**<https://internal.cloud-solutioning.ibm.com>**

**Exported output as configured:**

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**What this example is**

We’re designing a **single‑site, dedicated** VMware Cloud Foundation (VCF) environment on IBM Cloud. In the patterns catalog, *single site* is achieved by starting from the standard two‑region reference and **removing Region B and its Direct Link and CIS** components (keep CIS only if you specifically need DDoS protection on the public edge). That’s why you’ll see only one region and one cluster in this build.

On the sizing side, the tool computes hosts and storage using the built‑in formulas for CPU, memory and vSAN (it accounts for buffers, hyper‑threading, RAID/FTT, and dedup when enabled). That is what drives the “Hardware configurations” you saw.

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| A screenshot of a black screen  AI-generated content may be incorrect. | **1) Projects list – the tile for EX\_VMware\_SingleSite**  **Caption:**  *Your project at a glance.* This card simply shows that the project has **VMware** plus **Common Services (CS)** attached. Common Services is where you add cross‑cutting items such as Transit Gateway/Direct Link networking and Security & Compliance Center (SCC) protections, which are used by any offering in the project. |

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| A screenshot of a computer  AI-generated content may be incorrect. | **2) Project Overview – name, opportunity, offerings**  **Caption:** *Tell the tool what you’re sizing.*   * **Offerings:** VMware is selected; “Common Services” is also ticked so we can add shared networking and security later. * **Discount:** Left at **0%** because discounts require formal approval. Keeping it at 0% is best for first‑pass estimates. * **Why nothing else here?** We didn’t pick PowerVS, VPC, SAP, or Satellite/ROKS because this example teaches a *VMware‑only* design. If you add them, the project grows into a multi‑offering solution (the tool supports that, but it’s out of scope for this example). |

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| A screenshot of a computer  AI-generated content may be incorrect. | **3) VMware → Instance header – VCF as a Service, Single‑Tenant, Region**  **Caption:** *Choose the service flavor and location.*   * **VCF as a Service** (managed by IBM) is selected instead of “VCF (Self‑managed)”. For beginners this reduces operational burden—IBM runs the control stack and lifecycle, you size the workload clusters. * **Single Tenant / Dedicated:** Ensures hardware isolation (no shared hosts). That aligns with the “Dedicated” wording in the patterns. * **Region & DC:** **Dallas (DAL10)** chosen for proximity and availability. * **Regional High Availability:** **Off** because this is a **single‑site** pattern. If you need cross‑site continuity, turn this on and add Region B (that would track the two‑region reference). |

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| A screenshot of a computer  AI-generated content may be incorrect. | **4) VMware → Workload cluster basics (workload‑a)**  **Caption:** *Define one cluster to run the app.*   * **Workload Type:** **Production** * **Flavor:** **Standard** (a balanced profile) * **Storage Type:** **vSAN + optional NFS**. vSAN is our primary datastore for VM disks. NFS remains available if we later add shared file capacities (we left NFS sizing at 0 in this run; see screen 7). * **Requirement ID (WKLD‑001):** A helpful label that will appear in exports.   **Why one cluster?** This example is intentionally simple. A second cluster (e.g., “management” or “database only”) is a valid option if you need fault isolation, different host profiles, or licensing separation. |

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| A screenshot of a computer  AI-generated content may be incorrect. | **5) Workloads table – app VM counts and sizes**  **Caption:** *Tell the tool what you plan to run.* We entered three tiers:   * **web:** 25 VMs × 2 vCPU × 8 GB RAM × 100 GB * **app:** 18 VMs × 4 vCPU × 16 GB RAM × 200 GB * **db:** 10 VMs × 8 vCPU × 64 GB RAM × 1,000 GB   These numbers drive the host count and storage capacity. The tool translates them using its CPU/RAM/vSAN formulas (buffers, hyper‑threading, oversubscription, and vSAN overhead are applied automatically—see next screen). |

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| A black screen with white text  AI-generated content may be incorrect. | **6) Hardware configurations – computed host profile & quantity**  **Caption:** *What hardware meets the workload?* The tool found a fit with:   * **7 hosts** of **Dual Intel Xeon Platinum 8260 (48 cores, 2.4 GHz)** * **768 GB RAM per host** * **vSAN usable per node:** 23 TB (based on the vSAN/RAID/FTT math and buffers) * **Estimated cost** shown for the cluster (compute + vSAN) for this host profile.   **Why this result?**   * The **CPU/vCPU** capacity is calculated from total cores minus CPU buffer, plus hyper‑threading, then multiplied by vCPU‑per‑core and by the number of nodes. * The **RAM** capacity applies a RAM buffer and any oversubscription factor you set. * The **vSAN usable TB** applies the selected **RAID/FTT** ratio and **headroom**; dedup/compression can be applied when enabled.   If your inputs can’t fit a single cluster, the dialog will tell you to split workloads (common when you push node limits or mix very different storage needs). |

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| A screenshot of a computer  AI-generated content may be incorrect. | **7) Cluster Overhead Configuration Details – the dials**  **Caption: *Safety margins and architecture choices.* Defaults here express good practice for production sizing:**   * **Include Buffer: On – protects against growth and bursts.** * **Example values (as seen on the page): CPU buffer 30%, RAM buffer 20%, Hyper‑threading 10%, vSAN overhead 10%, RAM oversubscription 1.3, Max nodes 64.** * **CPU model chosen: the same 8260 profile the tool matched.** * **Nodes quantity: 7 (the minimum to satisfy the workload with these buffers).** * **Usable Node Capacity (TB): 23 per node, matching the vSAN math.**   **Why keep buffers? Turning them off can under‑size the environment. The sizing engine is designed to use these factors when it computes total vCPU, memory and vSAN capacity.** |

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| A screenshot of a computer  AI-generated content may be incorrect. | **8) Cluster Storage – Attached NFS Storages**  **Caption:** *We didn’t add NFS in this run.* All NFS tiers are **0 TB**. That’s intentional: the app’s VM disks live on **vSAN**. **When would you add NFS?** Shared file workloads, repositories, or cost‑optimized archival volumes. You’d size the tier (0.25/2/4/10 IOPS/GB) in **TB** increments to match your performance/price target. |

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| A screenshot of a computer  AI-generated content may be incorrect. | **9) Licenses & Network (instance‑level)**  **Caption:** *What we left out—and why.*   * **OS Licenses:** All set to **0**. Many clients bring their own OS licenses, or you can add Linux/Windows license quantities here to include them in price. * **Private network endpoints** (1 Gbps / 10 Gbps) left at **0**. For connectivity, we used **Common Services → Network** to design the core attachment (Transit Gateway + Direct Link), which is the right place to capture shared network services for a project. Instance‑level private endpoints are optional and not required for this VMware example. |

**Add Common Services -> SCC**

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| A screenshot of a computer  AI-generated content may be incorrect. | **10) Security & Compliance Center (SCC) – Workload Protection**  **Caption:** *Add protection and posture at project level.*   * **Association:** Bound to *VMware Service Instance 1* in **us‑south**. * **Cloud Posture (agentless):** **7** *compute instances* (one per ESXi host in the cluster). * **Host Protection (agent‑based):** **53** *VM agents* (25 web + 18 app + 10 db). SCC pricing is then computed for these resources. This is a simple, transparent mapping beginners can follow: **one posture unit per host**, **one agent per protected VM**. |

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| A screenshot of a computer  AI-generated content may be incorrect. | **11) SCC posture inputs** *Agentless* ***Cloud Posture Management****:* ***7 compute instances*** *(conservative). You can reduce this after discussing collection scope with security.* |

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| A screenshot of a computer  AI-generated content may be incorrect. | **12) SCC host protection inputs** ***Host Protection (agent‑based)****:* ***53 virtual machines*** *(one per VM).* ***Kubernetes = 0*** *because this VCF design doesn’t include OpenShift.* |

**Add Services -> Network**

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| A screenshot of a computer  AI-generated content may be incorrect. | **13) Add Services → Network (Transit Gateway)** *From* ***Common Services****, pick* ***Network → Transit Gateway*** *to model connectivity and egress costs.* |

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| A screenshot of a computer  AI-generated content may be incorrect. | **14) Transit Gateway details** *Name the TGW,* ***Location = Dallas****,* ***Routing = Global****. Add* ***2× Direct Link*** *connections and set a starting* ***egress (10 GB/month)*** *for cost visibility.* |

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| **15) Solution summary (VMware)** *Consolidated view: instance/cluster details,* ***capacity summary*** *(what you need vs what you get), and a translated* ***solution table*** *of items.* |

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| **16) Solution summary (Security)** *SCC Workload Protection rolled up:* ***0 worker nodes****,* ***7 multi‑cloud compute instances*** *for posture,* ***53 VM agents*** *for host protection.* |

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| **17) Pricing (VCF as a Service)** *Non‑binding estimate for the VCFaaS capacity and other listed items. Use* ***Export*** *to capture this in your bid template. Remember to validate in IBM Cloud Portal for formal pricing.* |