# Progress WhatsUp Gold

# Training labs

The power of WhatsUp Gold

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Lab i - Conr	nect to the Ipswitcl	h Training Environment (ITE)
i-1	Open Remote Desktop	Windows
		On the desktop, click the Windows button
		Immediately start typing MSTSC on your keyboard
		<ul> <li>Immediately start typing MSTSC on your Reyboard</li> <li>The Windows search will find Remote Desktop Connection</li> </ul>
		<ul> <li>Click on it</li> </ul>
		Best match
		Remote Desktop Connection
		Search work and web  Remote Desktop Connection  mstsc - See work and web results  App
		Ef orea
		Recent
		₽ mstc
		MAC
		You must have Microsoft Remote desktop installed
		Launch Microsoft Remote Desktop
i-2	Connect to your Apps	In the Remote Desktop Connection Dialog:
	Server in the ITE	Enter your server name:
		<ul> <li>The server name is</li> <li><i>The studentID vou were aiven&gt;.trainina.ipswitch.com</i></li> </ul>
		<ul> <li>As Examples.</li> </ul>
		• If you were given <i>st01</i> as your studentID, then the
		server address would be: st01training inswitch com
		<ul> <li>If you were given <i>st16</i> as your studentID, then the</li> </ul>
		server address would be:
		<i>st16</i> .training.ipswitch.com
		Remote Desktop Connection
		Connection
		Computer \$102 training inswitch com
		User name: training\st02
		You will be asked for credentials when you connect.
		Show Options     Connect Help



password       Windows Security         Enter your credentials       Ther redentials will be used to connect to st21.training.jpswitch.com.         Administrator       Administrator         QATEST.administrator       Use another account         Dusc another account       Then type in your username and password (sent to you with your server name), the appropriate fields.	into
Then type in your username and password (sent to you with your server name) the appropriate fields.	into
Then type in your username and password (sent to you with your server name) the appropriate fields.	into
Then type in your username and password (sent to you with your server name) the appropriate fields.	into
Then type in your username and password (sent to you with your server name) the appropriate fields.	into
Then type in your username and password (sent to you with your server name) the appropriate fields.	into
User training\< Your StudentID>	
<ul> <li>As an Example, you were given studentID st01; you would the type training\st01</li> </ul>	1
Windows Security × Enter your credentials	
Administrator	
QATEST.administrator training\st01	
Domain: training	
Connect a smart card	
C Remember my credentials	
OK Cancel	
<ul> <li>Password: <the given="" password="" were="" you=""></the></li> </ul>	
Click Yes on when asked if you want to connect	
Remote Desktop Connection	
The identity of the remote computer cannot be verified. Do you want to connect anyway?	
The remote computer could not be authenticated due to problems with its security certificate. It may be unsafe to proceed. Certificate name	
Name in the certificate from the remote computer: st02-app training local	
Certificate errors The following errors were encountered while validating the remote computer's certificate:	
The certificate is not from a trusted certifying authority.	
Do you want to connect despite these certificate errors?	
Vew cettficate Yes No	



1-4	Verify Connection	Once you are connected to the Desktop of your Apps server, look in the upper right-hand corner.		
		<ul> <li>Make sure you see Hostname: <yourstudentid>-app, where</yourstudentid></li> </ul>		
		Nake sure you see hosmanic. Tourstadening, app where VourStudentIDs is the student number you just leaged in with		
		< roui sindennozi is me sindenn number you just logged in with		
		Hostname: st@L-app		
		Instance ID:		
		Public IPv4 Address: 10.000		
		Private IPv4 Address: 10:27:1:10		
		Instance Size: t2.large		
		Availability Zone: us-east-1d		
		Architecture: AMD64		
		Total Memory: 8192 MB		
		Network Performance: Low to Medarate		
		Network Performance: Low to Woderate		
		You are now connected to the ITE		
	r ou are now connected to the LLE.			

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#### Lab 1 - Default Email Settings 1-1 Log in as your At the login Screen studentID Username: Your <studentID> • • Use the student ID you were given, example: st01 Password: <Your Student Password> . Username st01 **N**Progress Password WhatsUp Gold ..... Unified Network, Server and App Monitoring Stay logged in Don't forget to close the Welcome screen. **Configure Email** 1-2 Click the SETTINGS menu • settings Select System Settings • • Select Email Settings SETTINGS System Services System Settings > Alert Center Data Retention Discovery Settings > Alert Center Email Notifications Default Email Settings Users & User Groups External Authentication > Actions & Alerts > General Settings > Libraries In the Email Settings Dialog Destination email address: Enter <u>YOUR</u> studentID followed by • @wugtng.com • For Example, *if your* studentID is st02, you would enter st02@wugtng.com From: WhatsUpGold@wugtng.com • SMTP: mail.wugtng.com • Port: 25 • Use an encrypted connection (SSL/TLS): checked • Click Save •



	Default Email Settings 🛛 🔿 🗙
	Destination email address
	st02@wugtng.com
	From email address
	WhatsUpGold@wugtng.com
	SMTP server
	mail.wugtng.com
	Port Timeout (sec)
	25 🗘 30 🗘
	✓ Use an encrypted connection (SSL/TLS)
	Use SMTP Authentication
	User name
	Password
	Save Cancel
You have now completed Lab 1 – Ex	cternal Authentication and Email Settings.

Lab 2 - Addi	ng Credentials	
2-1	Add SNMP v2	Click Settings Menu: Libraries: Credentials
	Credential	SETTINGS
		System Services
		System Settings >
		Discovery Settings
		Users & User Groups
		Actions & Alerts
		Libraries Credentials
		MUTION'S
		<ul> <li>In the Credentials Library</li> <li>Click add +</li> </ul>
		Credentials L
		+ / 2 1
		= 🧐 SNMP v1
		SNMP v2 dm
		SNMP v3
		Select SNMPv2
		In the SNMPv2 dialog <ul> <li>Name: ITE-SNMPv2</li> <li>Description: SNMPv2 community string used in the ITE</li> <li>Read community: Training</li> </ul>
		Add SNMP v2 Credential
		Name:
		Description: SNMPv2 community stri
		Training
		Write community:
		Company Control
		Write community: (leave blank)
		Click Save



2-2	Add WMI credentials for the Training Domain	In the credential library • Click add <b>†</b>
		Click Save
2-3	Add WMI credentials for the wugtng domain	<ul> <li>In the credential library</li> <li>Select the Windows Credential you just created         <ul> <li>And click copy</li> </ul> </li> <li>Credentials Library         <ul> <li>* * * * *</li> <li>* *</li></ul></li></ul>

		In the Edit Windows dialog  Change the following fields  Name: WMI-WUGTNG  Description: WUGTNG Domain Credentials used in the ITE  Domain\Username: wugtng\ <studentid>  Edit Windows Credential  VUGTNG Domain Credentials used in  Description VUGTNG Domain Credentials used in  Description VUGTNG Domain Credentials used in  Description VUGTNG Domain Credentials used in  Domain\Username VUGTNG Domain Credentials used in  Edit Windows Credential Confirm New Password Confir</studentid>
		Click Save
2-4	Add VMware Credentials	In the credential library • Click add +
		Name: ITE-VMware
		Description: VMware credential used in the ITE
		User Name:     Student@vsphere.local       Password:
		Confirm Password:
		Save <u>Cancel</u>
		Click Save
2-5	Close the credential	• Click the X in the upper right-hand corner of the Credential Library to close
	You h	nave now completed Lab 2 - Adding Credentials.
		• •

Lab 3 – Add	Active Monitors	
3-1	Open MIB Walker	On the Menu Bar
		Click ANALYZE
		Mouse over Tools
		Click on MIB Walker
		ANALYZE SETTINGS
		Dashboards >
		Performance >
		Network >
		Alerts and Actions >
		Inventory >
		Tools Collup Whatslip Gold Add Ons PINAC Address Find
		Application Monitoring > $\lambda_c^2$ Layer 2 Trace
		Configuration Management > IIII MAC Address
		Log Maragement     Vitawa     Vitawa
		Virtual Monitoring > D SNMP MB File Explorer
		S Wreless >
		Web Performance Monitor
		<u>∐i</u> marinanaaba
		<ul> <li>In the Network Tool: SNMP MIB Walker dialog: Under "Address or</li> </ul>
		hostname:" type: <b>192.168.240.5</b>
		Credentials: Training (SNMPv2)
		• Object ID: <b>1.3.6.1.4.1.9.2.1</b>
		Click the Walk button to retrieve all the objects and their OIDs for this Cisco
		Catalyst switch.
		•© Network Tool: SNMP MIB Walker © MIDWalker
		Address or hostname: Credentials:
		Object ID: Eliter: Adyanced.
		136141921 Wak
		<ul> <li>Once the Stop button is greyed out</li> </ul>
		<ul> <li>Scroll these 69 results to locate the entry for avgBusy1(57).0 this is</li> </ul>
		near the bottom of the list.
		<ul> <li>Hover your cursor until a popup window appears.</li> </ul>
		Note: This <i>may or may</i> not pop up in your browser. If if
		doesi i, commue on to next step.

		<ul> <li>This contains information about that object, including Object ID (OID), Instance, Label, Type, Access and Description. Read the Description for the object, then copy the Object ID (with your mouse – right-click - Copy).</li> <li>         Instance:         Instance:         Object ID: 13614192157         Instance:         Instance:         Object ID: 13614192167         Instance:         Instance:         Object ID: 13614192167         Instance:         Instance:</li></ul>
		bufferHpCreate     inetConfligProto     hostConfligProto(71).0 0
3-2	Open Monitor Library	On the Menu bar Click on Settings Mouse over libraries Click Monitors System Services System Services System Services System Services Clices & User Settings Users & User Groups Actons & Alerts Scheduling Activities WhatsUp Gold Add Ons Roles and Sub Roles
3-3	Create new SNMP Monitor	In the Monitor library dialog • Click the plus   • Select Active Monitor Monitors Library • Click Wonitor Library • Passive Monitor • Passive Monitor

In the Select Active Monitor Type dialog • Type SNMP in the search text box then select SNMP Monitor from the list
Everyteine     The Strage Management Proceed (2004) mustare gathers information about the forecasts of a masses     The Strage Management Proceed (2004) mustare gathers information about the forecasts of a masses     The Strage Management Proceed (2004) mustare gathers information about the forecasts of a masses     The Strage Management Proceed (2004) mustare gathers information about the forecasts of a masses     The Strage Management Proceed (2004) mustare gathers information about the forecasts of a masses     The Strage Management Proceed (2004)     The
In the Add SNMP Monitor Dialog
INAME: CISCO SWITCH CPU      Description: SNMP active menitor to check the Ave CPU of a Cisco
<ul> <li>Description: SNMP active monitor to check the Avg CPU of a Cisco switch</li> </ul>
<ul> <li>Object ID: (paste the OID you copied) Or Type: 1.3.6.1.4.1.9.2.1.57</li> </ul>
<ul> <li>Instance: 0</li> </ul>
Check Type: Range of Values
<ul> <li>Low value: 0</li> </ul>
<ul> <li>High value: 85</li> </ul>
Click Save to save Service monitor to the library
Add SNMP Monitor ③ ×
Name
Cisco Switch CPU Description
SNMP active monitor to check the Avg CPU of a Cisco switch.
Use in ressan SMMP timeout Number of SMMP retries
2     \$ second(s)
ObjectD   Browse
ObjectilD         Instance           1.3.6.1.4.1.9.2.1.57         0
Condition
Check type Range of Values
Low value High value
Save Cancel

3-4	Create New SNMP Extended Monitor	Open Notepad ++ or Notepad.exe
	HTML file	Copy the below text and then paste into the blank document
		<snmpparameters> <snmpparameter name="CpqDaPhyDrvStatus"> <shortdescription>Physical Drive Status</shortdescription> <longdescription>Physical Drive Status. This shows the status of the physical drive. The following values are valid for the physical drive status: Other (1) Indicates that the instrument agent does not recognize the drive. You may need to upgrade your instrument agent and/or driver software. Ok (2) Indicates the drive is functioning properly. Failed (3) Indicates that the drive is no longer operating and should be replaced. predictiveFailure(4) Indicates that the drive has a predictive failure error and should be replaced. If you suspect a problem, run Compaq Diagnostics.</longdescription> <type>Object</type> <indexoid>1.3.6.1.4.1.232.3.2.5.1.1.2</indexoid> <oid>1.3.6.1.4.1.232.3.2.5.1.1.5 <units></units> </oid></snmpparameter></snmpparameters>
		File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ? X  File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ? X  Complex Comp
		<ul> <li>e. Save the file as HPDriveArray.xml to desktop.</li> <li>To connect to the WUG server</li> <li>Double click on the WUG RDP shortcut on your desktop.</li> <li><i>European Constant on the opens</i></li> <li>Use your StudentID and password</li> <li>Paste HPDriveArray.xml to WUG Server desktop.</li> <li>Open Windows file explorer and navigate to: <ul> <li>C:\Program Files (x86)\lpswitch\WhatsUp\Data\ SNMPExtended</li> </ul> </li> <li>Drag and drop the HPDriveArray.xml file into the SNMPExtended directory <ul> <li>Click continue on the UAC denied access dialog</li> </ul> </li> <li>Return to your App Server.</li> </ul>

3-5	Create New SNMP	In the Monitor library dialog
	Extended Monifor	<ul> <li>Click the plus +</li> </ul>
		Select Active Menitor
		Monitors Library
		Worneois Eistary
		+ 🖋 🖓 🔟   Test
		Active Monitor
		9 Performance Monitor
		In the Select Active Meniter Type dialog
		Type SNMP in the search text her select SNMP Extended Meniter
		from the list
		Active monitors enable you to verify health, simulate user evens, and test for specific conditions.
		Monitor Name SHAD X
		SNUP Extended Montor
		Decorption SNMP Encoded monitor checks one or more ODs, each against its own threshold, using an XM. Rie you import into the monitor ideficition. The XML Rie contains a lot of SNMP parameters (ODs) or monitor.
		Threshold operators grouper, that loss that a copule, contains, and so op un that he monitor's slakeg enable you to vory ingo or down strates a prime expected values. Use an another threshold values as needed based on device-specific characteristics, site service level constraints, and more.
		Select Cancel
		Click Select
		In the Add SNMP Extended Monitor Dialog
		Name: HP Drive Array Monitor
		<ul> <li>Description: SNMP Extended Monitor for an HP Drive Array</li> </ul>
		Uncheck Use in rescan
		Click Import File
		Monitor thresholds (0/0)
		Parameter † Down if
		Import a file and add thresholds to monitor

<ul> <li>In the Select Import File dialog</li> </ul>
Select HPDriveArray xml in the drop down
Select III Divertity.xiii in the diop down
Add ENMO Extended Manifes
Name Select Import File X
HP Drive Array Select file to import:
Description Alatel.xml
SNMP Extended Bluecoatxml
Checkpoint.xml
Use in rescan
Timeout Cpg Prolantxml
Dell Servers.xml
Monitor threshol
Fortigate.xml
Parameter 1 Hostxml
Import a file and HPDriveArray.xml
IBM Servers.xml v
OK Ung Cancel
Save terred
In the Select Thresholds – HPDriveArray.xml Dialog
Select Physical Drive Status
Select Thresholds - HPDriveArray.xml
✓ Parameter ↑
Physical Drive Status
OK <u>Cancel</u>
Click OK
Under the Monitor thresholds (1/1) section
onder me Monitor miestiolas (1/1) section
Select Physical Drive Status
Click Edit
Monitor thresholds (1/1)
+ · M Import file
Parameter T Edit Down If
Physical Drive Status > 0



		<ul> <li>In the Edit Threshold Physical Drive Status dialog         <ul> <li>Physical Drive Status is down when the: value</li> <li>Condition: is greater than</li> <li>Value: 2</li> </ul> </li> </ul>
		Add SMMP Extended Monitor       Image: Comparison of the state of the
		<ul> <li>Click OK</li> </ul>
		Add SNMP Extended Monitor         Name         IP Drive Array Monitor         StMP Extended Monitor for an HP Drive Array         Is the rescan         Timeout         Is cond(s)         Import file         Prysical Drive Seaus         Is cond         Second(s)         Is cond
3-6	Create New Http Content Monitor	<ul> <li>In the Monitor library dialog</li> <li>Click the plus +</li> <li>Select Active Monitor</li> </ul> In the Select Active Monitor Type dialog <ul> <li>Type HTTP in the search text box then select HTTP Content Monitor</li> <li>Click Select</li> </ul> In the Add HTTP Content Monitor Dialog <ul> <li>Name: App Web Site Content Monitor</li> <li>Description: HTTP Content Monitor to check the contents of app server web site</li> <li>Uncheck Use in rescan</li> </ul>

In the H     O	HTTP Server section Change URL to <u>http://app</u>
	HTTP Server   Advanced settings URL @ http://app Use authentication mechanism
• Scroll d o o	lown to the Search for content section Select Plain text Enter the text <b>IIS Windows Server</b> Monitor state if content not found Ensure <b>Down</b> is selected
	Search for content Plain text Regular expression IIS Windows Server Monitor state If content not found Down Up
0	Click OK to save
You have complet	ted Lab 3 – Active Monitors



#### Lab 4 - Performance Monitors 4-1 Open the Monitor The Monitor library should still be open, if not: Library Click on Settings • Mouse over libraries • Click Monitors • System Services System Settings > Users & User Groups > Actions & Alerts Libraries > Credentials Scheduling Activities > Monitors > Roles and Sub Roles Application Monitoring Network Traffic Analysis > WhatsUp Gold System Tasks 4-2 Create Active Script In the Monitor library Performance monitor ٠ Click the plus using two reference • Select Performance Monitor variables In the Select Performance Monitor Type dialog In the drop down select Active Script Performance Monitor ٠ Select Performance Monitor Type Performance monitors collect health and performance metrics over time as a single numeric value. View historical and real-time reports. Set thresholds for these values to trigger actions or Alert Center notifications Active Script Performance Monitor APC UPS Performance Monitor AWS CloudWatch Performance Monitor prise Billing Performance M 4 JMX JMX Perfo Select Cancel **Click Select** • In the Add Active Script Performance Monitor Dialog Name: Retransmitted TCP segments over time • Description: This performance monitor graphs the percentage of • retransmitted TCP segments over time using two reference variables: RVtcpOytSegs and RVtcpRetransSegs. Script Type: JScript ٠ Add Active Script Performance Monitor Name Retransmitted TCP Segments over time Description This performance monitor graphs the percentage of retransmitted TCP segments over time using two reference variables <u>RVrcpOytSegs</u> and <u>RVtcpRetrasSegs</u>. Script type O VBScript JScript Timeout second(s) 60



In the Reference Variables Section
<ul> <li>Click the Add button +</li> </ul>
In the Add New Reference Variable dialog
<ul> <li>Name: RVtcpOutSegs</li> </ul>
• Description: The total number of TCP segments sent out on the
network
<ul> <li>Object Type: SNMP</li> </ul>
o Counter: <b>1.3.6.1.2.1.6.11</b>
<ul> <li>Instance: 0</li> </ul>
Add New Reference Variable X
Name
RVtcpOutSegs
Description
The total number of TCP segments sent out on the network
Object type
● SNMP
O WMI
Performance Counter   Select
1.3.6.1.2.1.6.11
Instance
ol
Save
Click Sava
In the Reference Variables Section
In the Add New Reference Variable dialog
• Name: RVTCPRETransSegs
• Description: The total number of TCP segments that were
retransmitted on the system
• Object Type: SNMP
o Counter: 1.3.6.1.2.1.6.12
o Instance: O
Add New Reference Variable
Name RVtroBetrantSeps
Description
The total number of <u>ICP</u> segments that were <u>retransmitted</u>
on the system.
Object type
O WMI
Performance Counter   Select
Counter
1.3.6.1.2.1.6.12
0
Save <u>Cance</u>
Click Save

<ul><li>✓ Refere</li><li>+</li></ul>	ence Va	riables		
Variable	Type	Description	Object	Instance
RV/tcoOut	SNIMD	Total number of TCD seg	126121611	0
RvtcpOut	SINIVIP	Total number of TCP seg	1.3.0.1.2.1.0.11	0
n the Script T Enter /* This segme first Re polls th netwo var RV /* The instan- that w var RV //Erron if (isNa Contex } else { // Contex } contex }	Text area the foll second re- cents over the eference whe SNMP rk. */ /tcpOutSecond re- ce 0. It po- ere retran /tcpRetrans the perfor xt.SetValue Script text /* This script	a JScript that will allow you to ime on a device. For this scr variable RVtcpOutSegs is de object tcpOutSegs.0, the tot gs = parseInt(Context.GetRe efference variable RVtcpRetra smitted on the system. */ nsSegs = parseInt(Context.G RetransSegs)    isNaN(RVtcp ult(1, "Failed to poll the refere percentage: mittedPercent = 100 * RVtcp mance monitor value to gra e(TCPRetransmittedPercen	o graph the percentage of re ipt, we use two SNMP referent fined with OID 1.3.6.1.2.1.6.11 a al number of TCP segments is eferenceVariable("RVtcpOutS ansSegs is defined with OID 1 ansSegs.0, the total number of etReferenceVariable("RVtcpI eoutSegs.)) { ence variables."); bRetransSegs / RVtcpOutSeg oh i);	transmitted TCP nce variables: The nd instance 0. It sent out on the Gegs")); .3.6.1.2.1.6.12 and of TCP segments RetransSegs"));
<ul> <li>Click</li> </ul>	over time on For this scrip The first Refe the <u>SINMP</u> ob var <u>RVtcpOut</u> /* The secon It polls the SI on the syster var <u>RVtcpRet</u> //Error Ched if (IsNaN(RVt Context.SetR ) else { // Compute t var <u>COMPUTE</u> } Save	a device. t, we use two SNMP reference variables: rence variable <u>RVtcpOutSegs</u> is defined with ject <u>tcpOutSegs</u> , the total number of <u>TCP</u> s <u>Segs</u> = <u>parseInt(Context.GetReferenceVariab</u> d reference variable RVtcpRetransSegs is def JMP object tcpRetransSegs.0, the total numb n.*/ ransSegs = parseInt(Context.GetReferenceVa- ing cpRetransSegs)   isNaN(RVtcpOutSegs)) { esult(1, "Failed to poll the reference variable he percentage: nsmittedPercent = 100 * RVtcpRetransSegs / formance monitor value to graph alue(TCPRetransmittedPercent);	QID 1.3.6.1.2.1.6.11 and instance 0. It polls gments sent out on the network. */ [ef"RVtcpOutSegs")); ined with OID 1.3.6.1.2.1.6.12 and instance 0. er of TCP segments that were retransmitted riable("RVtcpRetransSegs")); :."]; RVtcpOutSegs;	

Lab 5 - Act	ions	
5-1	Open Actions and Policies Library	<ul> <li>Click the Setting menu</li> <li>Mouse over Actions &amp; Alerts</li> <li>Select Actions and Polices</li> </ul>
5-2	Create new Scripting Action	<pre>In the Action Library (bottom half have the dialog)     Click the plus +     Select PowerShell     In the New PowerShell Script Action dialog         Name: Restart Windows Service – W3SVC         Description: PowerShell script action to restart a windows         service         Timeout (seconds): 10         Run under device credentials: Checked         Script text:     #Using a try catch just in-case something goes wrong     try         # Get servername         Sip = SContext.GetProperty("Address");         SDnsEntry = [System.Net.DNS]:GetHostByAddress(Sip)         SDnsEntry = [System.Net.DNS]:GetHostByAddress(Sip)         SDnsName = [string]SDnsEntry.HostName;         # Get the Windows credentials         SWinUser = SContext.GetProperty("CredWindows:DomainAndUserid");         SWinUser = SContext.GetProperty("CredWindows:DomainAndUserid");         SWinUser = SContext.GetProperty("CredWindows:DomainAndUserid");         SWinBser = SContext.GetProperty("CredWindows:DomainAndUserid");         SWinUser = SContext.GetProperty("CredWindows:DomainAndUserid");         SWinDser = SContext.GetProperty("CredWindows:DomainAndUserid");         SWinDser = Scontext.GetProperty("CredWindows:DomainAndUserid");         SWinDser = SContext.GetProperty("CredWindows:DomainAndUserid");         SWinDser = Scontext.GetProperty("CredWindows:DomainAndUserid");         Symd = convertio-securestring SWinPass -asplaintext -force         Scred = new-object -typename System.Management.Automation.PSCredential -         argumentitis SWinDser.Spwd         Invoke-Command -ComputerName SDnsName -Credential Scred -ScriptBlock         (Get-Service -Name W3SVC   Restart-Service)         # Set the result         \$Context.SetResult(0, "Done!")         }         Catch [Microsoft.PowerShell.Commands.ServiceCommandException]         {             # Set the result if it goes wrong              \$Context.SetResult(1, "\$_exception.gettypeO.fullname")         }         }         }</pre>

	New PowerShell Script Action ③ ×			
	Name:			
	Restart Windows Service - W3SVC			
	Description:			
	PowerShell script action to restart a windows service			
	Timeout (seconds):			
	10			
	Script text:			
	#Using a try catch just in-case something goes wrong ^			
	<pre>{     # Get servername     Sip = \$Context.GetProperty("Address");     SOnState = [string]SonStry.HostNateS(Sip)     SOnState = [string]SonStry.HostNateS(Sip)     SOnState = [string]SonStry.HostNateS(Sip)     SonState = [string]SonStry.HostNateS(Sip)     SunNateS = \$Context.GetProperty("CredWindows:DomainAndUserid");     SWinNateS = \$Context.GetProperty("CredWindows:DomainAndUserid");     Synd = convertorsecurestring SWInPass - asplaintext -force     SWINDEEred = new-Diget - typename System.Hanagement.Lutomation.PSCredential -argumentlist     Invoke-Command -ComputerName SDnsName -Credential \$cred -ScriptBlock (Get-Service -     Wame WJSVC   Restart-Service)     # Set the result     Scontext.SetResult(0, "Done!")     [atch [Microsoft.PowerShell.Commands.ServiceCommandException]     # Set the result if it gos wrong     """ } </pre>			
	OK Cancel			
Click	k OK to save			
You have	You have finished Lab 5 - Actions			

#### <sup>23</sup> **Progress**<sup>®</sup> WhatsUp<sup>®</sup> Gold

Lab 6 - Adc	I More Actions and	Action Policies
6-1	Create new State Change Email Action	In the Action Library, Actions Tab <ul> <li>Click the plus +</li> </ul>
		Actions and Policies       Actions (4)     Action Policies (1)       Action Action Action Action     Action Action
		Select Email Action
		Select. Action Type   The follows parts inspead the multiple for multiple galaxies   Names   Names   Second   Cond
		<ul> <li>In the New Email Action dialog General Tab:         <ul> <li>Name: Primary IT</li> <li>Description: E-Mail Action for Primary IT Coverage Staff</li> <li>Mail to: <yourstudentid>-primary@wugtng.com</yourstudentid></li> <li>Example: st03-primary@wugtng.com</li> </ul> </li> <li>Note: The IMail server we use will automatically create a sub mail have named whatever is following the primary the primary is following the primary primary is following the primary is following the primary primary is following the primary prim</li></ul>
		mailbox named whatever is following the – before the @ sign in government of the second to be a sign of the second to be a sig

#### <sup>24</sup> **Progress**<sup>•</sup>WhatsUp<sup>•</sup>Gold

6-2	Modify State Change Mail Content	<ul> <li>At the top of New Email Action</li> <li>Click the Active and Passive Monitors Tab</li> </ul>
		Add Email Action $\odot e^* \times$
		General Active and Passive Monitors Alert Center
		Subject Insert variables: System v Device v Monitor v
		In the Subject:
		Change II to %Device.DisplayName (%Device.Address) is     %Device.WorstState - %Device.Status
		In the Message Body:
		<ul> <li>Replace the entire body with:</li> <li>%Device.HostName (%Device.Address) is %Device.State.</li> </ul>
		Details:
		Monitors that are down include: %Device.ActiveMonitorDownNames
		Monitors that are up include: %Device.ActiveMonitorUpNames
		Contact: %Device.Attribute.Contact
		Location: %Device.Attribute.Location
		Notes on this device (from device property page): %Device.Notes
		This mail was sent on %System.Date at %System.Time By Ipswitch WhatsUp Gold
		Click Save to save Primary IT Email Action
6-3	Create new Passive	In the Action Library, Actions Tab
		<ul> <li>Click the plus -</li> <li>Select Email Action</li> </ul>
		In the New Email Action dialog General Tab:
		<ul> <li>Name: Passive</li> <li>Description: E-Mail Action for Passive Monitors</li> </ul>
		<ul> <li>Mail to: <yourstudentid>-passive@wugtng.com</yourstudentid></li> </ul>
		<ul> <li>Example: sto4-passive@wugtng.com</li> </ul>
6-4	Modify Passive Monitor Mail Content	At the top of New Email Action  Click the Active and Passive Monitors Tab
		In the Subject:
		<ul> <li>Change "%Device. Type is %Device.State (%Device.HostName)." to "%PassiveMonitor.DisplayName rcvd from %Device.DisplayName</li> </ul>
		(%Device.Address)"

#### <sup>25</sup> **Progress**<sup>•</sup>WhatsUp<sup>•</sup>Gold

		In the Message Body: <ul> <li>Replace the entire contents with: %Device.HostName (%Device.Address)</li> <li>Details: %PassiveMonitor.Payload.*</li> <li>Notes on this device (from device property page): %Device.Notes</li> <li>This mail was sent on %System.Date at %System.Time Ipswitch WhatsUp Gold</li> <li>Click Save to save Passive Monitor Email Action</li> </ul>
6-5	Create new Secondary IT Email Action from the Primary IT action	<ul> <li>In the Actions and Policies Library Dialog Actions Tab</li> <li>Select the Primary IT Email Action</li> <li>Click Copy</li> <li>In the "Edit Email Action" dialog General Tab: <ul> <li>Name: Secondary IT</li> <li>Description: E-Mail Action for Secondary IT Coverage Staff</li> <li>Mail to: <yourstudentid>-secondary@wugtng.com</yourstudentid></li> <li>Example: st10-secondary@wugtng.com</li> </ul> </li> <li>Click Save to save Secondary IT monitor Email Action</li> </ul>
6-6	Add Email Notification Action Policy	<ul> <li>On the Action Policies Tab at the top <ul> <li>Click the </li> </ul> </li> <li>Actions and Policies <ul> <li>Action Policies (1)</li> <li>Action Policy (1)</li> <li>In the Action Policy Builder dialog</li> <li>Policy Name: Notification Policy</li> </ul> </li> <li>Action Policy Builder <ul> <li>Notification Policy</li> <li>Notification Policy</li> </ul> </li> </ul>



<ul> <li>CLICK Add</li> <li>In the "Select an action from the Action Library:" drop down <ul> <li>Select Default Web Alarm</li> </ul> </li> <li>In the Execute the action on the following state change: drop down</li> <li>Select Down at least 2 min</li> </ul>
• Click OK
<ul> <li>Click Add</li> <li>Select: Select an action from the Action Library</li> <li>In the "Select an action from the Action Library:" drop down <ul> <li>Select Primary IT</li> </ul> </li> <li>In the Execute the action on the following state change: drop down <ul> <li>Select Down at least 2 min</li> </ul> </li> </ul>
<ul> <li>If the rest of table is a state of ta</li></ul>

## <sup>27</sup> **Progress**<sup>®</sup> WhatsUp<sup>®</sup> Gold

0	Click Add
0	In the "Select an action from the Action Library:" drop down
	Select Primary IT
0	In the <u>E</u> xecute the action on the following state change: drop down
	Select Up In the Only if the following state was reached:
0	Select 2 minutes - (Down at least 2 min)
	Edit Policy Rule © ×
	Primary IT V
	Execute the action on the following state change Up
	Only if the following state was reached Down as least 2 min
	Blackout Schedule
	+ /  Schedule Details Start:Time End Time Duration
	No data to display
	Repeat action
	OK Gancel
	Click OK
0	Click Add
0	In the "Select an action from the Action Library:" drop down
	Select Secondary IT
0	In the Execute the action on the following state change: drop down
	<ul> <li>Select Down at least 20 min</li> <li>Click Add in the Blackout Schedule Section</li> </ul>
0	In the Weekly Schedule dialog
	<ul> <li>Start time: 08:00 AM</li> </ul>
	<ul> <li>End time: 08:00 AM</li> </ul>
	Check Sunday and Saturday
	Weekly Schedule
	Start Time 8:00 AM
	End Time 8:00 AM
	Duration 24:00
	Days I Sunday Division Priday
	□ Tuesday Saturday
	Wednesday
	OK Cancel
	Click OK

#### <sup>28</sup> **Progress**<sup>•</sup>WhatsUp<sup>•</sup>Gold

			Edit Policy Rule			@ <b>X</b>	1	
						<u>o</u> x		
			Select an action from the Action	Library				
			Secondary IT	·		× ]		
			Down at least 20 min	ing state change		~		
			Only if the following state was re	sached				
			Any state					
			Blackout Schedule					
			+ / =					
			Schedule Details	Start Time	End Time	Duration		
			Weekends	8:00 AM	8:00 AM	24:00		
			Repeat action					
			OK <u>Cancel</u>					
			• Clic	ck OK				
		Click Save to save to	close the New A	ction Pol	licy Wir	ndow		
6-7	Add W3 Service	On the Action Policie	es Tab at the top					
	Restart Action Policy	<ul> <li>Click the +</li> </ul>						
		<ul> <li>In the Action</li> </ul>	n Policy Builder V	Vindow				
		o Pol	icy Name W3 Sei	rvice Res	start P	olicy		
					orarr r	one,		
			Action	Policy Builde	er			
						1		
			Policy nar	me				
			W3 Rest	tart Policy				
						· · · ·		
		o Clic	k Add					
		<ul> <li>In the Edit F</li> </ul>	olicy Rule Dialog	I				
		o Int	he "Select an acti	ion from	the Ac	tion Libra	ary:" drop do	wn
			Select Resta	art Wind	lows Se	ervice – V	W3SVC	
		o Int	he Execute the a	ction on	the fol	lowina st	ate change: (	drop down
		0 111	Select Down	n at leas	t 2 mir	ו <u>ק</u> אווי. ו		
			k OK					
		Click Course						
		Close the Action	ctions and Policie	es Library	/ windo	W		
		_						
	You have no	w completed Lab 6 –	More Actions an	nd Actio	n Polic	cies		

#### <sup>29</sup> **Progress**<sup>•</sup>WhatsUp<sup>•</sup>Gold

Lab 7 - New	Device Roles	
7-1	Open Role and Sub Role Library	On the Menu bar Click on Settings Mouse over libraries Select Roles and Sub Roles Sternvos revices System Settings Agent Settings Agent Settings Credentials Scheduling Activities Monitors Monitors Monitors Monitoring Mutsulp Gold Add Ons Monitoring Mutsulp Gold System Tasks
7-2	Import Domain Controller role	<text><text><image/><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></text></text>









#### <sup>32</sup> **Progress**<sup>•</sup>WhatsUp<sup>•</sup>Gold

As an example, if <i>your</i> student ID is St02, you will enter ST02- APP
O X         General       O X         General       Rule Group       Note       Net       See         San Rules       Image Sub Roles         Applied Sub Roles       Image Sub Roles         Applied Sub Roles       Image Sub Roles         Monters       Image Sub Roles       Image Sub Roles       Image Sub Roles       Image Sub Roles         Monters       Image Sub Roles       Image Sub Roles       Image Sub Roles       Image Sub Roles         Monters       Image Sub Roles
<ul> <li>Click Save</li> <li>Close the Rule Group Dialog by clicking the X in the upper right-hand corner of the dialog</li> <li>Click Next or on the Applied Sub Roles</li> <li>On the Applied Sub Roles tab click Add () button</li> <li>In the Add Applied Sub Role dialog</li> <li>Select (check the check boxes)</li> <li>AWS Resource</li> <li>Windows Infrastructure</li> <li>Windows Server</li> <li>Click Next or on the Attributes tab</li> <li>On the Add Attribute dialog</li> <li>Click Add</li> <li>On the Add Attribute dialog</li> <li>In the Add Attribute dialog</li> <li>Click Add</li> <li>Click Add</li> <li>On the Add Attribute dialog</li> <li>Click Add</li> <li>On the Adtribute dialog</li> <li>Click Add</li> <li>On the Adtribute dialog</li> <li>Click Add</li> <li>On the Attributes Tab</li> <li>Click Add</li> <li>Mame: Maintenance</li> <li>Click Add</li> <li>Click Add</li> <li>Mame: Maintenance</li> <li>Click Add</li> <li>Click Add</li> <li>Mame: Maintenance</li> <li>Click Add</li> </ul>

	-	Click Ok	,		
	0				
		Role Editor - ITE A	pps Server	(2)	<
		Scan Rules	Attributes	Perk HEVY COL	
		Applied Sub Roles Attributes	Attributes are free-form name/value attributes to categorize or tag device	e pairs that are used to save any kind of information about a device. You can also use the es with any label of your choice.	
		Custom Links	Discovery will add the following attri	bunes to devices	
		Action Policy	Name Name Description	Value 9Discovery.Device.Name 9Discovery.Device.Name	
		Tasks	Contact Location	st01@wugtrg.com AWS	
			Model Vendor_DS	MDiscovery.Device.Model MDiscovery.Device.Vendor_05 MDiscovery.Device.Vendor_05	
			MACAddress MACAddressVendor	MDiscovery.Device.PhysicalAddress MDiscovery.Device.PhysicalAddressVendor	
			Maintenance	2nd Tuesday of the month	
					_
•	Click N	lext or on	the Monitor	s tab:	
•	On the	Monitors	tab Add (1) hr		
	U Un tha I	CIICK IN	dialog	non	
		Monnors ( Under t	liaioy he tyne• Δct	ive select (check the check	(hox)
	0		HTTP (Hv	pertext Transfer Protocol (	Web Server))
		•	App Web S	ite Content Monitor	
	0	Click Ok	< Comparison of the second sec		
•	On the	Monitors	tab monitor	rs list	
	0	Ping			
			Check Crifi	cal	
	0	- HTTP		ys applied	
	0		Critical che	cked	
		-	Set to Chec	ck support first	
	0	App We	b Site Conte	ent Monitor	
		•	Critical NO	Tchecked	
		•	Set to Cheo	ck support first	
		Role Editor	- ITE Apps Server	ØX	
		Scan Rules	Monitors	Back Next Save	
		Applied Sub F Attributes	Scan for and configure the	selected monitors on applicable devices	
		Custom Links Monitors	Name	Type Critical Application Rule	
		Action Policy Tasks	App Web Ste	Cancers Manitor Active	
			чтти 🥧	Active Check support first 🗸	
•	Click N	lext or on	the Action F	Policy Tab	
•	On the	Action Po	olicy Tab	drandown	
	0	in me A	Select Noti	fication Policy	
		_	Select NOII	incurion i oney	
•	Click S	ave			

![](_page_34_Picture_0.jpeg)

![](_page_34_Picture_1.jpeg)

![](_page_35_Picture_0.jpeg)

	Deles and	Cub Deles Lib	****				
	Roles and	n m	rary				<b>2</b> 0
	Enabled	Nama	Description	Pole Turne	Monitore	Malebr	
	Endoled	Maine	Description	Role Type	Monitors	wagnt	
	ON	Lightweight AP	Lightweight/Managed Access Point	Role		12	Default
	ON	Windows	Microsoft Windows	Role		4	Default
		Managed Device	Profile for devices with SNMP that di	Role	Ping, CPU Utilization, Disk Utilization	3	Default
	ON	Cisco Meraki	Cisco Meraki Cloud Controller	Role	Cisco Meraki Cloud	13	Default
		Storage Array	Storage Array	Role		4	Default
	ON	Windows Deskt	Microsoft Windows Desktop	Role		6	Default
	ON	Windows Server	Microsoft Windows Server	Role		8	Default
		Storage Cluster	Storage Area Network(SAN) cluster	Role		5	Default
	ON	Storage Node	Storage array network node	Role		5	Default
		Windows Mobile	Microsoft Windows Mobile Device	Role		7	Default
	ON	Load Balancer	Device that acts as a reverse proxy a	Role		11	Default
	ON	Domain Contro	Device role to identify servers which	Role	Ping, DNS	101	Custorn
	ON	ITE App Server	Application Server in the ITE	Role	Ping, HTTP, W3 Service, App Web Sit	101	Custom
	ON	ITE WUG Server	WhatsUp Gold Server in the ITE	Role	Ping, Ipswitch NmPoller \ ActiveMon	110	Custom
	B Role Type:	Sub Role					
	ON	Hyper-V Host	Hyper-V server sub role	Sub Role		11	Default

![](_page_36_Picture_0.jpeg)

Lab 8 - Netv	vork Discovery	
<b>Lab 3 - Nerv</b> 8-1	Schedule a Scan	<text><list-item><list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></text>

	k Next or on the O o Increase the F	ptions tab Ping and SNMP Timeouts to	5000 ms
		String     Retry Count       5000     I       SNMP       Timeout (ms)       Retry Count       5000       I	
• Clic	k Next or on the So Check Schedu Under Schedu Selec	chedule tab ile ile Options t Weekly Schedule your scan base (your instructor may cha Non-US classes)	d on the Table below nge the times based or
	Student ID	Day	Time (GMT)
	St01 / St16	Tomorrow (Thursday)	12:00 AM
	St02 / St17	Tomorrow (Thursday)	12:30 AM
	St03 / St18	Tomorrow (Thursday)	1:00 AM
	C+0//C+10		4-6.444
	ST04 / ST19	Tomorrow (Thursday)	1:30 AM
	St04 / St19 St05 / St20	Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM 2:00 AM
	St04 / St19 St05 / St20 St06 / St21	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM 2:00 AM 2:30 AM
	St04 / St19           St05 / St20           St06 / St21           St07 / St22	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM 2:00 AM 2:30 AM 3:00 AM
	St04 / St19           St05 / St20           St06 / St21           St07 / St22           St08 / St23	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM 2:00 AM 2:30 AM 3:00 AM 3:30 AM
	St04 / St19           St05 / St20           St06 / St21           St07 / St22           St08 / St23           St09 / St24	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM 2:00 AM 2:30 AM 3:00 AM 3:30 AM 4:00 AM
	St04 / St19         St05 / St20         St06 / St21         St07 / St22         St08 / St23         St09 / St24         St10 / St25	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM 2:00 AM 2:30 AM 3:00 AM 3:30 AM 4:00 AM 4:30 AM
	St04 / St19         St05 / St20         St06 / St21         St07 / St22         St08 / St23         St09 / St24         St10 / St25         St11 / St26	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM 2:00 AM 2:30 AM 3:00 AM 3:30 AM 4:00 AM 4:30 AM 5:00 AM
	St04 / St19         St05 / St20         St06 / St21         St07 / St22         St08 / St23         St09 / St24         St10 / St25         St11 / St26         St12 / St27	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM 2:00 AM 2:30 AM 3:00 AM 3:30 AM 4:00 AM 4:00 AM 5:00 AM 5:00 AM
	St04 / St19         St05 / St20         St06 / St21         St07 / St22         St08 / St23         St09 / St24         St10 / St25         St11 / St26         St12 / St27         St13 / St28	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM         2:00 AM         2:30 AM         3:00 AM         3:30 AM         4:00 AM         4:30 AM         5:00 AM         5:30 AM         6:00 AM
	St04 / St19         St05 / St20         St06 / St21         St07 / St22         St08 / St23         St09 / St24         St10 / St25         St11 / St26         St12 / St27         St13 / St28         St14 / St29	Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday) Tomorrow (Thursday)	1:30 AM         2:00 AM         2:30 AM         3:00 AM         3:30 AM         4:00 AM         4:30 AM         5:00 AM         5:30 AM         6:00 AM         6:30 AM

![](_page_38_Picture_0.jpeg)

	1. Start
	Set the scan to run on a schedule
	Z Schedule
	Limit Schedule options
	2. Credentials O Dally Weekly Options
	Weekly     Recur every     Sunday
	S. Options O Monthly Monday
	Schedule Wednesday
	Review & Run
	🗌 Friday
	Every week/s
	Begin schedule on 1:00 AM V 10/25/2018 M [Server time-zone]
	Next scheduled event
	1:00am, Thursday November 1, 2018 [Server time-zone]
	Expire schedule on
	10/26/2018
	<ul> <li>Click Next or on the Review &amp; Run tab         <ul> <li>Name - Weekly Scan</li> <li>Description - Scans the ITE once a week</li> <li>Click Save</li> </ul> </li> <li>1. Start Scan summary Back Save Save &amp; Run Now Name Weekly Scan</li> </ul>
	2. Credentials Description
	3. Options
	Schedule Starting device set for the scan 🎤
	Review & Run IP Address(es) 192.168.200.1
	Local Subnet 10.27.0.32 - 10.27.0.47
You have now o	Close the new scan dialog. completed Lab 8 - Network Discovery.
	Jompiered Lab o - Nerwork Discovery.

![](_page_39_Picture_0.jpeg)

Lab 9 - Sta	art Monitoring	
9-1	Change Web Alarm Checking Interval	<image/> On the WhatsUp Gold Menu bar Click on the UserID menu Select User Preferences Log Out User Preferences Log Out In the User Preferences dialog Change the Alarms Checking Interval to 30 second(s) Click Save Ver Preferences Source interview Source intervi
9-2	Open Discover Network	Click The discover Menu • Select Discovered Network Discovered Network New Scan Saved Scan Settings
9-3	Start monitoring devices	In Discovered Devices list • Check the top box of the list to select all your devices Discovered Network (114 Devices) Display Name IP A Device Role • st02-wug.t 10.2 ITE WUG Server • • 10.27.1.17 10.2 Device • • • • • • • • • • • • • • • • • • •

![](_page_40_Picture_0.jpeg)

In the information Card      Click Start (Update Monitoring
Image: Start/Update Monitoring
114 Devices Selected
In the Start/Update Group dialog
Start/Update Monitoring X
Select a Destination Group
Select Devices to Monitor
Name         IP         Role (Click to Edit)         Status           ID drawur training local         10.27.1.27         ITE WHG Server         New Device
102/11/17     10.27/11/7     10.27/11/7     Dev/ce     VNew Dev/ce      10.27/11/7     10.27/11/7     Dev/ce     VNew Dev/ce      VNew Dev/ce
TrainingCore.wugtng.c     192.168.200.1     Router     New Device
WUGTNG2901.wugtng 192.168.200.142 Router V New Device License Information
Selected Devices 114 Available Licenses 2500
Requiring New License 114 Will Be Updated 0
Start Cancel
<ul> <li>You will notice the Start/Update Monitoring scan will show up in the Active Scan(s) tab</li> </ul>
<u>د</u> 1 Active Scan(s) < Discovered
Start/Update Monitoring Creating Devices Cancel Display Nan Devices completed / total 3/45
2     → 10.27.0       2     → 101-ap
Click My Network Button in the menu bar
Notice device will start populating in the My Network Map/List
Once all your devices are being monitored, you can proceed to the next step

9-4	Verify Role and Sub Role Applications	In the My Network <ul> <li>Click on the Filters &amp; Overlays tab</li> <li>Apply Switch Role filter <ul> <li>In the filter text box type: Switch</li> <li>In the Roles</li> </ul> </li> <li>Select Switch to apply the filter <ul> <li>Filters &amp; Overlays</li> <li>Verlays</li> <li>Filters &amp; Verlays</li> <li>Verlays</li> <li>Verlays</li></ul></li></ul>
		<ul> <li>Verify that the custom Active Script monitors were added to</li> </ul>
		the Cisco Switches     Clear Filters
		Apply Domain Controller Role Filter
		<ul> <li>In the filter text box type: Domain Controller</li> <li>In the Roles</li> </ul>
		Select Domain Controller to apply filter
		• Open a Device's device properties
		<ul> <li>Verify everything which was supposed to be applied was applied</li> </ul>
		Clear Filters
		Apply ITE App Server Role Filter
		<ul> <li>On the Filters and Overlays tab</li> <li>Start typing ITE Apps Server in the filter text box</li> </ul>
		<ul> <li>Under Roles</li> </ul>
		Select ITE Apps Server
		<ul> <li>Open you App Server's device properties</li> </ul>
		<ul> <li>Verify everything which was supposed to be applied was applied</li> </ul>
		Don't close the device properties
9-5	Open Monitor	On the Monitors tab on the far-right side
	Library	<ul> <li>Click on Go to library menu button         <ul> <li>Click Monitors Library</li> </ul> </li> </ul>
		erva Monitors Library Actions and Policies

![](_page_42_Picture_0.jpeg)

<ul> <li>9-6 Create new Service Monitors Library</li> <li> • Click on the Plus</li></ul>
In the Select Active Monitor Type dialog         . Type Service in the search text box then select Service Monitor from the list         Image: Service Monitor Type dialog         . Click Select         In the Add Service Monitor Dialog         . Name: W3 Service         . Description: Service Monitor for the World Wide Web Publishing Service         . Uncheck Use in rescan
<image/>
<image/>
In the Select Active Monitor Type dialog In the Select Active Monitor Type dialog Type Service in the search text box then select Service Monitor from the list In the Select Active Monitor Type dialog In the Add Service Monitor for the World Wide Web Publishing Service In the Add Service Monitor for the World Wide Web Publishing Service In the Add Service Monitor for the World Wide Web Publishing Service In the Add Service Monitor for the World Wide Web Publishing Service In the Add Service Monitor for the World Wide Web Publishing Service
<ul> <li>In the Select Active Monitor Type dialog</li> <li>Type Service in the search text box then select Service Monitor from the list</li> <li>In the Select Active Monitor Dialog</li> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
In the Select Active Monitor Type dialog • Type Service in the search text box then select Service Monitor from the list
<ul> <li>Type Service in the search text box then select Service Monitor from the list</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>And the work of the source work of the low of the low</li></ul>
<ul> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Click Select</li> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Click Select</li> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Click Select</li> <li>In the Add Service Monitor Dialog</li> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
In the Add Service Monitor Dialog <ul> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Name: W3 Service</li> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
<ul> <li>Description: Service Monitor for the World Wide Web Publishing Service</li> <li>Uncheck Use in rescan</li> </ul>
• Oncheck Ose in rescan
Protocol to use: Select WMI
Add Service Monitor ① ×
Name
Visuative Description Function Research Annual Mark Mark Research
_ Service working nor ner wenn wiese meb nubbinning service
Restart on failure  Protocol to use
© Whit ◯ SNMP
This field is required Browse
Said
Click the Browse button

![](_page_43_Picture_0.jpeg)

		<ul> <li>In the Service Selection dialog</li> <li>Click Browse in the browse for device dropdown</li> </ul>
		Service Selection X
		Device to browse
		Services Q Browse
		nelle Save Vexuipuuri
		a line the Colored Diology Connects to state base
		<ul> <li>In the select Dialog Search text box</li> <li>Enter -app</li> </ul>
		<ul> <li>Select your App server in the device list</li> </ul>
		Select
		Include devices in sub-groups
		✓      ✓      ✓      My Network (45)     ✓      ↓     □      □      □      □      □      □      □      □      □      □      □      □      □     □
		All devices (dynamic grou     All routers (dynamic group
		36 AWS (3)
		o Click Apply
		Back in the Service Selection dialog
		<ul> <li>Scroll down and select World Wide Web Publishing Service</li> </ul>
		Service Selection X
		Verke browse with approximiting local
		Arrives Name State Description access to network resources. While description access to network resources. While description that do not enforce 802.1X accesses and the dott State does not accesses.
		Whil Performance Adapter Stopped Provides performance Ibrary Information from Windows Management Instrumentation (Whilip provides to Ellents on the return): This service only nume when Performance Data Meyer a saturated.
		Creates and maintenance dam reasons to remote service subig the MB protocol. If this service is copred, there accounts will be uneasifelity. If this is service a disabled, any services that explicitly depend on it will fail to spart.
		World Wide Web Publishing Service Running Provides Web connectivity and administration through the Internet Information Services Autohoration services for interacting with
		Xbox Live. K has stopped a concerning the stopped some applications may not operate correctly.
		O Click Save
		Click Save     Close the Monitors Library
9-7	Add additional	Still in the Device Properties dialog on the Monitors tab
	Server	Click the Add Button and select Active Monitor
		Monitors (7)
		Polling ( Chative Monitor A
		Actions
		Credentials (2)
		In the Active Monitor Properties Dialog
		<ul> <li>In the What type of Active Monitor would you like to add to this</li> </ul>
		device? Dropdown

		<ul> <li>Select W3 Servi</li> </ul>	ice	
		Active Monitor Proper	ties	
		What type of Active Monitor wou	ld vou like to add to this device?	
		W3 Service		
	Click Net	ext		
	Review	the monitor settings the	n <b>click</b> Next	
	In the A	poly this Action Policy dr	con down	
	• III III 7	Select W3 Service Resta	rt Policy	
		Antina Manitan Duananting		
		Active Monitor Properties		
		Apply this Action Policy:		
		W3 Service Restart Policy		
		State Change	Action to perform	
		Down At Least 2 Minutes	W3 Service Restart	
		Click Finish		
	• Close th	Click Finish ne device properties		
	Click Se	etup Critical (Enabled) to	o open the Critical Active M	onitor Setup dialog
		🕂 🔹 🦯 📋 Enable Disable	Setup Critical (Enabled)	
		Monitor	rgument Comment	
		▼ Type: Active Monitor		
		🗆 👞 НТТР		
		Ping		
		U ale, W3 Service		J
	• In the C	ritical Active Monitor Set	up dialog ick Make Critical button	
	0			
		Non-Critical Monitor	S	
		Make Critical		
		Monitor		
		🔲 斗 App Web Site Content	Monitor	
		W3 Service		

		Under the original of the	he Critical Monitors section Using the Move Up or Move dow Ping W3 Service HTTP Critical Monitors (in polling order) Make Non-Critical Move Up Move Down Monitor Monitor Monitor Monitors are now set with the pro- Up at least 5 min Up at least 5 min Up at least 5 min Up at least 5 min	vn buttons, a	Yes No Yes Yes (3) Yes Yes (1) Yes Yes (2)	e monitors
9-8	Verify Actions and Action Policies	On your App Se. • Open th 0 0 0 0 0 0 0 0 0 0 0 0 0	rver, the one you are RDP'd to be Windows Service manager by clicking the Start Button Then type Services.msc Click on the Services Icon that a Search Search Services manager Scroll to the bottom of the servi Select the World Wide Publishin Click Stop Service Help Services Stop Service The WhatsUp Gold Web Interface Clear all filters from the My Network	ppears below	w the sear	ch box

![](_page_46_Picture_0.jpeg)

• After two minutes (plus the web interface interval), you should see a large popup window on your screen, as the web alarm action triggers
Q       Ind1         Image: Constraint of the second se
Dismiss All
Click the Disprise button on the Web Alexan
Click the Dismiss button on the web Alarm
Go into the web mail
• Open another web browser lab
Enter un: mail.wuging.com
<ul> <li>Enter your email address and student password</li> </ul>
<ul> <li>Verify Down Notification was sent</li> </ul>
In Windows Services Manager
<ul> <li>Verify World Wide Web Publishing Service Restarted</li> </ul>
Back in Web Mail
<ul> <li>Verify Up Notification was sent</li> </ul>
Return to WhatsUp Gold Web Interface
You now completed Lab 9 - Start Monitoring.

Lab 10 - P	lace Device int	o and out of Maintenance using Swagger
10-1	Create JSON data to use	Open Notepad ++
		If Notepad ++ is not on a blank page, click File: New
		On the New page in Notepad ++
		Change the page language to JSON by clicking Language on the menu bar
		<ul> <li>Then mouse over the letter J</li> <li>Click JSON</li> </ul>
		File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
		1 A →
		E > F >
		Gui4Cli H >
		Java
		KiXtart JavaScript L > JSON
		M > JSP * S
		<ul> <li>Type the following in the window         {             "enabled": true,             "endLtc": "         </li> </ul>
		<ul> <li>After the "endUtc": "         <ul> <li>Enter tomorrow's date in the format of "yyyy-mm-dd</li> <li>Followed by a T</li> <li>Then the time in the format of "hh:mm:ss</li> <li>Followed by a Z</li> <li>So, it would look like</li> <li>2022-09-15T12:30:00Z",</li> </ul> </li> </ul>
		<ul> <li>Finish up the file with         "reason": "Testing"         }</li> </ul>
		When competed it should look like
		File Edit Search View Encoding Language Settings Tools Macr
		1 = { 2 "enabled": true,
		3 "endUtc": "2022-09-07T12:30:00Z", 4 "reason": "Testing"
		5 L)

10-2	Login to API using Swagger	In the V	Veb Browser,	ther tab and type: http://	wuq.9644/swaq	iaer/ui/ir	ndex#/
	UI	-	openana o			iger, ai, ii	
				→ WhatsUp Gold × C	Swagger UI 644/swagger/ui/index#/	× +	
						(-) swa	agger
							-35
		•	Click the Lo	gin button at top right			
			(+) swagg	http://wug:9644/swagger/docs/	v1	admin:admin	Login
		•	You should o log	receive the following me jin was successful, yc	ssage ou have a toke	en now!	
10-3	Get DeviceID for	•	Click on Dev	viceGroup to expand the	device group se	ection	
	specific device		GET /api/v1/dev	ce-groups/{groupId}/devices		Returns the su	mmary data for a given device group.
		•	In the groupID value textbox, <b>type</b> zero (0) In the search value textbox, <b>type</b> 2901				
			Parameter	Value	Description	Parameter Type	Data Type
			returnHierarchy		The id of the group.	guery	boolean
					the parent group. default=true		
			search		I he optional state to search.	query	string
					insensitive ; searches the display name, hostname and network address	17	
			pageId		The pageld	query	string
			limit		The limit for the page	query	integer
			Authorization Try it out!	Bearer eyJhbGciOiJodHRwOi8vd3d3LnczLm9y.	oauth2 access_token	header	string
		•	Click Try it Scroll down o Tal Response E { { pagin "pag siz siz siz siz siz siz siz siz siz siz	out! and view the Response I ce note of the "id": value ody s:: { c: c: c: c: c: c: c: c: c: c: c: c: c:	Body <b>OT</b> be the same	as the on	e pictured

10-4	Put Device into Maintenance	<ul> <li>Click on Device to expand the device section</li> <li>Scroll down and click on</li> </ul>				
	mode	Put         /api/v1/devices/{deviceld}/config/maintenance         Update maintenance mode settings for a given device				
		Ensure the Response Content Type is set to application/json				
		Response Content Type application/json 🗸				
		<ul> <li>In the deviceID field, type in the device ID you recorded in the last step</li> <li>In the cfg field, paste in the JSON you created in step 10-1         <ul> <li>Making sure you have all of the curly brackets and commas needed</li> </ul> </li> </ul>				
		deviceId 28 ID of device				
		<pre>cfg {     "enabled": true,     "endUtc": "2022-09-07T12:30:00Z",     "reason": "Testing" } Manual maintenance mode configuration</pre>				
		Parameter content type: application/ison V				
		<ul> <li>And ensure the Parameter content type is also set to application/json</li> </ul>				
		Click the Try it out! Button				
		Check the Response Body				
		• You should see				
		Response Body				
		{     "data": {         "success": true     } }				
		<ul> <li>Go into the WhatsUp Gold Web Admin and verify wugtn2901 is in maintenance mode</li> </ul>				
		AppSrv20.wugtng.com 192.168.200.221				
		□ S WUGTN2901.wugtng.com 192.168.200.29				
		□ ● AppSrv10.wugtng.com 192.168.203.201				
10-5	Remove device from maintenance mode	<ul> <li>Back in the swagger UI, edit the JSON data in the cfg field to only include         {             "enabled": false         }         </li> </ul>				
		Then click the Try it out! Button				
		<ul> <li>Go into the WhatsUp Gold Web Admin and verify wugtn2901 is out of maintenance mode</li> </ul>				
		□ ● AppSrv20.wugtng.com 192.168.200.221				
		WUGTN2901.wugtng.com 192.168.200.29				
		□ ● AppSrv10.wugtng.com 192.168.203.201				
	You have complete	ed Lab 10 – Place Device into and out of Maintenance using Swagger				

Lab 11 - Pla	ace Device into	o and out of Maintenance using PowerShell
11-1	Open Windows PowerShell ISE	<text></text>
11-2	Enter configuration variables in your script	<ul> <li>In the script pane of the ISE,</li> <li>Note: you will notice when you type in the ISE, it will offer suggestions for what you are typing, and you can either hit the tab key or click it with your mouse to select your choice.</li> <li>type in:</li> <li>\$wugServer = "wug"</li> <li>\$wugUser = "admin"</li> <li>\$wugPass = "admin"</li> <li>\$authURL = "HTTP://\${wugServer}:9644/api/v1/token"</li> <li>\$headers = \$null</li> <li>\$creds = @{</li> <li>username = "admin"</li> <li>password = "admin"</li> <li>\$;</li> </ul>

11-3	Enter Invoke- RestMethod	• In the script pane of the ISE and line or so below your current text, enter:
	into script	\$result = Invoke-RestMethod -Method Post -Uri \$authURL -Body \$creds -Headers \$headers
		\$result   Format-List
		Windows PowerShell ISE File Edit View Tools Debug Add-ons Help File Edit View Tools Debug Add-ons Help UnitideIlps1" X 1 SwugServer = "wug" 2 SwugSers = "admin" 3 SwugPass = "admin" 4 SauthURL - "HTTP://S(wugServer}:9644/api/v1/token" 5 Sheaders = Snull 6 7 BScreds = 0{ 8 Username = "admin" 9 password = "admin" 10 j; 13 Sresult = Invoke-RestMethod -Method Post -Uri SauthURL -Body Screds -Headers Sheaders 14 15 Sresult   Format-List]
11-4	Test your script	On the ISE's menu bar, click on the Run Script button
	so far	Source Shell ISE
		File Edit View Tools Debug Add-ons Help
		Untitled1.ps1* X Run Script (F5)
		Or you can press the E5 button.
		<ul> <li>In the better output page if your script rap correctly you should see the</li> </ul>
		<ul> <li>Access_Token</li> <li>Token</li> </ul>
		<ul> <li>Token_type</li> <li>Expires_In</li> </ul>
		And the retresh_token  Sautoux = 'fill''/' Sungerver' Sund (/gan/vi//coken'  Sheaders = Snull
		Screds = 64 "admin" password = "admin" grant_type = "password" ]:
		Sresult = Invoke-ResMethod -Nethod Post -Uni SauthuRL -Body Screds -Headers Sheaders Sresult   Format-List access_token : ey1MbGri013odHkw18xd3d1.czt.m9/2y8/MDALzAU.3htb67zakc5M9//SNob#fjL300rT11Ni151n165C1561ka0VC15.ey1odHkw08Vc2N02W1hvy44Mxc3b764.m9/2y98/MDALzAU.21k
		2660x8812/w111cg/w10211cg/w10211cg/w10211cg/w10264x4/cg/stawp1b3v2dbg/29213dt2_b00g/w102w811bfgde/v2baadt23)x66i01511me3/w1021cs11licGogde1ab31X Seir cV/11 gr/w11ab411Cb/w110jE20j13D02x21s1m44Cl01V9jC06jE3K6ab02j30140.md/x02dt151a522Cl51nd22556k61fg.5g8v-YLC_SUtege0_L8x23645j46b8x26k/p2 v00g token_type i bear en explices_in i 1299 enf ent_Loken i g13bGcr013adfbu13wd3b1.eczLm9/298/b00Lz40CJhtl56Ezakctb9/25ke3b87j12N01713H11211315Lnt65CL51E3p02CJhcg34bp34by34by34by34by2y32ydb40LLz4Ll21k
		26GBXKL24VHTCyshVB1TypHKtaWHCCaddWoTxv2Nc2UDXHtcystaWpUBWZ4QU79EL34L2JbUDgWDYWRHTbsDpdKv72bBxL2L3VbGH015TWFYHETC15TNCGV9H125TIX Sict5VH1jpHKtaWHCC3VHH10jEXkj2BRQzkzListw4cCE0H72NTc20DCNSHaWaZjoid3VhL8HbdXdH15L8F3ZCEEnd2y5hcGkifQ.wEEEink_s60_VF-WYbm10gRTLK8HP137C,W 2734
		PS C1\Users\inO1>

#### <sup>52</sup> **Progress**<sup>•</sup>WhatsUp<sup>•</sup>Gold

11-5	Edit script to place device	• Back in the script pane, edit the script as follows:
	into maintenance	• <b>Replace</b> \$result   Format-List with \$authToken = \$result.access_token
		Then add the following:
		\$deviceID = 28
		\$maintURL = "HTTP://\${wugServer}:9644/api/v1/devices/\${deviceID}/config/maintenance"
		<pre>\$jsonData = @{     "enabled" = \$true;     "endUtc" = "2022-10-25T12:30:00.000Z";     "reason" = "Testing" }   ConvertTo-Json NOTE: for the JSON data, enter the values you used for the swagger</pre>
		\$headers = New-Object "System.Collections.Generic.Dictionary[[String],[String]]" \$headers.Add("Authorization", "Bearer \${authToken}") \$headers.Add("Content-Type", "application/json") \$headers.Add("Accept", "application/json")
		\$maintResult = Invoke-RestMethod -Method Put -Uri \$maintURL -Headers \$headers -Body \$jsonData
		\$maintResult
11-6	Put device into maintenance via PowerShell	<text><text><text><text></text></text></text></text>

#### <sup>53</sup> **Progress**<sup>®</sup> WhatsUp<sup>®</sup> Gold

		<ul> <li>In the WhatsUp Gold web admin         <ul> <li>Check that the device did go into maintenance mode</li> </ul> </li> <li>Go to the device properties page on the polling tab         <ul> <li>View that Maintenance mode is turned on</li> <li>And that the Expiration Time matches what you set</li> </ul> </li> <li>Manual Maintenance         <ul> <li>Expiration Time   Edit</li> <li>12:30 PM, 09/15/2022 09/15/2022</li> </ul> </li> </ul>
11-7	Edit script to take device out of maintenance	<ul> <li>Back in the script pane of the ISE, edit the script as follows:         <ul> <li>Edit your script as follows</li> </ul> </li> <li>Change: \$jsonData = @{</li></ul>
11-8	Take device out of maintenance via PowerShell	<ul> <li>Click the Run Script button in the ISE</li> <li>Windows PowerShell ISE <pre>File Edit View Tools Debug Add-ons Help </pre> </pre></pre></pre></pre></pre></li> <li>View the output in the bottom Output pane of the ISE </li> <li>Steamboder = file file file file file file file file</li></ul>
	You have com	npleted Lab 11 - Place Device into and out of Maintenance using PowerShell

Lab 12 - P	ace Multiple D	evices into and out of Maintenance using PowerShell
12-1	Open new script pane in Windows PowerShell ISE	<ul> <li>On the Menu bar of the ISE         <ul> <li>Click on New to open a new blank script pane</li> <li>Windows Por File Edit View</li> <li>File Edit View</li> <li>New 14.ps1</li> <li>16</li> <li>17 #\$dev</li> <li>18</li> <li>19 \$main</li> </ul> </li> </ul>
12-2	Copy and edit your script	<ul> <li>In the script pane of the ISE,</li> <li>Back on what might be called Untiled1.ps1 <ul> <li>Select all of your script</li> <li>Copy it</li> </ul> </li> <li> Window ProveDation INFORMATION INFORMATION</li></ul>

![](_page_55_Picture_1.jpeg)

#### **Progress** WhatsUp Gold

![](_page_56_Picture_1.jpeg)

12-4	Edit script to take device out of maintenance	<ul> <li>Back in the script pane of the ISE, edit the script as follows:         <ul> <li>Edit your script as follows</li> </ul> </li> <li>Change: \$jsonData = @{</li></ul>		
11-8	Take device out of maintenance via PowerShell	<ul> <li>Click the Run Script button in the ISE</li> <li>Administrator: Windows PowerShell ISE File Edit View Tools Debug Add-ons Help Untitled1ps1 Untitled2ps1 X Run Script [F5] Untitled1ps1 Untitled2ps1 X Run Script [F5] I = This will place or remove 2 multiple devices into Maintenace mode 3 using the WhatsUp Gold REST API #&gt; 4 5 SwugSer = "wug" 6 SwugSer = "wug" 6 SwugSer = "adding" • View the output in the bottom Output pane of the ISE 6 SwugSer = "adding" • In the WhatsUp Gold web admin • Check that the device is out of maintenance mode</li></ul>		
You have completed Lab 12 – Place Multiple devices into and out of Maintenance using PowerShell				

![](_page_58_Picture_0.jpeg)

#### **About Progress**

Progress gives you everything you need to create, deliver, manage and support consumer-grade end user experiences. Our singular focus is on application development and digital experience tools, platforms and cloud services that bring together your apps and content, while seamlessly and securely integrating with your enterprise data. The result is competitive differentiation and business success.

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![](_page_58_Picture_4.jpeg)

![](_page_58_Picture_5.jpeg)