Configuring WinRM on Port 5986 for Ansible

Step 1: Enable WinRM on the Windows Server

1. Open PowerShell as Administrator and run:

```
winrm quickconfig -q
```

2. Configure WinRM to allow unencrypted traffic and basic authentication:

```
winrm set winrm/config/service '@{AllowUnencrypted="true"}'
winrm set winrm/config/service/auth '@{Basic="true"}'
```

Step 2: Generate and Configure an SSL Certificate

1. Create a self-signed certificate:

```
$cert = New-SelfSignedCertificate -DnsName $(hostname) -CertStoreLocation Cert:\LocalMachine\My
$thumbprint = $cert.Thumbprint
```

2. Configure a WinRM listener on port 5986 using the certificate:

```
winrm create winrm/config/Listener?Address=*+Transport=HTTPS "@{Hostname='$(hostname)';CertificateThumbprint='$thumbprint'}"
```

3. Verify that WinRM is listening on 5986:

```
winrm enumerate winrm/config/listener
```

Step 3: Allow Port 5986 Through Windows Firewall

Run the following command to allow incoming WinRM connections on port 5986:

```
New-NetFirewallRule -Name "WinRM_HTTPS" -DisplayName "WinRM HTTPS (5986)" -Protocol TCP -LocalPort 5986 -Action Allow
```

Step 4: Test WinRM Connection Locally

Before proceeding with Ansible, test WinRM on the Windows server:

```
Test-WSMan -ComputerName localhost -UseSSL
```

Step 5: Install Required Python Modules on the Ansible Control Node

On your Ansible Control Node, install the pywinrm module:

```
pip install pywinrm
```

Step 6: Configure Ansible Inventory File

Edit your Ansible inventory (hosts.ini) and add the Windows server details:

```
[windows]
winserver ansible_host=your_server_ip

[windows:vars]
ansible_user=Administrator
ansible_password=YourSecurePassword
ansible_connection=winrm
ansible_winrm_transport=ntlm
ansible_winrm_server_cert_validation=ignore
```