How to read very large text files fast

QUESTION

Does anyone know the fastest way to read large text files (10Mb) into a string. *Readln* is just too slow.

Answer 1

You may try this:

```
function R(const FileName: string): string;
var
  M: TFileStream;
begin
  M := TFileStream.Create(FileName, fmOpenRead);
  try
    SetLength(Result, M.Size);
    M.Read(Result[1], M.Size);
  finally
    M.Free;
  end;
end;
```

Tip by Christian Aymon

Answer 2

As an alternative to Christian's suggestion, you can also use a memory-mapped file:

```
function MMFileToString(const AFilename: string): string;
var
  hFile: THandle;
  hFileMap: THandle;
  hiSize: DWORD;
  loSize: DWORD;
  text: string;
  view: pointer;
begin
  Result := '';
  if AFilename = '' then
    Exit;
  if not FileExists(AFilename) then
    Exit;
  {Open the file}
  hFile := CreateFile(
    PChar(AFilename), GENERIC_READ, FILE_SHARE_READ, nil,
    OPEN_EXISTING, FILE_ATTRIBUTE_NORMAL, 0
  );
  if hFile <> INVALID_HANDLE_VALUE then
  begin
    loSize := GetFileSize(hFile, @hiSize);
    {File was opened successfully, now map it:}
    hFileMap := CreateFileMapping(
      hFile, nil, PAGE_READONLY, hiSize, loSize, 'TextForString'
    );
    if (hFileMap <> 0) then
    begin
      if (GetLastError() = ERROR_ALREADY_EXISTS) then
      begin
        MessageDlg(
          'Mapping already exists - not created.', mtWarning, [mbOk], 0
        );
        CloseHandle(hFileMap)
      end
      else
      begin
```

```
    try
      {File mapped successfully, now map a view of the file into the
      address space:}
      view := MapViewOfFile(hFileMap, FILE_MAP_READ, 0, 0, 0);
      if (view <> nil) then
      begin {View mapped successfully}
        {Close file handle - as long is view is open it will persist}
        CloseHandle(hFile);
        SetLength(Result, loSize);
        Move(view^, Result[1], loSize);
      end
      else
        MessageDlg(
          'Unable to map view of file. ' + SysErrorMessage(GetLastError),
          mtWarning, [mbOk], 0
        );
    finally
      UnmapViewOfFile(view);  {Close view}
      CloseHandle(hFileMap);  {Close mapping}
    end
    end
  end
  else
  begin
    MessageDlg(
      'Unable to create file mapping. ' + SysErrorMessage(GetLastError),
      mtWarning, [mbOk], 0
    );
  end;
  end
  else
  begin
    MessageDlg(
      'Unable to open file. ' + SysErrorMessage(GetLastError),
      mtWarning, [mbOk], 0
    );
  end;
end;
```

Tip by Ralph Friedman