodDescription":"验证区块所有交易/Verify all transactions in the block","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_batchVerify","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"preStateRoot","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_bl\_state":{"MethodDescription":"设置节点区块同步状态(由区块模块设置)/Set the node block state","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_bl\_state","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"status","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_blockHeight":{"MethodDescription":"接收最新区块高度/Receive the latest block height","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_blockHeight","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"height","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_cs\_state":{"MethodDescription":"设置节点打包状态(由共识模块设置)/Set the node packaging state","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_cs\_state","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"packaging","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_gengsisSave":{"MethodDescription":"保存创世块的交易/Save the transactions of the Genesis block ","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_gengsisSave","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getBlockTxs":{"MethodDescription":"获取区块的完整交易，如果没有查询到，或者查询到的不是区块完整的交易数据，则返回空集合/Get block transactions","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getBlockTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHashList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getBlockTxsExtend":{"MethodDescription":"根据hash列表，获取交易，先查未确认，再查已确认/Get transactions by hashs","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getBlockTxsExtend","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHashList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"allHits","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getConfirmedTx":{"MethodDescription":"根据hash获取已确认交易(只查已确认)/Get confirmed transaction by tx hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getConfirmedTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getConfirmedTxClient":{"MethodDescription":"根据hash获取已确认交易(只查已确认)/Get confirmed transaction by tx hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getConfirmedTxClient","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getSystemTypes":{"MethodDescription":"获取所有系统交易类型/Get system transaction types","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getSystemTypes","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getTx":{"MethodDescription":"根据hash获取交易, 先查未确认, 查不到再查已确认/Get transaction by tx hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_getTxClient":{"MethodDescription":"根据hash获取交易，先查未确认，查不到再查已确认/Get transaction by tx hash","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_getTxClient","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHash","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_newTx":{"MethodDescription":"接收本地新交易/receive a new transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_newTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_packableTxs":{"MethodDescription":"获取可打包的交易集/returns a list of packaged transactions","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_packableTxs","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"endTimestamp","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"maxTxDataSize","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockTime","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"packingAddress","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"preStateRoot","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_register":{"MethodDescription":"注册模块交易/Register module transactions","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_register","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"moduleCode","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"list","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"delList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_rollback":{"MethodDescription":"回滚区块的交易/transaction rollback","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_rollback","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txHashList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_save":{"MethodDescription":"保存新区块的交易/Save the confirmed transaction","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_save","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"contractList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"blockHeader","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.tx\_verifyTx":{"MethodDescription":"验证交易接口，包括含基础验证、验证器、账本验证/Verify transation","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"tx\_verifyTx","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.verifyCoinData":{"MethodDescription":"未确认交易校验","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"verifyCoinData","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.verifyCoinDataBatchPackaged":{"MethodDescription":"打包交易校验","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"verifyCoinDataBatchPackaged","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"[1-65535]","ParameterValidRegExp":""},{"ParameterName":"txList","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nuls.withdrawValid":{"MethodDescription":"withdraw deposit agent transaction validate","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"withdrawValid","MethodScope":"public","Parameters":[{"ParameterName":"chainId","ParameterType":"","ParameterValidRange":"","ParameterValidRegExp":""},{"ParameterName":"tx","ParameterType":"String","ParameterValidRange":"","ParameterValidRegExp":""}]},"Nulstar.ListAPI":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"ListAPI","MethodScope":"public","Parameters":[]},"Nulstar.checkupdates":{"MethodDescription":"","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"checkupdates","MethodScope":"public","Parameters":[]},"Nulstar.shutdownsystem":{"MethodDescription":"Stops the system enterily.","MethodMinEvent":"0","MethodMinPeriod":"0","MethodName":"shutdownsystem","MethodScope":"admin","Parameters":[]}}},"ResponseErrorCode":"","ResponseMaxSize":"0","ResponseProcessingTime":"0","ResponseStatus":0},"MessageID":"1564452709452-9","MessageType":"Response","TimeZone":"8","Timestamp":"1564453163735"}

**shutdownsystem(7791 port):**

**Connector:**

2019-07-30 10:23:50.684 Information Message Received {"MessageData":{"RequestAck":false,"RequestMethods":{"shutdownsystem":null},"ResponseMaxSize":"0","SubscriptionEventCounter":"0","SubscriptionPeriod":"0","SubscriptionRange":""},"MessageID":"1559699289509","MessageType":"Request","TimeZone":8,"Timestamp":155969930285

2019-07-30 10:23:50.684 Information Message Sent {"MessageData":{"RequestAck":"0","RequestMethods":{"ForwardMessage":{"shutdownsystem":{}}},"ResponseMaxSize":"0","SubscriptionEventCounter":"0","SubscriptionPeriod":"0","SubscriptionRange":""},"MessageID":"1564452709452-10","MessageType":"Request","TimeZone":"8","Timestamp":"1564453430684"}

**ServiceManager:**

2019-07-30 10:23:50.687 Information Message Received {"MessageData":{"RequestAck":"0","RequestMethods":{"ForwardMessage":{"shutdownsystem":{}}},"ResponseMaxSize":"0","SubscriptionEventCounter":"0","SubscriptionPeriod":"0","SubscriptionRange":""},"MessageID":"1564452709452-10","MessageType":"Request","TimeZone":"8","Timestamp":"1564453430684"}

2019-07-30 10:23:50.687 Information Message Sent {"MessageData":{"RequestAck":"0","RequestMethods":{"shutdownsystem":{}},"ResponseMaxSize":"0","SubscriptionEventCounter":"0","SubscriptionPeriod":"0","SubscriptionRange":""},"MessageID":"1564452705671-38","MessageType":"Request","TimeZone":"8","Timestamp":"1564453430687"}

2019-07-30 10:23:51.868 Warning Resource Management WebSocket '1564452740167' disconnected!

2019-07-30 10:23:51.872 Warning Resource Management WebSocket '1564452742219' disconnected!

2019-07-30 10:23:51.875 Warning Resource Management WebSocket '1564452738962' disconnected!

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