



TEMPLATE

Hyper-V Nested Virtualization Readiness Template (Windows Server 2022)

A practical vendor-neutral template for evaluating, planning, and validating Hyper-V nested virtualization on Windows Server 2022 before production or lab rollout.

Hyper-V Nested Virtualization Readiness Template

Platform: Windows Server 2022 Use case: Lab, training, test, or controlled validation environment Goal: Confirm that nested virtualization is appropriate, supported, and operationally safe before enabling it

How to use this template

Use this document to capture the prerequisites, design decisions, and validation results for a nested Hyper-V deployment. Complete each section before enabling inner virtual machines at scale.

1) Deployment summary



Project name: _____ Owner/team: _____

Date: _____

Environment type: ? Lab ? Training ?
Test ? Demo ? Other: _____ Outer host name: _____
Outer VM name: _____ Nested host OS version/build: _____

Primary objective: _____

Expected inner VM workload: _____

Go-live or validation target date: _____

2) Fit assessment

Check the items that apply and note any constraints.

Appropriate reasons to use nested virtualization

- ☐ [] I need a virtualized Hyper-V host inside a VM for lab or validation purposes.
- ☐ [] I need to reproduce virtualization-dependent behavior without dedicated physical hardware.
- ☐ [] I need a portable training or demo environment.
- ☐ [] I need a contained environment for automation, recovery testing, or security analysis.

Reasons to avoid nested virtualization

- ☐ [] The workload requires strong, steady performance.
- ☐ [] The workload needs deterministic low latency.



- ☐ The outer host is already near capacity.
- ☐ The inner guests are intended to mirror production throughput.
- ☐ The design depends on hardware features that may not pass cleanly through another virtualization layer.

Decision: ? Suitable ? Suitable with constraints ? Not recommended

Notes:

3) Host and hardware prerequisites

Outer physical host

- ☐ The physical host CPU supports virtualization extensions.
- ☐ The outer hypervisor configuration supports exposing virtualization support to a guest.
- ☐ Firmware settings are correct for virtualization features.
- ☐ The host has enough spare CPU and memory capacity for nested use.
- ☐ The host is not expected to run near saturation during the test window.

CPU model: _____

Host memory installed: _____

Estimated memory available for nested workload: _____

Notes:

Outer virtual machine



- ☐ The outer VM has been created or identified.
- ☐ The outer VM generation is compatible with the intended security and virtualization model.
- ☐ The outer VM has sufficient assigned memory.
- ☐ The outer VM has suitable CPU allocation.
- ☐ The outer VM is configured with networking appropriate for the test.
- ☐ The outer VM has storage performance adequate for nested use.

Outer VM vCPU count: _____

Outer VM memory: _____

Outer VM storage location/type: _____

Outer VM network design: _____

4) Guest OS suitability

- ☐ The nested host guest is Windows Server 2022.
- ☐ Licensing and support assumptions are documented.
- ☐ Security settings are compatible with the intended nested use.
- ☐ Any required management tools are available inside the guest.

Guest edition: _____

Build/version: _____

Licensing notes:

5) Security and VM design review

- ☐ The VM generation and firmware model have been reviewed.



- ☐ Secure Boot behavior has been verified against the guest OS design.
- ☐ Guest trust and hardening settings do not block the intended nested configuration.
- ☐ Administrative access model is documented.
- ☐ The environment is isolated enough for the intended use case.
- ☐ Any required snapshot/checkpoint policy has been approved.

Security notes:

Checkpoint/snapshot policy:

6) Networking design

Select the design that best matches the use case.

- ☐ NAT: Inner VMs access outbound network resources through the nested host.
- ☐ External bridge: Inner VMs need access to the broader network.
- ☐ Isolated lab switch: Inner VMs remain fully contained.
- ☐ Other: _____

Addressing plan:

DNS plan:

Internet access required? ? Yes ? No

Corporate network access required? ? Yes ? No

Isolation requirements:



7) Resource sizing worksheet

Nested virtualization typically needs more headroom than a normal application VM.

Outer VM allocation

Resource	Planned	Minimum acceptable	Notes
vCPU	__	__	_____
Memory	__	__	_____
Storage	__	__	_____
Network	__	__	_____

Inner VM test workload

Resource	Planned	Notes
Number of inner VMs	__	_____
Memory per inner VM	__	_____
vCPU per inner VM	__	_____
Storage per inner VM	__	_____

Total estimated nested demand:

Headroom confirmed? ? Yes ? No



8) Enablement checklist

Use the following sequence to reduce configuration mistakes.

- ☐ Confirm virtualization support on the physical host.
- ☐ Confirm the outer VM is correctly sized.
- ☐ Confirm the outer VM generation and security model.
- ☐ Expose virtualization support to the guest VM.
- ☐ Install the Hyper-V role inside the guest.
- ☐ Reboot the guest if required.
- ☐ Create a small test inner VM.
- ☐ Attach the selected networking model.
- ☐ Boot the inner VM successfully.
- ☐ Validate functional behavior before expanding scope.

Enablement date/time: _____

Performed by: _____

9) Validation matrix

Record proof that the nested host operates as intended.

Test Expected result Pass/Fail Notes			
Guest Hyper-V role installs cleanly	Role installs without error	? Pass ? Fail	_____
Nested host boots normally	No boot or driver issues	? Pass ? Fail	_____
Inner VM creates successfully	VM creation succeeds	? Pass ? Fail	_____
Inner VM starts successfully	VM reaches boot state	? Pass ? Fail	_____



Networking works as designed | Inner VM has intended connectivity | ? Pass ? Fail | _____

Performance is acceptable for lab use | No unexpected contention | ? Pass ? Fail | _____

Reboot and recovery succeed | Environment returns to service | ? Pass ? Fail | _____

Validation summary:

10) Operational risks to monitor

- ☐ CPU contention on the outer host
- ☐ Memory pressure caused by stacked virtualization layers
- ☐ Slower inner VM startup times
- ☐ Networking complexity across layers
- ☐ Misleading troubleshooting signals from the outer VM versus the inner guest
- ☐ Drift between lab assumptions and production expectations

Top risks for this deployment:

Mitigation actions:

11) Acceptance criteria

Nested virtualization is ready for controlled use when all of the following are true:

- ☐ Hardware and virtualization support are confirmed.
- ☐ The outer VM is sized with sufficient headroom.



- ☐ The guest OS and VM model are compatible.
- ☐ Networking is working as designed.
- ☐ A small inner VM workload boots successfully.
- ☐ Validation results are documented.
- ☐ Operational limits are understood by the team.

Final decision: ? Approved ? Approved with restrictions ? Not approved

Approver name: _____

Approval date: _____

Restrictions or conditions:

12) Post-deployment notes

Use this space for lessons learned, tuning changes, and follow-up actions.

Quick reference: when nested virtualization is the right choice

Choose nested virtualization when you need:

- A lab inside a VM
- Reproducible test conditions



- Controlled training environments
- Safe isolation for functional validation

Avoid it when you need:

- Production-grade performance
- Low-latency behavior
- High throughput
- A simple troubleshooting model

End of template