CLAIMS

1. A method, comprising:

identifying a remote file stored on a remote computing system;

predicting that a predicted portion of the remote file is likely to be subject to a future read request;

downloading the predicted portion of the remote file to a local file; and

updating metadata of the local file to map a local portion of the local file to the predicted portion of the remote file, wherein the local file is configured to appear to a file system as if the local file is a full copy of the remote file.

2. The method of claim 1, further comprising receiving a first read request, wherein:

the identifying is based at least on a target of the first read request; and

the predicting is based at least on the first read request.

3. The method of claim 2, further comprising determining, based at least on an application profile database, a requesting application that initiated the first read request, wherein the predicting is further based at least on the requesting application.

4. The method of claim 3, further comprising:

receiving a second read request targeting a targeted portion of the remote file; and

updating the application profile database based at least on the predicted portion and the targeted portion.

5. The method of claim 1, further comprising:

receiving a second read request targeting a targeted portion of the remote file;

determining that the predicted portion of the remote file includes the targeted portion; and

responsive to the determination that the predicted portion includes the targeted portion, returning, based on the metadata, at least part of the local portion mapped to the predicted portion.

6. The method of claim 1, further comprising:

receiving a second read request targeting a targeted portion of the remote file;

determining that the predicted portion of the remote file does not include the targeted portion; and

downloading, responsive to the determination that the predicted portion does not include the targeted portion, at least a second portion of the remote file including the targeted portion.

7. The method of any preceding claim, further comprising monitoring read operations of a computing system, wherein the predicting is based at least on the monitoring.

8. The method of any preceding claim, wherein the predicting is based at least on system configuration information.

9. The method of any preceding claim, wherein:
the remote computing system is a cloud computing system; and
the remote file is a cloud file.

10. A system comprising:
a memory; and
a central processing unit (CPU) including one or more CPU cores configured to:
identify a remote file stored on a remote computing system;
predict that a predicted portion of the remote file is likely to be subject to a future read request;
download the predicted portion of the remote file to a local file; and
update metadata of the local file to map a local portion of the local file to the predicted portion of the remote file, wherein the updated metadata of the local file further causes the local file to appear to a file system as if the local file is the remote file.

11. The system of claim 10, wherein the CPU is further configured to receive a first read request, wherein:
the identifying is based at least on a target of the first read request; and
the predicting is based at least on the first read request.

12. The system of claim 11, wherein the CPU is further configured to determine, based at least on an application profile database, a requesting application that initiated the first read request, wherein the predicting is further based at least on the requesting application.

13. The system of claim 12, wherein the CPU is further configured to:
receive a second read request targeting a targeted portion of the remote file; and
update the application profile database based at least on the predicted portion and the targeted portion.

14. The system of claim 10, wherein the CPU is further configured to:
receive a second read request targeting a targeted portion of the remote file;
determine that the predicted portion of the remote file includes the targeted portion; and
responsive to the determination that the predicted portion includes the targeted portion, return, based on the metadata, at least part of the local portion mapped to the predicted portion.

15. The system of claim 10, wherein the CPU is further configured to:
receive a second read request targeting a targeted portion of the remote file;

determine that the predicted portion of the remote file does not include the targeted portion; and

responsive to the determination that the predicted portion does not include the targeted portion, download at least a second portion of the remote file including the targeted portion.

16. The system of any preceding claim, wherein the CPU is further configured to monitor read operations of the system, wherein the predicting is based at least on the monitoring.

17. The system of any preceding claim, wherein:

the remote computing system is a cloud computing system; and

the remote file is a cloud file.

18. A computer program product, the computer program product comprising a computer readable storage medium having program instructions embodied therewith, the program instructions executable by a computer to cause the computer to:

identify a remote file stored on a remote computing system;

predict that a predicted portion of the remote file is likely to be subject to a future read request;

download the predicted portion of the remote file to a local file;

update metadata of the local file to map a local portion of the local file to the predicted portion of the remote file; and

present the local file to a file system as if the local file is a full copy of the remote file.

19. The computer program product of claim 18, wherein the instructions further cause the computer to receive a first read request, wherein:

the identifying is based at least on a target of the first read request; and

the predicting is based at least on the first read request.

20. The computer program product of claim 19, wherein the instructions further cause the computer to determine, based at least on an application profile database, a requesting application that initiated the first read request, wherein the predicting is further based at least on the requesting application.

21. The computer program product of claim 20, wherein the instructions further cause the computer to:

receive a second read request targeting a targeted portion of the remote file;

determine that the predicted portion of the remote file includes the targeted portion; and

responsive to the determination that the predicted portion includes the targeted portion, return, based on the metadata, at least part of the local portion mapped to the predicted portion.

22. The computer program product of claim 18, wherein the instructions further cause the computer to:

receive a second read request targeting a targeted portion of the remote file;

determine that the predicted portion of the remote file does not include the targeted portion; and

responsive to the determination that the predicted portion does not include the targeted portion, download at least a second portion of the remote file including the targeted portion..

23. The computer program product of claim 22, wherein the second portion of the remote file comprises an entirety of the remote file.

24. The computer program product of any preceding claim, wherein the instructions further cause the computer to monitor read operations of the computer, wherein the predicting is based at least on the monitoring.

25. The computer program product of any preceding claim, wherein:

the remote computing system is a cloud computing system; and

the remote file is a cloud file.