EOSIO-java Error Model The Android Team | May 1, 2019

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one.block.eosiojava.interfaces
                                                                                         <<interface>>
IRPCProvider
   + init(endpoints: List<EosioEndPoint>, failoverRetries: Integer) {exceptions = InitError}
   + getInfo(): GetInfoResponse {exceptions = GetInfoError}
   + getBlock(getBlockRequest: GetBlockRequest): GetBlockResponse {exceptions = GetBlockError}
   + getRawAbi(getRawAbiReguest: GetRawAbiReguest): GetRawAbiResponse {exceptions = GetRawError} // From EOSIOAccount.name
   + getRequiredKeys(getRequiredKeysRequest: GetRequiredKeysRequest): GetRequiredKeysResponse {exceptions = GetRequiredKeysError}
   + pushTransaction(pushTransactionRequest: PushTransactionRequest): PushTransactionResponse {exceptions = PushTransactionError}
                                                  <<interface>>
                                              ISerializationProvider
   + deserialize(x: K):K {exceptions = DeserializeError}
   + serialize(y: K):K {exceptions = SerializeError}
   + deserializeTransaction(hex:String):String {exceptions = DeserializeTransactionError}
   + serializeTransaction(json:String): String {exceptions = SerializeTransactionError}
   + deserializeAbi(hex:String): String {exceptions = DeserializeAbiError}
   + serializeAbi(json:String): String {exceptions = SerializeAbiError}
                                                            <<interface>>
                                                            IABIProvider
   + getAbis(chainId: String, accounts: List<EosioName>): Map<String, String> {exceptions = GetAbiError}
   + getAbi(chainId: String, account: EosioName): String {exceptions = GetAbiError}
                                                                            <<interface>>
                                                                          ISignatureProvider
   + sign Transaction (request: Eosio Transaction Signature Request): Eosio Transaction Signature Response \\ \{exceptions = Sign Transaction Error\}
   + getAvailableKeys(): List<String> {exceptions = GetAvailableKeysError}
Note - With this model the implementor is forced to handle the error for the method being called.
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SAMPLE IMPLEMENTATION
 class SignatureProviderImpl implements SignatureProvider{
    public List<String> getAvailableKeys() throws GetAvailableKeyError {
    throw new GetAvailableKeyError("Get Available key error", new NullPointerException());
    interface SignatureProvider {
     List<String> getAvailableKeys() throws GetAvailableKeyError;
   public void testSignatureProviderError() {
       new SignatureProviderImpl().getAvailableKeys();
     } catch (SignatureProviderError error) {
       error.printStackTrace();
   public void testGetAvailableKeyErrorChain() {
          new SignatureProviderImpl().getAvailableKeys();
       } catch (GetAvailableKeyError error) {
          throw new Signature Provider Error ("Signature provider chain with get Available Key error", error);
     } catch (SignatureProviderError error) {
       error.printStackTrace();
For testGetAvailableKeyErrorChain() test..... (In this implementation we receive the whole chain.) com.example.kenscarberry.signature.error.SignatureProviderError: Signature provider chain with getAvailableKey error
at com.example.kenscarberry.signature.crypto.ErrorTest3.testGetAvailableKeyErrorChain(ErrorTest3.java:50)
Caused by: com.example.kenscarberry.signature.error.GetAvailableKeyError: Get Available key error
at com.example.kenscarberry.signature.crypto.ErrorTest3$SignatureProviderImpl.getAvailableKeys(ErrorTest3.java:61)
at com.example.kenscarberry.signature.crypto.ErrorTest3.testGetAvailableKeyErrorChain(ErrorTest3.java:48)
Caused by: java.lang.NullPointerException
 ... 24 more
```

For testSignatureProviderError test... (In this implementation we receive the root cause.)

com.example.kenscarberry.signature.error.GetAvailableKeyError: Get Available key error at com.example.kenscarberry.signature.crypto.ErrorTest3\$SignatureProviderImpl.getAvailableKeys(ErrorTest3.java:38) at com.example.kenscarberry.signature.crypto.ErrorTest3.testSignatureProviderError(ErrorTest3.java:49)

Caused by: java.lang.NullPointerException

... 24 more

