CLAIMS

What is claimed is:

1. A blockchain-based cross-chain data access method, applied to a multi-chain system comprising a plurality of blockchains, wherein the method comprises the following:

obtaining an access request that is specific to target data and that is sent by any node device, wherein the access request comprises a uniform resource locator (URL) which comprises an access path of the target data, and wherein the URL comprises a domain field used to record information about a target blockchain that the target data is located in;

determining, based on the access path of the target data and the domain field of the URL, ~~a~~ the target blockchain that the target data is located in, wherein a corresponding data access driver is configured for the target blockchain; and

invoking the data access driver to parse the access request, to complete access to the target data.

~~2. The method according to claim 1, wherein the access request comprises a uniform resource locator (URL), and the URL comprises the access path of the target data.~~

~~3. The method according to claim 2, wherein the URL comprises a domain field, and the domain field is used to record information about the target blockchain that the target data is located in; and~~

~~the determining, based on the access path of the target data, a target blockchain that the target data is located in comprises the following:~~

~~determining, based on the domain field of the URL, the target blockchain that the target data is located in.~~

~~4~~2. The method according to claim ~~3~~1, wherein the URL further comprises a feature value field of the target data, used to record a feature value of the target data; and

the invoking the data access driver to parse the access request, to complete access to the target data comprises the following:

invoking the data access driver to parse the URL, and obtaining the target data based on the feature value field of the URL; and

returning the target data to the node device.

~~5~~3. The method according to claim ~~4~~2, wherein the URL further comprises a retrieval space field, used to record identification information of data retrieval space used when the feature value of the target data is used as a query index to query the target data on the target blockchain; and

the obtaining the target data based on the feature value field of the URL comprises the following:

obtaining, based on the domain field and the retrieval space field, data retrieval space of the target blockchain that the target data is located in; and

performing retrieval in the data retrieval space based on the feature value of the target data, to obtain the target data.

~~6~~4. The method according to claim ~~4~~ 2 or ~~5~~3, wherein the URL further comprises a code identification field, used to record an output coding scheme of the target data; and

the returning the target data to the node device comprises the following:

parsing the code identification field to obtain the output coding scheme of the target data;

coding the obtained target data based on the output coding scheme; and

returning the coded target data to the node device.

~~7~~5. The method according to claim ~~6~~4, wherein the output coding scheme comprises a JavaScript Object Notation (JSON) scheme or an Extensible Markup Language (XML) scheme.

~~8~~6. The method according to claim ~~4~~2, wherein the feature value field of the URL is used to record a digital digest of the target data; and

the invoking the data access driver to parse the access request, to complete access to the target data further comprises the following:

checking whether a digital digest of the obtained target data is the same as the digital digest of the target data recorded in the feature value field of the URL; and

if yes, returning the target data to the node device.

~~9~~7. The method according to claim ~~3~~1, wherein the domain field further comprises the following fields:

a protocol field, used to record a protocol name of a blockchain protocol supported by the target blockchain; and

an instance field, used to record an instance name of an instance of the target blockchain when the target blockchain serves as a blockchain supporting the blockchain protocol.

~~10~~8. The method according to claim 1, wherein the multi-chain system comprises a blockchain system that comprises a main chain and a plurality of subchains corresponding to the main chain.

~~11~~9. A blockchain-based cross-chain data access apparatus, applied to a multi-chain system comprising a plurality of blockchains, wherein the apparatus comprises the following:

an obtaining unit, configured to obtain an access request that is specific to target data and that is sent by any node device, wherein the access request comprises a URL which comprises an access path of the target data, and wherein the URL comprises a domain field used to record information about a target blockchain that the target data is located in;

a determining unit, configured to determine, based on the access path of the target data and the domain field of the URL, ~~a~~ the target blockchain that the target data is located in, wherein a corresponding data access driver is configured for the target blockchain; and

a data access driver invoking unit, configured to invoke the data access driver to parse the access request, to complete access to the target data.

~~12. The apparatus according to claim 11, wherein the access request comprises a URL, and the URL comprises the access path of the target data.~~

~~13. The apparatus according to claim 12, wherein the URL comprises a domain field, and the domain field is used to record information about the target blockchain that the target data is located in; and~~

~~the determining unit is configured to:~~

~~determine, based on the domain field of the URL, the target blockchain that the target data is located in.~~

~~14~~10. The apparatus according to claim ~~13~~9, wherein the URL further comprises a feature value field of the target data, used to record a feature value of the target data; and

the data access driver invoking unit is configured to:

invoke the data access driver to parse the URL, and obtain the target data based on the feature value field of the URL; and

return the target data to the node device.

~~15~~11. The apparatus according to claim ~~14~~10, wherein the URL further comprises a retrieval space field, used to record identification information of data retrieval space used when the feature value of the target data is used as a query index to query the target data on the target blockchain; and

the data access driver invoking unit is configured to:

obtain, based on the domain field and the retrieval space field, data retrieval space of the target blockchain that the target data is located in; and

perform retrieval in the data retrieval space based on the feature value of the target data, to obtain the target data.

~~16~~12. The apparatus according to claim ~~14~~ 10 or ~~15~~11, wherein the URL further comprises a code identification field, used to record an output coding scheme of the target data; and

the data access driver invoking unit is configured to:

parse the code identification field to obtain the output coding scheme of the target data;

code the obtained target data based on the output coding scheme; and

return the coded target data to the node device.

~~17~~13. The apparatus according to claim ~~16~~12, wherein the output coding scheme comprises a JSON scheme or an XML scheme.

~~18~~14. The apparatus according to claim ~~14~~10, wherein the feature value field of the URL is used to record a digital digest of the target data; and

the data access driver invoking unit is configured to:

check whether a digital digest of the obtained target data is the same as the digital digest of the target data recorded in the feature value field of the URL; and

if yes, return the target data to the node device.

~~19~~15. The apparatus according to claim ~~13~~9, wherein the domain field further comprises the following fields:

a protocol field, used to record a protocol name of a blockchain protocol supported by the target blockchain; and

an instance field, used to record an instance name of an instance of the target blockchain when the target blockchain serves as a blockchain supporting the blockchain protocol.

~~20~~16. The apparatus according to claim ~~11~~9, wherein the multi-chain system comprises a blockchain system that comprises a main chain and a plurality of subchains corresponding to the main chain.

~~21~~17. A computer device, comprising a memory and a processor, wherein the memory stores a computer program that can be executed by the processor, and the processor executes the computer program to perform the method according to any one of claims 1 to ~~10~~8.

~~22~~18. A computer readable storage medium, storing a computer program, wherein when the computer program is executed by a processor, the method according to any one of claims 1 to ~~10~~ 8 is performed.