CLAIMS

1. A method of installing device application, being applicable in an edge device, comprising:

receiving an application package issued by a cloud, wherein the application package comprises application resource files respectively corresponding to a plurality of applications; and

in response to determining that a verification for the application package is passed, installing at least one application on the edge device based on the application resource files,

wherein the plurality of applications comprise a first application and a second application with a dependency relationship, the application package is generated based on at least one application resource file corresponding to the first application and at least one application resource file corresponding to the second application.

2. The method of claim 1, wherein the application package further comprises an application list comprising application identifiers of the plurality of applications and respective software version numbers corresponding to the application identifiers, installing at least one application on the edge device based on the application resource files comprises:

traversing each of the application identifiers in the application list and further

comparing a first version number with a second version number which are correspond to the application identifier, wherein the first version number is a software version number of a local application corresponding to the application identifier, and the second version number is a software version number corresponding to the application identifier in the application list;

in response to the first version number being different from the second version number, obtaining and installing an application resource file corresponding to the

application identifier from the application package, so as to upgrade the local application to an application corresponding to the second version number.

3. The method of any of claims 1-2, wherein the application package further comprises an identification code which is generated based on the application resource files in the application package, determining the verification for the application package is passed comprises:

obtaining a verification code based on the application resource files of the application package;

in response to the verification code being consistent with the identification code, determining the verification for the application package is passed.

4. The method of any of claims 1-2, wherein the application package further comprises a first application package version number for identifying the application package, determining that the verification for the application package is passed comprises:

in response to the first application package version number being different from a local second application package version number of the edge device, determining that the verification for the application package is passed, wherein the second application package version number is an identifier of an application package received by the edge device last time.

5. The method of claim 4, determining that the verification for the application package is passed further comprising:

updating the local second application package version number of the edge device to the first application package version number.

6. A method of installing device application, being applicable in a cloud, comprising:

generating an application package based on application resource files respectively corresponding to a plurality of applications; and

issuing the application package to an edge device for the edge device to, in response to determining that a verification for the application package is passed, install at least one application on the edge device based on the application resource files,

wherein the plurality of applications comprise a first application and a second application with a dependency relationship, generating the application package based on the application resource files respectively corresponding to the plurality of applications comprises:

generating the application package based on at least one application resource file corresponding to the first application and at least one application resource file corresponding to the second application.

7. The method of claim 6, wherein generating the application package based on the application resource files respectively corresponding to the plurality of applications comprises:

generating an application list based on respective application identifiers of the plurality of applications and respective software version numbers corresponding to the application identifiers; and

generating the application package based on the application list and the application resources files.

8. The method of claim 6, wherein generating the application package based on the application resource files respectively corresponding to the plurality of applications comprises:

generating an identification code based on the application resource files respectively corresponding to the plurality of applications; and

generating the application package based on the identification code and the application resource files respectively corresponding to the plurality of applications.

9. The method of claim 6, wherein generating the application package based on the application resource files respectively corresponding to the plurality of applications comprises:

generating a first application package version number corresponding to the application package, wherein the first application package version number identifies the application version number; and

generating the application package based on the first application package version number and the application resource files respectively corresponding to the plurality of applications.

10. An apparatus for installing device application, being applicable to an edge application, comprising:

an application receiving module, configured to receive an application package issued by a cloud, wherein the application package comprises application resource files respectively corresponding to a plurality of applications; and

an application installing module, configure to, in response to determining that a verification for the application package is passed, install at least one application on the edge device based on the application resource files,

wherein the plurality of applications comprise a first application and a second application with a dependency relationship, the application package is generated based on at least one application resource file corresponding to the first application and at least one application resource file corresponding to the second application.

11. The apparatus of claim 10, wherein the application package further comprises an application list;

the application list comprises: application identifiers of the plurality of applications and respective software version numbers corresponding to the application identifiers;

when the application installing module is configured to install the at least one application on the edge device based on the application resource files, comprising:

traversing each of the application identifiers in the application list, and comparing a first version number with a second version number which are correspond to the application identifier, wherein the first version number is a software version number of a local application corresponding to the application identifier, and the second version number is a software version number corresponding to the application identifier in the application list;

in response to the first version number being different from the second version number, obtaining and installing an application resource file corresponding to the application identifier from the application package, so as to upgrade the local application to an application corresponding to the second version number.

12. The apparatus of any of claims 10-11, wherein the application further comprises: an identification code which is generated based on the application resource files,

when the application installing module is configured to determine that the verification for the application package is passed, comprising:

obtaining a verification code based on the application resource files of the application package;

in response to the verification code being consistent with the identification code, determining that the verification for the application package is passed.

13. The apparatus of any of claims 10-11, wherein the application package further comprises a first application package version number for identifying the application package;

when the application installing module is configured to determine that the verification for the application package is passed, comprising:

in response to the first application package version number being different from a local second application package version number of the edge device, determining that the verification for the application package is passed, and the second application package version number is an identifier of an application package received by the edge device last time.

14. The apparatus of claim 13, further comprising:

a version number updating module, configured to update the local second application package version number of the edge device to the first application package version number.

15. An apparatus for installing device application, being applicable to a cloud, comprising:

an application package generating module, configured to generate an application package based on application resource files respectively corresponding to a plurality of applications; and

an application issuing module, configured to issue the application package to an edge device for the edge device to, in response to that the edge device passes a verification for the application package, install at least one application on the edge device based on the application resource files,

wherein the plurality of applications comprise a first application and a second application with a dependency relationship, the application package generating module is further configured to generate the application package based on at least one application resource file corresponding to the first application and at least one application resource file corresponding to the second application.

16. The apparatus of claim 15, wherein the application package generating module is specifically configured to:

generate an application list based on respective application identifiers of the plurality of applications and respective software version numbers corresponding to the application identifiers; and

generate the application package based on the application list and the application resources files.

17. An electronic device, comprising a processor, and a memory storing computer instructions executable on a processor, when the computer instructions are executed by the processor, the method of any of claims 1-5 or 6-9 is implemented.

18. A computer program product, comprising a computer program/instruction, wherein when the computer program/instruction is executed by a processor, the method of any of claims 1-5 or 6-9 is implemented.

19. A computer readable storage medium, having a computer program stored thereon, wherein in a case that the computer program is executed by a processor, the method of any of claims 1-5 or 6-9 is implemented.