Microsoft

WorkshopPLUS: SharePoint Server Administration

Troubleshooting: Tools

Agenda - Chapter 1

Out-of-the-box tools
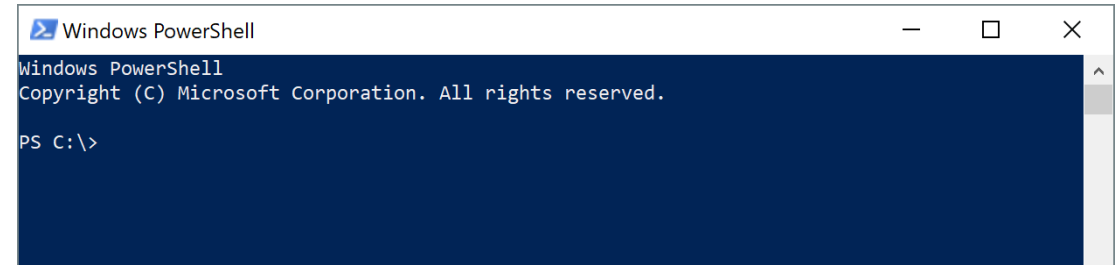

PowerShell

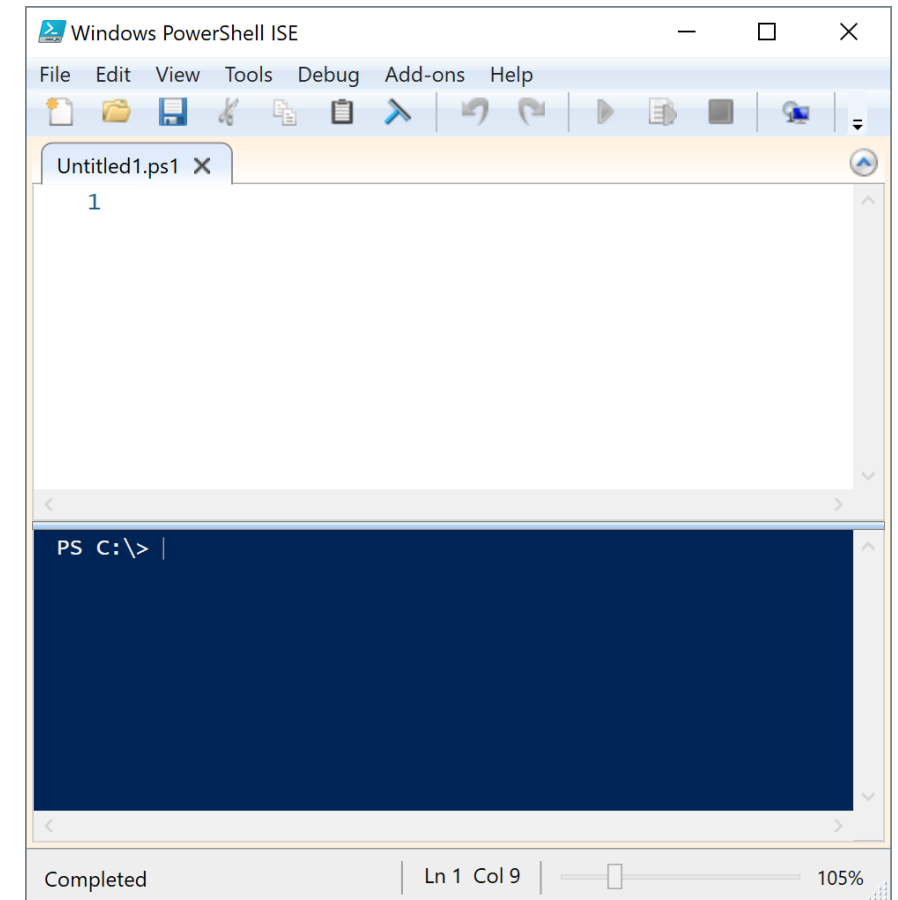**Developer Dashboard**

PowerShell

About PowerShell

- Script language to automate activities
- SharePoint heavily relies on PowerShell
- Can be used to configure, administer, audit and monitor SharePoint
- Current version is PowerShell v5.1
- PowerShell Integrated Scripting Environment (ISE) improves creating and debugging scripts

Important: PowerShell Core is <u>not</u> supported

Developer Dashboard

About Developer Dashboard

- Shows details for each executed request: Correlation ID, ULS entries, SQL calls, request duration, etc.

- Requires Usage and Health Service application

- Not enabled by default - use PowerShell to enable


```
$ContentService = [Microsoft.SharePoint.Administration.SPWebService]::ContentService
$DevDashboard = $ContentService.DeveloperDashboardSettings
$DevDashboard.DisplayLevel = "On"
$DevDashboard.Update()
```
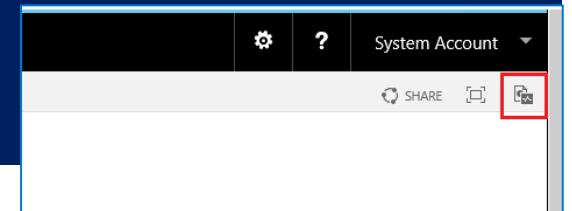
Agenda - Chapter 2

External tools

Microsoft Edge DevTools
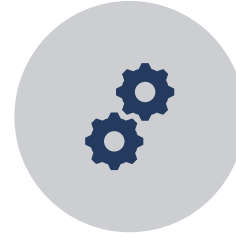
Fiddler

ULS Viewer
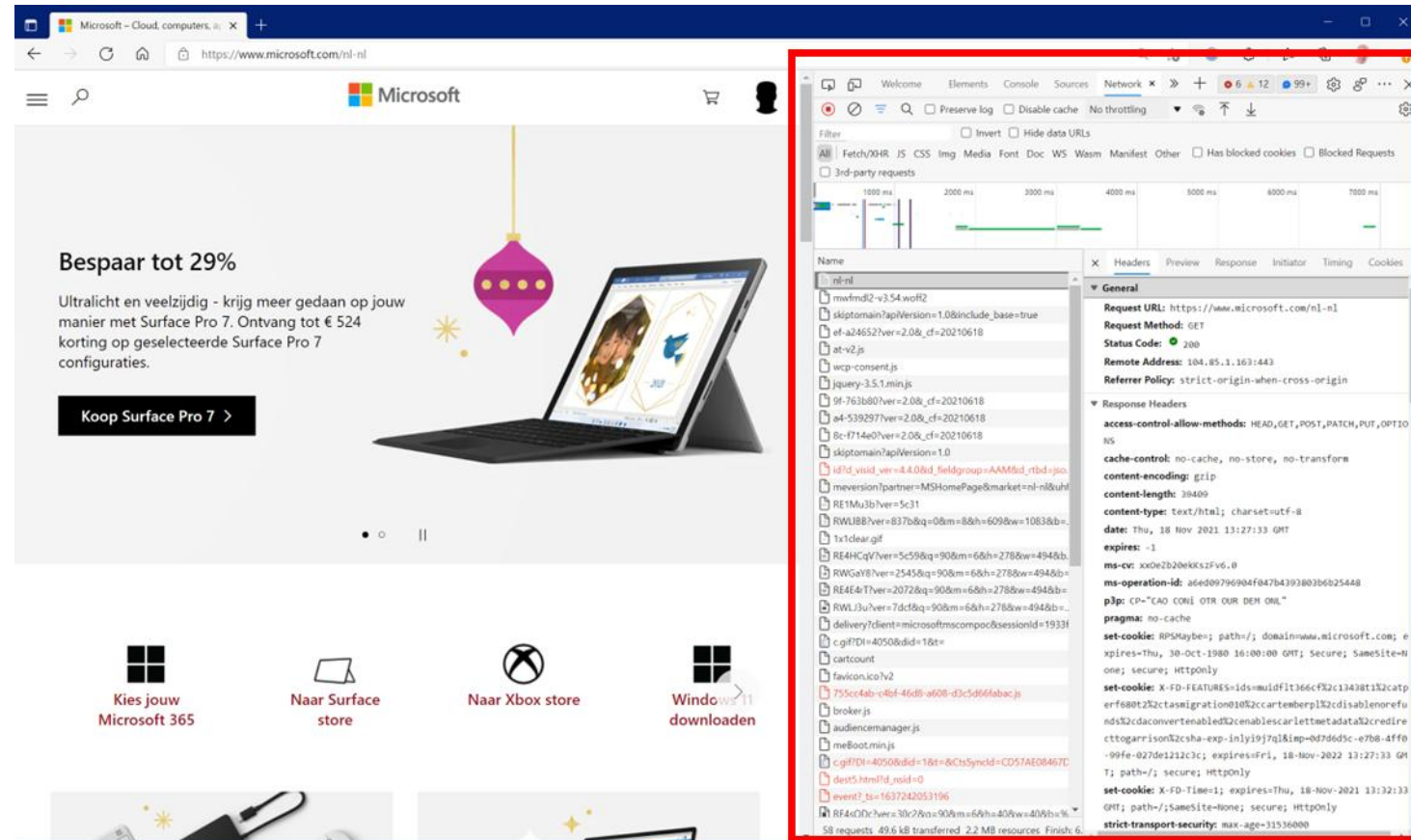
Process Explorer / Process Monitor

LogParser

Microsoft Edge DevTools

About Microsoft Edge DevTools

- Suite of tools to help you build, debug, test, and speed up your webpages
- Integrated and simple to use
- Provide a visual interface to the platform
- Enable fast experimentation
- Optimize application performance
- Open by pressing F12

Microsoft Edge DevTools - Elements

Elements menu

- Shows the structure of the webpage as it is being rendered
- Makes it possible to edit HTML and styles in a live page
- Possible without having to edit and reload your sources, so you can quickly solve display issues or experiment with new ideas
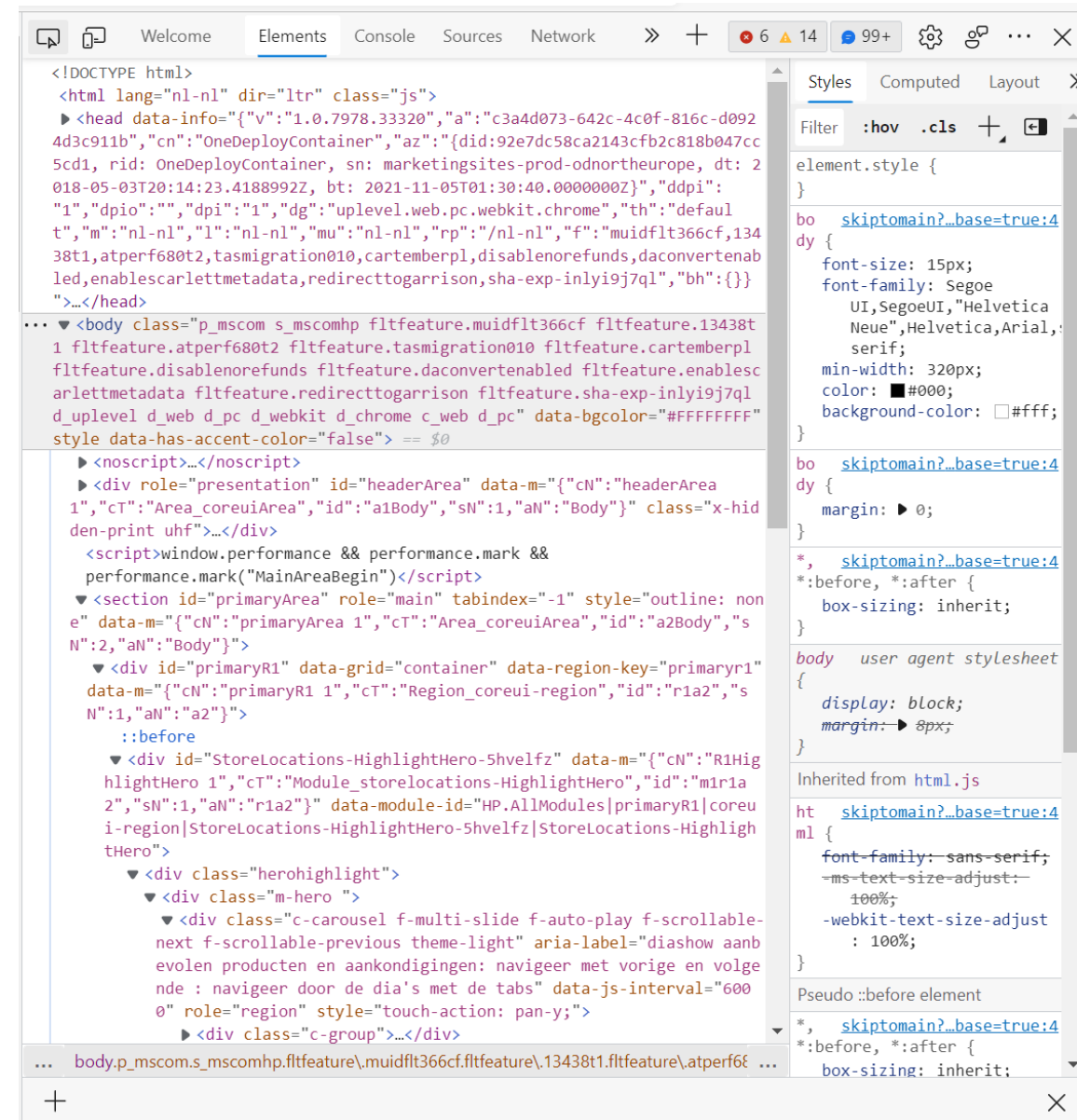
Microsoft Edge DevTools - Network

Network menu

- Gives the fine details of any network requests involved in the loading and operation of your webpages
- View Request and Respond headers, loaded components, and load times
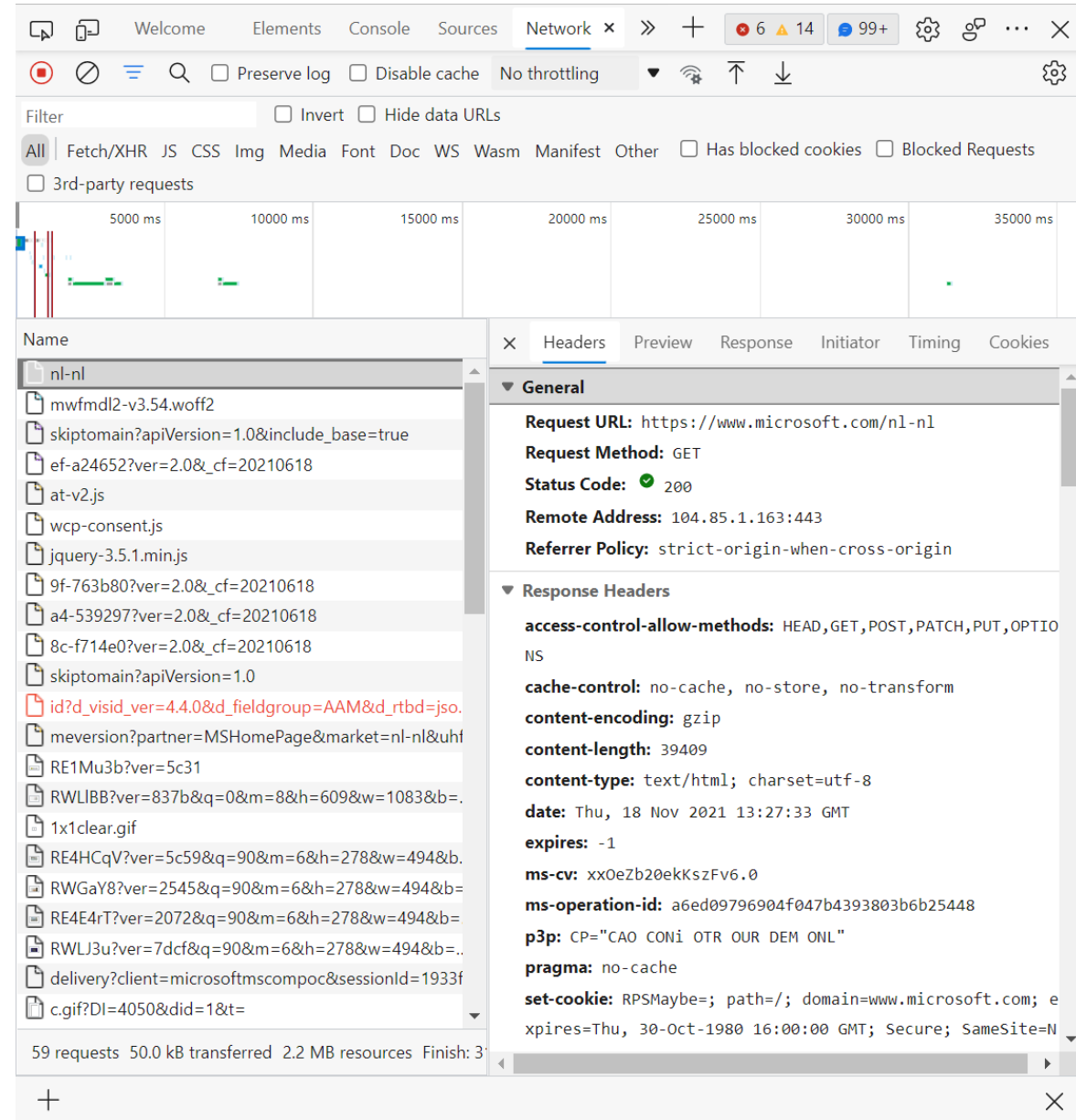
Fiddler

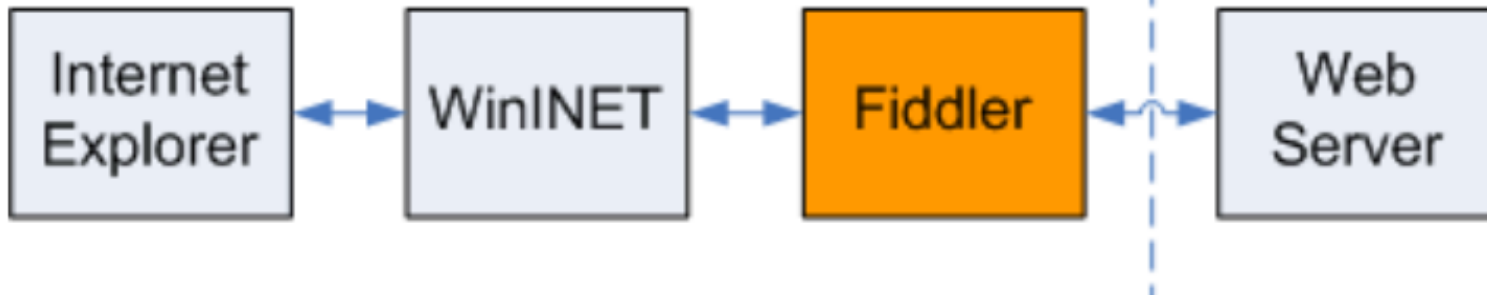## About Fiddler

- GUI-based tool to examine HTTP traffic to a browser
- Looks at additional statistical information
- Acts as system proxy to capture all traffic
- Possible to capture, decrypt, and inspect HTTPS traffic
- https://www.telerik.com/fiddler
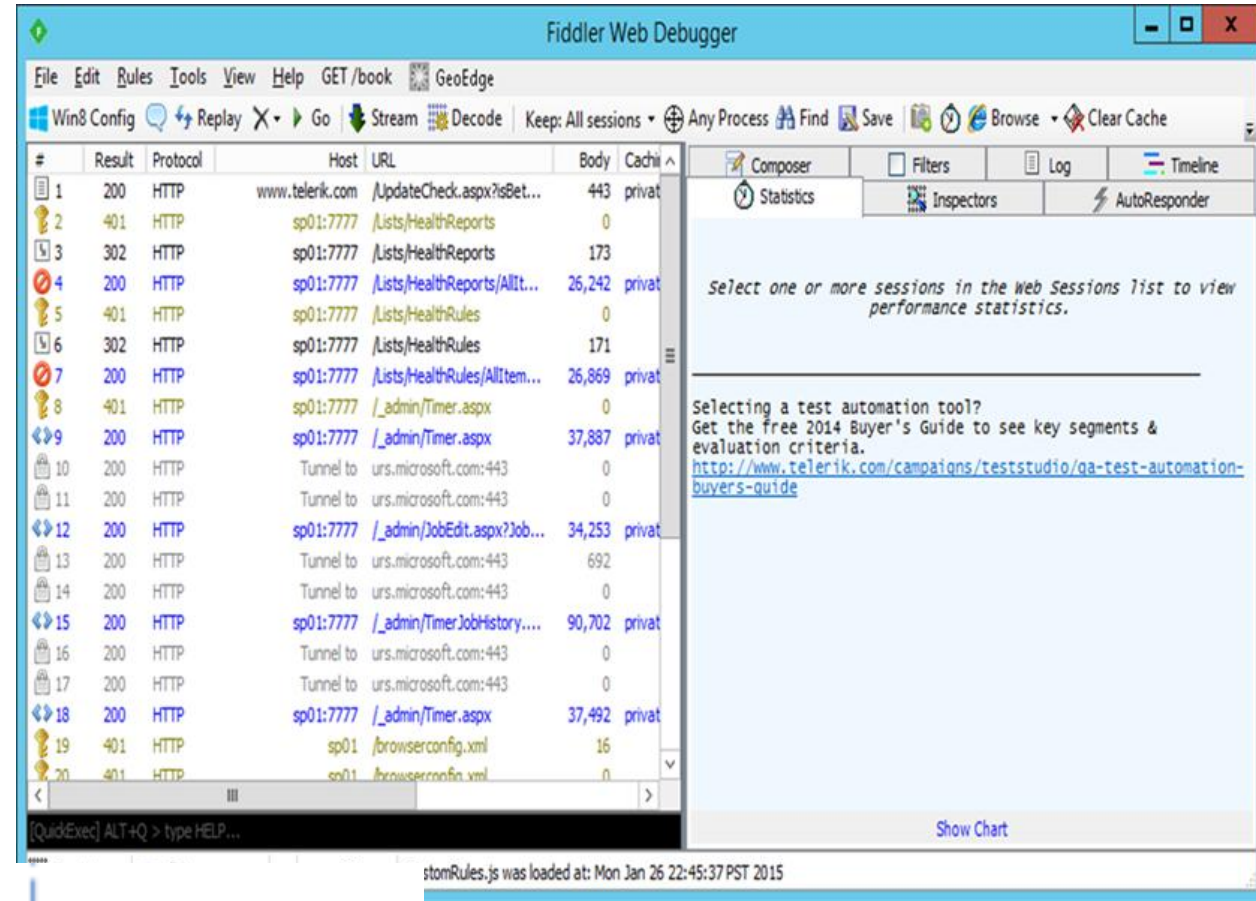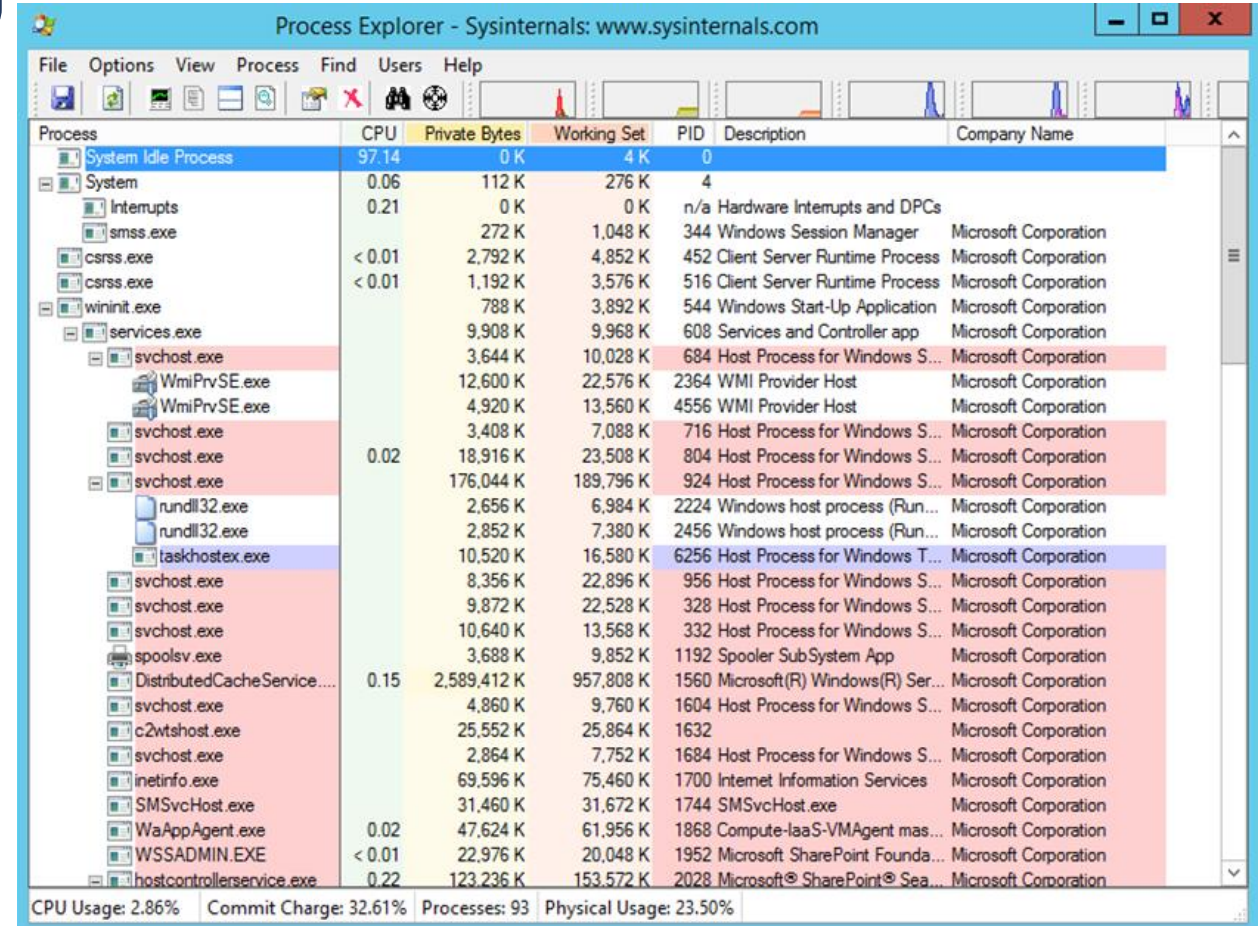
ULS Viewer

About ULS Viewer

- Robust tool but not officially supported
- ULS logs can be viewed in real-time or offline mode
- Sorts and filters, based on any available column
- Views message easily in separate pane
- Reorders and resizes columns, sorts any column
- https://www.microsoft.com/en-us/download/details.aspx?id=44020
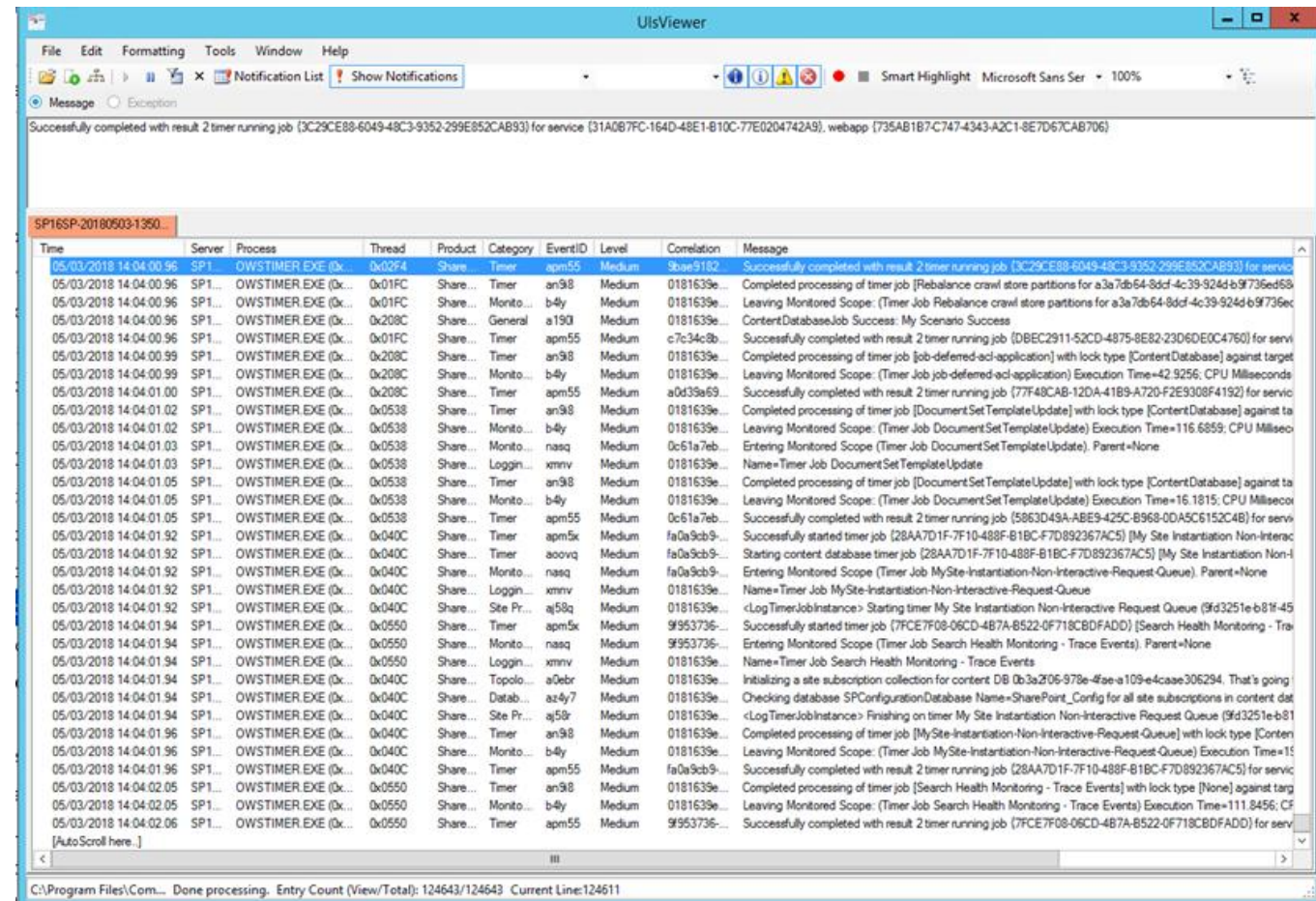
Process Explorer

About Process Explorer

- Part of the Sysinternals family
- To know what processes are running at any given time to understand how CPU and other resources are being used
- "Task Manager on Steroids"
- Free

Download: https://docs.microsoft.com/en-us/sysinternals/downloads/process-explorer

Process Monitor

About Process Monitor

- Part of the Sysinternals family
- Process Monitor is an advanced monitoring tool for Windows that captures real-time file system, Registry, and process/thread activity
- Sorts, filters and highlights based on any available column
- Free

Download: https://docs.microsoft.com/en-us/sysinternals/downloads/procmon
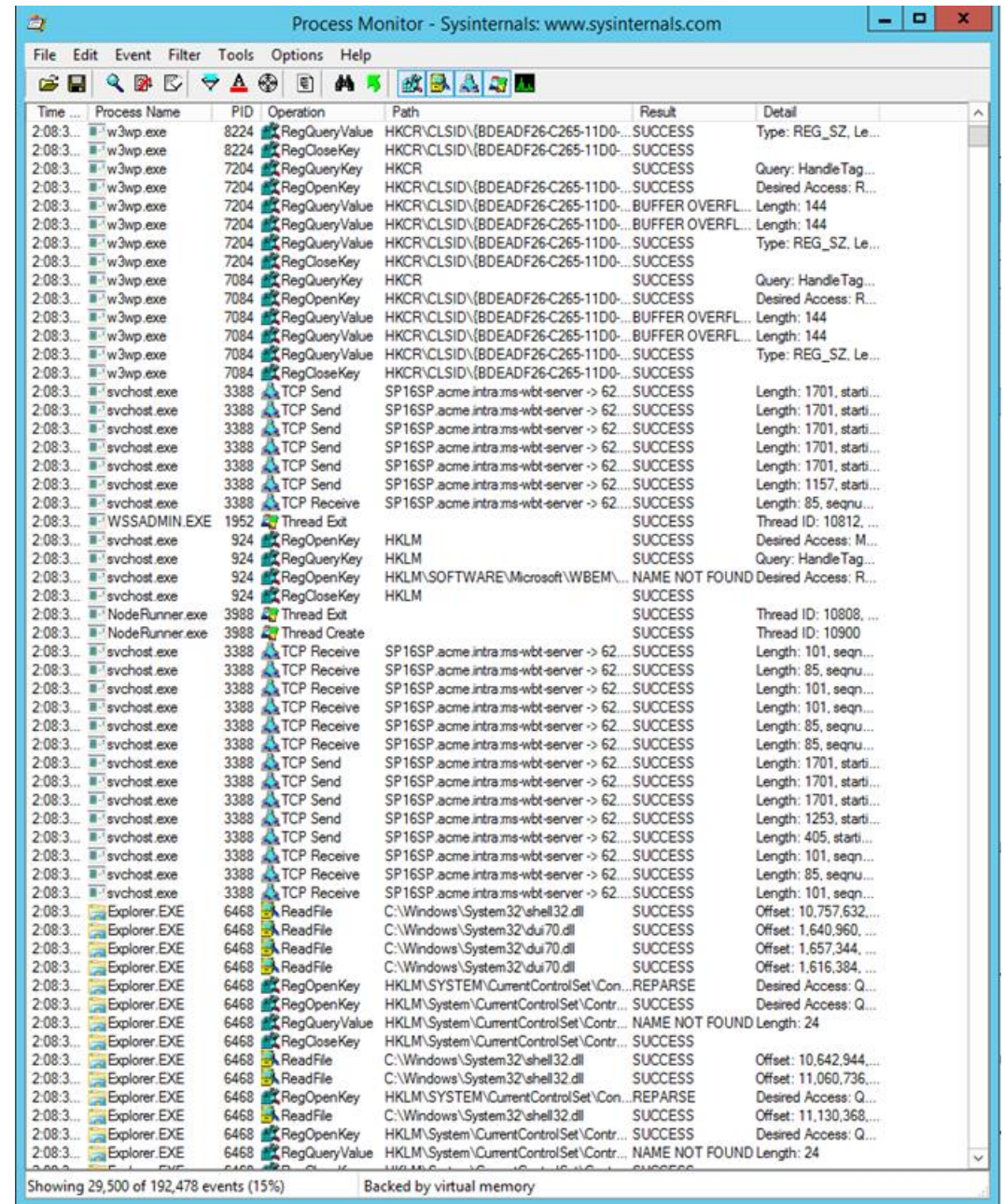
Demonstration

Review server activity using Process Explorer and Process Monitor

LogParser

- Command line tool allowing T-SQL querying of log files
- Swiss army knife for reading and manipulation of many log formats like IIS, Event logs, URLScan, Netmon Traces, ULS logs
- Provides output in many formats: Chart, CSV, TSV, XML, SQL
- Many of the queries that were manually done with LogParser are now included in SharePoint reports
- Use LogParser Studio to create and test queries

LogParser: http://www.microsoft.com/en-us/download/details.aspx?id=24659
LogParser Studio: https://gallery.technet.microsoft.com/office/Log-Parser-Studio-cd458765
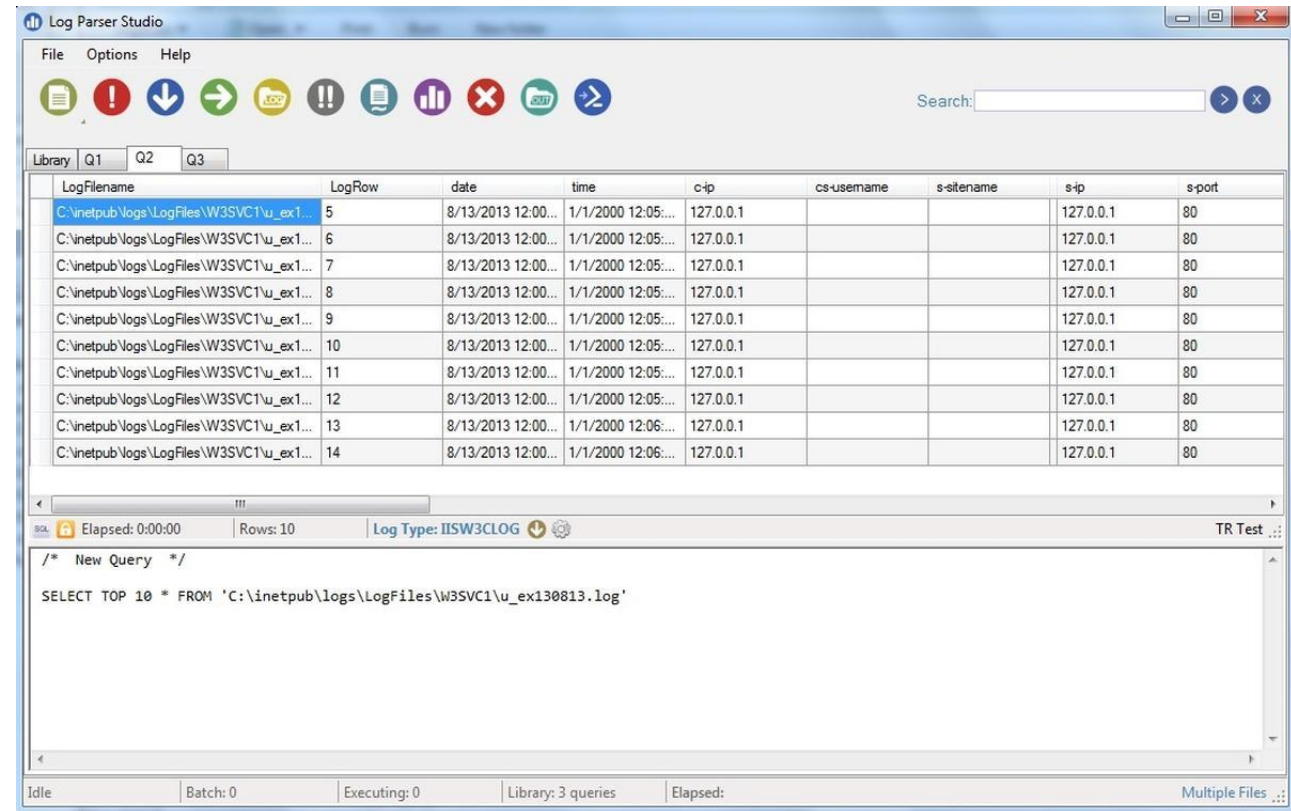
LogParser examples

Top 20 User Agents

SELECT Top 20 cs(User-Agent) AS Browser, COUNT(*) AS Requests FROM *.log GROUP BY Browser ORDER BY Requests DESC

Top 20 Client IPs

SELECT Top 20 c-ip AS visitIp, COUNT(*) AS Requests FROM *.log GROUP BY visitIp ORDER BY Requests DESC

Top 10 Most Download Files

SELECT Top 10 cs-uri-stem, count(*) as Downloads FROM ' from *.log' GROUP BY cs-uri-stem ORDER BY Downloads DESC

Top 25 Slowest pages

SELECT Top 25 cs-uri-stem as URL, MAX(time-taken) As Max, MIN(time-taken) As Min, Avg(time-taken) As Average FROM *.log GROUP BY URL ORDER By Average DESC

Running a query

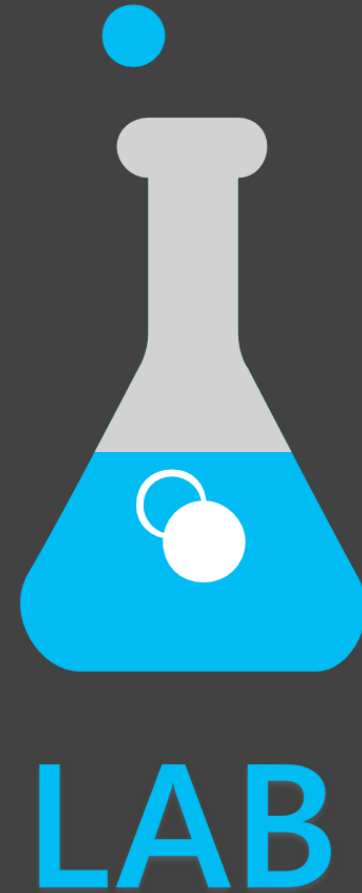LogParser.exe -i:W3C "Query-From-The-Examples-Above" -o:CSV -recurse:-1

Lab 5.2:
Review the various troubleshooting tools

Objectives

After completing this lab, you will be able to:

- Review available tools to troubleshoot SharePoint

LAB

Knowledge Check

Which tool can you use to analyze the SharePoint ULS logs?

- ULS Viewer

Which tools can you use to analyze the process activity?

- Process Explorer and Process Monitor

Which tools can you use to analyze the browser requests?

- Internet Explorer Developer Toolbar and Fiddler

Questions?

Microsoft