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  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
    <!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->
    <IlrtTestKind>BuildOnly</IlrtTestKind>
    <!-- Test unsupported outside of windows -->
    <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
    <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
    <UnloadabilityIncompatible>true</UnloadabilityIncompatible>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
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Chris Re (cmr28@cornell.edu) and Werner Vogels (vogels@cs.cornell.edu)

For details on the original authors see http://math.nist.gov/scimark2

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Use:
https://github.com/dotnet/coreclr/blob/a9074bce5e3814db67dbec1c56f477202164d162/tests/src/sizeondisk/sodbenc h/SoDBench.cs#L738
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https://github.com/santoshsahoo/nbench (mirror of the same code)

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https://github.com/madler/zlib
http://zlib.net/zlib_license.html

/* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.11, January 15th, 2017

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Martin Richards
23 February 2007
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    <!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->
    <IlrtTestKind>BuildOnly</IlrtTestKind>
    <!-- Test unsupported outside of windows -->
    <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
  </PropertyGroup>
</Project>

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Use: https://github.com/mono/mono/blob/23e6f6fd4b58d72800f4e27f2a29a6b58806ff475f/mono/mini/bench.cs#L65

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https://github.com/madler/zlib
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" zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.11, January 15th, 2017

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Martin Richards
23 February 2007
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    <IlrtTestKind>BuildOnly</IlrtTestKind>
    <!-- Test unsupported outside of windows -->
    <TestUnsupportedOutsideWindows>true</Test UnsupportedOutsideWindows>
    <DisableProjectBuild Condition="$(TargetsUnix) == 'true'">true</DisableProjectBuild>
    <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
    <UnloadabilityIncompatible>true</UnloadabilityIncompatible>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="../ServerContracts/Server.CoClasses.cs" />
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/* zlib.h -- interface of the 'zlib' general purpose compression library version 1.2.11, January 15th, 2017

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MessagePack for C#

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Please feel free to re-implement this benchmark in any language you choose. I would be happy to incorporate such translations into this distribution together with their timing/size results.

Martin Richards
23 February 2007

1.6 topshelf-serviceinstaller 4.7.3062.0
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1.7 system-valuetuple 4.6.26011.01

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using System.Runtime.InteropServices;
using System.Net.NetworkInformation;

internal static partial class Interop
{
    internal static partial class Sys
    {
        [StructLayout(LayoutKind.Sequential)]
public unsafe struct IPEndPointInfo
{
    public fixed byte AddressBytes[16];
    public uint NumAddressBytes;
    public uint Port;
    private uint __padding; // For native struct-size padding. Does not contain useful data.
}

[StructLayout(LayoutKind.Sequential)]
public struct NativeTcpConnectionInformation
{
    public IPEndPointInfo LocalEndPoint;
    public IPEndPointInfo RemoteEndPoint;
    public TcpState State;
}

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetEstimatedTcpConnectionCount")]
public static extern unsafe int GetEstimatedTcpConnectionCount();

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetActiveTcpConnectionInfos")]
public static extern unsafe int GetActiveTcpConnectionInfos(NativeTcpConnectionInformation* infos, int* infoCount);

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetEstimatedUdpListenerCount")]
public static extern unsafe int GetEstimatedUdpListenerCount();

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetActiveUdpListeners")]
public static extern unsafe int GetActiveUdpListeners(IPEndPointInfo* infos, int* infoCount);

namespace System.Diagnostics
{
    internal static partial class ProcessManager
    {
        /// <summary>Gets process infos for each process on the specified machine.</summary>
        /// <param name="machineName">The target machine.</param>
        /// <returns>An array of process infos, one per found process.</returns>
        public static ProcessInfo[] GetProcessInfos(string machineName)
        {
            ThrowIfRemoteMachine(machineName);
        }
    }
}

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int[] procIds = GetProcessIds(machineName);

// Iterate through all process IDs to load information about each process
var processes = new List<ProcessInfo>(procIds.Length);
foreach (int pid in procIds)
{
    ProcessInfo pi = CreateProcessInfo(pid);
    if (pi != null)
    {
        processes.Add(pi);
    }
}

return processes.ToArray();

/// <summary>Gets an array of module infos for the specified process.</summary>
/// <param name="processId">The ID of the process whose modules should be enumerated.</param>
/// <returns>The array of modules.</returns>
internal static ProcessModuleCollection GetModules(int processId)
{
    // We don't have a good way of getting all of the modules of the particular process,
    // but we can at least get the path to the executable file for the process, and
    // other than for debugging tools, that's the main reason consumers of Modules care about it,
    // and why MainModule exists.
    try
    {
        string exePath = GetProcPath(processId);
        if (!string.IsNullOrEmpty(exePath))
        {
            return new ProcessModuleCollection(1)
            {
                new ProcessModule()
                {
                    FileName = exePath,
                    ModuleName = Path.GetFileName(exePath)
                }
            };
        }
    }
    catch { } // eat all errors

    return new ProcessModuleCollection(0); // eat all errors
}

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namespace System.Net.NetworkInformation
{
    internal static class IPGlobalPropertiesPal
    {
        public static IPGlobalProperties GetIPGlobalProperties()
        {
            return new BsdIPGlobalProperties();
        }
    }
}

Description: a source with two atom:contributor elements produces no error
Expect: !Error
-->

<feed xmlns="http://www.w3.org/2005/Atom">

    <title>Example Feed</title>
    <link href="http://contoso.com/"/>
    <updated>2003-12-13T18:30:02Z</updated>
    <author>
        <name>Author Name</name>
    </author>
    <id>urn:uuid:60a76c80-d399-11d9-b93C-0003939e0af6</id>

    <entry>
        <source>
            <title>Source of all knowledge</title>
            <id>urn:uuid:28213c50-f84c-11d9-8cd6-0800200c9a66</id>
            <updated>2003-12-13T17:46:27Z</updated>
            <contributor>
                <name>John Smith</name>
            </contributor>
            <contributor>
                <name>input name</name>
            </contributor>
        </source>
        <title>Atom-Powered Robots Run Amok</title>
        <link href="http://contoso.com/2003/12/13/atom03"/>
        <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
        <updated>2003-12-13T18:30:02Z</updated>
        <summary>Some text.</summary>
    </entry>

</feed>
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using System;
using System.Runtime.InteropServices;

internal static partial class Interop
{
    internal static partial class Sys
    {

        [Flags]
        internal enum InterfaceFlags
        {
            InterfaceUp = 0x01,


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InterfaceSupportsMulticast = 0x02,
InterfaceHasLink = 0x04,
InterfaceError = 0x08,

[StructLayoutAttribute(LayoutKind.Sequential)]
public unsafe readonly struct TcpGlobalStatistics
{
    public readonly ulong ConnectionsAccepted;
    public readonly ulong ConnectionsInitiated;
    public readonly ulong CumulativeConnections;
    public readonly ulong ErrorsReceived;
    public readonly ulong FailedConnectionAttempts;
    public readonly ulong SegmentsReceived;
    public readonly ulong SegmentsResent;
    public readonly ulong SegmentsSent;
    public readonly int CurrentConnections;
    private readonly int __padding;
}

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetTcpGlobalStatistics")]
public static extern unsafe int GetTcpGlobalStatistics(out TcpGlobalStatistics statistics);

[StructLayoutAttribute(LayoutKind.Sequential)]
public unsafe readonly struct IPv4GlobalStatistics
{
    public readonly ulong OutboundPackets;
    public readonly ulong OutputPacketsNoRoute;
    public readonly ulong CantFrags;
    public readonly ulong DatagramsFragmented;
    public readonly ulong PacketsReassembled;
    public readonly ulong TotalPacketsReceived;
    public readonly ulong PacketsDelivered;
    public readonly ulong PacketsDiscarded;
    public readonly ulong PacketsForwarded;
    public readonly ulong BadAddress;
    public readonly ulong BadHeader;
    public readonly ulong UnknownProtos;
    public readonly int DefaultTtl;
    public readonly int Forwarding;
}

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetIPv4GlobalStatistics")]
public static extern unsafe int GetIPv4GlobalStatistics(out IPv4GlobalStatistics statistics);

[StructLayoutAttribute(LayoutKind.Sequential)]
public unsafe readonly struct UdpGlobalStatistics
{
}
public readonly ulong DatagramsReceived;
public readonly ulong DatagramsSent;
public readonly ulong IncomingDiscarded;
public readonly ulong IncomingErrors;
public readonly ulong UdpListeners;
}

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetUdpGlobalStatistics")]
public static extern unsafe int GetUdpGlobalStatistics(out UdpGlobalStatistics statistics);

[StructLayoutAttribute(LayoutKind.Sequential)]
public unsafe readonly struct Icmpv4GlobalStatistics
{
    public readonly ulong AddressMaskRepliesReceived;
    public readonly ulong AddressMaskRepliesSent;
    public readonly ulong AddressMaskRequestsReceived;
    public readonly ulong AddressMaskRequestsSent;
    public readonly ulong DestinationUnreachableMessagesReceived;
    public readonly ulong DestinationUnreachableMessagesSent;
    public readonly ulong EchoRepliesReceived;
    public readonly ulong EchoRepliesSent;
    public readonly ulong EchoRequestsReceived;
    public readonly ulong EchoRequestsSent;
    public readonly ulong ParameterProblemsReceived;
    public readonly ulong ParameterProblemsSent;
    public readonly ulong RedirectsReceived;
    public readonly ulong RedirectsSent;
    public readonly ulong SourceQuenchesReceived;
    public readonly ulong SourceQuenchesSent;
    public readonly ulong TimeExceededMessagesReceived;
    public readonly ulong TimeExceededMessagesSent;
    public readonly ulong TimestampRepliesReceived;
    public readonly ulong TimestampRepliesSent;
    public readonly ulong TimestampRequestsReceived;
    public readonly ulong TimestampRequestsSent;
}

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetIcmpv4GlobalStatistics")]
public static extern unsafe int GetIcmpv4GlobalStatistics(out Icmpv4GlobalStatistics statistics);

[StructLayoutAttribute(LayoutKind.Sequential)]
public unsafe readonly struct Icmpv6GlobalStatistics
{
    public readonly ulong DestinationUnreachableMessagesReceived;
    public readonly ulong DestinationUnreachableMessagesSent;
    public readonly ulong EchoRepliesReceived;
    public readonly ulong EchoRepliesSent;
    public readonly ulong EchoRequestsReceived;
}
public readonly ulong EchoRequestsSent;
public readonly ulong MembershipQueriesReceived;
public readonly ulong MembershipQueriesSent;
public readonly ulong MembershipReductionsReceived;
public readonly ulong MembershipReductionsSent;
public readonly ulong MembershipReportsReceived;
public readonly ulong MembershipReportsSent;
public readonly ulong NeighborAdvertisementsReceived;
public readonly ulong NeighborAdvertisementsSent;
public readonly ulong NeighborSolicitsReceived;
public readonly ulong NeighborSolicitsSent;
public readonly ulong PacketTooBigMessagesReceived;
public readonly ulong PacketTooBigMessagesSent;
public readonly ulong ParameterProblemsReceived;
public readonly ulong ParameterProblemsSent;
public readonly ulong RedirectsReceived;
public readonly ulong RedirectsSent;
public readonly ulong RouterAdvertisementsReceived;
public readonly ulong RouterAdvertisementsSent;
public readonly ulong RouterSolicitsReceived;
public readonly ulong RouterSolicitsSent;
public readonly ulong TimeExceededMessagesReceived;
public readonly ulong TimeExceededMessagesSent;
}

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetIcmpv6GlobalStatistics")]
public static extern unsafe int GetIcmpv6GlobalStatistics(out Icmpv6GlobalStatistics statistics);

public readonly struct NativeIPInterfaceStatistics
{
    public readonly ulong SendQueueLength;
    public readonly ulong Mtu;
    public readonly ulong Speed;
    public readonly ulong InPackets;
    public readonly ulong InErrors;
    public readonly ulong OutPackets;
    public readonly ulong OutErrors;
    public readonly ulong InBytes;
    public readonly ulong OutBytes;
    public readonly ulong InMulticastPackets;
    public readonly ulong OutMulticastPackets;
    public readonly ulong InDrops;
    public readonly ulong InNoProto;
    public readonly ulong Flags;
}

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetNativeIPInterfaceStatistics")]
public static extern unsafe int GetNativeIPInterfaceStatistics(string name, out NativeIPInterfaceStatistics stats);

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetIcmpv6GlobalStatistics")]
public static extern unsafe int GetIcmpv6GlobalStatistics(out Icmpv6GlobalStatistics statistics);

[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetNativeIPInterfaceStatistics")]
public static extern unsafe int GetNativeIPInterfaceStatistics(string name, out NativeIPInterfaceStatistics stats);
[DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_GetNumRoutes")]
public static extern int GetNumRoutes();
}
}
<!--
Description: a feed with two atom:contributor elements
Expect: !Error
-->

<feed xmlns="http://www.w3.org/2005/Atom">

	<title>Example Feed</title>
	<link href="http://contoso.com/"></link>
	<updated>2003-12-13T18:30:02Z</updated>
	<author>
		<name>Author Name</name>
	</author>
	<contributor>
		<name>John Smith</name>
	</contributor>
	<contributor>
		<name>input name</name>
	</contributor>
	{id>urn:uuid:60a76c80-d399-11d9-b93C-0003939e0af6</id>

	<entry>
		<title>Atom-Powered Robots Run Amok</title>
		<link href="http://contoso.com/2003/12/13/atom03"/></link>
		<id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
		<updated>2003-12-13T18:30:02Z</updated>
		<summary>Some text.</summary>
	</entry>

</feed>

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using System;
using System.Diagnostics;
using System.Runtime.InteropServices;
using System.Text;
using size_t = System.IntPtr;

// This implements shim for sysctl calls.
// They are available on BSD systems - FreeBSD, OSX and others.
// Linux has sysctl() but it is deprecated as well as it is missing sysctlbyname()

internal static partial class Interop
{
    internal static partial class Sys
    {

        [DllImport(Libraries.SystemNative, EntryPoint = "SystemNative_Sysctl", SetLastError = true)]
        private extern static unsafe int Sysctl(int* name, int namelen, void* value, size_t* len);

        // This is 'raw' sysctl call, only wrapped to allocate memory if needed
        // caller always needs to free returned buffer using Marshal.FreeHGlobal()

        public static unsafe int Sysctl(Span<int> name, ref byte* value, ref int len)
        {
            fixed (int * ptr = &MemoryMarshal.GetReference(name))
            {
                return Sysctl(ptr, name.Length, ref value, ref len);
            }
        }

        public static unsafe int Sysctl(int* name, int name_len, ref byte* value, ref int len)
        {
            IntPtr bytesLength = (IntPtr)len;
            byte * pBuffer = value;
            value = null;
            int ret=-1;

            if (value == null && len == 0)
            {
                // do one try to see how much data we need
                ret = Sysctl(name, name_len, pBuffer, &bytesLength);
                if (ret != 0)
                {
                    throw new InvalidOperationException(SR.Format(SR.InvalidSysctl, *name, Marshal.GetLastWin32Error()));
                }

                pBuffer = (byte*)Marshal.AllocHGlobal((int)bytesLength);
            }

            ret = Sysctl(name, name_len, pBuffer, &bytesLength);
            if (ret != 0)
            {
                if (value == null && len == 0)
                {
                    // This is case we allocated memory for caller
                    Marshal.FreeHGlobal((IntPtr)pBuffer);
                }

                throw new InvalidOperationException(SR.Format(SR.InvalidSysctl, *name, Marshal.GetLastWin32Error()));
            }

            // do one try to see how much data we need
            ret = Sysctl(name, name_len, pBuffer, &bytesLength);
            if (ret != 0)
            {
                if (value == null && len == 0)
                {
                    // This is case we allocated memory for caller
                    Marshal.FreeHGlobal((IntPtr)pBuffer);
                }

                throw new InvalidOperationException(SR.Format(SR.InvalidSysctl, *name, Marshal.GetLastWin32Error()));
            }
        }
    }
}
namespace System.Net.NetworkInformation
{
    internal static class NetworkInterfacePal
    {
        /// Returns objects that describe the network interfaces on the local computer.
        public static NetworkInterface[] GetAllNetworkInterfaces()
        {
            return BsdNetworkInterface.GetBsdNetworkInterfaces();
        }
        public static bool GetIsNetworkAvailable()
        {
            foreach (var ni in GetAllNetworkInterfaces())
            {
                if (ni.NetworkInterfaceType == NetworkInterfaceType.Loopback
                    || ni.NetworkInterfaceType == NetworkInterfaceType.Tunnel)
                {
                    continue;
                }
                if (ni.OperationalStatus == OperationalStatus.Up)
                {
                    return true;
                }
            }
            return false;
        }
        public static int IPv6LoopbackInterfaceIndex
        {
            get
            {
                return LoopbackInterfaceIndex;
            }
        }
    }
}
public static int LoopbackInterfaceIndex
{
    get
    {
        var interfaces = BsdNetworkInterface.GetBsdNetworkInterfaces();
        for (int i = 0; i < interfaces.Length; i++)
        {
            if (interfaces[i].NetworkInterfaceType == NetworkInterfaceType.Loopback)
            {
                return ((UnixNetworkInterface)interfaces[i]).Index;
            }
        }
        throw new NetworkInformationException(SR.net_NoLoopback);
    }
}

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namespace System.ComponentModel
{
    /// <summary>
    /// Provides the <see langword='abstract'/> base class for all licenses. A license is
    /// granted to a specific instance of a component.
    /// </summary>
    public abstract class License : IDisposable
    {
        /// <summary>
        /// When overridden in a derived class, gets the license key granted to this component.
        /// </summary>
        public abstract string LicenseKey { get; }

        /// <summary>
        /// When overridden in a derived class, releases the license.
        /// </summary>
        public abstract void Dispose();
    }
}

<!--
Description: entry with multiple atom:contributor elements
Expect: !Error
-->

<feed xmlns="http://www.w3.org/2005/Atom">
  <title>Example Feed</title>
  <link href="http://contoso.com/"><updated>2003-12-13T18:30:02Z</updated>
  <author>
    <name>Author Name</name>
  </author>
  <id>urn:uuid:60a76c80-d399-11d9-b93C-0003939e0af6</id>

  <entry>
    <title>Atom-Powered Robots Run Amok</title>
    <link href="http://contoso.com/2003/12/13/atom03"/>
    <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
    <updated>2003-12-13T18:30:02Z</updated>
  </entry>
</feed>
<summary>Some text.</summary>

<contributor>
  <name>John Smith</name>
</contributor>

<contributor>
  <name>input name</name>
</contributor>

<feed xmlns="http://www.w3.org/2005/Atom"
  xmlns:creativeCommons="http://contoso.com/creativeCommonsRssModule">
  <title>Example Feed</title>
  <link href="http://contoso.com/"/>
  <updated>2003-12-13T18:30:02Z</updated>
  <author>
    <name>Author Name</name>
  </author>
  <id>urn:uuid:60a76c80-d399-11d9-b93C-0003939e0af6</id>
  <creativeCommons:license>http://contoso.com/licenses/by/2.0/</creativeCommons:license>
  <entry>
    <title>Atom-Powered Robots Run Amok</title>
    <link href="http://contoso.com/2003/12/13/atom03"/>
    <id>urn:uuid:1225c695-cfb8-4ebb-aaaa-80da344efa6a</id>
    <updated>2003-12-13T18:30:02Z</updated>
    <summary>Some text.</summary>
    <creativeCommons:license>http://contoso.com/licenses/by/2.0/</creativeCommons:license>
  </entry>
</feed>

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https://github.com/madler/zlib
http://zlib.net/zlib_license.html

/* zlib.h -- interface of the ‘zlib’ general purpose compression library version 1.2.11, January 15th, 2017

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```
using System.Collections.Generic;
using System.ComponentModel;

namespace System.Diagnostics
{
    public partial class Process
    {
        ///
    }
```

---

```xml
new XElement("TITLE", "The Tragedy of Hamlet, Prince of Denmark"),
new XElement("fm",
    new XElement("p", "Text placed in the public domain by Moby Lexical Tools, 1992.").
    new XElement("p", "XML version by Jon Bosak, 1996-1997.").
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/// Creates an array of <see cref="Process"/> components that are associated with process resources on a
/// remote computer. These process resources share the specified process name.
/// </summary>
public static Process[] GetProcessesByName(string processName, string machineName)
{
    if (processName == null)
    {
        processName = string.Empty;
    }

    Process[] procs = GetProcesses(machineName);
    var list = new List<Process>();

    for (int i = 0; i < procs.Length; i++)
    {
        if (string.Equals(processName, procs[i].ProcessName, StringComparison.OrdinalIgnoreCase))
        {
            list.Add(procs[i]);
        }
        else
        {
            procs[i].Dispose();
        }
    }

    return list.ToArray();
}

/// <summary>
/// Gets or sets which processors the threads in this process can be scheduled to run on.
/// </summary>
private unsafe IntPtr ProcessorAffinityCore
{
    get
    {
        throw new PlatformNotSupportedException(SR.ProcessorAffinityNotSupported);
    }
    set
    {
        throw new PlatformNotSupportedException(SR.ProcessorAffinityNotSupported);
    }
}

/// <summary>
/// Make sure we have obtained the min and max working set limits.
/// </summary>
private void GetWorkingSetLimits(out IntPtr minWorkingSet, out IntPtr maxWorkingSet)
// We can only do this for the current process on OS X
if (_processId != Interop.Sys.GetPid())
    throw new PlatformNotSupportedException(SR.OsxExternalProcessWorkingSetNotSupported);

// Minimum working set (or resident set, as it is called on *nix) doesn't exist so set to 0
minWorkingSet = IntPtr.Zero;

// Get the max working set size
Interop.Sys.RLimit limit;
if (Interop.Sys.GetRLimit(Interop.Sys.RlimitResources.RLIMIT_RSS, out limit) == 0)
{
    maxWorkingSet = limit.CurrentLimit == Interop.Sys.RLIM_INFINITY ?
        new IntPtr(long.MaxValue) :
        new IntPtr(Convert.ToInt64(limit.CurrentLimit));
}
else
{
    // The contract specifies that this throws Win32Exception when it failes to retrieve the info
    throw new Win32Exception();
}

/// <summary>Sets one or both of the minimum and maximum working set limits.</summary>
/// <param name="newMin">The new minimum working set limit, or null not to change it.</param>
/// <param name="newMax">The new maximum working set limit, or null not to change it.</param>
/// <param name="resultingMin">The resulting minimum working set limit after any changes applied.</param>
/// <param name="resultingMax">The resulting maximum working set limit after any changes applied.</param>
private void SetWorkingSetLimitsCore(IntPtr? newMin, IntPtr? newMax, out IntPtr resultingMin, out IntPtr resultingMax)
{
    // We can only do this for the current process on OS X
    if (_processId != Interop.Sys.GetPid())
        throw new PlatformNotSupportedException(SR.OsxExternalProcessWorkingSetNotSupported);

    // There isn't a way to set the minimum working set, so throw an exception here
    if (newMin.HasValue)
    {
        throw new PlatformNotSupportedException(SR.MinimumWorkingSetNotSupported);
    }

    // The minimum resident set will always be 0, default the resulting max to 0 until we set it (to make the
    // compiler happy)
    resultingMin = IntPtr.Zero;
    resultingMax = IntPtr.Zero;

    // The default hard upper limit is absurdly high (over 9000PB) so just change the soft limit...especially since
// if you aren't root and move the upper limit down, you need root to move it back up
if (newMax.HasValue)
{
    Interop.Sys.RLimit limits = new Interop.Sys.RLimit() { CurrentLimit = (ulong)newMax.Value.ToInt64() }
};

int result = Interop.Sys.SetRLimit(Interop.Sys.RlimitResources.RLIMIT_RSS, ref limits);
if (result != 0)
{
    throw new System.ComponentModel.Win32Exception(SR.RUsageFailure);
}

// Try to grab the actual value, in case the OS decides to fudge the numbers
result = Interop.Sys.GetRLimit(Interop.Sys.RlimitResources.RLIMIT_RSS, out limits);
if (result == 0) resultingMax = new IntPtr((long)limits.CurrentLimit);


---

1.8 visual-studio-runtime 14.00.23026.0

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1.9 microsoft-windowsdesktop-app-ref

4.7.3062.0

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1.10 system-data-common 4.6.26011.01

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Martin Richards
23 February 2007

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1.11 sharpziplib 1.1.0
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1.12 microsoft-build-runtime 4.7.3062.0

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1.13 visual-studio-runtime 10.0.40219.1

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        <IlrtTestKind>BuildOnly</IlrtTestKind>
        <!-- Test unsupported outside of windows -->
        <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
        <DisableProjectBuild Condition="$(TargetsUnix) == 'true'">true</DisableProjectBuild>
        <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
        <UnloadabilityIncompatible>true</UnloadabilityIncompatible>
    </PropertyGroup>
    <ItemGroup>
        <Compile Include="Program.cs" />
        <Compile Include="../../ServerContracts/Server.CoClasses.cs" />
        <Compile Include="../../ServerContracts/Server.Contracts.cs" />
        <Compile Include="../../ServerContracts/ServerGuids.cs" />
    </ItemGroup>
</Project>
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Martin Richards
23 February 2007

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/* zlib.h -- interface of the 'zlib' general purpose compression library version 1.2.11, January 15th, 2017

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The punycode implementation is based on the sample code in RFC 3492

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/* zlib.h -- interface of the 'zlib' general purpose compression library
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John R. Hauser
2018 January 20

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Use:
https://github.com/dotnet/coreclr/blob/a9074bce5e3814db67dbec1c56f477202164d162/tests/src/sizeondisk/sodbenc
h/SoDBench.cs#L738
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
    <!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->
    <IlrtTestKind>BuildOnly</IlrtTestKind>
    <!-- Test unsupported outside of windows -->
    <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
    <DisableProjectBuild Condition="'(TargetsUnix)' == 'true'">true</DisableProjectBuild>
    <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
    <UnloadabilityIncompatible>true</UnloadabilityIncompatible>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="../ServerContracts/Server.CoClasses.cs" />
    <Compile Include="../ServerContracts/Server.Contracts.cs" />
    <Compile Include="../ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <ProjectReference Include="../NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
  </ItemGroup>
</Project>

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1.16 system-security-cryptography-algorithms 4.6.26011.01

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```xml
<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
    <!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->
    <IlrtTestKind>BuildOnly</IlrtTestKind>
    <!-- Test unsupported outside of windows -->
    <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
    <DisableProjectBuild Condition="$(TargetsUnix) == true">true</DisableProjectBuild>
    <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
    <UnloadabilityIncompatible>true</UnloadabilityIncompatible>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="../../../ServerContracts/Server.CoClasses.cs" />
    <Compile Include="../../../ServerContracts/Server.Contracts.cs" />
    <Compile Include="../../../ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <ProjectReference Include="../../../NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
  </ItemGroup>
</Project>
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https://github.com/dotnet/coreclr/blob/a9074bce5e3814db67dbec1c56f477202164d162/tests/src/sizeondisk/sodbenc
h/SoDBench.cs#L738

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Martin Richards
23 February 2007

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/* zlib.h -- interface of the 'zlib' general purpose compression library
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Martin Richards
23 February 2007

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 version 1.2.11, January 15th, 2017

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Bit Twiddling Hacks

By Sean Eron Anderson
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<UnloadabilityIncompatible>true</UnloadabilityIncompatible>
</PropertyGroup>
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<Compile Include="Program.cs" />
<Compile Include=".\ServerContracts\Server.CoClasses.cs" />
<Compile Include=".\ServerContracts\Server.Contracts.cs" />
<Compile Include=".\ServerContracts\ServerGuids.cs" />
</ItemGroup>
<ItemGroup>
<ProjectReference Include=".\NativeServer\CMakeLists.txt" />
<ProjectReference Include="$(TestSourceDir)Common\CoreCLRTestLibrary\CoreCLRTestLibrary.csproj" />
</ItemGroup>
</Project>

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1.20 mongodb-driver-core 2.8.1

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2. SaslPrepHelper.cs

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1.21 microsoft-windowsdesktop-app-runtime-win-x64 4.7.3062.0
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1.22 system-threading-overlapped

4.6.26011.01

1.22.1 Available under license:

<Project Sdk="Microsoft.NET.Sdk">
    <PropertyGroup>
        <OutputType>Exe</OutputType>
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        <!-- Test unsupported outside of windows -->
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    </PropertyGroup>
    <ItemGroup>
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        <Compile Include="../../ServerContracts/Server.CoClasses.cs" />
        <Compile Include="../../ServerContracts/Server.Contracts.cs" />
    </ItemGroup>
</Project>
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Martin Richards
23 February 2007

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https://github.com/santoshsahoo/nbench (mirror of the same code)

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The punycode implementation is based on the sample code in RFC 3492

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Martin Richards
23 February 2007
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<Project Sdk="Microsoft.NET.Sdk">
    <PropertyGroup>
        <OutputType>Exe</OutputType>
    </PropertyGroup>
</Project>
<ApplicationManifest>App.manifest</ApplicationManifest>

<!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/2081 -->

<IlrtTestKind>BuildOnly</IlrtTestKind>

<!-- Test unsupported outside of windows -->

<TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>

<!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->

<UnloadabilityIncompatible>true</UnloadabilityIncompatible>

</PropertyGroup>

<ItemGroup>

<Compile Include="Program.cs" />

<Compile Include="../../ServerContracts/Server.CoClasses.cs" />

<Compile Include="../../ServerContracts/Server.Contracts.cs" />

<Compile Include="../../ServerContracts/ServerGuids.cs" />

</ItemGroup>

<ItemGroup>

<ProjectReference Include="../../NativeServer/CMakeLists.txt" />

<ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />

</ItemGroup>

</Project>

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1.24 powertreading 4.6.0.0

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1.25 curl 7.61.1

1.25.1 Available under license:

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## OpenLDAP

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## libssh2

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1.26 system-runtime-interopservices-runtimeinformation 4.6.26011.01

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Martin Richards
23 February 2007

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<Project Sdk="Microsoft.NET.Sdk">

<PropertyGroup>

<OutputType>Exe</OutputType>

<ApplicationManifest>App.manifest</ApplicationManifest>

<!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->

<IlrtTestKind>BuildOnly</IlrtTestKind>

<!-- Test unsupported outside of windows -->

<TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>

DISABLEPROJECTBUILD Condition="$(TargetsUnix) == 'true'">true</DISABLEPROJECTBUILD>

<!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->

<UnloadabilityIncompatible>true</UnloadabilityIncompatible>

</PropertyGroup>

<ItemGroup>

<Compile Include="Program.cs" />

<Compile Include="../ServerContracts/Server.CoClasses.cs" />

<Compile Include="../ServerContracts/Server.Contracts.cs" />

<Compile Include="../ServerContracts/ServerGuids.cs" />

</ItemGroup>

<ItemGroup>

<ProjectReference Include="../NativeServer/CMakeLists.txt" />

<ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />

</ItemGroup>

</Project>

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    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
  </PropertyGroup>
</Project>

<!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->

<IlrtTestKind>BuildOnly</IlrtTestKind>
<!-- Test unsupported outside of windows -->
<TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
<DisableProjectBuild Condition="$(TargetsUnix) == 'true'">true</DisableProjectBuild>
<!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
<UnloadabilityIncompatible>true</UnloadabilityIncompatible>
</PropertyGroup>
<ItemGroup>
<Compile Include="Program.cs" />
<Compile Include="../../ServerContracts/Server.CoClasses.cs" />
<Compile Include="../../ServerContracts/Server.Contracts.cs" />
<Compile Include="../../ServerContracts/ServerGuids.cs" />
</ItemGroup>
<ItemGroup>
<ProjectReference Include="../../NativeServer/CMakeLists.txt" />
<ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
</ItemGroup>
</Project>

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Martin Richards
23 February 2007
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/* zlib.h -- interface of the 'zlib' general purpose compression library
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1.29 mstest-testframework 14.0.4503.01

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1.30 openssl 1.0.1c

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* /opt/ws_local/PERMITS_SQL/1013397298_1592345992.04/0/enterpriselibrary-common205-0-zip/EL-V5/aExpense/Scripts/jquery-1.4.4-vsdoc.js
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* jQuery validation plugin 1.10.0
* * http://bassistance.de/jquery-plugins/jquery-plugin-validation/
* http://docs.jquery.com/Plugins/Validation
1.33 zlib 1.2.3

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/* zlib.h -- interface of the 'zlib' general purpose compression library
  version 1.2.11, January 15th, 2017

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/* zlib.h -- interface of the 'zlib' general purpose compression library
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/* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.11, January 15th, 2017

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<one line to give the program's name and a brief idea of what it does.>
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<optional comments here, mostly ignored>

<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice

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1.48 libjpeg 6b

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README for release 6b of 27-Mar-1998

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our electronic mailing list. Mailing list members are notified of updates
and have a chance to participate in technical discussions, etc.

This software is the work of Tom Lane, Philip Gladstone, Jim Boucher,
Lee Crocker, Julian Minguillon, Luis Ortiz, George Phillips, Davide Rossi,
Guido Vollbeding, Ge’ Weijers, and other members of the Independent JPEG
Group.

IJG is not affiliated with the official ISO JPEG standards committee.

DOCUMENTATION ROADMAP
=======================

This file contains the following sections:

OVERVIEW General description of JPEG and the IJG software.
LEGAL ISSUES Copyright, lack of warranty, terms of distribution.
REFERENCES Where to learn more about JPEG.
ARCHIVE LOCATIONS Where to find newer versions of this software.
RELATED SOFTWARE Other stuff you should get.
FILE FORMAT WARS Software *not* to get.
TO DO Plans for future IJG releases.

Other documentation files in the distribution are:

User documentation:
install.doc How to configure and install the IJG software.
usage.doc Usage instructions for cjpeg, djpeg, jpegtran,
rdjpgcom, and wrjpgcom.
*.1 Unix-style man pages for programs (same info as usage.doc).
wizard.doc Advanced usage instructions for JPEG wizards only.
change.log Version-to-version change highlights.

Programmer and internal documentation:
libjpeg.doc How to use the JPEG library in your own programs.
example.c      Sample code for calling the JPEG library.
structure.doc  Overview of the JPEG library's internal structure.
filelist.doc   Road map of IJG files.
coderules.doc  Coding style rules --- please read if you contribute code.

Please read at least the files install.doc and usage.doc. Useful information can also be found in the JPEG FAQ (Frequently Asked Questions) article. See ARCHIVE LOCATIONS below to find out where to obtain the FAQ article.

If you want to understand how the JPEG code works, we suggest reading one or more of the REFERENCES, then looking at the documentation files (in roughly the order listed) before diving into the code.

OVERVIEW
========

This package contains C software to implement JPEG image compression and decompression. JPEG (pronounced "jay-peg") is a standardized compression method for full-color and gray-scale images. JPEG is intended for compressing "real-world" scenes; line drawings, cartoons and other non-realistic images are not its strong suit. JPEG is lossy, meaning that the output image is not exactly identical to the input image. Hence you must not use JPEG if you have to have identical output bits. However, on typical photographic images, very good compression levels can be obtained with no visible change, and remarkably high compression levels are possible if you can tolerate a low-quality image. For more details, see the references, or just experiment with various compression settings.

This software implements JPEG baseline, extended-sequential, and progressive compression processes. Provision is made for supporting all variants of these processes, although some uncommon parameter settings aren't implemented yet. For legal reasons, we are not distributing code for the arithmetic-coding variants of JPEG; see LEGAL ISSUES. We have made no provision for supporting the hierarchical or lossless processes defined in the standard.

We provide a set of library routines for reading and writing JPEG image files, plus two sample applications "cjpeg" and "djpeg", which use the library to perform conversion between JPEG and some other popular image file formats. The library is intended to be reused in other applications.

In order to support file conversion and viewing software, we have included considerable functionality beyond the bare JPEG coding/decoding capability; for example, the color quantization modules are not strictly part of JPEG decoding, but they are essential for output to colormapped file formats or colormapped displays. These extra functions can be compiled out of the library if not required for a particular application. We have also included "jpegtran", a utility for lossless transcoding between different JPEG
processes, and "rdjpgcom" and "wrjpgcom", two simple applications for inserting and extracting textual comments in JFIF files.

The emphasis in designing this software has been on achieving portability and flexibility, while also making it fast enough to be useful. In particular, the software is not intended to be read as a tutorial on JPEG. (See the REFERENCES section for introductory material.) Rather, it is intended to be reliable, portable, industrial-strength code. We do not claim to have achieved that goal in every aspect of the software, but we strive for it.

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that you must include source code if you redistribute it. (See the file
ansi2knr.c for full details.) However, since ansi2knr.c is not needed as part
of any program generated from the IJG code, this does not limit you more than
the foregoing paragraphs do.

The Unix configuration script "configure" was produced with GNU Autoconf.
It is copyright by the Free Software Foundation but is freely distributable.
The same holds for its supporting scripts (config.guess, config.sub,
lconfig, ltmain.sh). Another support script, install-sh, is copyright
by M.I.T. but is also freely distributable.

It appears that the arithmetic coding option of the JPEG spec is covered by
patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot
legally be used without obtaining one or more licenses. For this reason,
support for arithmetic coding has been removed from the free JPEG software.
(Since arithmetic coding provides only a marginal gain over the unpatented
Huffman mode, it is unlikely that very many implementations will support it.)
So far as we are aware, there are no patent restrictions on the remaining
code.

The IJG distribution formerly included code to read and write GIF files.
To avoid entanglement with the Unisys LZW patent, GIF reading support has
been removed altogether, and the GIF writer has been simplified to produce
"uncompressed GIFs". This technique does not use the LZW algorithm; the
resulting GIF files are larger than usual, but are readable by all standard
GIF decoders.
We are required to state that
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REFERENCES
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We highly recommend reading one or more of these references before trying to understand the innards of the JPEG software.

The best short technical introduction to the JPEG compression algorithm is Wallace, Gregory K. "The JPEG Still Picture Compression Standard", Communications of the ACM, April 1991 (vol. 34 no. 4), pp. 30-44. (Adjacent articles in that issue discuss MPEG motion picture compression, applications of JPEG, and related topics.) If you don't have the CACM issue handy, a PostScript file containing a revised version of Wallace's article is available at ftp://ftp.uu.net/graphics/jpeg/wallace.ps.gz. The file (actually a preprint for an article that appeared in IEEE Trans. Consumer Electronics) omits the sample images that appeared in CACM, but it includes corrections and some added material. Note: the Wallace article is copyright ACM and IEEE, and it may not be used for commercial purposes.

A somewhat less technical, more leisurely introduction to JPEG can be found in "The Data Compression Book" by Mark Nelson and Jean-loup Gailly, published by M&T Books (New York), 2nd ed. 1996, ISBN 1-55851-434-1. This book provides good explanations and example C code for a multitude of compression methods including JPEG. It is an excellent source if you are comfortable reading C code but don't know much about data compression in general. The book's JPEG sample code is far from industrial-strength, but when you are ready to look at a full implementation, you've got one here...


The JPEG standard itself is not available electronically; you must order a paper copy through ISO or ITU. (Unless you feel a need to own a certified official copy, we recommend buying the Pennebaker and Mitchell book instead; it's much cheaper and includes a great deal of useful explanatory material.) In the USA, copies of the standard may be ordered from ANSI Sales at (212) 642-4900, or from Global Engineering Documents at (800) 854-7179. (ANSI doesn't take credit card orders, but Global does.) It's not cheap: as of 1992, ANSI was charging $95 for Part 1 and $47 for Part 2, plus 7%

Some extensions to the original JPEG standard are defined in JPEG Part 3, a newer ISO standard numbered ISO/IEC IS 10918-3 and ITU-T T.84. IJG currently does not support any Part 3 extensions.

The JPEG standard does not specify all details of an interchangeable file format. For the omitted details we follow the "JFIF" conventions, revision 1.02. A copy of the JFIF spec is available from:

Literature Department
C-Cube Microsystems, Inc.
1778 McCarthy Blvd.
Milpitas, CA 95035
phone (408) 944-6300, fax (408) 944-6314

A PostScript version of this document is available by FTP at ftp://ftp.uu.net/graphics/jpeg/jfif.ps.gz. There is also a plain text version at ftp://ftp.uu.net/graphics/jpeg/jfif.txt.gz, but it is missing the figures.

The TIFF 6.0 file format specification can be obtained by FTP from ftp://ftp.sgi.com/graphics/tiff/TIFF6.ps.gz. The JPEG incorporation scheme found in the TIFF 6.0 spec of 3-June-92 has a number of serious problems. IJG does not recommend use of the TIFF 6.0 design (TIFF Compression tag 6). Instead, we recommend the JPEG design proposed by TIFF Technical Note #2 (Compression tag 7). Copies of this Note can be obtained from ftp.sgi.com or from ftp://ftp.uu.net/graphics/jpeg/. It is expected that the next revision of the TIFF spec will replace the 6.0 JPEG design with the Note's design. Although IJG's own code does not support TIFF/JPEG, the free libtiff library uses our library to implement TIFF/JPEG per the Note. libtiff is available from ftp://ftp.sgi.com/graphics/tiff/.

ARCHIVE LOCATIONS

The "official" archive site for this software is ftp.uu.net (Internet address 192.48.96.9). The most recent released version can always be found there in directory graphics/jpeg. This particular version will be archived as ftp://ftp.uu.net/graphics/jpeg/jpegsrc.v6b.tar.gz. If you don't have direct Internet access, UUNET's archives are also available via UUCP; contact help@uunet.uu.net for information on retrieving files that way.
Numerous Internet sites maintain copies of the UUNET files. However, only ftp.uu.net is guaranteed to have the latest official version.

You can also obtain this software in DOS-compatible "zip" archive format from the SimTel archives (ftp://ftp.simtel.net/pub/simtelnet/msdos/graphics/), or on CompuServe in the Graphics Support forum (GO CIS:GRAPHSUP), library 12 "JPEG Tools". Again, these versions may sometimes lag behind the ftp.uu.net release.

The JPEG FAQ (Frequently Asked Questions) article is a useful source of general information about JPEG. It is updated constantly and therefore is not included in this distribution. The FAQ is posted every two weeks to Usenet newsgroups comp.graphics.misc, news.answers, and other groups. It is available on the World Wide Web at http://www.faqs.org/faqs/jpeg-faq/ and other news.answers archive sites, including the official news.answers archive at rtfm.mit.edu: ftp://rtfm.mit.edu/pub/usenet/news.answers/jpeg-faq/.

If you don't have Web or FTP access, send e-mail to mail-server@rtfm.mit.edu with body:

send usenet/news.answers/jpeg-faq/part1
send usenet/news.answers/jpeg-faq/part2

RELATED SOFTWARE
================

Numerous viewing and image manipulation programs now support JPEG. (Quite a few of them use this library to do so.) The JPEG FAQ described above lists some of the more popular free and shareware viewers, and tells where to obtain them on Internet.

If you are on a Unix machine, we highly recommend Jef Poskanzer's free PBMPLUS software, which provides many useful operations on PPM-format image files. In particular, it can convert PPM images to and from a wide range of other formats, thus making cjpeg/djpeg considerably more useful. The latest version is distributed by the NetPBM group, and is available from numerous sites, notably ftp://wuarchive.wustl.edu/Graphics/Graphics/packages/NetPBM/.

Unfortunately PBMPLUS/NETPBM is not nearly as portable as the IJG software is; you are likely to have difficulty making it work on any non-Unix machine.

A different free JPEG implementation, written by the PVRG group at Stanford, is available from ftp://havefun.stanford.edu/pub/jpeg/. This program is designed for research and experimentation rather than production use; it is slower, harder to use, and less portable than the IJG code, but it is easier to read and modify. Also, the PVRG code supports lossless JPEG, which we do not. (On the other hand, it doesn't do progressive JPEG.)

FILE FORMAT WARS
Some JPEG programs produce files that are not compatible with our library. The root of the problem is that the ISO JPEG committee failed to specify a concrete file format. Some vendors "filled in the blanks" on their own, creating proprietary formats that no one else could read. (For example, none of the early commercial JPEG implementations for the Macintosh were able to exchange compressed files.)

The file format we have adopted is called JFIF (see REFERENCES). This format has been agreed to by a number of major commercial JPEG vendors, and it has become the de facto standard. JFIF is a minimal or "low end" representation. We recommend the use of TIFF/JPEG (TIFF revision 6.0 as modified by TIFF Technical Note #2) for "high end" applications that need to record a lot of additional data about an image. TIFF/JPEG is fairly new and not yet widely supported, unfortunately.

The upcoming JPEG Part 3 standard defines a file format called SPIFF. SPIFF is interoperable with JFIF, in the sense that most JFIF decoders should be able to read the most common variant of SPIFF. SPIFF has some technical advantages over JFIF, but its major claim to fame is simply that it is an official standard rather than an informal one. At this point it is unclear whether SPIFF will supersede JFIF or whether JFIF will remain the de-facto standard. IJG intends to support SPIFF once the standard is frozen, but we have not decided whether it should become our default output format or not. (In any case, our decoder will remain capable of reading JFIF indefinitely.)

Various proprietary file formats incorporating JPEG compression also exist. We have little or no sympathy for the existence of these formats. Indeed, one of the original reasons for developing this free software was to help force convergence on common, open format standards for JPEG files. Don't use a proprietary file format!

TO DO
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The major thrust for v7 will probably be improvement of visual quality. The current method for scaling the quantization tables is known not to be very good at low Q values. We also intend to investigate block boundary smoothing, "poor man's variable quantization", and other means of improving quality-vs-file-size performance without sacrificing compatibility.

In future versions, we are considering supporting some of the upcoming JPEG Part 3 extensions --- principally, variable quantization and the SPIFF file format.

As always, speeding things up is of great interest.
1.49 Newtonsoft.Json 4.5.6.14930

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7-Zip Command line version

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By Sean Eron Anderson
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Martin Richards
23 February 2007

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/* zlib.h -- interface of the 'zlib' general purpose compression library
   version 1.2.11, January 15th, 2017

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By Sean Eron Anderson
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    <IlrtTestKind>BuildOnly</IlrtTestKind>
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    <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
    <DisableProjectBuild Condition="$(TargetsUnix) == 'true'">true</DisableProjectBuild>
    <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
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  </PropertyGroup>
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    <Compile Include="../../ServerContracts/Server.Contracts.cs" />
    <Compile Include="../../ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <ProjectReference Include="../../NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
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    <!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->
    <IlrtTestKind>BuildOnly</IlrtTestKind>
    <!-- Test unsupported outside of windows -->
    <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
    <DisableProjectBuild Condition="$(TargetsUnix) == 'true'">true</DisableProjectBuild>
    <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
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  <ItemGroup>
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    <Compile Include="../../ServerContracts/Server.CoClasses.cs" />
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  </ItemGroup>
  <ItemGroup>
    <ProjectReference Include="../../NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
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By Sean Eron Anderson
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The punycode implementation is based on the sample code in RFC 3492

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    <Compile Include="../ServerContracts/Server.Contracts.cs" />
    <Compile Include="../ServerContracts/ServerGuids.cs" />
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  </ItemGroup>
</Project>

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1. The following files: CryptographyHelpers.cs, HashAlgorithmName.cs, Rfc2898DeriveBytes.cs

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/* zlib.h -- interface of the 'zlib' general purpose compression library
 version 1.2.11, January 15th, 2017

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1.66 boost 1.57.0

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--- end ---
This is an attempt to acknowledge early contributions to the garbage collector. Later contributions should instead be mentioned in README.changes.

HISTORY -
Early versions of this collector were developed as a part of research projects supported in part by the National Science Foundation and the Defense Advance Research Projects Agency.

The garbage collector originated as part of the run-time system for the Russell programming language implementation. The first version of the garbage collector was written primarily by Al Demers. It was then refined and mostly rewritten, primarily by Hans-J. Boehm, at Cornell U., the University of Washington, Rice University (where it was first used for C and assembly code), Xerox PARC, SGI, and HP Labs. However, significant contributions have also been made by many others.

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https://github.com/santoshsahoo/nbench (mirror of the same code)

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Martin Richards
23 February 2007

<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
    <!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->
    <IlrtTestKind>BuildOnly</IlrtTestKind>
    <!-- Test unsupported outside of windows -->
    <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
    <DisableProjectBuild Condition="$(TargetsUnix) == 'true'">true</DisableProjectBuild>
    <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
    <UnloadabilityIncompatible>true</UnloadabilityIncompatible>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="../../../ServerContracts/Server.CoClasses.cs" />
    <Compile Include="../../../ServerContracts/Server.Contracts.cs" />
    <Compile Include="../../../ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <ProjectReference Include="../../../NativeServer/CMakeLists.txt" />
    <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
  </ItemGroup>
</Project>
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## 1.69 commonservicelocator 1.0.0.0

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"Id":14765,"ShortName": "Ms-PL","StartDate": "/Date(1220558921010-0700)/"
}
```

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/* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.11, January 15th, 2017

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<Project Sdk="Microsoft.NET.Sdk">
  <PropertyGroup>
    <OutputType>Exe</OutputType>
    <ApplicationManifest>App.manifest</ApplicationManifest>
    <!-- Blocked on ILAsm supporting embedding resources. See https://github.com/dotnet/coreclr/issues/20819 -->
    <IlrtTestKind>BuildOnly</IlrtTestKind>
    <!-- Test unsupported outside of windows -->
    <TestUnsupportedOutsideWindows>true</TestUnsupportedOutsideWindows>
    <DisableProjectBuild Condition="$(TargetsUnix) == 'true'">true</DisableProjectBuild>
    <!-- This test would require the runincontext.exe to include App.manifest describing the COM interfaces -->
    <UnloadabilityIncompatible>true</UnloadabilityIncompatible>
  </PropertyGroup>
  <ItemGroup>
    <Compile Include="Program.cs" />
    <Compile Include="../../ServerContracts/Server.CoClasses.cs" />
    <Compile Include="../../ServerContracts/Server.Contracts.cs" />
    <Compile Include="../../ServerContracts/ServerGuids.cs" />
  </ItemGroup>
  <ItemGroup>
    <ProjectReference Include="../../NativeServer/CMakeLists.txt" />
  </ItemGroup>
</Project Sdk>
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Martin Richards
23 February 2007
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  <Compile Include="../../ServerContracts/Server.Contracts.cs" />
  <Compile Include="../../ServerContracts/ServerGuids.cs" />
</ItemGroup>

<ItemGroup>
  <ProjectReference Include="../../NativeServer/CMakeLists.txt" />
  <ProjectReference Include="$(TestSourceDir)Common/CoreCLRTestLibrary/CoreCLRTestLibrary.csproj" />
</ItemGroup>
</Project>

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https://github.com/madler/zlib
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/* zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.11, January 15th, 2017

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1.78 microsoft-build-engine 4.7.3062.0

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1.79 system-componentmodel-annotations

4.7.3062.0

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Martin Richards
23 February 2007

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</TextBlock>
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    VerticalAlignment="Top"
    TextWrapping="Wrap"
    Height="47.04">
    <Run
        Text="An interactive sample that shows off most features on a single NotifyIcon." />
</TextBlock>
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    VerticalAlignment="Top"
    Height="27"
    Content="Open Sample Window"
    x:Name="btnMainSample"
    Click="btnMainSample_Click"
    Width="164"
    HorizontalAlignment="Left" />
<Path
    Fill="#FFFFFFFF"
    Stroke="#FF60758A"
    HorizontalAlignment="Left"
    Margin="244.31,50,0,66"
    Width="1"
    Data="M269,57 L269,390.18163 Opacity="0.325"
</TextBlock>
<TextBlock
    Margin="255.31,191,10,0"
    TextWrapping="Wrap"
The latest news related to the component can be found on the project page:

[Hyperlink NavigateUri="http://www.hardcodet.net/wpf-notifyicon"]

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Path Fill="#FFFFFFFF" Stretch="Fill" Stroke="#FF60758A"
1.82 log4cplus 1.1.3

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