# Windows Update Error: -2145107951 WU_E_PT_SUS_SERVER_NOT_SET

In the context of Tanium Patch (or patching via Windows Update Agent/WSUS), this means the client is trying to contact a Windows Update Server, but the policy registry key pointing to the server (WUServer) isn't set or accessible. According to Tanium's documentation, this is a known error revealed during patch scan/deployment.

## ? What it means in practical terms

- The machine is configured (or expects) to use a WSUS server (or other internal update source) rather than the public Microsoft Update service.
- The registry key **HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate\WUServer** (and possibly **WUStatusServer**) is missing or empty.
- Because the server to use is not set, the Windows Update Agent cannot proceed with patching/scan and reports this error.
- In Tanium's context, this shows up on the endpoint patch scan or deployment log, indicating the client cannot obtain the update source.

https://help.tanium.com/bundle/ug_patch_cloud/page/patch/ref_errors.html

https://help.tanium.com/bundle/ug_patch_cloud/page/patch/troubleshooting.html

## ? **Step-by-Step Checklist for Fixing:**

### Error: -2145107951 (0x80244011) WU_E_PT_SUS_SERVER_NOT_SET

**Meaning:** Windows Update Agent expects WSUS, but *WUServer* is missing or not configured.

## 1. Identify Affected Machines

In Tanium, filter endpoints where Patch scan shows:

- `WU_E_PT_SUS_SERVER_NOT_SET`
- or error: `-2145107951`

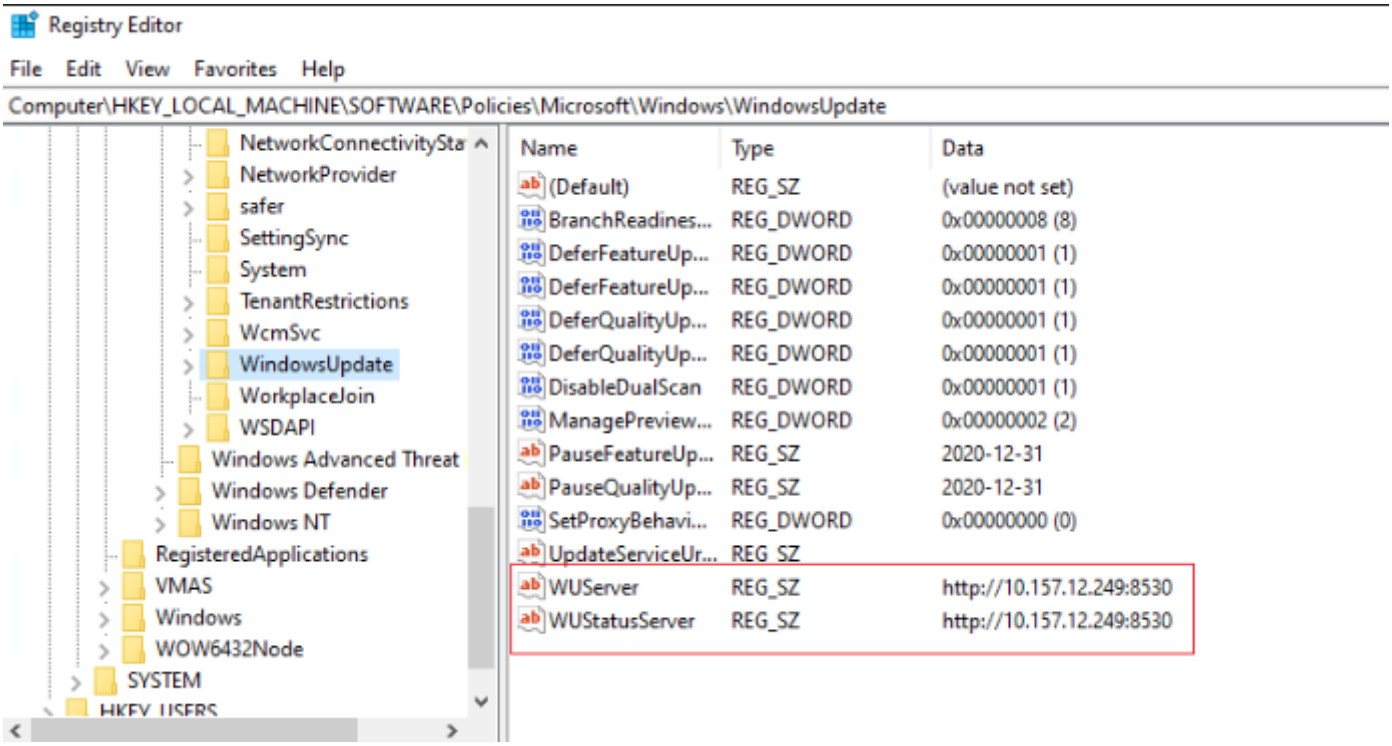
# 2. Determine Intended Update Source

You need clarity:

### Option A — Endpoints SHOULD use WSUS / SCCM.

→ They must have:

```
WUServer
WUStatusServer
```




### Option B — Endpoints SHOULD use Microsoft Update (cloud).

→ WSUS registry keys must be **removed**; otherwise scan breaks.

(Many mixed-domain environments break here.)

# 3. Check Registry on a Sample Machine

Path:

```
HKLM\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate
```

Look for:

- `WUServer`
- `WUStatusServer`

If missing AND WSUS is intended → fix.
If present AND the machine should use cloud updates → remove.

# 4. Apply Fix (Choose A or B)

## ? A. Remediate for WSUS Environments (Set the server values)

Use this when Tanium Patch relies on your WSUS/SCCM SUP.

### PowerShell: Set WSUS server

```
$WUServer = "http://YOUR-WSUS-SERVER:8530"
$RegPath = "HKLM:\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate"

If (-not (Test-Path $RegPath)) {
    New-Item -Path $RegPath -Force | Out-Null
}

Set-ItemProperty -Path $RegPath -Name WUServer -Value $WUServer -Type String
Set-ItemProperty -Path $RegPath -Name WUStatusServer -Value $WUServer -Type String

# Required subkey
$AUPath = "$RegPath\AU"
If (-not (Test-Path $AUPath)) {
    New-Item -Path $AUPath -Force | Out-Null
}

Set-ItemProperty -Path $AUPath -Name UseWUServer -Value 1 -Type DWord

# Reload configuration
gpupdate /force | Out-Null
```

## Use when:

✔ Domain-joined
✔ SCCM or WSUS controlling updates
✔ Tanium Patch configured to use internal WSUS

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## ? B. Remediate for Cloud / Internet Update Environments

Use this when:

- You are using **Tanium Cloud Patch only**
- No WSUS/SCCM in the environment
- Machines should hit **Microsoft Update** directly

### PowerShell: Remove WSUS keys

```
$RegPath = "HKLM:\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate"

If (Test-Path $RegPath) {
    Remove-Item -Path $RegPath -Recurse -Force
}

gpupdate /force | Out-Null
```

### Why this works:

Cloud-only environments break when WSUS keys exist but are empty or ghosted.

# 5. Trigger Update Scan

Run:

```
wuauclt.exe /detectnow
```

Or simply reboot.

Then re-run the Tanium Patch scan.

# 6. Validate

Success means:

- No more error `WU_E_PT_SUS_SERVER_NOT_SET`
- Endpoint reports as patch-compliant in Tanium

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# In **Tanium Cloud using Microsoft Update**, the **ONLY correct configuration** is:

### ? **No WSUS registry keys at all.**

(If they exist, even empty, Windows Update breaks and Tanium Patch errors.)

Below is the **clean, safe remediation path** for cloud-only environments.

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# ? **What your environment *should* look like**

The following registry path should **not exist**:

```
HKLM\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate
```

No:

- `WUServer`
- `WUStatusServer`
- `UseWUServer`

When these keys exist, the Windows Update agent thinks WSUS is required → **But Tanium Cloud doesn’t set WSUS → error appears.**

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# ? **Final Remediation Script (Cloud Only)**

This is the script you should deploy through **Tanium Deploy**, RMM, or manually.

✔ Safe

✔ MSP-friendly

✔ Removes ONLY WSUS configuration

✔ Leaves all other policies untouched

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### PowerShell: Remove WSUS Policies for Tanium Cloud

```
# Path to Windows Update policy key
$RegPath = "HKLM:\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate"

# Remove WSUS configuration if present
if (Test-Path $RegPath) {
    Write-Host "WSUS policy folder found. Removing it for Microsoft Update compatibility..."
    Remove-Item -Path $RegPath -Recurse -Force
} else {
    Write-Host "No WSUS policies found. Nothing to remove."
}

# Force policy refresh
gpupdate /force | Out-Null

# Force Windows Update detection
Write-Host "Triggering update scan..."
Invoke-Expression "wuauclt.exe /detectnow"

Write-Host "Remediation complete."
```

## ? After Running: What You Should See

Within 5–15 minutes:

- Tanium Patch scan completes successfully
- Error **WU_E_PT_SUS_SERVER_NOT_SET** disappears
- Endpoint shows the correct missing patches
- Patching works through Microsoft Update directly

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**clean Tanium sensor** that detects ANY WSUS configuration on endpoints — perfect for **Tanium Cloud + Microsoft Update** environments.

It reports:

- **Compliant** → No WSUS keys (correct for Tanium Cloud)
- **Non-Compliant** → WSUS keys found (will cause patch errors)
- Includes the actual values found, so you know exactly what to fix.

You can paste this directly into **Tanium → Sensors → Create New Sensor**.

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# ? Tanium Sensor: Detect WSUS Configuration (Cloud Patch Compliance)

**Name:** `WSUS_Configuration_Status`
**Category:** Patch / Compliance
**Platform:** Windows

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## Sensor Script (Copy/Paste into Tanium)

```
# Sensor: WSUS Configuration Status

$regPath = "HKLM:\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate"
$result = @{}

if (Test-Path $regPath) {
    # WSUS config exists → Non-Compliant for Tanium Cloud
    $values = Get-ItemProperty -Path $regPath | Select-Object *

    $result["Status"] = "Non-Compliant"

    # Extract meaningful values
    $wsusServer      = $values.WUServer
    $wsusStatusServer = $values.WUStatusServer

    if ($wsusServer)       { $result["WUServer"]      = $wsusServer }
    if ($wsusStatusServer) { $result["WUStatusServer"] = $wsusStatusServer }

} else {
    # Ideal state for Tanium Cloud → No WSUS keys
    $result["Status"] = "Compliant"
}

# Output the result in key/value format
```

```
$result.GetEnumerator() | ForEach-Object { "$($_.Key)=$($_.Value)" }
```

## ? Sample Outputs

### ? Compliant system

```
Status=Compliant
```

### □ Non-Compliant system (Has WSUS keys)

```
Status=Non-Compliant
WUServer=http://old-wsus01.contoso.local:8530
WUStatusServer=http://old-wsus01.contoso.local:8530
```

## ? Recommended Tanium Filter in Grid

You can create a saved Question:

```
Get WSUS_Configuration_Status from all machines
```

Add a filter:

- Status **equals** Non-Compliant

This gives you a real-time list of machines that need remediation.

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# ? Tanium Package: Remove WSUS Configuration (for Tanium Cloud Patch)

**clean, safe, Tanium-Cloud-approved remediation package** that removes WSUS configuration and forces endpoints back to **Microsoft Update**, eliminating:

- `WU_E_PT_SUS_SERVER_NOT_SET`
- -2145107951
- Scan failures
- Patch deployment failures

This is formatted exactly the way Tanium expects so you can paste it directly into **Tanium → Packages → Import**.

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**Package Name:** `Remediate_WSUS_Config_For_Tanium_Cloud`
**Description:**
Removes WSUS policy registry keys so endpoints use Microsoft Update as required for Tanium Cloud Patch. Fixes error WU_E_PT_SUS_SERVER_NOT_SET.

**Command:** PowerShell
**Deploy to:** Windows only

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# ? PACKAGE CONTENT (COPY/PASTE INTO TANIUM)

## 1. Command (PowerShell)

Paste the following into the **Command** field of the package:

```
# Remediation package for Tanium Cloud - Remove WSUS config

$RegPath = "HKLM:\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate"

Write-Host "Checking for WSUS policy keys..."

if (Test-Path $RegPath) {
    Write-Host "WSUS configuration detected. Removing..."
    Remove-Item -Path $RegPath -Recurse -Force
} else {
    Write-Host "No WSUS configuration detected. No action needed."
}

# Force Group Policy refresh (non-intrusive)
gpupdate /target:computer /force | Out-Null

Start-Sleep -Seconds 3

# Trigger Windows Update detection cycle
Write-Host "Triggering Windows Update scan..."
Invoke-Expression "wuauclt.exe /detectnow"

Write-Host "WSUS remediation complete."
exit 0
```

## ? 2. Detection Rule (Optional but Recommended)

This prevents running on clean machines.

Create a detection rule:

**IF** File Exists → `HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate`

OR (use "Registry Value Exists"):

1. Registry key path:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\WindowsUpdate
```

1. Condition: **Exists**

This ensures only non-compliant machines get the fix.

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# ? 3. Post-Action Recommendation

After the package runs, trigger a Tanium Patch "Scan and Deploy" or schedule automatic scanning.

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# ? 4. Optional: Reporting Tag

If you want a tag so you know the machine was fixed, add:

```
New-Item -Path "HKLM:\Software\Tanium\Remediation" -Force | Out-Null
Set-ItemProperty -Path "HKLM:\Software\Tanium\Remediation" -Name "RemovedWSUS" -Value (Get-Date).ToString()
```

Then you can build a sensor around this.

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