

Run as Administrator and Wait for Completion in Delphi

You may use ShellExecute to run DOS command in Delphi, but it causes lots of run-time error in Windows 10+ based on my experience, because system requires to have some sort of permission. Custom function RunAsAdminAndWaitForCompletion() will help you to clear that issue.

```
function RunAsAdminAndWaitForCompletion(IsAdmin: Boolean; hWnd: HWND; filename: string; Parameters: string): Boolean;
{
    See Step 3: Redesign for UAC Compatibility (UAC)
    http://msdn.microsoft.com/en-us/library/bb756922.aspx
}
var
    sei: TShellExecuteInfo;
    ExitCode: DWORD;
begin
    ZeroMemory(@sei, SizeOf(sei));
    sei.cbSize := SizeOf(TShellExecuteInfo);
    sei.Wnd := hWnd;
    sei.fMask := SEE_MASK_FLAG_DDEWAIT or SEE_MASK_FLAG_NO_UI or SEE_MASK_NOCLOSEPROCESS;
    if IsAdmin=True then sei.lpVerb := PChar('runas');
    sei.lpFile := PChar(filename); // PAnsiChar;
    if parameters <> '' then
        sei.lpParameters := PChar(parameters); // PAnsiChar;
    sei.nShow := SW_SHOWNORMAL; //Integer;

    if ShellExecuteEx(@sei) then begin
        repeat
            Application.ProcessMessages;
            GetExitCodeProcess(sei.hProcess, ExitCode) ;
        until (ExitCode <> STILL_ACTIVE) or Application.Terminated;
    end;
end;
```

Below is the sample code to run above

```
// Run DOS command in admin permission
RunAsAdminAndWaitForCompletion( True, HWND(Handle), 'notepad.exe', '');

// Run DOS command without admin permission
RunAsAdminAndWaitForCompletion( False, HWND(Handle), 'notepad.exe', '');
```